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Geologic and Environmental Consulting Services

Jim Orr, RG
Oregon Department of Environmental Quality
NW Region Cleanup Program
700 NE Multnomah Street, Suite 600
Portland, Oregon, 97232

July 25, 2025

Transmitted via email

Subject: **Wetland Sampling Plan**
Lawrence Oil Company Bulk Plant (AKA St. Helens Pacific Pride)
845 N. Columbia River Hwy, Saint Helens, Oregon
ECSI # 6720 OERS # 2024-2684

Mr. Orr:

Martin S. Burck Associates, Inc. (MSBA) has prepared this work plan for wetland sampling activities at the property referenced above. The wetland sampling is intended to evaluate the magnitude and extent of soil and sediment impacted by petroleum hydrocarbons (PHCs) released from the oil water separator (OWS). The site features and a preliminary outline of the wetland are shown on the attached Wetland Delineation Map, Figure 1 (Attachment A).

Purpose:

A Jurisdictional Wetland Delineation Report prepared by Schott and Associates was submitted to the Oregon Department of State Lands (DSL) on March 10, 2025. A copy of the Wetland Delineation Map is presented as Figure 1 (Attachment A), and the report is available for download from the following hyperlink. Wetland Delineation Report DSL approved the Wetland Delineation Report on June 5, 2025. MSBA will prepare and submit a Joint Permit Application (JPA) to the Oregon Department of Environmental Quality (DEQ), Oregon Department of State Lands (DSL), and US Army Corps of Engineers (USACE). Based on discussions with USACE,

the JPA will need to include a fairly detailed outline of the proposed excavation areas, depths, and volume of soil from within the wetland. The proposed sampling presented in this work plan is intended to provide sufficient delineation for the JPA.

Previous Sampling and Interim Excavation Cleanup:

The following presents a brief summary of sampling and interim excavation cleanup activities conducted at the site. A preliminary evaluation of the results is presented at the end of this summary.

MSBA Soil Sample "Composite of S1 and S2":

On October 23rd, 2024, MSBA conducted an initial site visit and collected samples ***S1-0.5*** and ***S2-0.5*** from near-surface soil located at an area to the southeast where free product was most prevalent on shallow perched groundwater and the OWS discharge point, respectively. The samples were collected to determine the primary constituents of potential concern (COPCs) and for soil disposal authorization. Field screening using a photoionization detector (PID) identified these areas as the highest concentrations of PHCs in the soil exposed at the time. The two samples were composited by the laboratory and analyzed for the following COPCs.

- Diesel using method NWTPH-Dx
- Gasoline using method NWTPH-Gx
- Volatile organic compounds (VOCs), including chlorinated solvents, using method 8260D
- RCRA 8 Metals using method 6010D

Diesel and oil were detected at a combined concentration of 27,000 ppm. Gasoline was detected at a concentration of 2,900 ppm, but was attributed to overlap from diesel-range hydrocarbons. VOCs, barium, and chromium were detected in the composite sample. A copy of the laboratory analytical report is presented in Attachment B, and selected results are shown on Figure 2.

Republic Services Free Product Sample "Creek Water":

MSBA also obtained lab results for a free product sample that Republic Services collected from the wetland on October 17, 2024. MSBA requested the addition of RCRA 8 metals to the lab report in addition to previous analyses for diesel, oil, VOCs, and PCBs. Diesel was detected at a concentration of 1,080,000 ppm, and the remaining constituents were not detected. However, the reporting limits for the remaining constituents were elevated due to the high diesel concentration. A copy of the laboratory report is presented in Attachment B.

MSBA Interim Excavation Cleanup and Confirmation Soil Sampling (S3-1 through S9-1):

On November 7th and 8th, 2024, MSBA directed excavation cleanup activities from the gravel area north of the wetland in general accordance with the DEQ-approved work plan titled Work Plan for Interim Excavation Cleanup and Storm Drain Repair, dated November 5th, 2024. The cleanup targeted shallow soil containing the highest concentrations of PHCs in the gravel area near the OWS discharge. An estimated 200 cubic yards of soil containing diesel was excavated to an approximate depth of 1 foot below surface grade (bsg), as shown on Figure 2. The soil was stockpiled near the northeast property boundary pending disposal at the Wasco County Landfill.

Following the excavation, PHCs remained in the soil. Confirmation soil samples ***S3-1***, ***S4-1***, ***S5-1***, ***S6-1***, ***S7-1***, ***S8-1***, and ***S9-1*** were collected from the south and east sidewalls at a depth of 1 foot bsg and analyzed for diesel and oil. Diesel and oil were detected in all samples at concentrations ranging from 22.9 ppm (***S8-1***) to 6,630 ppm (***S9-1***). A copy of the laboratory analytical report is presented in Attachment B, and selected results are shown on Figure 2.

MSBA Ponded Water Sampling (Baker Tank H2O):

Water ponded within the interim excavation cleanup area and was pumped into a Baker tank to stop runoff from entering the wetland area. On November 26, 2024, MSBA collected a water sample from a 21,000-gallon Baker tank. The water sample was submitted for analysis of diesel, oil, VOCs, PAHs, and RCRA 8 metals. Diesel was detected at a concentration of 1,400 ppb, and several VOCs, PAHs, and barium were detected. A copy of the laboratory report is presented in Attachment B.

Sample Results and Primary Constituents of Potential Concern:

MSBA completed a preliminary evaluation of the soil, water, and product sample results and determined that the primary COPCs are:

- Diesel and Oil
- VOCs: Benzene; toluene; ethylbenzene; xylenes; naphthalene; 1,2,4-trimethylbenzene; 1,3,5-trimethylbenzene

Due to elevated reporting limits and a limited number of samples analyzed, the remaining COPCs, gasoline, chlorinated VOCs, PAHs, and metals arsenic, chromium, copper, and lead, will be retained for further evaluation. Although gasoline was detected and will be further evaluated, at

this time, it appears that the detections are due to overlap from diesel and oil. Chlorinated VOCs such as PCE and TCE also do not appear to be present, but additional samples will be analyzed to confirm.

Proposed Wetland Sampling Strategy and Anticipated Locations:

MSBA anticipates that nine to fifteen soil samples and two sediment samples will be collected from the area designated as a stream or wetland. The proposed approximate sample locations are presented on the attached Proposed Wetland Sample Locations Map (Figure 2). The sample locations will be documented in the field using a handheld Trimble Global Positioning System (GPS) unit. The sampling activities will be performed in general accordance with the MSBA Field Methods and Procedures (FM&P) presented in Attachment C. Quality control samples such as field duplicates, equipment blanks, trip blanks, etc., will be collected in accordance with the Quality Control Plan presented in Attachment D.

The sample locations are primarily situated on the embankment above the water level. The highest observed concentrations, if present, are expected to be near the water level at the time of the release. Note that sample locations WS3 and WS6 are associated explicitly with previously observed product/water seeps or flows into the wetland area (Figure 2). These areas are not currently contributing product or water to the wetland. In addition, samples will be collected for analysis from the identified "Palustrine Forested Wetland" and the "Overland Stormwater Drainage" areas, as shown on Figure 2. The remaining sample locations are distributed along the bank of the wetland area for requisite coverage and may be adjusted based on field screening. The bank of the wetland will be thoroughly field screened using observations and PID readings from the high-water line to the water level at the time of the sampling event. Any discrete areas identified with high levels of PHCs based on field screening will be sampled for analysis. Vertical delineation samples may also be collected, as warranted, at locations where high PHC concentrations are observed. If bank samples WS3 and WS6 are not significantly impacted, the bank samples to the west of sample WS3 and east of sample WS6 may be excluded.

If no discrete areas of high or elevated PHC concentrations are observed, the wetland samples will be collected at the approximate locations illustrated on Figure 2. The soil conditions between and around the sample locations will be thoroughly field screened and documented based on observations and PID readings.

If PHCs are observed beyond the current network of proposed samples, the investigation/sampling area will be extended, as warranted, until PHCs are no longer observed. Two sediment sample locations (Sed 1 and Sed 2) are currently proposed adjacent to the two areas where water/product

incursion (WS3 and WS6) was observed at the time of the release. The sediment samples will be collected from the bottom of the channel using a hand auger. Two surface water samples (SW1 and SW2) will also be collected at the approximate locations of sediment samples Sed 1 and Sed 2.

Laboratory Analytical Strategy:

- All soil, sediment, and surface water samples will be submitted for analysis of diesel and oil using method NWTPH-Dx. A minimum of two of the most likely impacted bank samples will be analyzed with and without a silica gel cleanup to evaluate potential non-petroleum polar organics. The silica gel cleanup will not be completed using a sulfuric acid step.

- All proposed soil samples will be submitted for additional analyses, such as:
    - Gasoline using method NWTPH-Gx
    - Volatile organic compounds (VOCs) using method 8260D (soil and sediment samples will be collected in EPA Method 5035 Closed-System Purge and Trap Extraction VOAs)
    - Polycyclic aromatic hydrocarbons (PAHs) using method 8270E-SIM
    - Total metals arsenic, chromium, copper, and lead using method 6010D (TCLP follow-ups, as warranted)
    - Total organic carbon using method SW-846 9060 or standard method 5310B

If additional samples are collected and analyzed for further delineation, the analyses may be limited based on the initial sample results.

Reporting and Schedule:

MSBA will prepare a report summarizing the sample results, including figures, tables, and a comparison of the results to occupational risk-based concentrations (RBCs) and ecological screening levels. The most stringent RBCs and ecological screening levels are presented in Attachment D (Quality Control Tables -2 through 4). The report will be submitted to DEQ and included in the Joint Permit Application. MSBA will also complete an ecological risk assessment and compare the sample results to the ecological screening levels.

The proposed sampling will be scheduled as soon as this work plan is approved. Please let us know if you have any questions or need additional information.

Remarks and Signature:

The information/conclusions contained in this plan were arrived at in accordance with currently accepted professional geologic and environmental practices at this time and location. No warranties are intended or implied. This plan was prepared solely for the Lawrence Oil Company. Martin S. Burck Associates, Inc. is not responsible for the independent interpretations, conclusions, or actions of others derived from or based on the information presented herein.

Information and opinions presented in this plan are based on the collection and review of data from limited portions of the site, subsurface, and surroundings. Martin S. Burck Associates, Inc. is not responsible for conditions or specific portions of the site that are not investigated, for conditions that are not reported or properly presented, and for future activities or investigations that may alter the current condition or understanding of the site.

Please contact me at (541) 387-4422 if you have any questions regarding this report.

Sincerely,
Martin S. Burck Associates, Inc.

Martin S. Burck, LG/RG
Licensed/Registered Geologist OR, WA, CA

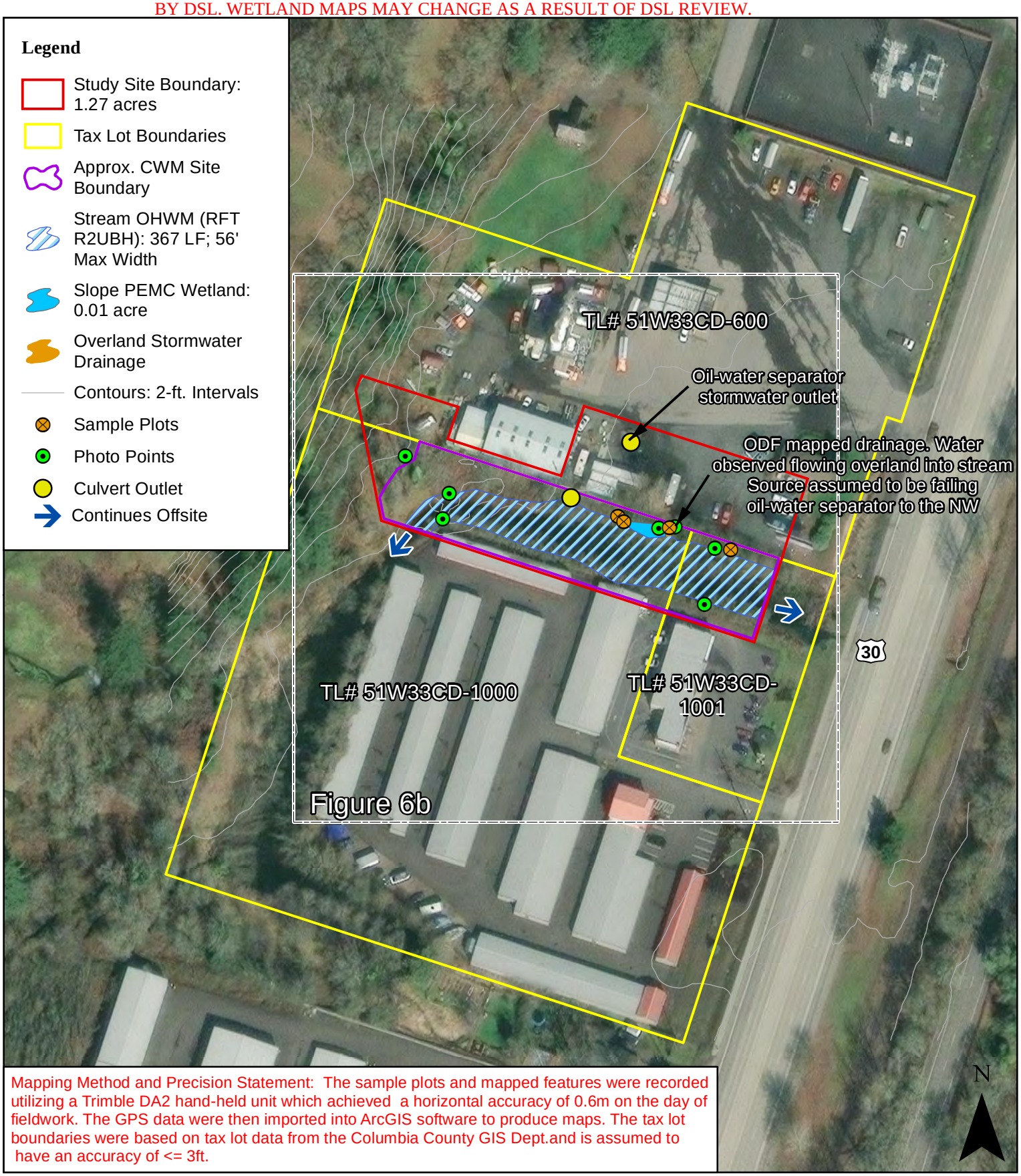
July 25, 2025
Date

Attachment A Figure 1 - Wetland Delineation Map
Figure 2 – Proposed Wetland Sample Locations
Attachment B Laboratory Analytical Reports
Attachment C MSBA Field Methods and Procedures
Attachment D Quality Control Plan

Attachment A

Figure 1 Wetland Delineation Map
Figure 2 Proposed Wetland Sample Locations

NOTICE: REPORTS ARE CONSIDERED DRAFT DOCUMENTS UNTIL REVIEW IS COMPLETED BY DSL. WETLAND MAPS MAY CHANGE AS A RESULT OF DSL REVIEW.



Mapping Method and Precision Statement: The sample plots and mapped features were recorded utilizing a Trimble DA2 hand-held unit which achieved a horizontal accuracy of 0.6m on the day of fieldwork. The GPS data were then imported into ArcGIS software to produce maps. The tax lot boundaries were based on tax lot data from the Columbia County GIS Dept.and is assumed to have an accuracy of <= 3ft.

Date: 3/6/2025

Data Source: ESRI, 2025; Columbia County GIS Dept., DOGAMI, 2005

Figure 1 Wetland Delineation Map - Overview

Schott & Associates
Ecologists & Wetland Specialists
P.O. Box 589 | Aurora, OR 97002 | (503) 678-6007

N Columbia Highway Project Site: S&A # 3226

0 75 150 300 Feet

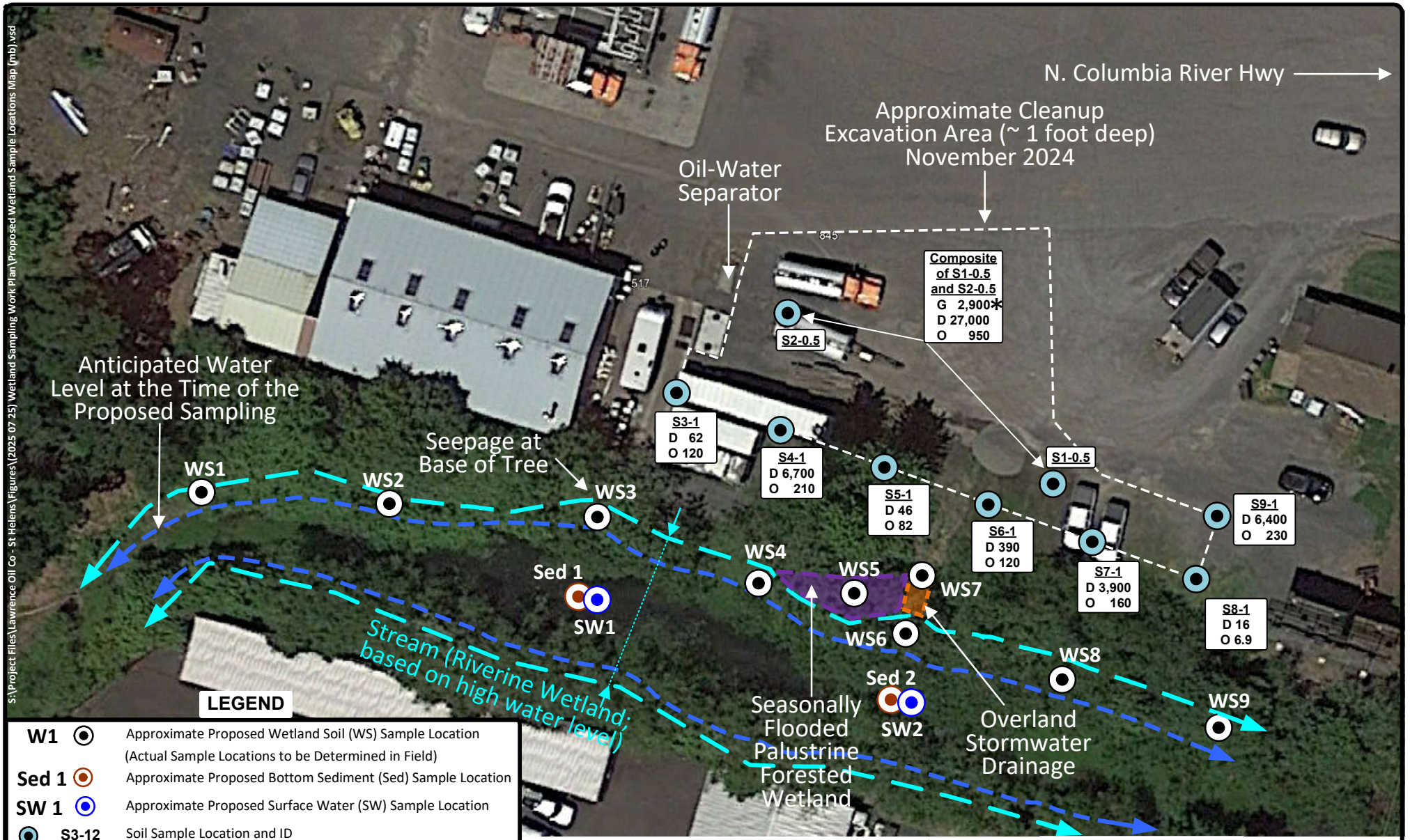


FIGURE 2

PROPOSED WETLAND SAMPLE LOCATIONS

Lawrence Oil Company Bulk Plant
845 N. Columbia River Hwy
St Helens, OR

Attachment B

Laboratory Analytical Reports

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Josh Owen
Martin S Burck Associates
200 North Wasco Ct
Hood River, Oregon 97031

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JOB DESCRIPTION

855 Columbia R Hwy

JOB NUMBER

590-27836-1

Eurofins Spokane
11922 East 1st Ave
Spokane WA 99206

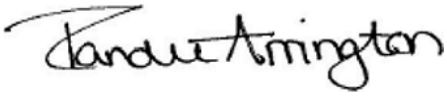
See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization



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Revision 1

Authorized for release by
Randee Arrington, Business Unit Manager
Randee.Arrington@et.eurofinsus.com
(509)924-9200

Table of Contents

Job Narrative
590-27836-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Revision
The report being provided is a revision of the original report sent on 11/5/2024. The report (revision 1) is being revised due to: added 8260 full list analytes to final report per the clients request.

Receipt
The sample was received on 10/31/2024 10:59 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.5°C.

Gasoline Range Organics
Method NWTPH_Gx_MS: For the following samples, detected hydrocarbons in the gasoline range appear to be due to diesel overlap. Composite of S1 and S2 (590-27836-1)

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

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

Hydrocarbons
Method NWTPH_Dx: Surrogate recovery for the following samples were outside control limits: Composite of S1 and S2 (590-27836-1). Evidence of matrix interference due to high target analytes is present; therefore, re-extraction and/or re-analysis was not performed.

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

Metals
Method 6010D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 590-50644 and analytical batch 590-50658 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

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

Sample Summary

Client: Martin S Burck Associates
Project/Site: 855 Columbia R Hwy

Job ID: 590-27836-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-27836-1	Composite of S1 and S2	Solid	10/23/24 15:17	10/31/24 10:59

Definitions/Glossary

Client: Martin S Burck Associates
Project/Site: 855 Columbia R Hwy

Job ID: 590-27836-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Client: Martin S Burck Associates
Project/Site: 855 Columbia R Hwy

Job ID: 590-27836-1

Client Sample ID: Composite of S1 and S2
Date Collected: 10/23/24 15:17
Date Received: 10/31/24 10:59

Lab Sample ID: 590-27836-1
Matrix: Solid
Percent Solids: 88.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.2	0.23	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,1,1-Trichloroethane	ND		1.2	0.21	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,1,2,2-Tetrachloroethane	ND		1.2	0.35	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,1,2-Trichloroethane	ND		1.2	0.43	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,1-Dichloroethane	ND		1.2	0.32	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,1-Dichloroethene	ND		1.2	0.41	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,1-Dichloropropene	ND		1.2	0.21	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,2,3-Trichlorobenzene	ND		1.2	0.41	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,2,3-Trichloropropane	ND		2.4	0.45	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,2,4-Trichlorobenzene	ND		1.2	0.23	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,2,4-Trimethylbenzene	**35**		1.2	0.28	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,2-Dibromo-3-Chloropropane	ND		6.1	0.73	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,2-Dichlorobenzene	ND		1.2	0.28	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,2-Dichloroethane	ND		1.2	0.27	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,2-Dichloropropane	ND		1.5	0.37	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,3,5-Trimethylbenzene	**14**		1.2	0.39	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,3-Dichlorobenzene	ND		1.2	0.15	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,3-Dichloropropane	ND		1.2	0.36	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
1,4-Dichlorobenzene	ND		1.2	0.25	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
2,2-Dichloropropane	ND		1.2	0.30	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
2-Chlorotoluene	ND		1.2	0.20	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
4-Chlorotoluene	ND		1.2	0.28	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Benzene	ND		0.24	0.12	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Bromobenzene	ND		1.2	0.27	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Bromoform	ND		2.4	0.23	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Bromomethane	ND		6.1	0.40	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Carbon tetrachloride	ND		1.2	0.13	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Chlorobenzene	ND		1.2	0.25	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Chlorobromomethane	ND		1.2	0.49	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Chlorodibromomethane	ND		2.4	0.20	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Chloroethane	ND		2.4	0.69	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Chloroform	ND		1.2	0.29	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Chloromethane	ND		6.1	0.51	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
cis-1,2-Dichloroethene	ND		1.2	0.25	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
cis-1,3-Dichloropropene	ND		1.2	0.25	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Dibromomethane	ND		1.2	0.27	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Dichlorobromomethane	ND		1.2	0.76	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Dichlorodifluoromethane	ND		1.2	0.34	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Ethylbenzene	**2.1**		1.2	0.20	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Ethylene Dibromide	ND		1.2	0.41	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Hexachlorobutadiene	ND		1.2	0.20	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Isopropylbenzene	**1.3**		1.2	0.38	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
m,p-Xylene	**19**		4.9	0.35	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Methyl tert-butyl ether	ND		0.61	0.36	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Methylene Chloride	ND		4.3	2.4	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Naphthalene	**4.3**		2.4	0.34	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
n-Butylbenzene	**5.3**		1.2	0.33	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
N-Propylbenzene	**4.0**		1.2	0.32	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
o-Xylene	**11**		2.4	0.28	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10

Client Sample ID: Composite of S1 and S2

Date Collected: 10/23/24 15:17
Date Received: 10/31/24 10:59

Lab Sample ID: 590-27836-1
Matrix: Solid
Percent Solids: 88.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	**1.9**		1.2	0.23	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Styrene	ND		1.2	0.29	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
tert-Butylbenzene	**0.26**	**J**	1.2	0.24	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Tetrachloroethene	ND		0.49	0.21	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Toluene	**0.72**	**J**	1.2	0.55	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
trans-1,2-Dichloroethene	ND		1.2	0.28	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
trans-1,3-Dichloropropene	ND		1.2	0.32	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Trichloroethene	ND		0.30	0.092	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Vinyl chloride	ND		0.73	0.25	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10
Xylenes, Total	**30**		7.3	0.63	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*79 - 124*	*10/31/24 13:13*	*10/31/24 18:55*	*10*
4-Bromofluorobenzene (Surr)	*113*		*66 - 129*	*10/31/24 13:13*	*10/31/24 18:55*	*10*
Dibromofluoromethane (Surr)	*101*		*80 - 120*	*10/31/24 13:13*	*10/31/24 18:55*	*10*
Toluene-d8 (Surr)	*100*		*80 - 120*	*10/31/24 13:13*	*10/31/24 18:55*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**2900**		61	22	mg/Kg	☼	10/31/24 13:13	10/31/24 18:55	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*41.5 - 162*	*10/31/24 13:13*	*10/31/24 18:55*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**27000**		560	230	mg/Kg	☼	10/31/24 12:03	11/01/24 11:46	50
Residual Range Organics (RRO) (C25-C36)	**950**	**J**	1400	280	mg/Kg	☼	10/31/24 12:03	11/01/24 11:46	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*647*	*S1+*	*50 - 150*	*10/31/24 12:03*	*11/01/24 11:46*	*50*
n-Triacontane-d62	*161*	*S1+*	*50 - 150*	*10/31/24 12:03*	*11/01/24 11:46*	*50*

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		11	4.2	mg/Kg	☼	11/04/24 10:59	11/04/24 15:26	10
Barium	**48**		11	2.8	mg/Kg	☼	11/04/24 10:59	11/04/24 15:26	10
Cadmium	ND		8.4	0.50	mg/Kg	☼	11/04/24 10:59	11/04/24 15:26	10
Chromium	**4.9**	**J**	11	1.5	mg/Kg	☼	11/04/24 10:59	11/04/24 15:26	10
Lead	ND	F1	25	12	mg/Kg	☼	11/04/24 10:59	11/04/24 15:26	10
Selenium	ND		42	25	mg/Kg	☼	11/04/24 10:59	11/04/24 15:26	10
Silver	ND		11	2.4	mg/Kg	☼	11/04/24 10:59	11/04/24 15:26	10

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		47	12	ug/Kg	☼	11/04/24 10:51	11/04/24 17:00	1

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

Lab Sample ID: MB 590-50602/1-A
Matrix: Solid
Analysis Batch: 50609

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50602

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.10	0.019	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,1,1-Trichloroethane	ND		0.10	0.017	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,1,2,2-Tetrachloroethane	ND		0.10	0.029	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,1,2-Trichloroethane	ND		0.10	0.035	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,1-Dichloroethane	ND		0.10	0.026	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,1-Dichloroethene	ND		0.10	0.034	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,1-Dichloropropene	ND		0.10	0.017	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,2,3-Trichlorobenzene	ND		0.10	0.033	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,2,3-Trichloropropane	ND		0.20	0.037	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,2,4-Trichlorobenzene	ND		0.10	0.019	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,2,4-Trimethylbenzene	ND		0.10	0.023	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,2-Dibromo-3-Chloropropane	ND		0.50	0.060	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,2-Dichlorobenzene	ND		0.10	0.023	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,2-Dichloroethane	ND		0.10	0.022	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,2-Dichloropropane	ND		0.12	0.030	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,3,5-Trimethylbenzene	ND		0.10	0.032	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,3-Dichlorobenzene	ND		0.10	0.013	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,3-Dichloropropane	ND		0.10	0.030	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
1,4-Dichlorobenzene	ND		0.10	0.021	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
2,2-Dichloropropane	ND		0.10	0.024	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
2-Chlorotoluene	ND		0.10	0.016	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
4-Chlorotoluene	ND		0.10	0.023	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Benzene	ND		0.020	0.010	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Bromobenzene	ND		0.10	0.022	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Bromoform	ND		0.20	0.019	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Bromomethane	ND		0.50	0.033	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Carbon tetrachloride	ND		0.10	0.011	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Chlorobenzene	ND		0.10	0.021	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Chlorobromomethane	ND		0.10	0.040	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Chlorodibromomethane	ND		0.20	0.016	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Chloroethane	ND		0.20	0.056	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Chloroform	ND		0.10	0.024	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Chloromethane	ND		0.50	0.042	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
cis-1,2-Dichloroethene	ND		0.10	0.021	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
cis-1,3-Dichloropropene	ND		0.10	0.020	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Dibromomethane	ND		0.10	0.022	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Dichlorobromomethane	ND		0.10	0.062	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Dichlorodifluoromethane	ND		0.10	0.028	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Ethylbenzene	ND		0.10	0.016	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Ethylene Dibromide	ND		0.10	0.034	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Hexachlorobutadiene	ND		0.10	0.016	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Isopropylbenzene	ND		0.10	0.031	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
m,p-Xylene	ND		0.40	0.029	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Methyl tert-butyl ether	ND		0.050	0.030	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Methylene Chloride	ND		0.35	0.20	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Naphthalene	ND		0.20	0.028	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
n-Butylbenzene	ND		0.10	0.028	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
N-Propylbenzene	ND		0.10	0.026	mg/Kg		10/31/24 13:13	10/31/24 15:45	1

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

Lab Sample ID: MB 590-50602/1-A
Matrix: Solid
Analysis Batch: 50609

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50602

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.20	0.023	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
sec-Butylbenzene	ND		0.10	0.019	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Styrene	ND		0.10	0.024	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
tert-Butylbenzene	ND		0.10	0.020	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Tetrachloroethene	ND		0.040	0.018	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Toluene	ND		0.10	0.045	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
trans-1,2-Dichloroethene	ND		0.10	0.023	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
trans-1,3-Dichloropropene	ND		0.10	0.026	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Trichloroethene	ND		0.025	0.0076	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Vinyl chloride	ND		0.060	0.020	mg/Kg		10/31/24 13:13	10/31/24 15:45	1
Xylenes, Total	ND		0.60	0.052	mg/Kg		10/31/24 13:13	10/31/24 15:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*79 - 124*	*10/31/24 13:13*	*10/31/24 15:45*	*1*
4-Bromofluorobenzene (Surr)	*103*		*66 - 129*	*10/31/24 13:13*	*10/31/24 15:45*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*	*10/31/24 13:13*	*10/31/24 15:45*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*	*10/31/24 13:13*	*10/31/24 15:45*	*1*

Lab Sample ID: LCS 590-50602/2-A
Matrix: Solid
Analysis Batch: 50609

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50602

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	0.500	0.540		mg/Kg		108	76 - 139
1,1,1-Trichloroethane	0.500	0.501		mg/Kg		100	59 - 150
1,1,2,2-Tetrachloroethane	0.500	0.456		mg/Kg		91	66 - 130
1,1,2-Trichloroethane	0.500	0.531		mg/Kg		106	74 - 131
1,1-Dichloroethane	0.500	0.483		mg/Kg		97	79 - 133
1,1-Dichloroethene	0.500	0.372		mg/Kg		74	50 - 150
1,1-Dichloropropene	0.500	0.530		mg/Kg		106	80 - 131
1,2,3-Trichlorobenzene	0.500	0.472		mg/Kg		94	72 - 130
1,2,3-Trichloropropane	0.500	0.440		mg/Kg		88	61 - 138
1,2,4-Trichlorobenzene	0.500	0.492		mg/Kg		98	73 - 129
1,2,4-Trimethylbenzene	0.500	0.551		mg/Kg		110	78 - 128
1,2-Dibromo-3-Chloropropane	0.500	0.432	J	mg/Kg		86	49 - 143
1,2-Dichlorobenzene	0.500	0.522		mg/Kg		104	80 - 121
1,2-Dichloroethane	0.500	0.452		mg/Kg		90	77 - 126
1,2-Dichloropropane	0.500	0.479		mg/Kg		96	71 - 136
1,3,5-Trimethylbenzene	0.500	0.538		mg/Kg		108	76 - 130
1,3-Dichlorobenzene	0.500	0.537		mg/Kg		107	80 - 121
1,3-Dichloropropane	0.500	0.512		mg/Kg		102	73 - 125
1,4-Dichlorobenzene	0.500	0.522		mg/Kg		104	80 - 122
2,2-Dichloropropane	0.500	0.506		mg/Kg		101	50 - 150
2-Chlorotoluene	0.500	0.502		mg/Kg		100	73 - 131
4-Chlorotoluene	0.500	0.487		mg/Kg		97	76 - 128
Benzene	0.500	0.532		mg/Kg		106	80 - 128
Bromobenzene	0.500	0.481		mg/Kg		96	70 - 129
Bromoform	0.500	0.515		mg/Kg		103	49 - 150

Client: Martin S Burck Associates
Project/Site: 855 Columbia R Hwy

Job ID: 590-27836-1

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

Lab Sample ID: LCS 590-50602/2-A
Matrix: Solid
Analysis Batch: 50609

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50602

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	0.500	0.396	J	mg/Kg		79	39 - 150
Carbon tetrachloride	0.500	0.500		mg/Kg		100	61 - 150
Chlorobenzene	0.500	0.558		mg/Kg		112	80 - 124
Chlorobromomethane	0.500	0.426		mg/Kg		85	67 - 138
Chlorodibromomethane	0.500	0.508		mg/Kg		102	70 - 132
Chloroethane	0.500	0.499		mg/Kg		100	38 - 150
Chloroform	0.500	0.491		mg/Kg		98	80 - 131
Chloromethane	0.500	0.412	J	mg/Kg		82	29 - 150
cis-1,2-Dichloroethene	0.500	0.469		mg/Kg		94	78 - 132
cis-1,3-Dichloropropene	0.500	0.489		mg/Kg		98	71 - 123
Dibromomethane	0.500	0.481		mg/Kg		96	76 - 121
Dichlorobromomethane	0.500	0.480		mg/Kg		96	79 - 122
Dichlorodifluoromethane	0.500	0.419		mg/Kg		84	14 - 120
Ethylbenzene	0.500	0.546		mg/Kg		109	80 - 127
Ethylene Dibromide	0.500	0.533		mg/Kg		107	76 - 126
Hexachlorobutadiene	0.500	0.545		mg/Kg		109	75 - 136
Isopropylbenzene	0.500	0.553		mg/Kg		111	79 - 134
m,p-Xylene	0.500	0.538		mg/Kg		108	80 - 131
Methyl tert-butyl ether	0.500	0.408		mg/Kg		82	69 - 132
Methylene Chloride	0.500	0.340	J	mg/Kg		68	42 - 150
Naphthalene	0.500	0.449		mg/Kg		90	57 - 131
n-Butylbenzene	0.500	0.502		mg/Kg		100	75 - 128
N-Propylbenzene	0.500	0.513		mg/Kg		103	71 - 136
o-Xylene	0.500	0.531		mg/Kg		106	78 - 128
sec-Butylbenzene	0.500	0.513		mg/Kg		103	78 - 132
Styrene	0.500	0.549		mg/Kg		110	76 - 128
tert-Butylbenzene	0.500	0.507		mg/Kg		101	74 - 129
Tetrachloroethene	0.500	0.589		mg/Kg		118	76 - 142
Toluene	0.500	0.539		mg/Kg		108	79 - 130
trans-1,2-Dichloroethene	0.500	0.385		mg/Kg		77	75 - 140
trans-1,3-Dichloropropene	0.500	0.499		mg/Kg		100	68 - 133
Trichloroethene	0.500	0.570		mg/Kg		114	80 - 129
Vinyl chloride	0.500	0.372		mg/Kg		74	38 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*85*		*79 - 124*
4-Bromofluorobenzene (Surr)	*96*		*66 - 129*
Dibromofluoromethane (Surr)	*93*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

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

Lab Sample ID: MB 590-50602/1-A
Matrix: Solid
Analysis Batch: 50610

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50602

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		5.0	1.8	mg/Kg		10/31/24 13:13	10/31/24 15:45	1

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

Lab Sample ID: MB 590-50602/1-A
Matrix: Solid
Analysis Batch: 50610

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50602

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*41.5 - 162*	*10/31/24 13:13*	*10/31/24 15:45*	*1*

Lab Sample ID: LCS 590-50602/3-A
Matrix: Solid
Analysis Batch: 50610

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50602

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline	50.0	45.2		mg/Kg		90	74.4 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*41.5 - 162*

Lab Sample ID: 590-27783-B-2-A DU
Matrix: Solid
Analysis Batch: 50610

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 50602

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Gasoline	4.2	J	ND		mg/Kg	☼	NC	32.3

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*41.5 - 162*

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

Lab Sample ID: MB 590-50599/1-A
Matrix: Solid
Analysis Batch: 50600

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50599

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10	4.2	mg/Kg		10/31/24 12:03	10/31/24 22:20	1
Residual Range Organics (RRO) (C25-C36)	ND		25	5.0	mg/Kg		10/31/24 12:03	10/31/24 22:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*82*		*50 - 150*	*10/31/24 12:03*	*10/31/24 22:20*	*1*
n-Triacontane-d62	*95*		*50 - 150*	*10/31/24 12:03*	*10/31/24 22:20*	*1*

Lab Sample ID: LCS 590-50599/2-A
Matrix: Solid
Analysis Batch: 50600

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50599

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics (DRO) (C10-C25)	66.7	57.1		mg/Kg		86	50 - 150
Residual Range Organics (RRO) (C25-C36)	66.7	66.6		mg/Kg		100	50 - 150

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

Lab Sample ID: LCS 590-50599/2-A
Matrix: Solid
Analysis Batch: 50600

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50599

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*88*		*50 - 150*
n-Triacontane-d62	*98*		*50 - 150*

Lab Sample ID: 590-27831-A-2-B DU
Matrix: Solid
Analysis Batch: 50600

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 50599

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)	5.6	J		ND		mg/Kg	☼			NC	40
Residual Range Organics (RRO) (C25-C36)	58			28.4	F3	mg/Kg	☼			68	40

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
o-Terphenyl	*81*		*50 - 150*
n-Triacontane-d62	*91*		*50 - 150*

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 590-50644/2-A
Matrix: Solid
Analysis Batch: 50658

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50644

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.3	0.50	mg/Kg		11/04/24 10:58	11/04/24 15:21	1
Barium	ND		1.3	0.34	mg/Kg		11/04/24 10:58	11/04/24 15:21	1
Cadmium	ND		1.0	0.059	mg/Kg		11/04/24 10:58	11/04/24 15:21	1
Chromium	ND		1.3	0.18	mg/Kg		11/04/24 10:58	11/04/24 15:21	1
Lead	ND		3.0	1.5	mg/Kg		11/04/24 10:58	11/04/24 15:21	1
Selenium	ND		5.0	3.0	mg/Kg		11/04/24 10:58	11/04/24 15:21	1
Silver	ND		1.3	0.29	mg/Kg		11/04/24 10:58	11/04/24 15:21	1

Lab Sample ID: LCS 590-50644/1-A
Matrix: Solid
Analysis Batch: 50658

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50644

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			100	87.4		mg/Kg		87	80 - 120		
Barium			100	99.6		mg/Kg		100	80 - 120		
Cadmium			50.0	43.4		mg/Kg		87	80 - 120		
Chromium			50.0	51.4		mg/Kg		103	80 - 120		
Lead			50.0	47.6		mg/Kg		95	80 - 120		
Selenium			100	89.9		mg/Kg		90	80 - 120		
Silver			5.00	5.11		mg/Kg		102	80 - 120		

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: 590-27836-1 MS
Matrix: Solid
Analysis Batch: 50658

Client Sample ID: Composite of S1 and S2
Prep Type: Total/NA
Prep Batch: 50644

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	ND		110	113		mg/Kg	☼	103	75 - 125
Barium	48		110	186		mg/Kg	☼	125	75 - 125
Cadmium	ND		54.9	57.5		mg/Kg	☼	105	75 - 125
Chromium	4.9	J	54.9	66.2		mg/Kg	☼	112	75 - 125
Lead	ND	F1	54.9	71.4	F1	mg/Kg	☼	130	75 - 125
Selenium	ND		110	124		mg/Kg	☼	112	75 - 125
Silver	ND		5.49	6.67	J	mg/Kg	☼	121	75 - 125

Lab Sample ID: 590-27836-1 MSD
Matrix: Solid
Analysis Batch: 50658

Client Sample ID: Composite of S1 and S2
Prep Type: Total/NA
Prep Batch: 50644

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	ND		112	107		mg/Kg	☼	95	75 - 125	6	20
Barium	48		112	174		mg/Kg	☼	112	75 - 125	6	20
Cadmium	ND		56.0	53.9		mg/Kg	☼	96	75 - 125	7	20
Chromium	4.9	J	56.0	63.3		mg/Kg	☼	104	75 - 125	4	20
Lead	ND	F1	56.0	69.1		mg/Kg	☼	123	75 - 125	3	20
Selenium	ND		112	114		mg/Kg	☼	102	75 - 125	8	20
Silver	ND		5.60	5.90	J	mg/Kg	☼	105	75 - 125	12	20

Lab Sample ID: 590-27836-1 DU
Matrix: Solid
Analysis Batch: 50658

Client Sample ID: Composite of S1 and S2
Prep Type: Total/NA
Prep Batch: 50644

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	ND		ND		mg/Kg	☼	NC	20
Barium	48		46.3		mg/Kg	☼	4	20
Cadmium	ND		ND		mg/Kg	☼	NC	20
Chromium	4.9	J	4.34	J	mg/Kg	☼	12	20
Lead	ND	F1	ND		mg/Kg	☼	NC	20
Selenium	ND		ND		mg/Kg	☼	NC	20
Silver	ND		ND		mg/Kg	☼	NC	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 590-50643/2-A
Matrix: Solid
Analysis Batch: 50657

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50643

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		50	12	ug/Kg		11/04/24 10:51	11/04/24 16:42	1

Lab Sample ID: LCS 590-50643/1-A
Matrix: Solid
Analysis Batch: 50657

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50643

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	200	200		ug/Kg		100	80 - 120

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: 580-144796-A-15-D MS
Matrix: Solid
Analysis Batch: 50657

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 50643

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	51		220	260		ug/Kg	☼	95	80 - 120

Lab Sample ID: 580-144796-A-15-E MSD
Matrix: Solid
Analysis Batch: 50657

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 50643

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	51		237	274		ug/Kg	☼	94	80 - 120	5	20

Lab Sample ID: 580-144796-A-15-C DU
Matrix: Solid
Analysis Batch: 50657

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 50643

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	51		48.1		ug/Kg	☼	5	20

Lab Chronicle

Client: Martin S Burck Associates
Project/Site: 855 Columbia R Hwy

Job ID: 590-27836-1

Client Sample ID: Composite of S1 and S2

Lab Sample ID: 590-27836-1
Date Collected: 10/23/24 15:17
Matrix: Solid
Date Received: 10/31/24 10:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			50603	10/31/24 13:46	MRV	EET SPK

Client Sample ID: Composite of S1 and S2

Lab Sample ID: 590-27836-1
Date Collected: 10/23/24 15:17
Matrix: Solid
Date Received: 10/31/24 10:59
Percent Solids: 88.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			10.432 g	10 mL	50602	10/31/24 13:13	JSP	EET SPK
Total/NA	Analysis	8260D		10	0.86 mL	43 mL	50609	10/31/24 18:55	JSP	EET SPK
Total/NA	Prep	5035			10.432 g	10 mL	50602	10/31/24 13:13	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		10	0.86 mL	43 mL	50610	10/31/24 18:55	JSP	EET SPK
Total/NA	Prep	3550C			15.19 g	5 mL	50599	10/31/24 12:03	MRV	EET SPK
Total/NA	Analysis	NWTPH-Dx		50	1 mL	1 mL	50600	11/01/24 11:46	NMI	EET SPK
Total/NA	Prep	3050B			1.34 g	50 mL	50644	11/04/24 10:59	AMB	EET SPK
Total/NA	Analysis	6010D		10			50658	11/04/24 15:26	AMB	EET SPK
Total/NA	Prep	7471B			0.60 g	50 mL	50643	11/04/24 10:51	AMB	EET SPK
Total/NA	Analysis	7471B		1			50657	11/04/24 17:00	AMB	EET SPK

Laboratory References:

EET SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: Martin S Burck Associates
Project/Site: 855 Columbia R Hwy

Job ID: 590-27836-1

Laboratory: Eurofins Spokane

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4137	12-08-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Martin S Burck Associates
Project/Site: 855 Columbia R Hwy

Job ID: 590-27836-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	EET SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	EET SPK
6010D	Metals (ICP)	SW846	EET SPK
7471B	Mercury (CVAA)	SW846	EET SPK
Moisture	Percent Moisture	EPA	EET SPK
3050B	Preparation, Metals	SW846	EET SPK
3550C	Ultrasonic Extraction	SW846	EET SPK
5035	Closed System Purge and Trap	SW846	EET SPK
7471B	Preparation, Mercury	SW846	EET SPK

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Eurofins TestAmerica, Spokane
11922 E 1st Avenue

Spokane WA 99206-5302
phone 509.924 9200 fax 509.924.9290

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager	Site Contact:	Date:	COC No:
Your Company Name here: Martin S. Burck Assoc.	Email: jowen@msbaenvironmental.com	Lab Contact.	Carrier:	1 of 1 COCs
Address: 200 N Wasco Ct	Tel/Fax: 541-387-4422			Sampler:
City/State/Zip: Hood River, OR 97031	Analysis Turnaround Time			For Lab Use Only:
541-387-4422 Phone	☐ CALENDAR DAYS ☐ WORKING DAYS			Walk-in Client.
541 387 4813 FAX	TAT if different from Below ____			Lab Sampling.
Project Name: 855 Columbia R. Hwy	☐ 2 weeks			
Site: 855 Columbia R. Hwy	☐ 1 week			Job / SDG No
PO# 855 Columbia R. Hwy	☐ 2 days			
	☑ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	NWTPH-Gx	NWTPH-Dx	8260D - BTEX	RCRA 8 metals	Sample Specific Notes
Composite of S1 and S2	10/23/24	15:17	Comp	Soil	3			✓	✓	✓	✓	

590-27836 Chain of Custody

Preservation Used. 1= Ice, 2= HCl, 3= H_2SO_4, 4=HNO_3, 5=NaOH, 6= Other ____

Possible Hazard Identification
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments 1-day TAT!

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No. | Cooler Temp (°C) Obs'd. 2.0 Corr'd. 1.5 | Therm ID No. IR0016

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Jon White	MSBA	10/30/24 13:00			
Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Relinquished by	Company	Date/Time	Received in Laboratory by	Company: EET SPO	Date/Time 10/31/24 1030

Form No. CA-C-WI-002, Rev. 4.23, dated 4/16/2019

Login Sample Receipt Checklist

Client: Martin S Burck Associates

Job Number: 590-27836-1

Login Number: 27836
List Number: 1
Creator: Morris, Mackenzie 1

List Source: Eurofins Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Tuesday, October 29, 2024

Daniel Ogno
NRC
6211 N Ensign St
Portland, OR 97217

RE: A4J1459 - DEQ Sampling - P216.16354

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 A4J1459, which was received by the laboratory on 10/17/2024 at 12:00:00PM.

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

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

Cooler Receipt Information
Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.
(See Cooler Receipt Form for details)
Default Cooler 1.2 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.

Apex Laboratories

Darrell Auvil For Darwin Thomas, Business Development Director

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Creek Water	**A4J1459-01**	**Oil**	**10/17/24 10:00**	**10/17/24 12:00**

Apex Laboratories

Darrell Auvil For Darwin Thomas, Business Development Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

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
Creek Water (A4J1459-01)				**Matrix: Oil**		**Batch: 24J0996**		
Diesel	**1080000**	---	182000	mg/kg	100	10/25/24 13:11	NWTPH-Dx	
Oil	ND	---	364000	mg/kg	100	10/25/24 13:11	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)			*Recovery: %*	*Limits: 50-150 %*	*100*	*10/25/24 13:11*	*NWTPH-Dx*	*S-01*

Apex Laboratories

Darrell Auvil For Darwin Thomas, Business Development Director

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6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

NRC	Project: DEQ Sampling	
6211 N Ensign St	Project Number: P216.16354	Report ID:
Portland, OR 97217	Project Manager: Daniel Ogno	A4J1459 - 10 29 24 1703

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Creek Water (A4J1459-01RE1)				**Matrix: Oil**			**Batch: 24J0748**	**V-13, V-15**
Acetone	ND	---	46.7	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Acrylonitrile	ND	---	4.67	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Benzene	ND	---	0.467	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Bromobenzene	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Bromochloromethane	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Bromodichloromethane	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Bromoform	ND	---	4.67	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Bromomethane	ND	---	23.4	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
2-Butanone (MEK)	ND	---	23.4	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
n-Butylbenzene	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
sec-Butylbenzene	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
tert-Butylbenzene	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Carbon disulfide	ND	---	23.4	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Carbon tetrachloride	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Chlorobenzene	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Chloroethane	ND	---	23.4	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Chloroform	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Chloromethane	ND	---	11.7	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
2-Chlorotoluene	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
4-Chlorotoluene	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Dibromochloromethane	ND	---	4.67	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	11.7	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Dibromomethane	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,2-Dichlorobenzene	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,3-Dichlorobenzene	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,4-Dichlorobenzene	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Dichlorodifluoromethane	ND	---	4.67	mg/kg wet	500	10/18/24 12:30	5035A/8260D	ICV-02
1,1-Dichloroethane	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,1-Dichloroethene	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	

Apex Laboratories

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Darrell Auvil For Darwin Thomas, Business Development Director

APEX LABORATORIES

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Creek Water (A4J1459-01RE1)				**Matrix: Oil**		**Batch: 24J0748**		**V-13, V-15**
1,2-Dichloropropane	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,3-Dichloropropane	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
2,2-Dichloropropane	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,1-Dichloropropene	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Ethylbenzene	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Hexachlorobutadiene	ND	---	4.67	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
2-Hexanone	ND	---	23.4	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Isopropylbenzene	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
4-Isopropyltoluene	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Methylene chloride	ND	---	23.4	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	---	23.4	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Naphthalene	ND	---	4.67	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
n-Propylbenzene	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Styrene	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Toluene	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	11.7	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	11.7	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,1,1-Trichloroethane	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,1,2-Trichloroethane	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Trichloroethene (TCE)	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Trichlorofluoromethane	ND	---	11.7	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,2,3-Trichloropropane	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
Vinyl chloride	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
m,p-Xylene	ND	---	2.34	mg/kg wet	500	10/18/24 12:30	5035A/8260D	
o-Xylene	ND	---	1.17	mg/kg wet	500	10/18/24 12:30	5035A/8260D	

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6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Creek Water (A4J1459-01RE1)				**Matrix: Oil**			**Batch: 24J0748**	**V-13, V-15**
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 93 %*	*Limits: 80-120 %*	*1*	*10/18/24 12:30*	*5035A/8260D*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*10/18/24 12:30*	*5035A/8260D*	
4-Bromofluorobenzene (Surr)			*104 %*	*79-120 %*	*1*	*10/18/24 12:30*	*5035A/8260D*	

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ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Creek Water (A4J1459-01)				**Matrix: Oil**		**Batch: 24J0713**		**C-07**
Aroclor 1016	ND	---	1.55	mg/kg	2	10/17/24 14:16	EPA 8082A	
Aroclor 1221	ND	---	1.55	mg/kg	2	10/17/24 14:16	EPA 8082A	
Aroclor 1232	ND	---	1.55	mg/kg	2	10/17/24 14:16	EPA 8082A	
Aroclor 1242	ND	---	1.55	mg/kg	2	10/17/24 14:16	EPA 8082A	
Aroclor 1248	ND	---	1.55	mg/kg	2	10/17/24 14:16	EPA 8082A	
Aroclor 1254	ND	---	1.55	mg/kg	2	10/17/24 14:16	EPA 8082A	
Aroclor 1260	ND	---	1.55	mg/kg	2	10/17/24 14:16	EPA 8082A	
Surrogate: Decachlorobiphenyl (Surr)		*Recovery: 91 %*		*Limits: 60-125 %*	*2*	*10/17/24 14:16*	*EPA 8082A*	

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ANALYTICAL REPORT

NRC	Project: DEQ Sampling	
6211 N Ensign St	Project Number: P216.16354	Report ID:
Portland, OR 97217	Project Manager: Daniel Ogno	A4J1459 - 10 29 24 1703

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Creek Water (A4J1459-01)				**Matrix: Oil**				
Batch: 24J1072								
Arsenic	ND	---	2.81	mg/kg	5	10/28/24 21:17	EPA 6020B	
Barium	ND	---	2.81	mg/kg	5	10/28/24 21:17	EPA 6020B	
Cadmium	ND	---	0.562	mg/kg	5	10/28/24 21:17	EPA 6020B	
Chromium	ND	---	2.81	mg/kg	5	10/28/24 21:17	EPA 6020B	
Lead	ND	---	0.562	mg/kg	5	10/28/24 21:17	EPA 6020B	
Mercury	ND	---	0.225	mg/kg	5	10/28/24 21:17	EPA 6020B	
Selenium	ND	---	2.81	mg/kg	5	10/28/24 21:17	EPA 6020B	
Silver	ND	---	0.562	mg/kg	5	10/28/24 21:17	EPA 6020B	

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ANALYTICAL REPORT

NRC	Project: DEQ Sampling	
6211 N Ensign St	Project Number: P216.16354	Report ID:
Portland, OR 97217	Project Manager: Daniel Ogno	A4J1459 - 10 29 24 1703

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 24J0996 - EPA 3580A							Oil					
Blank (24J0996-BLK1)			Prepared: 10/25/24 07:44		Analyzed: 10/25/24 12:24							
NWTPH-Dx												
Diesel	ND	---	2000	mg/kg	1	---	---	---	---	---	---	
Oil	ND	---	4000	mg/kg	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 95 %*		*Limits: 50-150 %*		*Dilution: 1x*					
LCS (24J0996-BS1)			Prepared: 10/25/24 07:44		Analyzed: 10/25/24 12:47							
NWTPH-Dx												
Diesel	12200	---	2000	mg/kg	1	12500	---	98	38-132%	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 104 %*		*Limits: 50-150 %*		*Dilution: 1x*					
Duplicate (24J0996-DUP1)			Prepared: 10/25/24 07:44		Analyzed: 10/25/24 13:35							
QC Source Sample: Creek Water (A4J1459-01)												
NWTPH-Dx												
Diesel	**832000**	---	143000	mg/kg	100	---	1080000	---	---	26	30%	
Oil	ND	---	286000	mg/kg	100	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: %*		*Limits: 50-150 %*		*Dilution: 100x*					*S-01*

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ANALYTICAL REPORT

NRC	Project: DEQ Sampling	
6211 N Ensign St	Project Number: P216.16354	Report ID:
Portland, OR 97217	Project Manager: Daniel Ogno	A4J1459 - 10 29 24 1703

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0706 - EPA 5035A							Soil					
Blank (24J0706-BLK1)			Prepared: 10/17/24 10:00 Analyzed: 10/17/24 16:29									
5035A/8260D												
Acetone	ND	---	1.00	mg/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	0.0100	mg/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	---	0.250	mg/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	0.250	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	ICV-02
1,1-Dichloroethane	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	

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APEX LABORATORIES

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Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0706 - EPA 5035A							**Soil**					
Blank (24J0706-BLK1)			Prepared: 10/17/24 10:00 Analyzed: 10/17/24 16:29									
1,2-Dichloropropane	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Styrene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	0.250	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	0.250	mg/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	0.250	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) *Recovery: 101 %* *Limits: 80-120 %* *Dilution: 1x*

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ANALYTICAL REPORT

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6211 N Ensign St	Project Number: P216.16354	Report ID:
Portland, OR 97217	Project Manager: Daniel Ogno	A4J1459 - 10 29 24 1703

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0706 - EPA 5035A									Soil			
Blank (24J0706-BLK1)			Prepared: 10/17/24 10:00 Analyzed: 10/17/24 16:29									
Surr: Toluene-d8 (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*106 %*	*79-120 %*			*"*					
LCS (24J0706-BS1)			Prepared: 10/17/24 10:00 Analyzed: 10/17/24 15:34									
5035A/8260D												
Acetone	2.09	---	1.00	mg/kg wet	50	2.00	---	105	80-120%	---	---	
Acrylonitrile	1.07	---	0.100	mg/kg wet	50	1.00	---	107	80-120%	---	---	
Benzene	1.11	---	0.0100	mg/kg wet	50	1.00	---	111	80-120%	---	---	
Bromobenzene	1.06	---	0.0250	mg/kg wet	50	1.00	---	106	80-120%	---	---	
Bromochloromethane	1.09	---	0.0500	mg/kg wet	50	1.00	---	109	80-120%	---	---	
Bromodichloromethane	1.22	---	0.0500	mg/kg wet	50	1.00	---	**122**	**80-120%**	---	---	Q-56
Bromoform	1.47	---	0.100	mg/kg wet	50	1.00	---	**147**	**80-120%**	---	---	Q-56
Bromomethane	1.42	---	0.500	mg/kg wet	50	1.00	---	**142**	**80-120%**	---	---	Q-56
2-Butanone (MEK)	2.25	---	0.500	mg/kg wet	50	2.00	---	113	80-120%	---	---	
n-Butylbenzene	1.17	---	0.0500	mg/kg wet	50	1.00	---	117	80-120%	---	---	
sec-Butylbenzene	1.17	---	0.0500	mg/kg wet	50	1.00	---	117	80-120%	---	---	
tert-Butylbenzene	1.14	---	0.0500	mg/kg wet	50	1.00	---	114	80-120%	---	---	
Carbon disulfide	1.14	---	0.500	mg/kg wet	50	1.00	---	114	80-120%	---	---	
Carbon tetrachloride	1.22	---	0.0500	mg/kg wet	50	1.00	---	**122**	**80-120%**	---	---	Q-56
Chlorobenzene	1.10	---	0.0250	mg/kg wet	50	1.00	---	110	80-120%	---	---	
Chloroethane	1.08	---	0.500	mg/kg wet	50	1.00	---	108	80-120%	---	---	
Chloroform	1.12	---	0.0500	mg/kg wet	50	1.00	---	112	80-120%	---	---	
Chloromethane	0.849	---	0.250	mg/kg wet	50	1.00	---	85	80-120%	---	---	
2-Chlorotoluene	1.13	---	0.0500	mg/kg wet	50	1.00	---	113	80-120%	---	---	
4-Chlorotoluene	1.18	---	0.0500	mg/kg wet	50	1.00	---	118	80-120%	---	---	
Dibromochloromethane	1.37	---	0.100	mg/kg wet	50	1.00	---	**137**	**80-120%**	---	---	Q-56
1,2-Dibromo-3-chloropropane	1.15	---	0.250	mg/kg wet	50	1.00	---	115	80-120%	---	---	
1,2-Dibromoethane (EDB)	1.14	---	0.0500	mg/kg wet	50	1.00	---	114	80-120%	---	---	
Dibromomethane	1.15	---	0.0500	mg/kg wet	50	1.00	---	115	80-120%	---	---	
1,2-Dichlorobenzene	1.13	---	0.0250	mg/kg wet	50	1.00	---	113	80-120%	---	---	
1,3-Dichlorobenzene	1.12	---	0.0250	mg/kg wet	50	1.00	---	112	80-120%	---	---	
1,4-Dichlorobenzene	1.09	---	0.0250	mg/kg wet	50	1.00	---	109	80-120%	---	---	
Dichlorodifluoromethane	0.924	---	0.100	mg/kg wet	50	1.00	---	92	80-120%	---	---	ICV-02
1,1-Dichloroethane	1.09	---	0.0250	mg/kg wet	50	1.00	---	109	80-120%	---	---	

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Darrell Auvil For Darwin Thomas, Business Development Director

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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0706 - EPA 5035A							**Soil**					
LCS (24J0706-BS1)			Prepared: 10/17/24 10:00		Analyzed: 10/17/24 15:34							
1,2-Dichloroethane (EDC)	1.15	---	0.0250	mg/kg wet	50	1.00	---	115	80-120%	---	---	
1,1-Dichloroethene	1.13	---	0.0250	mg/kg wet	50	1.00	---	113	80-120%	---	---	
cis-1,2-Dichloroethene	1.14	---	0.0250	mg/kg wet	50	1.00	---	114	80-120%	---	---	
trans-1,2-Dichloroethene	1.13	---	0.0250	mg/kg wet	50	1.00	---	113	80-120%	---	---	
1,2-Dichloropropane	1.13	---	0.0250	mg/kg wet	50	1.00	---	113	80-120%	---	---	
1,3-Dichloropropane	1.16	---	0.0500	mg/kg wet	50	1.00	---	116	80-120%	---	---	
2,2-Dichloropropane	1.48	---	0.0500	mg/kg wet	50	1.00	---	**148**	**80-120%**	---	---	Q-56
1,1-Dichloropropene	1.14	---	0.0500	mg/kg wet	50	1.00	---	114	80-120%	---	---	
cis-1,3-Dichloropropene	1.27	---	0.0500	mg/kg wet	50	1.00	---	**127**	**80-120%**	---	---	Q-56
trans-1,3-Dichloropropene	1.36	---	0.0500	mg/kg wet	50	1.00	---	**136**	**80-120%**	---	---	Q-56
Ethylbenzene	1.13	---	0.0250	mg/kg wet	50	1.00	---	113	80-120%	---	---	
Hexachlorobutadiene	1.14	---	0.100	mg/kg wet	50	1.00	---	114	80-120%	---	---	
2-Hexanone	2.09	---	0.500	mg/kg wet	50	2.00	---	105	80-120%	---	---	
Isopropylbenzene	1.07	---	0.0500	mg/kg wet	50	1.00	---	107	80-120%	---	---	
4-Isopropyltoluene	1.13	---	0.0500	mg/kg wet	50	1.00	---	113	80-120%	---	---	
Methylene chloride	1.05	---	0.500	mg/kg wet	50	1.00	---	105	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	2.35	---	0.500	mg/kg wet	50	2.00	---	118	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1.05	---	0.0500	mg/kg wet	50	1.00	---	105	80-120%	---	---	
Naphthalene	0.918	---	0.100	mg/kg wet	50	1.00	---	92	80-120%	---	---	
n-Propylbenzene	1.15	---	0.0250	mg/kg wet	50	1.00	---	115	80-120%	---	---	
Styrene	1.02	---	0.0500	mg/kg wet	50	1.00	---	102	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1.23	---	0.0250	mg/kg wet	50	1.00	---	**123**	**80-120%**	---	---	Q-56
1,1,2,2-Tetrachloroethane	1.33	---	0.0500	mg/kg wet	50	1.00	---	**133**	**80-120%**	---	---	Q-56
Tetrachloroethene (PCE)	1.08	---	0.0250	mg/kg wet	50	1.00	---	108	80-120%	---	---	
Toluene	1.03	---	0.0500	mg/kg wet	50	1.00	---	103	80-120%	---	---	
1,2,3-Trichlorobenzene	1.01	---	0.250	mg/kg wet	50	1.00	---	101	80-120%	---	---	
1,2,4-Trichlorobenzene	1.00	---	0.250	mg/kg wet	50	1.00	---	100	80-120%	---	---	
1,1,1-Trichloroethane	1.19	---	0.0250	mg/kg wet	50	1.00	---	119	80-120%	---	---	
1,1,2-Trichloroethane	1.15	---	0.0250	mg/kg wet	50	1.00	---	115	80-120%	---	---	
Trichloroethene (TCE)	1.01	---	0.0250	mg/kg wet	50	1.00	---	101	80-120%	---	---	
Trichlorofluoromethane	1.05	---	0.250	mg/kg wet	50	1.00	---	105	80-120%	---	---	
1,2,3-Trichloropropane	1.13	---	0.0500	mg/kg wet	50	1.00	---	113	80-120%	---	---	
1,2,4-Trimethylbenzene	1.19	---	0.0500	mg/kg wet	50	1.00	---	119	80-120%	---	---	
1,3,5-Trimethylbenzene	1.21	---	0.0500	mg/kg wet	50	1.00	---	**121**	**80-120%**	---	---	Q-56

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ORELAP ID: OR100062

ANALYTICAL REPORT

NRC	Project: DEQ Sampling	
6211 N Ensign St	Project Number: P216.16354	Report ID:
Portland, OR 97217	Project Manager: Daniel Ogno	A4J1459 - 10 29 24 1703

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0706 - EPA 5035A									Soil			
LCS (24J0706-BS1)			Prepared: 10/17/24 10:00 Analyzed: 10/17/24 15:34									
Vinyl chloride	1.03	---	0.0250	mg/kg wet	50	1.00	---	103	80-120%	---	---	
m,p-Xylene	2.30	---	0.0500	mg/kg wet	50	2.00	---	115	80-120%	---	---	
o-Xylene	1.08	---	0.0250	mg/kg wet	50	1.00	---	108	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 101 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*102 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*97 %*		*79-120 %*				*"*			
Duplicate (24J0706-DUP1)			Prepared: 10/16/24 10:30 Analyzed: 10/17/24 17:51									
QC Source Sample: Non-SDG (A4J1398-01)												
Acetone	ND	---	1.40	mg/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	0.140	mg/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	---	0.0140	mg/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	---	0.140	mg/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	0.701	mg/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	0.701	mg/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	0.701	mg/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	0.701	mg/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	---	0.351	mg/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	0.140	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	0.351	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0706 - EPA 5035A							**Soil**					
Duplicate (24J0706-DUP1)			Prepared: 10/16/24 10:30 Analyzed: 10/17/24 17:51									
QC Source Sample: Non-SDG (A4J1398-01)												
1,3-Dichlorobenzene	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	0.140	mg/kg dry	50	---	ND	---	---	---	30%	ICV-02
1,1-Dichloroethane	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	0.140	mg/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	0.701	mg/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	0.701	mg/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	0.701	mg/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	0.140	mg/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	0.351	mg/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	0.351	mg/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	

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ORELAP ID: OR100062

ANALYTICAL REPORT

NRC	Project: DEQ Sampling	
6211 N Ensign St	Project Number: P216.16354	Report ID:
Portland, OR 97217	Project Manager: Daniel Ogno	A4J1459 - 10 29 24 1703

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0706 - EPA 5035A							Soil					
Duplicate (24J0706-DUP1)			Prepared: 10/16/24 10:30 Analyzed: 10/17/24 17:51									
QC Source Sample: Non-SDG (A4J1398-01)												
Trichloroethene (TCE)	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	0.351	mg/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	0.0701	mg/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	---	0.0351	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery:*	*100 %*	*Limits:*	*80-120 %*		*Dilution:*	*1x*				
Toluene-d8 (Surr)			*97 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*104 %*		*79-120 %*			*"*				
Matrix Spike (24J0706-MS1)			Prepared: 10/15/24 13:43 Analyzed: 10/17/24 23:18									
QC Source Sample: Non-SDG (A4J1380-07)												
5035A/8260D												
Acetone	3.30	---	1.45	mg/kg dry	50	2.91	ND	114	36-164%	---	---	
Acrylonitrile	1.24	---	0.145	mg/kg dry	50	1.45	ND	86	65-134%	---	---	
Benzene	1.44	---	0.0145	mg/kg dry	50	1.45	ND	99	77-121%	---	---	
Bromobenzene	1.51	---	0.0364	mg/kg dry	50	1.45	ND	104	78-121%	---	---	
Bromochloromethane	1.42	---	0.0727	mg/kg dry	50	1.45	ND	98	78-125%	---	---	
Bromodichloromethane	1.84	---	0.0727	mg/kg dry	50	1.45	ND	127	75-127%	---	---	Q-54g
Bromoform	2.38	---	0.145	mg/kg dry	50	1.45	ND	**164**	**67-132%**	---	---	Q-54j
Bromomethane	2.37	---	0.727	mg/kg dry	50	1.45	ND	**163**	**53-143%**	---	---	Q-54h
2-Butanone (MEK)	2.92	---	0.727	mg/kg dry	50	2.91	ND	100	51-148%	---	---	
n-Butylbenzene	1.59	---	0.0727	mg/kg dry	50	1.45	ND	110	70-128%	---	---	
sec-Butylbenzene	1.66	---	0.0727	mg/kg dry	50	1.45	ND	114	73-126%	---	---	
tert-Butylbenzene	1.71	---	0.0727	mg/kg dry	50	1.45	ND	117	73-125%	---	---	
Carbon disulfide	1.88	---	0.727	mg/kg dry	50	1.45	ND	130	63-132%	---	---	
Carbon tetrachloride	2.07	---	0.0727	mg/kg dry	50	1.45	ND	**142**	**70-135%**	---	---	Q-54g
Chlorobenzene	1.76	---	0.0364	mg/kg dry	50	1.45	0.164	110	79-120%	---	---	
Chloroethane	2.74	---	0.727	mg/kg dry	50	1.45	ND	**189**	**59-139%**	---	---	Q-01
Chloroform	1.69	---	0.0727	mg/kg dry	50	1.45	ND	116	78-123%	---	---	
Chloromethane	1.10	---	0.364	mg/kg dry	50	1.45	ND	76	50-136%	---	---	

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ORELAP ID: OR100062

ANALYTICAL REPORT

NRC	Project: DEQ Sampling	
6211 N Ensign St	Project Number: P216.16354	Report ID:
Portland, OR 97217	Project Manager: Daniel Ogno	A4J1459 - 10 29 24 1703

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0706 - EPA 5035A							Soil					
Matrix Spike (24J0706-MS1)			Prepared: 10/15/24 13:43 Analyzed: 10/17/24 23:18									
QC Source Sample: Non-SDG (A4J1380-07)												
2-Chlorotoluene	1.50	---	0.0727	mg/kg dry	50	1.45	ND	103	75-122%	---	---	
4-Chlorotoluene	1.64	---	0.0727	mg/kg dry	50	1.45	ND	113	72-124%	---	---	
Dibromochloromethane	2.19	---	0.145	mg/kg dry	50	1.45	ND	**150**	**74-126%**	---	---	Q-54e
1,2-Dibromo-3-chloropropane	1.61	---	0.364	mg/kg dry	50	1.45	ND	110	61-132%	---	---	
1,2-Dibromoethane (EDB)	1.66	---	0.0727	mg/kg dry	50	1.45	ND	114	78-122%	---	---	
Dibromomethane	1.64	---	0.0727	mg/kg dry	50	1.45	ND	113	78-125%	---	---	
1,2-Dichlorobenzene	1.59	---	0.0364	mg/kg dry	50	1.45	ND	109	78-121%	---	---	
1,3-Dichlorobenzene	1.55	---	0.0364	mg/kg dry	50	1.45	ND	106	77-121%	---	---	
1,4-Dichlorobenzene	1.54	---	0.0364	mg/kg dry	50	1.45	ND	106	75-120%	---	---	
Dichlorodifluoromethane	1.54	---	0.145	mg/kg dry	50	1.45	ND	106	29-149%	---	---	ICV-02
1,1-Dichloroethane	1.50	---	0.0364	mg/kg dry	50	1.45	ND	103	76-125%	---	---	
1,2-Dichloroethane (EDC)	1.81	---	0.0364	mg/kg dry	50	1.45	ND	125	73-128%	---	---	
1,1-Dichloroethene	1.99	---	0.0364	mg/kg dry	50	1.45	ND	**137**	**70-131%**	---	---	Q-01
cis-1,2-Dichloroethene	1.54	---	0.0364	mg/kg dry	50	1.45	ND	106	77-123%	---	---	
trans-1,2-Dichloroethene	1.51	---	0.0364	mg/kg dry	50	1.45	ND	104	74-125%	---	---	
1,2-Dichloropropane	1.43	---	0.0364	mg/kg dry	50	1.45	ND	98	76-123%	---	---	
1,3-Dichloropropane	1.61	---	0.0727	mg/kg dry	50	1.45	ND	111	77-121%	---	---	
2,2-Dichloropropane	1.95	---	0.0727	mg/kg dry	50	1.45	ND	**134**	**67-133%**	---	---	Q-54k
1,1-Dichloropropene	1.54	---	0.0727	mg/kg dry	50	1.45	ND	106	76-125%	---	---	
cis-1,3-Dichloropropene	1.70	---	0.0727	mg/kg dry	50	1.45	ND	117	74-126%	---	---	Q-54r
trans-1,3-Dichloropropene	1.99	---	0.0727	mg/kg dry	50	1.45	ND	**137**	**71-130%**	---	---	Q-54q
Ethylbenzene	1.68	---	0.0364	mg/kg dry	50	1.45	ND	116	76-122%	---	---	
Hexachlorobutadiene	1.70	---	0.145	mg/kg dry	50	1.45	ND	117	61-135%	---	---	
2-Hexanone	2.75	---	0.727	mg/kg dry	50	2.91	ND	95	53-145%	---	---	
Isopropylbenzene	1.56	---	0.0727	mg/kg dry	50	1.45	ND	107	68-134%	---	---	
4-Isopropyltoluene	1.56	---	0.0727	mg/kg dry	50	1.45	ND	107	73-127%	---	---	
Methylene chloride	1.31	---	0.727	mg/kg dry	50	1.45	ND	90	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	3.21	---	0.727	mg/kg dry	50	2.91	ND	110	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1.40	---	0.0727	mg/kg dry	50	1.45	ND	96	73-125%	---	---	
Naphthalene	1.15	---	0.145	mg/kg dry	50	1.45	ND	79	62-129%	---	---	
n-Propylbenzene	1.66	---	0.0364	mg/kg dry	50	1.45	ND	114	73-125%	---	---	
Styrene	1.46	---	0.0727	mg/kg dry	50	1.45	ND	101	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1.96	---	0.0364	mg/kg dry	50	1.45	ND	**135**	**78-125%**	---	---	Q-54l

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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0706 - EPA 5035A							**Soil**					
Matrix Spike (24J0706-MS1)			Prepared: 10/15/24 13:43 Analyzed: 10/17/24 23:18									
QC Source Sample: Non-SDG (A4J1380-07)												
1,1,2,2-Tetrachloroethane	1.71	---	0.0727	mg/kg dry	50	1.45	ND	118	70-124%	---	---	Q-54c
Tetrachloroethene (PCE)	1.65	---	0.0364	mg/kg dry	50	1.45	ND	113	73-128%	---	---	
Toluene	1.46	---	0.0727	mg/kg dry	50	1.45	ND	100	77-121%	---	---	
1,2,3-Trichlorobenzene	1.43	---	0.364	mg/kg dry	50	1.45	ND	98	66-130%	---	---	
1,2,4-Trichlorobenzene	1.34	---	0.364	mg/kg dry	50	1.45	ND	92	67-129%	---	---	
1,1,1-Trichloroethane	1.91	---	0.0364	mg/kg dry	50	1.45	ND	**131**	**73-130%**	---	---	Q-01
1,1,2-Trichloroethane	1.63	---	0.0364	mg/kg dry	50	1.45	ND	112	78-121%	---	---	
Trichloroethene (TCE)	1.36	---	0.0364	mg/kg dry	50	1.45	ND	93	77-123%	---	---	
Trichlorofluoromethane	5.90	---	0.364	mg/kg dry	50	1.45	ND	**406**	**62-140%**	---	---	Q-01
1,2,3-Trichloropropane	1.59	---	0.0727	mg/kg dry	50	1.45	ND	109	73-125%	---	---	
1,2,4-Trimethylbenzene	1.69	---	0.0727	mg/kg dry	50	1.45	ND	116	75-123%	---	---	
1,3,5-Trimethylbenzene	1.71	---	0.0727	mg/kg dry	50	1.45	ND	118	73-124%	---	---	Q-54
Vinyl chloride	1.41	---	0.0364	mg/kg dry	50	1.45	ND	97	56-135%	---	---	
m,p-Xylene	3.49	---	0.0727	mg/kg dry	50	2.91	ND	120	77-124%	---	---	
o-Xylene	1.56	---	0.0364	mg/kg dry	50	1.45	ND	107	77-123%	---	---	

Surr: 1,4-Difluorobenzene (Surr)	*Recovery: 89 %*	*Limits: 80-120 %*	*Dilution: 1x*
Toluene-d8 (Surr)	*97 %*	*80-120 %*	*"*
4-Bromofluorobenzene (Surr)	*95 %*	*79-120 %*	*"*

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Darrell Auvil For Darwin Thomas, Business Development Director

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ORELAP ID: OR100062

ANALYTICAL REPORT

NRC	Project: DEQ Sampling	
6211 N Ensign St	Project Number: P216.16354	Report ID:
Portland, OR 97217	Project Manager: Daniel Ogno	A4J1459 - 10 29 24 1703

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0748 - EPA 5035A							Soil					
Blank (24J0748-BLK1)			Prepared: 10/18/24 08:00 Analyzed: 10/18/24 11:08									
5035A/8260D												
Acetone	ND	---	1.00	mg/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	0.0100	mg/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	---	0.250	mg/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	0.250	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	ICV-02
1,1-Dichloroethane	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	

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Darrell Auvil For Darwin Thomas, Business Development Director

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0748 - EPA 5035A							**Soil**					
Blank (24J0748-BLK1)			Prepared: 10/18/24 08:00 Analyzed: 10/18/24 11:08									
1,2-Dichloropropane	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Styrene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	0.250	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	0.250	mg/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	0.250	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) *Recovery: 95 %* *Limits: 80-120 %* *Dilution: 1x*

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Darrell Auvil For Darwin Thomas, Business Development Director

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0748 - EPA 5035A									Soil			
Blank (24J0748-BLK1)			Prepared: 10/18/24 08:00 Analyzed: 10/18/24 11:08									
Surr: Toluene-d8 (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*				*Dilution: 1x*				
4-Bromofluorobenzene (Surr)			*103 %*	*79-120 %*				*"*				
LCS (24J0748-BS1)			Prepared: 10/18/24 08:00 Analyzed: 10/18/24 10:13									
5035A/8260D												
Acetone	1.83	---	1.00	mg/kg wet	50	2.00	---	91	80-120%	---	---	
Acrylonitrile	0.927	---	0.100	mg/kg wet	50	1.00	---	93	80-120%	---	---	
Benzene	1.06	---	0.0100	mg/kg wet	50	1.00	---	106	80-120%	---	---	
Bromobenzene	1.06	---	0.0250	mg/kg wet	50	1.00	---	106	80-120%	---	---	
Bromochloromethane	0.987	---	0.0500	mg/kg wet	50	1.00	---	99	80-120%	---	---	
Bromodichloromethane	1.23	---	0.0500	mg/kg wet	50	1.00	---	**123**	**80-120%**	---	---	Q-56
Bromoform	1.56	---	0.100	mg/kg wet	50	1.00	---	**156**	**80-120%**	---	---	Q-56
Bromomethane	1.47	---	0.500	mg/kg wet	50	1.00	---	**147**	**80-120%**	---	---	Q-56
2-Butanone (MEK)	2.00	---	0.500	mg/kg wet	50	2.00	---	100	80-120%	---	---	
n-Butylbenzene	1.11	---	0.0500	mg/kg wet	50	1.00	---	111	80-120%	---	---	
sec-Butylbenzene	1.12	---	0.0500	mg/kg wet	50	1.00	---	112	80-120%	---	---	
tert-Butylbenzene	1.14	---	0.0500	mg/kg wet	50	1.00	---	114	80-120%	---	---	
Carbon disulfide	1.30	---	0.500	mg/kg wet	50	1.00	---	**130**	**80-120%**	---	---	Q-56
Carbon tetrachloride	1.31	---	0.0500	mg/kg wet	50	1.00	---	**131**	**80-120%**	---	---	Q-56
Chlorobenzene	1.11	---	0.0250	mg/kg wet	50	1.00	---	111	80-120%	---	---	
Chloroethane	1.35	---	0.500	mg/kg wet	50	1.00	---	**135**	**80-120%**	---	---	Q-56
Chloroform	1.15	---	0.0500	mg/kg wet	50	1.00	---	115	80-120%	---	---	
Chloromethane	0.736	---	0.250	mg/kg wet	50	1.00	---	**74**	**80-120%**	---	---	Q-55
2-Chlorotoluene	1.12	---	0.0500	mg/kg wet	50	1.00	---	112	80-120%	---	---	
4-Chlorotoluene	1.17	---	0.0500	mg/kg wet	50	1.00	---	117	80-120%	---	---	
Dibromochloromethane	1.44	---	0.100	mg/kg wet	50	1.00	---	**144**	**80-120%**	---	---	Q-56
1,2-Dibromo-3-chloropropane	1.16	---	0.250	mg/kg wet	50	1.00	---	116	80-120%	---	---	
1,2-Dibromoethane (EDB)	1.15	---	0.0500	mg/kg wet	50	1.00	---	115	80-120%	---	---	
Dibromomethane	1.12	---	0.0500	mg/kg wet	50	1.00	---	112	80-120%	---	---	
1,2-Dichlorobenzene	1.12	---	0.0250	mg/kg wet	50	1.00	---	112	80-120%	---	---	
1,3-Dichlorobenzene	1.10	---	0.0250	mg/kg wet	50	1.00	---	110	80-120%	---	---	
1,4-Dichlorobenzene	1.07	---	0.0250	mg/kg wet	50	1.00	---	107	80-120%	---	---	
Dichlorodifluoromethane	0.902	---	0.100	mg/kg wet	50	1.00	---	90	80-120%	---	---	ICV-02
1,1-Dichloroethane	1.05	---	0.0250	mg/kg wet	50	1.00	---	105	80-120%	---	---	

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0748 - EPA 5035A							**Soil**					
LCS (24J0748-BS1)			Prepared: 10/18/24 08:00 Analyzed: 10/18/24 10:13									
1,2-Dichloroethane (EDC)	1.16	---	0.0250	mg/kg wet	50	1.00	---	116	80-120%	---	---	
1,1-Dichloroethene	1.26	---	0.0250	mg/kg wet	50	1.00	---	**126**	**80-120%**	---	---	Q-56
cis-1,2-Dichloroethene	1.11	---	0.0250	mg/kg wet	50	1.00	---	111	80-120%	---	---	
trans-1,2-Dichloroethene	1.10	---	0.0250	mg/kg wet	50	1.00	---	110	80-120%	---	---	
1,2-Dichloropropane	1.03	---	0.0250	mg/kg wet	50	1.00	---	103	80-120%	---	---	
1,3-Dichloropropane	1.13	---	0.0500	mg/kg wet	50	1.00	---	113	80-120%	---	---	
2,2-Dichloropropane	1.52	---	0.0500	mg/kg wet	50	1.00	---	**152**	**80-120%**	---	---	Q-56
1,1-Dichloropropene	1.10	---	0.0500	mg/kg wet	50	1.00	---	110	80-120%	---	---	
cis-1,3-Dichloropropene	1.25	---	0.0500	mg/kg wet	50	1.00	---	**125**	**80-120%**	---	---	Q-56
trans-1,3-Dichloropropene	1.39	---	0.0500	mg/kg wet	50	1.00	---	**139**	**80-120%**	---	---	Q-56
Ethylbenzene	1.14	---	0.0250	mg/kg wet	50	1.00	---	114	80-120%	---	---	
Hexachlorobutadiene	1.15	---	0.100	mg/kg wet	50	1.00	---	115	80-120%	---	---	
2-Hexanone	1.93	---	0.500	mg/kg wet	50	2.00	---	97	80-120%	---	---	
Isopropylbenzene	1.05	---	0.0500	mg/kg wet	50	1.00	---	105	80-120%	---	---	
4-Isopropyltoluene	1.11	---	0.0500	mg/kg wet	50	1.00	---	111	80-120%	---	---	
Methylene chloride	0.943	---	0.500	mg/kg wet	50	1.00	---	94	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	2.16	---	0.500	mg/kg wet	50	2.00	---	108	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1.04	---	0.0500	mg/kg wet	50	1.00	---	104	80-120%	---	---	
Naphthalene	0.874	---	0.100	mg/kg wet	50	1.00	---	87	80-120%	---	---	
n-Propylbenzene	1.11	---	0.0250	mg/kg wet	50	1.00	---	111	80-120%	---	---	
Styrene	1.01	---	0.0500	mg/kg wet	50	1.00	---	101	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1.31	---	0.0250	mg/kg wet	50	1.00	---	**131**	**80-120%**	---	---	Q-56
1,1,2,2-Tetrachloroethane	1.24	---	0.0500	mg/kg wet	50	1.00	---	**124**	**80-120%**	---	---	Q-56
Tetrachloroethene (PCE)	1.14	---	0.0250	mg/kg wet	50	1.00	---	114	80-120%	---	---	
Toluene	1.02	---	0.0500	mg/kg wet	50	1.00	---	102	80-120%	---	---	
1,2,3-Trichlorobenzene	1.03	---	0.250	mg/kg wet	50	1.00	---	103	80-120%	---	---	
1,2,4-Trichlorobenzene	0.994	---	0.250	mg/kg wet	50	1.00	---	99	80-120%	---	---	
1,1,1-Trichloroethane	1.26	---	0.0250	mg/kg wet	50	1.00	---	**126**	**80-120%**	---	---	Q-56
1,1,2-Trichloroethane	1.13	---	0.0250	mg/kg wet	50	1.00	---	113	80-120%	---	---	
Trichloroethene (TCE)	0.981	---	0.0250	mg/kg wet	50	1.00	---	98	80-120%	---	---	
Trichlorofluoromethane	1.24	---	0.250	mg/kg wet	50	1.00	---	**124**	**80-120%**	---	---	Q-56
1,2,3-Trichloropropane	1.15	---	0.0500	mg/kg wet	50	1.00	---	115	80-120%	---	---	
1,2,4-Trimethylbenzene	1.18	---	0.0500	mg/kg wet	50	1.00	---	118	80-120%	---	---	
1,3,5-Trimethylbenzene	1.19	---	0.0500	mg/kg wet	50	1.00	---	119	80-120%	---	---	

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Darrell Auvil For Darwin Thomas, Business Development Director

APEX LABORATORIES

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0748 - EPA 5035A							**Soil**					
LCS (24J0748-BS1)			Prepared: 10/18/24 08:00 Analyzed: 10/18/24 10:13									
Vinyl chloride	0.905	---	0.0250	mg/kg wet	50	1.00	---	91	80-120%	---	---	
m,p-Xylene	2.32	---	0.0500	mg/kg wet	50	2.00	---	116	80-120%	---	---	
o-Xylene	1.07	---	0.0250	mg/kg wet	50	1.00	---	107	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*100 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*96 %*	*79-120 %*			*"*					
Duplicate (24J0748-DUP1)			Prepared: 10/17/24 16:45 Analyzed: 10/18/24 13:24									**H-01, V-16, V-21**
QC Source Sample: Non-SDG (A4I1524-01)												
Acetone	ND	---	4.82	mg/kg dry	200	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	0.482	mg/kg dry	200	---	ND	---	---	---	30%	
Benzene	ND	---	0.0482	mg/kg dry	200	---	ND	---	---	---	30%	
Bromobenzene	ND	---	0.120	mg/kg dry	200	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	0.241	mg/kg dry	200	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	0.241	mg/kg dry	200	---	ND	---	---	---	30%	
Bromoform	ND	---	0.482	mg/kg dry	200	---	ND	---	---	---	30%	
Bromomethane	ND	---	2.41	mg/kg dry	200	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	2.41	mg/kg dry	200	---	ND	---	---	---	30%	
n-Butylbenzene	**5.21**	---	0.241	mg/kg dry	200	---	5.36	---	---	3	30%	M-02
sec-Butylbenzene	**2.47**	---	0.241	mg/kg dry	200	---	2.39	---	---	3	30%	
tert-Butylbenzene	ND	---	6.02	mg/kg dry	200	---	ND	---	---	---	30%	R-02
Carbon disulfide	ND	---	2.41	mg/kg dry	200	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	0.241	mg/kg dry	200	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.120	mg/kg dry	200	---	ND	---	---	---	30%	
Chloroethane	ND	---	2.41	mg/kg dry	200	---	ND	---	---	---	30%	
Chloroform	ND	---	0.241	mg/kg dry	200	---	ND	---	---	---	30%	
Chloromethane	ND	---	1.20	mg/kg dry	200	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	0.241	mg/kg dry	200	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	0.241	mg/kg dry	200	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	0.482	mg/kg dry	200	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	1.20	mg/kg dry	200	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.241	mg/kg dry	200	---	ND	---	---	---	30%	
Dibromomethane	ND	---	0.241	mg/kg dry	200	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	0.120	mg/kg dry	200	---	ND	---	---	---	30%	

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Darrell Auvil For Darwin Thomas, Business Development Director

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0748 - EPA 5035A							**Soil**					
Duplicate (24J0748-DUP1)			Prepared: 10/17/24 16:45		Analyzed: 10/18/24 13:24							**H-01, V-16, V-21**
QC Source Sample: Non-SDG (A4I1524-01)												
1,3-Dichlorobenzene	ND	---	0.120	mg/kg dry	200	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.120	mg/kg dry	200	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	0.482	mg/kg dry	200	---	ND	---	---	---	30%	ICV-02
1,1-Dichloroethane	ND	---	0.120	mg/kg dry	200	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.120	mg/kg dry	200	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.120	mg/kg dry	200	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.120	mg/kg dry	200	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.120	mg/kg dry	200	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	0.120	mg/kg dry	200	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	0.241	mg/kg dry	200	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	0.241	mg/kg dry	200	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	0.241	mg/kg dry	200	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	0.241	mg/kg dry	200	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	0.241	mg/kg dry	200	---	ND	---	---	---	30%	
Ethylbenzene	**0.323**	---	0.120	mg/kg dry	200	---	0.320	---	---	0.7	30%	
Hexachlorobutadiene	ND	---	0.482	mg/kg dry	200	---	ND	---	---	---	30%	
2-Hexanone	ND	---	2.41	mg/kg dry	200	---	ND	---	---	---	30%	
Isopropylbenzene	**0.778**	---	0.241	mg/kg dry	200	---	0.768	---	---	1	30%	
4-Isopropyltoluene	**1.71**	---	0.241	mg/kg dry	200	---	1.72	---	---	0.4	30%	M-02
Methylene chloride	ND	---	2.41	mg/kg dry	200	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	2.41	mg/kg dry	200	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	0.241	mg/kg dry	200	---	ND	---	---	---	30%	
Naphthalene	**3.00**	---	0.482	mg/kg dry	200	---	3.41	---	---	13	30%	M-02
n-Propylbenzene	**2.53**	---	0.120	mg/kg dry	200	---	2.37	---	---	7	30%	
Styrene	ND	---	0.241	mg/kg dry	200	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.120	mg/kg dry	200	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	3.61	mg/kg dry	200	---	ND	---	---	---	30%	R-02
Tetrachloroethene (PCE)	ND	---	0.120	mg/kg dry	200	---	ND	---	---	---	30%	
Toluene	ND	---	0.241	mg/kg dry	200	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	1.20	mg/kg dry	200	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	1.20	mg/kg dry	200	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.120	mg/kg dry	200	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	1.20	mg/kg dry	200	---	ND	---	---	---	30%	R-02

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503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

NRC	Project: DEQ Sampling	
6211 N Ensign St	Project Number: P216.16354	Report ID:
Portland, OR 97217	Project Manager: Daniel Ogno	A4J1459 - 10 29 24 1703

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0748 - EPA 5035A							Soil					
Duplicate (24J0748-DUP1)			Prepared: 10/17/24 16:45 Analyzed: 10/18/24 13:24									H-01, V-16, V-21
QC Source Sample: Non-SDG (A4I1524-01)												
Trichloroethene (TCE)	ND	---	0.120	mg/kg dry	200	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	1.20	mg/kg dry	200	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	2.41	mg/kg dry	200	---	ND	---	---	---	30%	R-02
1,2,4-Trimethylbenzene	**26.6**	---	0.241	mg/kg dry	200	---	26.6	---	---	0.05	30%	
1,3,5-Trimethylbenzene	**8.48**	---	0.241	mg/kg dry	200	---	8.21	---	---	3	30%	
Vinyl chloride	ND	---	0.120	mg/kg dry	200	---	ND	---	---	---	30%	
m,p-Xylene	**7.35**	---	0.241	mg/kg dry	200	---	7.43	---	---	1	30%	
o-Xylene	**5.06**	---	0.120	mg/kg dry	200	---	5.28	---	---	4	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 112 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*93 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*103 %*		*79-120 %*				*"*			
Matrix Spike (24J0748-MS1)			Prepared: 10/15/24 16:00 Analyzed: 10/18/24 13:52									CONT
QC Source Sample: Non-SDG (A4J1375-05)												
5035A/8260D												
Acetone	2.76	---	1.41	mg/kg dry	50	2.82	ND	98	36-164%	---	---	
Acrylonitrile	1.55	---	0.141	mg/kg dry	50	1.41	ND	110	65-134%	---	---	
Benzene	1.78	---	0.0141	mg/kg dry	50	1.41	ND	**126**	**77-121%**	---	---	Q-01
Bromobenzene	1.60	---	0.0353	mg/kg dry	50	1.41	ND	113	78-121%	---	---	
Bromochloromethane	1.52	---	0.0705	mg/kg dry	50	1.41	ND	108	78-125%	---	---	
Bromodichloromethane	1.71	---	0.0705	mg/kg dry	50	1.41	ND	121	75-127%	---	---	Q-54l
Bromoform	1.89	---	0.141	mg/kg dry	50	1.41	ND	**134**	**67-132%**	---	---	Q-54n
Bromomethane	1.99	---	0.705	mg/kg dry	50	1.41	ND	141	53-143%	---	---	Q-54j
2-Butanone (MEK)	3.24	---	0.705	mg/kg dry	50	2.82	ND	115	51-148%	---	---	
n-Butylbenzene	1.73	---	0.0705	mg/kg dry	50	1.41	ND	122	70-128%	---	---	
sec-Butylbenzene	1.71	---	0.0705	mg/kg dry	50	1.41	ND	121	73-126%	---	---	
tert-Butylbenzene	1.58	---	0.0705	mg/kg dry	50	1.41	ND	112	73-125%	---	---	
Carbon disulfide	1.78	---	0.705	mg/kg dry	50	1.41	ND	126	63-132%	---	---	Q-54a
Carbon tetrachloride	1.75	---	0.0705	mg/kg dry	50	1.41	ND	124	70-135%	---	---	Q-54b
Chlorobenzene	1.56	---	0.0353	mg/kg dry	50	1.41	ND	111	79-120%	---	---	
Chloroethane	1.25	---	0.705	mg/kg dry	50	1.41	ND	89	59-139%	---	---	Q-54d
Chloroform	1.62	---	0.0705	mg/kg dry	50	1.41	ND	115	78-123%	---	---	
Chloromethane	1.28	---	0.353	mg/kg dry	50	1.41	ND	91	50-136%	---	---	Q-54s

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ANALYTICAL REPORT

NRC	Project: DEQ Sampling	
6211 N Ensign St	Project Number: P216.16354	Report ID:
Portland, OR 97217	Project Manager: Daniel Ogno	A4J1459 - 10 29 24 1703

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0748 - EPA 5035A							Soil					
Matrix Spike (24J0748-MS1)			Prepared: 10/15/24 16:00		Analyzed: 10/18/24 13:52							CONT
QC Source Sample: Non-SDG (A4J1375-05)												
2-Chlorotoluene	1.69	---	0.0705	mg/kg dry	50	1.41	ND	120	75-122%	---	---	
4-Chlorotoluene	1.60	---	0.0705	mg/kg dry	50	1.41	ND	114	72-124%	---	---	
Dibromochloromethane	1.79	---	0.141	mg/kg dry	50	1.41	ND	**127**	**74-126%**	---	---	Q-54i
1,2-Dibromo-3-chloropropane	1.72	---	0.353	mg/kg dry	50	1.41	ND	122	61-132%	---	---	
1,2-Dibromoethane (EDB)	1.57	---	0.0705	mg/kg dry	50	1.41	ND	112	78-122%	---	---	
Dibromomethane	1.71	---	0.0705	mg/kg dry	50	1.41	ND	121	78-125%	---	---	
1,2-Dichlorobenzene	1.62	---	0.0353	mg/kg dry	50	1.41	ND	115	78-121%	---	---	
1,3-Dichlorobenzene	1.57	---	0.0353	mg/kg dry	50	1.41	ND	111	77-121%	---	---	
1,4-Dichlorobenzene	1.50	---	0.0353	mg/kg dry	50	1.41	ND	106	75-120%	---	---	
Dichlorodifluoromethane	1.45	---	0.141	mg/kg dry	50	1.41	ND	103	29-149%	---	---	ICV-02
1,1-Dichloroethane	1.60	---	0.0353	mg/kg dry	50	1.41	ND	114	76-125%	---	---	
1,2-Dichloroethane (EDC)	1.44	---	0.0353	mg/kg dry	50	1.41	ND	102	73-128%	---	---	
1,1-Dichloroethene	1.50	---	0.0353	mg/kg dry	50	1.41	ND	107	70-131%	---	---	Q-54q
cis-1,2-Dichloroethene	1.68	---	0.0353	mg/kg dry	50	1.41	ND	119	77-123%	---	---	
trans-1,2-Dichloroethene	1.66	---	0.0353	mg/kg dry	50	1.41	ND	118	74-125%	---	---	
1,2-Dichloropropane	1.74	---	0.0353	mg/kg dry	50	1.41	ND	**124**	**76-123%**	---	---	Q-01
1,3-Dichloropropane	1.48	---	0.0705	mg/kg dry	50	1.41	ND	105	77-121%	---	---	
2,2-Dichloropropane	1.97	---	0.0705	mg/kg dry	50	1.41	ND	**140**	**67-133%**	---	---	Q-54m
1,1-Dichloropropene	1.77	---	0.0705	mg/kg dry	50	1.41	ND	**126**	**76-125%**	---	---	Q-01
cis-1,3-Dichloropropene	1.62	---	0.0705	mg/kg dry	50	1.41	ND	115	74-126%	---	---	Q-54p
trans-1,3-Dichloropropene	1.64	---	0.0705	mg/kg dry	50	1.41	ND	117	71-130%	---	---	Q-54f
Ethylbenzene	1.53	---	0.0353	mg/kg dry	50	1.41	ND	109	76-122%	---	---	
Hexachlorobutadiene	1.66	---	0.141	mg/kg dry	50	1.41	ND	118	61-135%	---	---	
2-Hexanone	2.60	---	0.705	mg/kg dry	50	2.82	ND	92	53-145%	---	---	
Isopropylbenzene	1.53	---	0.0705	mg/kg dry	50	1.41	ND	109	68-134%	---	---	
4-Isopropyltoluene	1.71	---	0.0705	mg/kg dry	50	1.41	ND	121	73-127%	---	---	
Methylene chloride	1.65	---	0.705	mg/kg dry	50	1.41	ND	117	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	2.84	---	0.705	mg/kg dry	50	2.82	ND	101	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1.54	---	0.0705	mg/kg dry	50	1.41	ND	109	73-125%	---	---	
Naphthalene	1.53	---	0.141	mg/kg dry	50	1.41	ND	108	62-129%	---	---	
n-Propylbenzene	1.66	---	0.0353	mg/kg dry	50	1.41	ND	118	73-125%	---	---	
Styrene	1.42	---	0.0705	mg/kg dry	50	1.41	ND	101	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1.66	---	0.0353	mg/kg dry	50	1.41	ND	118	78-125%	---	---	Q-54b

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ANALYTICAL REPORT

NRC	Project: DEQ Sampling	
6211 N Ensign St	Project Number: P216.16354	Report ID:
Portland, OR 97217	Project Manager: Daniel Ogno	A4J1459 - 10 29 24 1703

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0748 - EPA 5035A							**Soil**					
Matrix Spike (24J0748-MS1)			Prepared: 10/15/24 16:00		Analyzed: 10/18/24 13:52							**CONT**
QC Source Sample: Non-SDG (A4J1375-05)												
1,1,2,2-Tetrachloroethane	1.74	---	0.0705	mg/kg dry	50	1.41	ND	123	70-124%	---	---	Q-54o
Tetrachloroethene (PCE)	1.57	---	0.0353	mg/kg dry	50	1.41	ND	111	73-128%	---	---	
Toluene	1.40	---	0.0705	mg/kg dry	50	1.41	ND	99	77-121%	---	---	
1,2,3-Trichlorobenzene	1.53	---	0.353	mg/kg dry	50	1.41	ND	109	66-130%	---	---	
1,2,4-Trichlorobenzene	1.59	---	0.353	mg/kg dry	50	1.41	ND	113	67-129%	---	---	
1,1,1-Trichloroethane	1.69	---	0.0353	mg/kg dry	50	1.41	ND	120	73-130%	---	---	Q-54o
1,1,2-Trichloroethane	1.55	---	0.0353	mg/kg dry	50	1.41	ND	110	78-121%	---	---	
Trichloroethene (TCE)	1.71	---	0.0353	mg/kg dry	50	1.41	ND	122	77-123%	---	---	
Trichlorofluoromethane	2.58	---	0.353	mg/kg dry	50	1.41	ND	**183**	**62-140%**	---	---	Q-54o
1,2,3-Trichloropropane	1.45	---	0.0705	mg/kg dry	50	1.41	ND	103	73-125%	---	---	
1,2,4-Trimethylbenzene	1.81	---	0.0705	mg/kg dry	50	1.41	ND	**128**	**75-123%**	---	---	Q-01
1,3,5-Trimethylbenzene	1.75	---	0.0705	mg/kg dry	50	1.41	ND	124	73-124%	---	---	
Vinyl chloride	1.80	---	0.0353	mg/kg dry	50	1.41	ND	127	56-135%	---	---	
m,p-Xylene	3.07	---	0.0705	mg/kg dry	50	2.82	ND	109	77-124%	---	---	
o-Xylene	1.50	---	0.0353	mg/kg dry	50	1.41	ND	106	77-123%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 114 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*95 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*103 %*		*79-120 %*			*"*				

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6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

NRC	Project: DEQ Sampling	
6211 N Ensign St	Project Number: P216.16354	Report ID:
Portland, OR 97217	Project Manager: Daniel Ogno	A4J1459 - 10 29 24 1703

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 24J0713 - EPA 3580A/Sulfuric Acid and Florisil Cleanup												**Transformer Oil**
Blank (24J0713-BLK1)			Prepared: 10/17/24 11:31		Analyzed: 10/17/24 12:30							**C-07**
EPA 8082A												
Aroclor 1016	ND	---	1.00	mg/kg	1	---	---	---	---	---	---	
Aroclor 1221	ND	---	1.00	mg/kg	1	---	---	---	---	---	---	
Aroclor 1232	ND	---	1.00	mg/kg	1	---	---	---	---	---	---	
Aroclor 1242	ND	---	1.00	mg/kg	1	---	---	---	---	---	---	
Aroclor 1248	ND	---	1.00	mg/kg	1	---	---	---	---	---	---	
Aroclor 1254	ND	---	1.00	mg/kg	1	---	---	---	---	---	---	
Aroclor 1260	ND	---	1.00	mg/kg	1	---	---	---	---	---	---	
Surr: Decachlorobiphenyl (Surr)			*Recovery: 111 %*		*Limits: 60-125 %*			*Dilution: 1x*				
LCS (24J0713-BS1)			Prepared: 10/17/24 11:31		Analyzed: 10/17/24 12:48							**C-07**
EPA 8082A												
Aroclor 1016	18.3	---	1.00	mg/kg	1	25.0	---	73	47-134%	---	---	
Aroclor 1260	22.8	---	1.00	mg/kg	1	25.0	---	91	53-140%	---	---	
Surr: Decachlorobiphenyl (Surr)			*Recovery: 112 %*		*Limits: 60-125 %*			*Dilution: 1x*				
Duplicate (24J0713-DUP1)			Prepared: 10/17/24 11:31		Analyzed: 10/17/24 13:41							**C-07**
QC Source Sample: Non-SDG (A4J1339-01)												
Aroclor 1016	ND	---	1.72	mg/kg	2	---	ND	---	---	---	30%	
Aroclor 1221	ND	---	1.72	mg/kg	2	---	ND	---	---	---	30%	
Aroclor 1232	ND	---	1.72	mg/kg	2	---	ND	---	---	---	30%	
Aroclor 1242	ND	---	1.72	mg/kg	2	---	ND	---	---	---	30%	
Aroclor 1248	ND	---	1.72	mg/kg	2	---	ND	---	---	---	30%	
Aroclor 1254	ND	---	1.72	mg/kg	2	---	ND	---	---	---	30%	
Aroclor 1260	ND	---	1.72	mg/kg	2	---	ND	---	---	---	30%	
Surr: Decachlorobiphenyl (Surr)			*Recovery: 87 %*		*Limits: 60-125 %*			*Dilution: 2x*				
Matrix Spike (24J0713-MS1)			Prepared: 10/17/24 11:31		Analyzed: 10/17/24 14:16							**C-07**
QC Source Sample: Non-SDG (A4J1418-01)												
EPA 8082A												
Aroclor 1016	16.7	---	1.67	mg/kg	2	20.8	ND	80	47-134%	---	---	
Aroclor 1260	19.9	---	1.67	mg/kg	2	20.8	ND	96	53-140%	---	---	
Surr: Decachlorobiphenyl (Surr)			*Recovery: 115 %*		*Limits: 60-125 %*			*Dilution: 2x*				

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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

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 24J0713 - EPA 3580A/Sulfuric Acid and Florisil Cleanup												**Transformer Oil**

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Portland, OR 97217	Project Manager: Daniel Ogno	A4J1459 - 10 29 24 1703

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J1072 - EPA 3051A							Oil					
Blank (24J1072-BLK1)			Prepared: 10/28/24 13:02 Analyzed: 10/28/24 20:55									
EPA 6020B												
Arsenic	ND	---	2.50	mg/kg	5	---	---	---	---	---	---	
Barium	ND	---	2.50	mg/kg	5	---	---	---	---	---	---	
Cadmium	ND	---	0.500	mg/kg	5	---	---	---	---	---	---	
Chromium	ND	---	2.50	mg/kg	5	---	---	---	---	---	---	
Lead	ND	---	0.500	mg/kg	5	---	---	---	---	---	---	
Mercury	ND	---	0.200	mg/kg	5	---	---	---	---	---	---	
Selenium	ND	---	2.50	mg/kg	5	---	---	---	---	---	---	
Silver	ND	---	0.500	mg/kg	5	---	---	---	---	---	---	
LCS (24J1072-BS1)			Prepared: 10/28/24 13:02 Analyzed: 10/28/24 21:06									
EPA 6020B												
Arsenic	122	---	2.50	mg/kg	5	125	---	98	80-120%	---	---	
Barium	128	---	2.50	mg/kg	5	125	---	103	80-120%	---	---	
Cadmium	121	---	0.500	mg/kg	5	125	---	97	80-120%	---	---	
Chromium	125	---	2.50	mg/kg	5	125	---	100	80-120%	---	---	
Lead	128	---	0.500	mg/kg	5	125	---	102	80-120%	---	---	
Mercury	2.41	---	0.200	mg/kg	5	2.50	---	96	80-120%	---	---	
Selenium	62.7	---	2.50	mg/kg	5	62.5	---	100	80-120%	---	---	
Silver	65.8	---	0.500	mg/kg	5	62.5	---	105	80-120%	---	---	
Duplicate (24J1072-DUP1)			Prepared: 10/28/24 13:02 Analyzed: 10/28/24 21:22									
QC Source Sample: Creek Water (A4J1459-01)												
EPA 6020B												
Arsenic	ND	---	3.01	mg/kg	5	---	ND	---	---	---	20%	
Barium	ND	---	3.01	mg/kg	5	---	ND	---	---	---	20%	
Cadmium	ND	---	0.602	mg/kg	5	---	ND	---	---	---	20%	
Chromium	ND	---	3.01	mg/kg	5	---	ND	---	---	---	20%	
Lead	ND	---	0.602	mg/kg	5	---	ND	---	---	---	20%	
Mercury	ND	---	0.241	mg/kg	5	---	ND	---	---	---	20%	
Selenium	ND	---	3.01	mg/kg	5	---	ND	---	---	---	20%	
Silver	ND	---	0.602	mg/kg	5	---	ND	---	---	---	20%	
Matrix Spike (24J1072-MS1)			Prepared: 10/28/24 13:02 Analyzed: 10/28/24 21:28									

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6211 N Ensign St	Project Number: P216.16354	Report ID:
Portland, OR 97217	Project Manager: Daniel Ogno	A4J1459 - 10 29 24 1703

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J1072 - EPA 3051A							Oil					
Matrix Spike (24J1072-MS1)			Prepared: 10/28/24 13:02 Analyzed: 10/28/24 21:28									
QC Source Sample: Creek Water (A4J1459-01)												
EPA 6020B												
Arsenic	142	---	2.91	mg/kg	5	145	ND	98	75-125%	---	---	
Barium	146	---	2.91	mg/kg	5	145	ND	101	75-125%	---	---	
Cadmium	138	---	0.581	mg/kg	5	145	ND	95	75-125%	---	---	
Chromium	143	---	2.91	mg/kg	5	145	ND	98	75-125%	---	---	
Lead	144	---	0.581	mg/kg	5	145	ND	99	75-125%	---	---	
Mercury	2.75	---	0.233	mg/kg	5	2.91	ND	95	75-125%	---	---	
Selenium	72.4	---	2.91	mg/kg	5	72.7	ND	100	75-125%	---	---	
Silver	74.1	---	0.581	mg/kg	5	72.7	ND	102	75-125%	---	---	

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ANALYTICAL REPORT

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Portland, OR 97217	Project Manager: Daniel Ogno	A4J1459 - 10 29 24 1703

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3580A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24J0996							
A4J1459-01	Oil	NWTPH-Dx	10/17/24 10:00	10/25/24 07:44	0.11g/5mL	0.1g/5mL	0.91

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24J0748							
A4J1459-01RE1	Oil	5035A/8260D	10/17/24 10:00	10/17/24 12:56	1.07g/5mL	5g/5mL	4.67

Polychlorinated Biphenyls by EPA 8082A

Prep: EPA 3580A/Sulfuric Acid and Florisil Cleanup

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24J0713							
A4J1459-01	Oil	EPA 8082A	10/17/24 10:00	10/17/24 13:04	0.129g/5mL	0.1g/5mL	0.78

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24J1072							
A4J1459-01	Oil	EPA 6020B	10/17/24 10:00	10/28/24 13:02	0.089g/50mL	0.1g/50mL	1.12

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ANALYTICAL REPORT

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6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

QUALIFIER DEFINITIONS

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

Apex Laboratories

A-01	Internal Standard recovery passes analytical method criteria.
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.
CONT	The Sample Container provided for this analysis was not provided by Apex Laboratories, and has not been verified as part of the Apex Quality System.
H-01	Analyzed outside the recommended holding time.
ICV-02	Estimated Result. Initial Calibration Verification (ICV) failed low.
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-54	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +1%. 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 8260/8270 by +10%. 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 8260/8270 by +11%. 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 8260/8270 by +13%. 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 8260/8270 by +15%. 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 8260/8270 by +17%. 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 8260/8270 by +19%. The results are reported as Estimated Values.
Q-54g	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +2%. 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 8260/8270 by +22%. The results are reported as Estimated Values.
Q-54i	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +24%. The results are reported as Estimated Values.
Q-54j	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +27%. The results are reported as Estimated Values.
Q-54k	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +28%. The results are reported as Estimated Values.

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6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

Q-54l	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +3%. The results are reported as Estimated Values.
Q-54m	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +32%. The results are reported as Estimated Values.
Q-54n	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +36%. The results are reported as Estimated Values.
Q-54o	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +4%. The results are reported as Estimated Values.
Q-54p	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +5%. The results are reported as Estimated Values.
Q-54q	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +6%. The results are reported as Estimated Values.
Q-54r	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +7%. The results are reported as Estimated Values.
Q-54s	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -6%. The results are reported as Estimated Values.
Q-55	Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, 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 8260. Samples that are ND (Non-Detect) are not impacted.
R-02	The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
S-01	Surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.
V-13	Reporting levels raised due to dilution necessary for analysis due to sample foaming in sparge vessel.
V-15	Sample aliquot was subsampled from the sample container in the laboratory. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.
V-16	Sample aliquot was subsampled from the sample container in the laboratory. The subsampled aliquot was not preserved within 48 hours of sampling.
V-21	Sample aliquot was subsampled from a sample container that had been previously opened and had sample removed for another analysis.

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Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

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)

Validated 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'.

Results for Volatiles analyses on soils and sediments that are reported on a “dry weight” basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an “As Received” basis do not have the WMS correction applied, as dry weight was not performed.

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) may not be 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).

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to one half of the Reporting Limit (RL).
Blank results for gravimetric analyses are evaluated to the Reporting Level, not to half of the Reporting Level.
-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.
-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, if results are not reported to the MDL.

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, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

LABORATORY ACCREDITATION INFORMATION

ORELAP 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 provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Darrell Auvil For Darwin Thomas, Business Development Director

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ANALYTICAL REPORT

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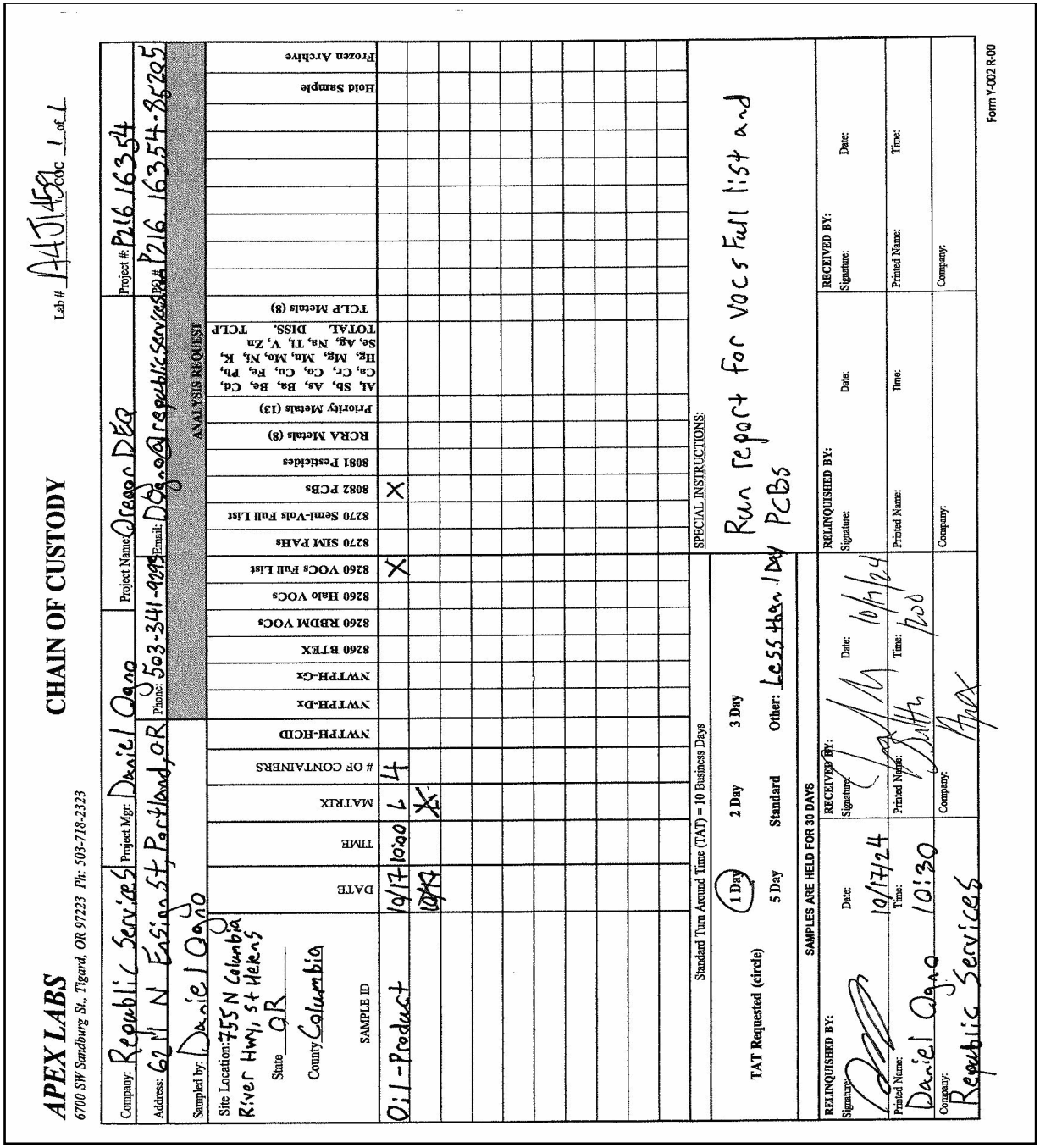

APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A4J1459 doc 1 of 1

Company: Republic Services | Project Mgr: Daniel Ogno | Project Name: Oregon DEQ | Project #: P216.16354
Address: 62 N Ensign St, Portland, OR | Phone: 503-341-9999 | Email: DOgno@republicservices.com | PO # P216.16354-85295
Sampled by: Daniel Ogno

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OR CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
0:1-Product	10/17	1030	L	4							X			X							
	10/17	1045	X	X																	

Site Location: 755 N Columbia River Hwy, St Helens, OR
State OR
County Columbia

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): (1 Day) 2 Day 3 Day | 5 Day Standard Other: Less than 1 Day

SPECIAL INSTRUCTIONS: Run report for VOCs Full list and PCBs

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:	10/17/24		Signature:		
Printed Name:		1700	Printed Name:		
Company: Daniel Ogno	10:30		Company:		
Company: Republic Services					

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:			Signature:		
Printed Name:			Printed Name:		
Company:			Company:		

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:			Signature:		
Printed Name:			Printed Name:		
Company:			Company:		

Form Y-002 R-00

Apex Laboratories

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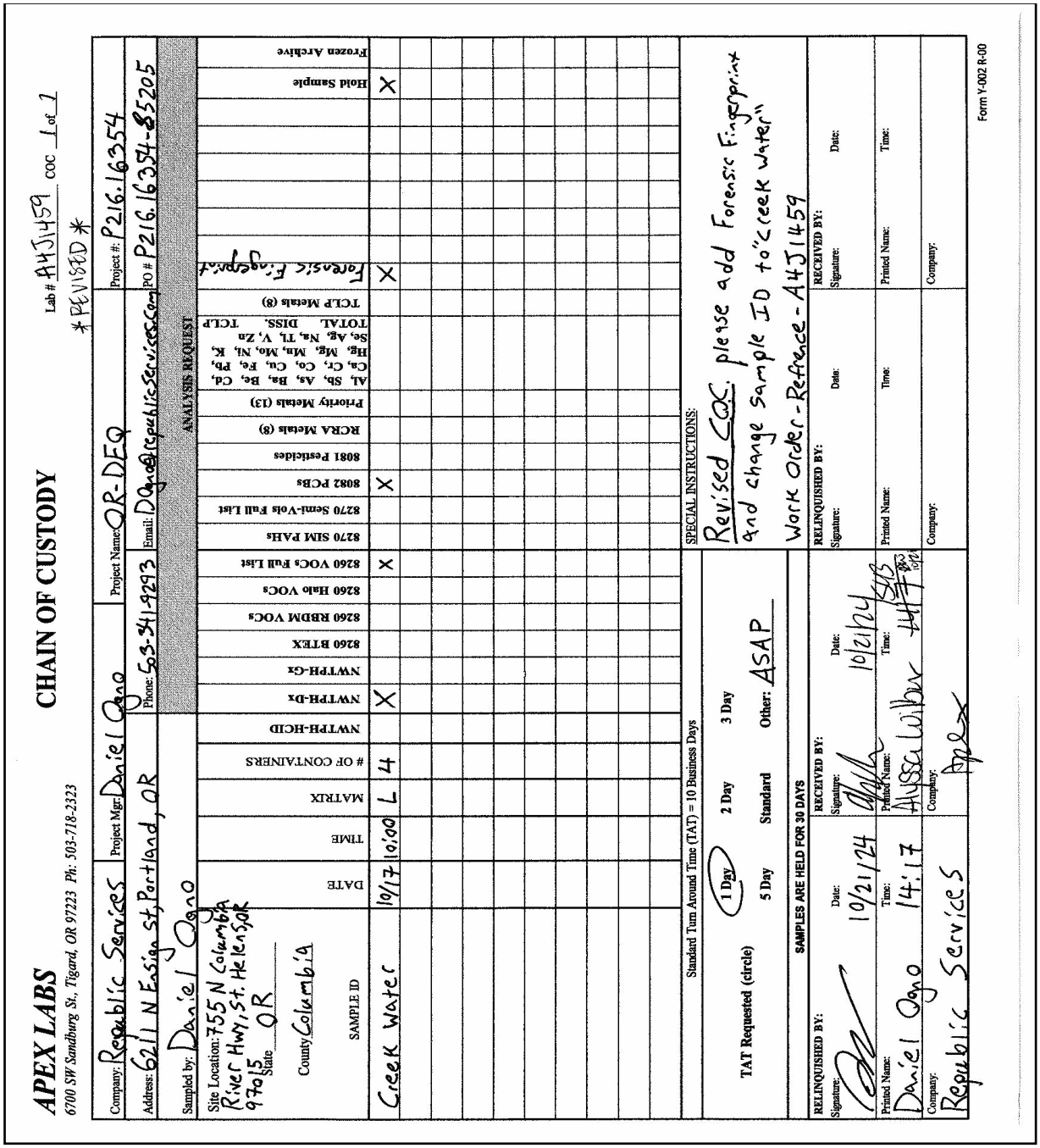
Darrell Auvil For Darwin Thomas, Business Development Director

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**



APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A4J1459 COC 1 of 1
REVISED

Company: Republic Services | Project Mgr: Daniel Ogno | Project Name: OR-DEQ | Project #: P216.16354
Address: 6211 N Ensign St, Portland, OR | Phone: 503-341-9293 | Email: DOgno@republicservices.com | PO # P216.16354-85205
Sampled by: Daniel Ogno

Site Location: 755 N Columbia River Hwy, St. Helens OR 97015 State
County Columbia

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Forensic Fingerprint	Hold Sample	Frozen Archive
Creek Water	10/17	10:00	L	4		X					X			X						X	X	

ANALYSIS REQUEST

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day | 2 Day | 3 Day | 5 Day | Standard | Other: ASAP

SPECIAL INSTRUCTIONS:
Revised COC. please add Forensic Fingerprint and change sample ID to "Creek Water" Work Order - Reference - A4J1459

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Date: 10/21/24	Date: 10/21/24	Date:	Date:
Time: 14:17	Time: 1417	Time:	Time:
Printed Name: Daniel Ogno	Printed Name: Alyssa Wilbur	Printed Name:	Printed Name:
Company: Republic Services	Company: APEX	Company:	Company:

Form Y-002 R-00

Apex Laboratories

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Darrell Auvil For Darwin Thomas, Business Development Director

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ANALYTICAL REPORT

NRC	Project: **DEQ Sampling**	
6211 N Ensign St	Project Number: **P216.16354**	**Report ID:**
Portland, OR 97217	Project Manager: **Daniel Ogno**	**A4J1459 - 10 29 24 1703**

APEX LABS COOLER RECEIPT FORM

Client: Republic Services Element WO#: A4 J1459

Project/Project #: Oregon DEQ P216.16354

Delivery Info:

Date/time received: 10/17/24 @ 1200 By: JS

Delivered by: Apex__Client X ESS__FedEx__UPS__Radio__Morgan__SDS__Evergreen__Other__

From USDA Regulated Origin? Yes____ No X

Cooler Inspection Date/time inspected: 10/17/24 @ 1202 By: JS

Chain of Custody included? Yes X No____

Signed/dated by client? Yes X No____

Contains USDA Reg. Soils? Yes____ No X Unsure (email RegSoils)____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	1.2						
Custody seals? (Y/N)	N						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	Real						
Condition (In/Out):	In						

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

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 10/17/24 @ 1235 By: JS

All samples intact? Yes X No___ Comments:

Bottle labels/COCs agree? Yes X No___ Comments:

COC/container discrepancies form initiated? Yes___ No X

Containers/volumes received appropriate for analysis? Yes X No___ Comments:

Do VOA vials have visible headspace? Yes___ No X NA___

Comments

Water samples: pH checked: Yes___No___NA X pH appropriate? Yes___No___NA X pH ID:

Comments:

Labeled by: JS Witness: [signature] Cooler Inspected by: JS

Form Y-003 R-02

Apex Laboratories

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Darrell Auvil For Darwin Thomas, Business Development Director

eurofins | Environment Testing

1 2 3 4 5 6 7 8 9 10 11 12

ANALYTICAL REPORT

PREPARED FOR

Attn: Josh Owen
Martin S Burck Associates
200 North Wasco Ct
Hood River, Oregon 97031

Generated 11/15/2024 4:24:34 PM

JOB DESCRIPTION

Lawrence Oil - St Helens

JOB NUMBER

590-28033-1

Eurofins Spokane
11922 East 1st Ave
Spokane WA 99206

See page two for job notes and contact information.

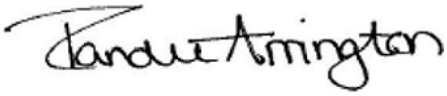
myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization



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Authorized for release by
Randee Arrington, Business Unit Manager
Randee.Arrington@et.eurofinsus.com
(509)924-9200

Table of Contents

Job Narrative
590-28033-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 11/12/2024 11:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.1°C.

Hydrocarbons
Method NWTPH_Dx: The method blank for preparation batch 590-50823 and analytical batch 590-50841 contained Residual Range Organics (RRO) (C25-C36) above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL) in the method blank; therefore, re-extraction and re-analysis of samples was not performed.

Method NWTPH_Dx: Detected hydrocarbons in the diesel range appear to be due to heavily weathered diesel and/or a light weight oil.

S3-1 (590-28033-1)

Method NWTPH_Dx: Detected hydrocarbons in the diesel range appear to be due to heavily weathered diesel.

S5-1 (590-28033-3) and S6-1 (590-28033-4)

Method NWTPH_Dx: Surrogate recovery for the following samples were outside control limits: S4-1 (590-28033-2), S7-1 (590-28033-5) and S9-1 (590-28033-7). Evidence of matrix interference due to high target analytes is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

Sample Summary

Client: Martin S Burck Associates
Job ID: 590-28033-1
Project/Site: Lawrence Oil - St Helens

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-28033-1	S3-1	Solid	11/07/24 14:34	11/12/24 11:10
590-28033-2	S4-1	Solid	11/07/24 14:42	11/12/24 11:10
590-28033-3	S5-1	Solid	11/07/24 14:48	11/12/24 11:10
590-28033-4	S6-1	Solid	11/08/24 09:08	11/12/24 11:10
590-28033-5	S7-1	Solid	11/08/24 09:20	11/12/24 11:10
590-28033-6	S8-1	Solid	11/08/24 09:32	11/12/24 11:10
590-28033-7	S9-1	Solid	11/08/24 10:48	11/12/24 11:10

Client: Martin S Burck Associates
Job ID: 590-28033-1
Project/Site: Lawrence Oil - St Helens

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

Glossary

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

Client Sample ID: S3-1
Lab Sample ID: 590-28033-1

Date Collected: 11/07/24 14:34
Matrix: Solid
Date Received: 11/12/24 11:10
Percent Solids: 93.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	62		11	4.5	mg/Kg	☼	11/13/24 08:52	11/13/24 16:57	1
Residual Range Organics (RRO) (C25-C36)	120	B	27	5.3	mg/Kg	☼	11/13/24 08:52	11/13/24 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*50 - 150*	*11/13/24 08:52*	*11/13/24 16:57*	*1*
n-Triacontane-d62	*97*		*50 - 150*	*11/13/24 08:52*	*11/13/24 16:57*	*1*

Client Sample ID: S4-1
Lab Sample ID: 590-28033-2

Date Collected: 11/07/24 14:42
Matrix: Solid
Date Received: 11/12/24 11:10
Percent Solids: 90.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	6700		110	45	mg/Kg	☼	11/13/24 08:52	11/14/24 09:27	10
Residual Range Organics (RRO) (C25-C36)	210	J B	270	54	mg/Kg	☼	11/13/24 08:52	11/14/24 09:27	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*165*	*S1+*	*50 - 150*	*11/13/24 08:52*	*11/14/24 09:27*	*10*
n-Triacontane-d62	*107*		*50 - 150*	*11/13/24 08:52*	*11/14/24 09:27*	*10*

Client Sample ID: S5-1
Lab Sample ID: 590-28033-3

Date Collected: 11/07/24 14:48
Matrix: Solid
Date Received: 11/12/24 11:10
Percent Solids: 88.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	46		11	4.7	mg/Kg	☼	11/13/24 08:52	11/13/24 18:02	1
Residual Range Organics (RRO) (C25-C36)	82	B	28	5.6	mg/Kg	☼	11/13/24 08:52	11/13/24 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*92*		*50 - 150*	*11/13/24 08:52*	*11/13/24 18:02*	*1*
n-Triacontane-d62	*97*		*50 - 150*	*11/13/24 08:52*	*11/13/24 18:02*	*1*

Client Sample ID: S6-1
Lab Sample ID: 590-28033-4

Date Collected: 11/08/24 09:08
Matrix: Solid
Date Received: 11/12/24 11:10
Percent Solids: 81.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	390		12	4.9	mg/Kg	☼	11/13/24 08:52	11/13/24 18:23	1
Residual Range Organics (RRO) (C25-C36)	120	B	29	5.8	mg/Kg	☼	11/13/24 08:52	11/13/24 18:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*104*		*50 - 150*	*11/13/24 08:52*	*11/13/24 18:23*	*1*
n-Triacontane-d62	*95*		*50 - 150*	*11/13/24 08:52*	*11/13/24 18:23*	*1*

Client Sample ID: S7-1

Lab Sample ID: 590-28033-5

Date Collected: 11/08/24 09:20
Matrix: Solid
Date Received: 11/12/24 11:10
Percent Solids: 90.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	3900		110	45	mg/Kg	☼	11/13/24 08:52	11/14/24 09:49	10
Residual Range Organics (RRO) (C25-C36)	160	J B	270	53	mg/Kg	☼	11/13/24 08:52	11/14/24 09:49	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*199*	*S1+*	*50 - 150*	*11/13/24 08:52*	*11/14/24 09:49*	*10*
n-Triacontane-d62	*96*		*50 - 150*	*11/13/24 08:52*	*11/14/24 09:49*	*10*

Client Sample ID: S8-1

Lab Sample ID: 590-28033-6

Date Collected: 11/08/24 09:32
Matrix: Solid
Date Received: 11/12/24 11:10
Percent Solids: 90.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	16		11	4.4	mg/Kg	☼	11/13/24 08:52	11/13/24 19:07	1
Residual Range Organics (RRO) (C25-C36)	6.9	J B	26	5.3	mg/Kg	☼	11/13/24 08:52	11/13/24 19:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*11/13/24 08:52*	*11/13/24 19:07*	*1*
n-Triacontane-d62	*92*		*50 - 150*	*11/13/24 08:52*	*11/13/24 19:07*	*1*

Client Sample ID: S9-1

Lab Sample ID: 590-28033-7

Date Collected: 11/08/24 10:48
Matrix: Solid
Date Received: 11/12/24 11:10
Percent Solids: 89.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	6400		110	46	mg/Kg	☼	11/13/24 08:52	11/14/24 10:11	10
Residual Range Organics (RRO) (C25-C36)	230	J B	280	55	mg/Kg	☼	11/13/24 08:52	11/14/24 10:11	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*302*	*S1+*	*50 - 150*	*11/13/24 08:52*	*11/14/24 10:11*	*10*
n-Triacontane-d62	*99*		*50 - 150*	*11/13/24 08:52*	*11/14/24 10:11*	*10*

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

Lab Sample ID: MB 590-50823/1-A
Matrix: Solid
Analysis Batch: 50841

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50823

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10	4.2	mg/Kg		11/13/24 08:52	11/13/24 13:38	1
Residual Range Organics (RRO) (C25-C36)	7.73	J	25	5.0	mg/Kg		11/13/24 08:52	11/13/24 13:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*50 - 150*	*11/13/24 08:52*	*11/13/24 13:38*	*1*
n-Triacontane-d62	*94*		*50 - 150*	*11/13/24 08:52*	*11/13/24 13:38*	*1*

Lab Sample ID: LCS 590-50823/2-A
Matrix: Solid
Analysis Batch: 50841

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50823

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics (DRO) (C10-C25)			66.7	61.2		mg/Kg		92	50 - 150		
Residual Range Organics (RRO) (C25-C36)			66.7	67.6		mg/Kg		101	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*90*		*50 - 150*
n-Triacontane-d62	*93*		*50 - 150*

Lab Sample ID: 590-28011-A-30-C DU
Matrix: Solid
Analysis Batch: 50841

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 50823

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)	ND			ND		mg/Kg	☼			NC	40
Residual Range Organics (RRO) (C25-C36)	ND			ND		mg/Kg	☼			NC	40

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
o-Terphenyl	*85*		*50 - 150*
n-Triacontane-d62	*83*		*50 - 150*

Client Sample ID: S3-1 — **Lab Sample ID: 590-28033-1**
Date Collected: 11/07/24 14:34 — **Matrix: Solid**
Date Received: 11/12/24 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			50824	11/13/24 08:58	MRV	EET SPK

Client Sample ID: S3-1 — **Lab Sample ID: 590-28033-1**
Date Collected: 11/07/24 14:34 — **Matrix: Solid**
Date Received: 11/12/24 11:10 — **Percent Solids: 93.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.09 g	5 mL	50823	11/13/24 08:52	MRV	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	50841	11/13/24 16:57	NMI	EET SPK

Client Sample ID: S4-1 — **Lab Sample ID: 590-28033-2**
Date Collected: 11/07/24 14:42 — **Matrix: Solid**
Date Received: 11/12/24 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			50824	11/13/24 08:58	MRV	EET SPK

Client Sample ID: S4-1 — **Lab Sample ID: 590-28033-2**
Date Collected: 11/07/24 14:42 — **Matrix: Solid**
Date Received: 11/12/24 11:10 — **Percent Solids: 90.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.34 g	5 mL	50823	11/13/24 08:52	MRV	EET SPK
Total/NA	Analysis	NWTPH-Dx		10	1 mL	1 mL	50841	11/14/24 09:27	NMI	EET SPK

Client Sample ID: S5-1 — **Lab Sample ID: 590-28033-3**
Date Collected: 11/07/24 14:48 — **Matrix: Solid**
Date Received: 11/12/24 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			50824	11/13/24 08:58	MRV	EET SPK

Client Sample ID: S5-1 — **Lab Sample ID: 590-28033-3**
Date Collected: 11/07/24 14:48 — **Matrix: Solid**
Date Received: 11/12/24 11:10 — **Percent Solids: 88.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.24 g	5 mL	50823	11/13/24 08:52	MRV	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	50841	11/13/24 18:02	NMI	EET SPK

Client Sample ID: S6-1 — **Lab Sample ID: 590-28033-4**
Date Collected: 11/08/24 09:08 — **Matrix: Solid**
Date Received: 11/12/24 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			50824	11/13/24 08:58	MRV	EET SPK

Lab Chronicle

Client: Martin S Burck Associates
Project/Site: Lawrence Oil - St Helens

Job ID: 590-28033-1

Client Sample ID: S6-1

Lab Sample ID: 590-28033-4
Date Collected: 11/08/24 09:08
Matrix: Solid
Date Received: 11/12/24 11:10
Percent Solids: 81.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.83 g	5 mL	50823	11/13/24 08:52	MRV	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	50841	11/13/24 18:23	NMI	EET SPK

Client Sample ID: S7-1

Lab Sample ID: 590-28033-5
Date Collected: 11/08/24 09:20
Matrix: Solid
Date Received: 11/12/24 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			50824	11/13/24 08:58	MRV	EET SPK

Client Sample ID: S7-1

Lab Sample ID: 590-28033-5
Date Collected: 11/08/24 09:20
Matrix: Solid
Date Received: 11/12/24 11:10
Percent Solids: 90.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.52 g	5 mL	50823	11/13/24 08:52	MRV	EET SPK
Total/NA	Analysis	NWTPH-Dx		10	1 mL	1 mL	50841	11/14/24 09:49	NMI	EET SPK

Client Sample ID: S8-1

Lab Sample ID: 590-28033-6
Date Collected: 11/08/24 09:32
Matrix: Solid
Date Received: 11/12/24 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			50824	11/13/24 08:58	MRV	EET SPK

Client Sample ID: S8-1

Lab Sample ID: 590-28033-6
Date Collected: 11/08/24 09:32
Matrix: Solid
Date Received: 11/12/24 11:10
Percent Solids: 90.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.69 g	5 mL	50823	11/13/24 08:52	MRV	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	50841	11/13/24 19:07	NMI	EET SPK

Client Sample ID: S9-1

Lab Sample ID: 590-28033-7
Date Collected: 11/08/24 10:48
Matrix: Solid
Date Received: 11/12/24 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			50824	11/13/24 08:58	MRV	EET SPK

Lab Chronicle

Client: Martin S Burck Associates
Project/Site: Lawrence Oil - St Helens

Job ID: 590-28033-1

Client Sample ID: S9-1
Date Collected: 11/08/24 10:48
Date Received: 11/12/24 11:10

Lab Sample ID: 590-28033-7
Matrix: Solid
Percent Solids: 89.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.29 g	5 mL	50823	11/13/24 08:52	MRV	EET SPK
Total/NA	Analysis	NWTPH-Dx		10	1 mL	1 mL	50841	11/14/24 10:11	NMI	EET SPK

Laboratory References:

EET SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: Martin S Burck Associates
Job ID: 590-28033-1
Project/Site: Lawrence Oil - St Helens

Laboratory: Eurofins Spokane

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4137	12-08-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Martin S Burck Associates
Project/Site: Lawrence Oil - St Helens

Job ID: 590-28033-1

Method	Method Description	Protocol	Laboratory
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	EET SPK
Moisture	Percent Moisture	EPA	EET SPK
3550C	Ultrasonic Extraction	SW846	EET SPK

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Eurofins TestAmerica, Spokane
11922 E 1st Avenue

Spokane, WA 99206-5302
phone 509.924.9200 fax 509.924.9290

Chain of Custody Record

eurofins Environment Testing

Regulatory Program ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager	Site Contact	Date	COC No:
Martin S. Burek Associates	Email: jwen@msbenvironmental.com	Lab Contact	Carrier	1 of 1 COCs
Address 200 N Wasco Ct	Tel/Fax			Sampler
City/State/Zip Hood River, OR	Analysis Turnaround Time			For Lab Use Only
Phone 541 387 4427	☐ CALENDAR DAYS ☒ WORKING DAYS			Walk-in Client
FAX	TAT if different from Below 3-day TAT			Lab Sampling
Project Name: Lawrence Oil - St Helens	☐ 2 weeks			
Site: Lawrence Oil - St Helens	☐ 1 week			Job / SDG No
PO# Lawrence Oil. St Helens	☐ 2 days ☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	NWTPH-Dx	Hold	Sample Specific Notes
S3-1	11/7/24	1434	G	Soil	3			✓		
S4-1	11/7/24	1442	G	Soil	3			✓		
S5-1	11/7/24	1448	G	Soil	3			✓		
S6-1	11/8/24	0908	G	Soil	3			✓		
S7-1	11/8/24	0920	G	Soil	3			✓		
S8-1	11/8/24	0932	G	Soil	3			✓		
S9-1	8/11/24	1048	G	Soil	3			✓		
Trip Blank					2				✓	

590-28033 Chain of Custody

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4; 4=HNO3; 5=NaOH, 6= Other _____

Possible Hazard Identification.
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments 3-day TAT

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.	Cooler Temp. (°C): Obs'd. 2.5 Corr'd: 2.1	Therm ID No. 12005

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Relinquished by	MSBA	11/11/24 13:00			
Relinquished by	Company	Date/Time:	Received by	Company	Date/Time
Relinquished by	Company	Date/Time	Received in Laboratory by	Company: EEC880	Date/Time: 11/12/24 1050

Form No. CA-C-WI-002, Rev 4.23, dated 4/16/2019

Login Sample Receipt Checklist

Client: Martin S Burck Associates

Job Number: 590-28033-1

Login Number: 28033

List Source: Eurofins Spokane

List Number: 1

Creator: Morris, Mackenzie 1

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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1 2 3 4 5 6 7 8 9 10 11 12

ANALYTICAL REPORT

PREPARED FOR

Attn: Josh Owen
Martin S Burck Associates
200 North Wasco Ct
Hood River, Oregon 97031

Generated 12/12/2024 11:23:23 AM

JOB DESCRIPTION

Lawrence Oil - St. Helens

JOB NUMBER

590-28345-1

Eurofins Spokane
11922 East 1st Ave
Spokane WA 99206

See page two for job notes and contact information.

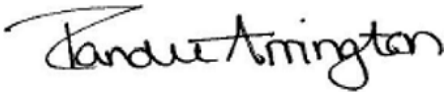
myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization



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12/12/2024 11:23:23 AM

Authorized for release by
Randee Arrington, Business Unit Manager
Randee.Arrington@et.eurofinsus.com
(509)924-9200

Table of Contents

Job Narrative
590-28345-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 12/3/2024 10:30 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C.

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

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

GC/MS Semi VOA
Method 8270E_SIM: The continuing calibration verification (CCV) associated with batch 590-51352 recovered above the upper control limit for p-Terphenyl-d14. The samples analytes associated with this CCV's failing surrogate were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: Baker Tank H2O (590-28345-1).

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

Hydrocarbons
Method NWTPH_Dx: Detected hydrocarbons appear to be due to weathered gasoline overlap as well as heavily weathered diesel.

Baker Tank H2O (590-28345-1)

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

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

Sample Summary

Client: Martin S Burck Associates
Project/Site: Lawrence Oil - St. Helens

Job ID: 590-28345-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-28345-1	Baker Tank H2O	Water	11/26/24 15:34	12/03/24 10:30

Definitions/Glossary

Client: Martin S Burck Associates
Job ID: 590-28345-1
Project/Site: Lawrence Oil - St. Helens

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Client: Martin S Burck Associates
Project/Site: Lawrence Oil - St. Helens

Job ID: 590-28345-1

Client Sample ID: Baker Tank H2O
Date Collected: 11/26/24 15:34
Date Received: 12/03/24 10:30

Lab Sample ID: 590-28345-1
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		2.0	0.64	ug/L			12/05/24 12:33	1
Chloromethane	ND		3.0	0.50	ug/L			12/05/24 12:33	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/05/24 12:33	1
Bromomethane	ND		5.0	0.76	ug/L			12/05/24 12:33	1
Chloroethane	ND		2.0	0.40	ug/L			12/05/24 12:33	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/05/24 12:33	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/05/24 12:33	1
Methylene Chloride	ND		5.0	2.2	ug/L			12/05/24 12:33	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/05/24 12:33	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/05/24 12:33	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/05/24 12:33	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/05/24 12:33	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/05/24 12:33	1
Chloroform	ND		1.0	0.24	ug/L			12/05/24 12:33	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/05/24 12:33	1
Carbon tetrachloride	ND		1.0	0.40	ug/L			12/05/24 12:33	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/05/24 12:33	1
Benzene	**8.7**		0.40	0.093	ug/L			12/05/24 12:33	1
1,2-Dichloroethane (EDC)	ND		1.0	0.31	ug/L			12/05/24 12:33	1
Trichloroethene	ND		1.0	0.20	ug/L			12/05/24 12:33	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/05/24 12:33	1
Dibromomethane	ND		2.0	0.50	ug/L			12/05/24 12:33	1
Bromodichloromethane	ND		1.0	0.29	ug/L			12/05/24 12:33	1
cis-1,3-Dichloropropene	ND		1.0	0.25	ug/L			12/05/24 12:33	1
Toluene	**14**		1.0	0.31	ug/L			12/05/24 12:33	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/05/24 12:33	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/05/24 12:33	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/05/24 12:33	1
1,3-Dichloropropane	ND		2.0	0.21	ug/L			12/05/24 12:33	1
Dibromochloromethane	ND		2.0	0.33	ug/L			12/05/24 12:33	1
1,2-Dibromoethane (EDB)	ND		1.0	0.20	ug/L			12/05/24 12:33	1
Chlorobenzene	ND		1.0	0.32	ug/L			12/05/24 12:33	1
Ethylbenzene	**0.65**	**J**	1.0	0.20	ug/L			12/05/24 12:33	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/05/24 12:33	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.32	ug/L			12/05/24 12:33	1
m,p-Xylene	**67**		2.0	0.28	ug/L			12/05/24 12:33	1
o-Xylene	**70**		1.0	0.16	ug/L			12/05/24 12:33	1
Styrene	ND		1.0	0.24	ug/L			12/05/24 12:33	1
Bromoform	ND		5.0	0.66	ug/L			12/05/24 12:33	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/05/24 12:33	1
Bromobenzene	ND		1.0	0.28	ug/L			12/05/24 12:33	1
N-Propylbenzene	ND		1.0	0.25	ug/L			12/05/24 12:33	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/05/24 12:33	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/05/24 12:33	1
1,3,5-Trimethylbenzene	**34**		1.0	0.32	ug/L			12/05/24 12:33	1
4-Chlorotoluene	ND		1.0	0.26	ug/L			12/05/24 12:33	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/05/24 12:33	1
1,2,4-Trimethylbenzene	**37**		1.0	0.31	ug/L			12/05/24 12:33	1
sec-Butylbenzene	ND		1.0	0.22	ug/L			12/05/24 12:33	1

Client Sample ID: Baker Tank H2O
Lab Sample ID: 590-28345-1
Date Collected: 11/26/24 15:34
Matrix: Water
Date Received: 12/03/24 10:30

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/05/24 12:33	1
p-Isopropyltoluene	**2.4**		1.0	0.27	ug/L			12/05/24 12:33	1
1,4-Dichlorobenzene	ND		1.0	0.28	ug/L			12/05/24 12:33	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/05/24 12:33	1
1,2-Dichlorobenzene	ND		1.0	0.23	ug/L			12/05/24 12:33	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/05/24 12:33	1
1,2,4-Trichlorobenzene	ND		1.0	0.50	ug/L			12/05/24 12:33	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/05/24 12:33	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/05/24 12:33	1
Naphthalene	**12**		2.0	0.63	ug/L			12/05/24 12:33	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/05/24 12:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/05/24 12:33*	*1*
4-Bromofluorobenzene (Surr)	*100*		*76 - 120*		*12/05/24 12:33*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 123*		*12/05/24 12:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*12/05/24 12:33*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**1900**		150	54	ug/L			12/05/24 12:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*68.7 - 141*		*12/05/24 12:33*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.63**		0.091	0.053	ug/L		12/03/24 10:49	12/11/24 21:55	1
2-Methylnaphthalene	ND		0.091	0.044	ug/L		12/03/24 10:49	12/11/24 21:55	1
1-Methylnaphthalene	**0.11**		0.091	0.023	ug/L		12/03/24 10:49	12/11/24 21:55	1
Acenaphthylene	**0.017**	**J**	0.091	0.016	ug/L		12/03/24 10:49	12/11/24 21:55	1
Acenaphthene	**0.17**		0.091	0.022	ug/L		12/03/24 10:49	12/11/24 21:55	1
Fluorene	**0.027**	**J**	0.091	0.016	ug/L		12/03/24 10:49	12/11/24 21:55	1
Phenanthrene	**0.066**	**J**	0.091	0.057	ug/L		12/03/24 10:49	12/11/24 21:55	1
Anthracene	**0.030**	**J**	0.091	0.025	ug/L		12/03/24 10:49	12/11/24 21:55	1
Fluoranthene	ND		0.091	0.017	ug/L		12/03/24 10:49	12/11/24 21:55	1
Pyrene	**0.55**		0.091	0.026	ug/L		12/03/24 10:49	12/11/24 21:55	1
Benzo[a]anthracene	ND		0.091	0.028	ug/L		12/03/24 10:49	12/11/24 21:55	1
Chrysene	ND		0.091	0.010	ug/L		12/03/24 10:49	12/11/24 21:55	1
Benzo[b]fluoranthene	ND		0.091	0.025	ug/L		12/03/24 10:49	12/11/24 21:55	1
Benzo[k]fluoranthene	ND		0.091	0.015	ug/L		12/03/24 10:49	12/11/24 21:55	1
Benzo[a]pyrene	ND		0.091	0.012	ug/L		12/03/24 10:49	12/11/24 21:55	1
Indeno[1,2,3-cd]pyrene	ND		0.091	0.022	ug/L		12/03/24 10:49	12/11/24 21:55	1
Dibenz(a,h)anthracene	ND		0.091	0.013	ug/L		12/03/24 10:49	12/11/24 21:55	1
Benzo[g,h,i]perylene	ND		0.091	0.021	ug/L		12/03/24 10:49	12/11/24 21:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*71*		*44 - 120*	*12/03/24 10:49*	*12/11/24 21:55*	*1*
2-Fluorobiphenyl (Surr)	*82*		*32 - 120*	*12/03/24 10:49*	*12/11/24 21:55*	*1*
p-Terphenyl-d14	*79*		*39 - 120*	*12/03/24 10:49*	*12/11/24 21:55*	*1*

Client: Martin S Burck Associates
Project/Site: Lawrence Oil - St. Helens

Job ID: 590-28345-1

Client Sample ID: Baker Tank H2O

Lab Sample ID: 590-28345-1

Date Collected: 11/26/24 15:34

Matrix: Water

Date Received: 12/03/24 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**1.4**		0.21	0.12	mg/L		12/09/24 11:52	12/09/24 19:20	1
Residual Range Organics (RRO) (C25-C36)	ND		0.31	0.13	mg/L		12/09/24 11:52	12/09/24 19:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*79*		*50 - 150*	*12/09/24 11:52*	*12/09/24 19:20*	*1*
n-Triacontane-d62	*69*		*50 - 150*	*12/09/24 11:52*	*12/09/24 19:20*	*1*

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.025	0.010	mg/L		12/09/24 10:16	12/09/24 16:33	1
Barium	**0.015**	**J**	0.025	0.0014	mg/L		12/09/24 10:16	12/09/24 16:33	1
Cadmium	ND		0.025	0.0012	mg/L		12/09/24 10:16	12/09/24 16:33	1
Chromium	ND		0.025	0.0017	mg/L		12/09/24 10:16	12/09/24 16:33	1
Lead	ND		0.060	0.0051	mg/L		12/09/24 10:16	12/09/24 16:33	1
Selenium	ND		0.10	0.049	mg/L		12/09/24 10:16	12/09/24 16:33	1
Silver	ND		0.025	0.0025	mg/L		12/09/24 10:16	12/09/24 16:33	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.090	ug/L		12/09/24 10:17	12/09/24 16:32	1

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

Lab Sample ID: MB 590-51248/10
Matrix: Water
Analysis Batch: 51248

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		2.0	0.64	ug/L			12/05/24 12:04	1
Chloromethane	ND		3.0	0.50	ug/L			12/05/24 12:04	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/05/24 12:04	1
Bromomethane	ND		5.0	0.76	ug/L			12/05/24 12:04	1
Chloroethane	ND		2.0	0.40	ug/L			12/05/24 12:04	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/05/24 12:04	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/05/24 12:04	1
Methylene Chloride	ND		5.0	2.2	ug/L			12/05/24 12:04	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/05/24 12:04	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/05/24 12:04	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/05/24 12:04	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/05/24 12:04	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/05/24 12:04	1
Chloroform	ND		1.0	0.24	ug/L			12/05/24 12:04	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/05/24 12:04	1
Carbon tetrachloride	ND		1.0	0.40	ug/L			12/05/24 12:04	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/05/24 12:04	1
Benzene	ND		0.40	0.093	ug/L			12/05/24 12:04	1
1,2-Dichloroethane (EDC)	ND		1.0	0.31	ug/L			12/05/24 12:04	1
Trichloroethene	ND		1.0	0.20	ug/L			12/05/24 12:04	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/05/24 12:04	1
Dibromomethane	ND		2.0	0.50	ug/L			12/05/24 12:04	1
Bromodichloromethane	ND		1.0	0.29	ug/L			12/05/24 12:04	1
cis-1,3-Dichloropropene	ND		1.0	0.25	ug/L			12/05/24 12:04	1
Toluene	ND		1.0	0.31	ug/L			12/05/24 12:04	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/05/24 12:04	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/05/24 12:04	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/05/24 12:04	1
1,3-Dichloropropane	ND		2.0	0.21	ug/L			12/05/24 12:04	1
Dibromochloromethane	ND		2.0	0.33	ug/L			12/05/24 12:04	1
1,2-Dibromoethane (EDB)	ND		1.0	0.20	ug/L			12/05/24 12:04	1
Chlorobenzene	ND		1.0	0.32	ug/L			12/05/24 12:04	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/05/24 12:04	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/05/24 12:04	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.32	ug/L			12/05/24 12:04	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/05/24 12:04	1
o-Xylene	ND		1.0	0.16	ug/L			12/05/24 12:04	1
Styrene	ND		1.0	0.24	ug/L			12/05/24 12:04	1
Bromoform	ND		5.0	0.66	ug/L			12/05/24 12:04	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/05/24 12:04	1
Bromobenzene	ND		1.0	0.28	ug/L			12/05/24 12:04	1
N-Propylbenzene	ND		1.0	0.25	ug/L			12/05/24 12:04	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/05/24 12:04	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/05/24 12:04	1
1,3,5-Trimethylbenzene	ND		1.0	0.32	ug/L			12/05/24 12:04	1
4-Chlorotoluene	ND		1.0	0.26	ug/L			12/05/24 12:04	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/05/24 12:04	1
1,2,4-Trimethylbenzene	ND		1.0	0.31	ug/L			12/05/24 12:04	1

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

Lab Sample ID: MB 590-51248/10
Matrix: Water
Analysis Batch: 51248

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.22	ug/L			12/05/24 12:04	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/05/24 12:04	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/05/24 12:04	1
1,4-Dichlorobenzene	ND		1.0	0.28	ug/L			12/05/24 12:04	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/05/24 12:04	1
1,2-Dichlorobenzene	ND		1.0	0.23	ug/L			12/05/24 12:04	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/05/24 12:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.50	ug/L			12/05/24 12:04	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/05/24 12:04	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/05/24 12:04	1
Naphthalene	ND		2.0	0.63	ug/L			12/05/24 12:04	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/05/24 12:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*80 - 120*		*12/05/24 12:04*	*1*
4-Bromofluorobenzene (Surr)	*101*		*76 - 120*		*12/05/24 12:04*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 123*		*12/05/24 12:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*12/05/24 12:04*	*1*

Lab Sample ID: LCS 590-51248/1006
Matrix: Water
Analysis Batch: 51248

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dichlorodifluoromethane	10.0	8.77		ug/L		88	30 - 150
Chloromethane	10.0	9.52		ug/L		95	19 - 150
Vinyl chloride	10.0	10.4		ug/L		104	50 - 150
Bromomethane	10.0	10.6		ug/L		106	66 - 149
Chloroethane	10.0	9.10		ug/L		91	64 - 134
Trichlorofluoromethane	10.0	9.31		ug/L		93	71 - 147
1,1-Dichloroethene	10.0	8.89		ug/L		89	65 - 141
Methylene Chloride	10.0	8.07		ug/L		81	30 - 150
trans-1,2-Dichloroethene	10.0	8.52		ug/L		85	73 - 137
1,1-Dichloroethane	10.0	10.0		ug/L		100	80 - 125
2,2-Dichloropropane	10.0	11.2		ug/L		112	73 - 140
cis-1,2-Dichloroethene	10.0	9.91		ug/L		99	80 - 122
Bromochloromethane	10.0	9.75		ug/L		98	71 - 136
Chloroform	10.0	10.5		ug/L		105	80 - 123
1,1,1-Trichloroethane	10.0	10.2		ug/L		102	71 - 138
Carbon tetrachloride	10.0	11.0		ug/L		110	72 - 138
1,1-Dichloropropene	10.0	10.4		ug/L		104	82 - 123
Benzene	10.0	10.2		ug/L		102	80 - 120
1,2-Dichloroethane (EDC)	10.0	10.5		ug/L		105	80 - 120
Trichloroethene	10.0	10.3		ug/L		103	80 - 123
1,2-Dichloropropane	10.0	9.98		ug/L		100	79 - 122
Dibromomethane	10.0	10.1		ug/L		101	80 - 122
Bromodichloromethane	10.0	10.1		ug/L		101	80 - 120
cis-1,3-Dichloropropene	10.0	9.76		ug/L		98	80 - 121

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

Lab Sample ID: LCS 590-51248/1006
Matrix: Water
Analysis Batch: 51248

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Toluene	10.0	9.88		ug/L		99	80 - 129
trans-1,3-Dichloropropene	10.0	10.2		ug/L		102	73 - 138
1,1,2-Trichloroethane	10.0	10.1		ug/L		101	80 - 128
Tetrachloroethene	10.0	10.3		ug/L		103	80 - 139
1,3-Dichloropropane	10.0	10.0		ug/L		100	78 - 129
Dibromochloromethane	10.0	10.2		ug/L		102	80 - 130
1,2-Dibromoethane (EDB)	10.0	10.1		ug/L		101	80 - 124
Chlorobenzene	10.0	10.1		ug/L		101	80 - 124
Ethylbenzene	10.0	9.91		ug/L		99	80 - 122
1,1,1,2-Tetrachloroethane	10.0	10.2		ug/L		102	80 - 131
1,1,2,2-Tetrachloroethane	10.0	10.4		ug/L		104	60 - 150
m,p-Xylene	10.0	9.63		ug/L		96	80 - 125
o-Xylene	10.0	9.28		ug/L		93	80 - 130
Styrene	10.0	9.42		ug/L		94	79 - 134
Bromoform	10.0	10.4		ug/L		104	73 - 139
Isopropylbenzene	10.0	9.33		ug/L		93	80 - 122
Bromobenzene	10.0	9.83		ug/L		98	73 - 125
N-Propylbenzene	10.0	9.75		ug/L		97	73 - 136
1,2,3-Trichloropropane	10.0	10.5		ug/L		105	65 - 142
2-Chlorotoluene	10.0	10.6		ug/L		106	74 - 129
1,3,5-Trimethylbenzene	10.0	9.53		ug/L		95	76 - 129
4-Chlorotoluene	10.0	9.85		ug/L		99	79 - 125
tert-Butylbenzene	10.0	9.15		ug/L		92	76 - 131
1,2,4-Trimethylbenzene	10.0	9.16		ug/L		92	78 - 131
sec-Butylbenzene	10.0	9.80		ug/L		98	73 - 138
1,3-Dichlorobenzene	10.0	9.87		ug/L		99	80 - 122
p-Isopropyltoluene	10.0	9.20		ug/L		92	78 - 128
1,4-Dichlorobenzene	10.0	9.77		ug/L		98	80 - 120
n-Butylbenzene	10.0	8.83		ug/L		88	75 - 121
1,2-Dichlorobenzene	10.0	9.84		ug/L		98	80 - 120
1,2-Dibromo-3-Chloropropane	10.0	10.4		ug/L		104	53 - 142
1,2,4-Trichlorobenzene	10.0	10.4		ug/L		104	76 - 131
1,2,3-Trichlorobenzene	10.0	9.92		ug/L		99	70 - 137
Hexachlorobutadiene	10.0	10.2		ug/L		102	77 - 132
Naphthalene	10.0	10.2		ug/L		102	61 - 140
Methyl tert-butyl ether	10.0	9.13		ug/L		91	68 - 134

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*76 - 120*
Dibromofluoromethane (Surr)	*102*		*80 - 123*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*

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

Lab Sample ID: LCSD 590-51248/6
Matrix: Water
Analysis Batch: 51248

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dichlorodifluoromethane	10.0	8.77		ug/L		88	30 - 150	1	22
Chloromethane	10.0	9.52		ug/L		95	19 - 150	6	35
Vinyl chloride	10.0	10.4		ug/L		104	50 - 150	2	26
Bromomethane	10.0	10.6		ug/L		106	66 - 149	1	24
Chloroethane	10.0	9.10		ug/L		91	64 - 134	15	24
Trichlorofluoromethane	10.0	9.31		ug/L		93	71 - 147	0	24
1,1-Dichloroethene	10.0	8.89		ug/L		89	65 - 141	7	19
Methylene Chloride	10.0	8.07		ug/L		81	30 - 150	3	25
trans-1,2-Dichloroethene	10.0	8.52		ug/L		85	73 - 137	3	18
1,1-Dichloroethane	10.0	10.0		ug/L		100	80 - 125	4	20
2,2-Dichloropropane	10.0	11.2		ug/L		112	73 - 140	1	18
cis-1,2-Dichloroethene	10.0	9.91		ug/L		99	80 - 122	6	17
Bromochloromethane	10.0	9.75		ug/L		98	71 - 136	6	21
Chloroform	10.0	10.5		ug/L		105	80 - 123	6	18
1,1,1-Trichloroethane	10.0	10.2		ug/L		102	71 - 138	0	17
Carbon tetrachloride	10.0	11.0		ug/L		110	72 - 138	6	28
1,1-Dichloropropene	10.0	10.4		ug/L		104	82 - 123	1	20
Benzene	10.0	10.2		ug/L		102	80 - 120	1	15
1,2-Dichloroethane (EDC)	10.0	10.5		ug/L		105	80 - 120	5	14
Trichloroethene	10.0	10.3		ug/L		103	80 - 123	1	14
1,2-Dichloropropane	10.0	9.98		ug/L		100	79 - 122	4	15
Dibromomethane	10.0	10.1		ug/L		101	80 - 122	1	16
Bromodichloromethane	10.0	10.1		ug/L		101	80 - 120	3	16
cis-1,3-Dichloropropene	10.0	9.76		ug/L		98	80 - 121	2	16
Toluene	10.0	9.88		ug/L		99	80 - 129	2	35
trans-1,3-Dichloropropene	10.0	10.2		ug/L		102	73 - 138	2	17
1,1,2-Trichloroethane	10.0	10.1		ug/L		101	80 - 128	3	15
Tetrachloroethene	10.0	10.3		ug/L		103	80 - 139	2	20
1,3-Dichloropropane	10.0	10.0		ug/L		100	78 - 129	7	17
Dibromochloromethane	10.0	10.2		ug/L		102	80 - 130	3	15
1,2-Dibromoethane (EDB)	10.0	10.1		ug/L		101	80 - 124	3	14
Chlorobenzene	10.0	10.1		ug/L		101	80 - 124	1	14
Ethylbenzene	10.0	9.91		ug/L		99	80 - 122	1	35
1,1,1,2-Tetrachloroethane	10.0	10.2		ug/L		102	80 - 131	2	17
1,1,2,2-Tetrachloroethane	10.0	10.4		ug/L		104	60 - 150	0	17
m,p-Xylene	10.0	9.63		ug/L		96	80 - 125	1	35
o-Xylene	10.0	9.28		ug/L		93	80 - 130	1	35
Styrene	10.0	9.42		ug/L		94	79 - 134	4	17
Bromoform	10.0	10.4		ug/L		104	73 - 139	5	17
Isopropylbenzene	10.0	9.33		ug/L		93	80 - 122	2	16
Bromobenzene	10.0	9.83		ug/L		98	73 - 125	1	16
N-Propylbenzene	10.0	9.75		ug/L		97	73 - 136	1	18
1,2,3-Trichloropropane	10.0	10.5		ug/L		105	65 - 142	3	34
2-Chlorotoluene	10.0	10.6		ug/L		106	74 - 129	11	19
1,3,5-Trimethylbenzene	10.0	9.53		ug/L		95	76 - 129	1	17
4-Chlorotoluene	10.0	9.85		ug/L		99	79 - 125	0	16
tert-Butylbenzene	10.0	9.15		ug/L		92	76 - 131	1	18
1,2,4-Trimethylbenzene	10.0	9.16		ug/L		92	78 - 131	0	16

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

Lab Sample ID: LCSD 590-51248/6
Matrix: Water
Analysis Batch: 51248

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
sec-Butylbenzene			10.0	9.80		ug/L		98	73 - 138	1	17
1,3-Dichlorobenzene			10.0	9.87		ug/L		99	80 - 122	1	15
p-Isopropyltoluene			10.0	9.20		ug/L		92	78 - 128	2	17
1,4-Dichlorobenzene			10.0	9.77		ug/L		98	80 - 120	0	14
n-Butylbenzene			10.0	8.83		ug/L		88	75 - 121	1	16
1,2-Dichlorobenzene			10.0	9.84		ug/L		98	80 - 120	1	14
1,2-Dibromo-3-Chloropropane			10.0	10.4		ug/L		104	53 - 142	8	29
1,2,4-Trichlorobenzene			10.0	10.4		ug/L		104	76 - 131	5	24
1,2,3-Trichlorobenzene			10.0	9.92		ug/L		99	70 - 137	2	30
Hexachlorobutadiene			10.0	10.2		ug/L		102	77 - 132	4	25
Naphthalene			10.0	10.2		ug/L		102	61 - 140	6	25
Methyl tert-butyl ether			10.0	9.13		ug/L		91	68 - 134	4	18

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*76 - 120*
Dibromofluoromethane (Surr)	*102*		*80 - 123*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*

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

Lab Sample ID: MB 590-51247/10
Matrix: Water
Analysis Batch: 51247

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	54	ug/L			12/05/24 12:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*12/05/24 12:04*	*1*

Lab Sample ID: LCS 590-51247/1009
Matrix: Water
Analysis Batch: 51247

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline			1000	1160		ug/L		116	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*68.7 - 141*

Lab Sample ID: LCSD 590-51247/1013
Matrix: Water
Analysis Batch: 51247

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline			1000	1130		ug/L		113	80 - 120	2	20

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

Lab Sample ID: LCSD 590-51247/1013
Matrix: Water
Analysis Batch: 51247

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		68.7 - 141

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 590-51187/1-A
Matrix: Water
Analysis Batch: 51352

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 51187

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.090	0.053	ug/L		12/03/24 10:49	12/11/24 20:49	1
2-Methylnaphthalene	ND		0.090	0.044	ug/L		12/03/24 10:49	12/11/24 20:49	1
1-Methylnaphthalene	ND		0.090	0.023	ug/L		12/03/24 10:49	12/11/24 20:49	1
Acenaphthylene	ND		0.090	0.016	ug/L		12/03/24 10:49	12/11/24 20:49	1
Acenaphthene	ND		0.090	0.022	ug/L		12/03/24 10:49	12/11/24 20:49	1
Fluorene	ND		0.090	0.016	ug/L		12/03/24 10:49	12/11/24 20:49	1
Phenanthrene	ND		0.090	0.056	ug/L		12/03/24 10:49	12/11/24 20:49	1
Anthracene	ND		0.090	0.025	ug/L		12/03/24 10:49	12/11/24 20:49	1
Fluoranthene	ND		0.090	0.017	ug/L		12/03/24 10:49	12/11/24 20:49	1
Pyrene	ND		0.090	0.026	ug/L		12/03/24 10:49	12/11/24 20:49	1
Benzo[a]anthracene	ND		0.090	0.028	ug/L		12/03/24 10:49	12/11/24 20:49	1
Chrysene	ND		0.090	0.010	ug/L		12/03/24 10:49	12/11/24 20:49	1
Benzo[b]fluoranthene	ND		0.090	0.025	ug/L		12/03/24 10:49	12/11/24 20:49	1
Benzo[k]fluoranthene	ND		0.090	0.015	ug/L		12/03/24 10:49	12/11/24 20:49	1
Benzo[a]pyrene	ND		0.090	0.012	ug/L		12/03/24 10:49	12/11/24 20:49	1
Indeno[1,2,3-cd]pyrene	ND		0.090	0.022	ug/L		12/03/24 10:49	12/11/24 20:49	1
Dibenz(a,h)anthracene	ND		0.090	0.013	ug/L		12/03/24 10:49	12/11/24 20:49	1
Benzo[g,h,i]perylene	ND		0.090	0.021	ug/L		12/03/24 10:49	12/11/24 20:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	74		44 - 120	12/03/24 10:49	12/11/24 20:49	1
2-Fluorobiphenyl (Surr)	77		32 - 120	12/03/24 10:49	12/11/24 20:49	1
p-Terphenyl-d14	81		39 - 120	12/03/24 10:49	12/11/24 20:49	1

Lab Sample ID: LCS 590-51187/2-A
Matrix: Water
Analysis Batch: 51352

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 51187

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Naphthalene	1.60	1.48		ug/L		92	47 - 120
2-Methylnaphthalene	1.60	1.49		ug/L		93	46 - 120
1-Methylnaphthalene	1.60	1.45		ug/L		91	49 - 120
Acenaphthylene	1.60	1.59		ug/L		99	56 - 120
Acenaphthene	1.60	1.60		ug/L		100	53 - 120
Fluorene	1.60	1.70		ug/L		106	56 - 120
Phenanthrene	1.60	1.74		ug/L		109	59 - 128
Anthracene	1.60	1.67		ug/L		104	56 - 128
Fluoranthene	1.60	1.79		ug/L		112	58 - 129
Pyrene	1.60	1.74		ug/L		109	61 - 135

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 590-51187/2-A
Matrix: Water
Analysis Batch: 51352

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 51187

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzo[a]anthracene			1.60	1.76		ug/L		110	62 - 130		
Chrysene			1.60	1.67		ug/L		105	57 - 135		
Benzo[b]fluoranthene			1.60	1.74		ug/L		109	47 - 136		
Benzo[k]fluoranthene			1.60	1.70		ug/L		107	55 - 131		
Benzo[a]pyrene			1.60	1.61		ug/L		101	57 - 130		
Indeno[1,2,3-cd]pyrene			1.60	1.69		ug/L		106	61 - 121		
Dibenz(a,h)anthracene			1.60	1.75		ug/L		109	59 - 127		
Benzo[g,h,i]perylene			1.60	1.83		ug/L		114	59 - 129		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*82*		*44 - 120*
2-Fluorobiphenyl (Surr)	*85*		*32 - 120*
p-Terphenyl-d14	*84*		*39 - 120*

Lab Sample ID: LCSD 590-51187/3-A
Matrix: Water
Analysis Batch: 51352

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 51187

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Naphthalene			1.60	1.48		ug/L		92	47 - 120	0	30
2-Methylnaphthalene			1.60	1.47		ug/L		92	46 - 120	1	34
1-Methylnaphthalene			1.60	1.45		ug/L		90	49 - 120	0	32
Acenaphthylene			1.60	1.57		ug/L		98	56 - 120	2	24
Acenaphthene			1.60	1.57		ug/L		98	53 - 120	2	26
Fluorene			1.60	1.64		ug/L		103	56 - 120	3	24
Phenanthrene			1.60	1.71		ug/L		107	59 - 128	2	21
Anthracene			1.60	1.67		ug/L		104	56 - 128	0	25
Fluoranthene			1.60	1.77		ug/L		111	58 - 129	1	24
Pyrene			1.60	1.77		ug/L		111	61 - 135	2	24
Benzo[a]anthracene			1.60	1.76		ug/L		110	62 - 130	0	21
Chrysene			1.60	1.73		ug/L		108	57 - 135	3	20
Benzo[b]fluoranthene			1.60	1.72		ug/L		107	47 - 136	1	27
Benzo[k]fluoranthene			1.60	1.78		ug/L		111	55 - 131	4	28
Benzo[a]pyrene			1.60	1.64		ug/L		102	57 - 130	2	19
Indeno[1,2,3-cd]pyrene			1.60	1.72		ug/L		108	61 - 121	2	20
Dibenz(a,h)anthracene			1.60	1.79		ug/L		112	59 - 127	2	20
Benzo[g,h,i]perylene			1.60	1.88		ug/L		118	59 - 129	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5	*83*		*44 - 120*
2-Fluorobiphenyl (Surr)	*83*		*32 - 120*
p-Terphenyl-d14	*81*		*39 - 120*

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

Lab Sample ID: MB 590-51278/1-A
Matrix: Water
Analysis Batch: 51304

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 51278

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.20	0.11	mg/L		12/09/24 11:52	12/09/24 18:17	1
Residual Range Organics (RRO) (C25-C36)	ND		0.30	0.12	mg/L		12/09/24 11:52	12/09/24 18:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*50 - 150*	*12/09/24 11:52*	*12/09/24 18:17*	*1*
n-Triacontane-d62	*85*		*50 - 150*	*12/09/24 11:52*	*12/09/24 18:17*	*1*

Lab Sample ID: LCS 590-51278/2-A
Matrix: Water
Analysis Batch: 51304

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 51278

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics (DRO) (C10-C25)			1.60	0.871		mg/L		54	50 - 150		
Residual Range Organics (RRO) (C25-C36)			1.60	1.15		mg/L		72	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*80*		*50 - 150*
n-Triacontane-d62	*68*		*50 - 150*

Lab Sample ID: LCSD 590-51278/3-A
Matrix: Water
Analysis Batch: 51304

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 51278

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)			1.60	0.960		mg/L		60	50 - 150	10	25
Residual Range Organics (RRO) (C25-C36)			1.60	1.28		mg/L		80	50 - 150	10	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*88*		*50 - 150*
n-Triacontane-d62	*72*		*50 - 150*

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 590-51289/2-A
Matrix: Water
Analysis Batch: 51311

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 51289

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.025	0.010	mg/L		12/09/24 10:16	12/09/24 16:28	1
Barium	ND		0.025	0.0014	mg/L		12/09/24 10:16	12/09/24 16:28	1
Cadmium	ND		0.025	0.0012	mg/L		12/09/24 10:16	12/09/24 16:28	1
Chromium	ND		0.025	0.0017	mg/L		12/09/24 10:16	12/09/24 16:28	1
Lead	ND		0.060	0.0051	mg/L		12/09/24 10:16	12/09/24 16:28	1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: MB 590-51289/2-A
Matrix: Water
Analysis Batch: 51311

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 51289

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.10	0.049	mg/L		12/09/24 10:16	12/09/24 16:28	1
Silver	ND		0.025	0.0025	mg/L		12/09/24 10:16	12/09/24 16:28	1

Lab Sample ID: LCS 590-51289/1-A
Matrix: Water
Analysis Batch: 51311

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 51289

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			2.00	1.86		mg/L		93	80 - 120		
Barium			2.00	1.70		mg/L		85	80 - 120		
Cadmium			1.00	0.919		mg/L		92	80 - 120		
Chromium			1.00	0.948		mg/L		95	80 - 120		
Lead			1.00	1.01		mg/L		101	80 - 120		
Selenium			2.00	1.86		mg/L		93	80 - 120		
Silver			0.100	0.0859		mg/L		86	80 - 120		

Lab Sample ID: 590-28345-1 MS
Matrix: Water
Analysis Batch: 51311

Client Sample ID: Baker Tank H2O
Prep Type: Total Recoverable
Prep Batch: 51289

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	ND		2.00	1.89		mg/L		94	75 - 125
Barium	0.015	J	2.00	1.74		mg/L		86	75 - 125
Cadmium	ND		1.00	0.939		mg/L		94	75 - 125
Chromium	ND		1.00	0.983		mg/L		98	75 - 125
Lead	ND		1.00	1.03		mg/L		103	75 - 125
Selenium	ND		2.00	1.90		mg/L		95	80 - 120
Silver	ND		0.100	0.0893		mg/L		89	75 - 125

Lab Sample ID: 590-28345-1 MSD
Matrix: Water
Analysis Batch: 51311

Client Sample ID: Baker Tank H2O
Prep Type: Total Recoverable
Prep Batch: 51289

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	ND		2.00	1.86		mg/L		93	75 - 125	1	20
Barium	0.015	J	2.00	1.76		mg/L		87	75 - 125	1	20
Cadmium	ND		1.00	0.923		mg/L		92	75 - 125	2	20
Chromium	ND		1.00	0.951		mg/L		95	75 - 125	3	20
Lead	ND		1.00	1.00		mg/L		100	75 - 125	2	20
Selenium	ND		2.00	1.88		mg/L		94	80 - 120	1	20
Silver	ND		0.100	0.0866		mg/L		87	75 - 125	3	20

Lab Sample ID: 590-28345-1 DU
Matrix: Water
Analysis Batch: 51311

Client Sample ID: Baker Tank H2O
Prep Type: Total Recoverable
Prep Batch: 51289

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Arsenic	ND			ND		mg/L				NC	20
Barium	0.015	J		0.0154	J	mg/L				3	20
Cadmium	ND			ND		mg/L				NC	20

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: 590-28345-1 DU
Matrix: Water
Analysis Batch: 51311

Client Sample ID: Baker Tank H2O
Prep Type: Total Recoverable
Prep Batch: 51289

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chromium	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 590-51307/9-A
Matrix: Water
Analysis Batch: 51308

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 51307

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.090	ug/L		12/09/24 10:17	12/09/24 16:30	1

Lab Sample ID: LCS 590-51307/8-A
Matrix: Water
Analysis Batch: 51308

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 51307

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	2.00	2.06		ug/L		103	80 - 120

Lab Sample ID: 590-28345-1 MS
Matrix: Water
Analysis Batch: 51308

Client Sample ID: Baker Tank H2O
Prep Type: Total/NA
Prep Batch: 51307

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		2.00	2.07		ug/L		104	80 - 120

Lab Sample ID: 590-28345-1 MSD
Matrix: Water
Analysis Batch: 51308

Client Sample ID: Baker Tank H2O
Prep Type: Total/NA
Prep Batch: 51307

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		2.00	2.05		ug/L		103	80 - 120	1	20

Lab Sample ID: 590-28345-1 DU
Matrix: Water
Analysis Batch: 51308

Client Sample ID: Baker Tank H2O
Prep Type: Total/NA
Prep Batch: 51307

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	ND		ND		ug/L		NC	20

Lab Chronicle

Client: Martin S Burck Associates
Job ID: 590-28345-1
Project/Site: Lawrence Oil - St. Helens

Client Sample ID: Baker Tank H2O
Lab Sample ID: 590-28345-1
Date Collected: 11/26/24 15:34
Matrix: Water
Date Received: 12/03/24 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	51248	12/05/24 12:33	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	51247	12/05/24 12:33	JSP	EET SPK
Total/NA	Prep	3510C			247.7 mL	2 mL	51187	12/03/24 10:49	MRV	EET SPK
Total/NA	Analysis	8270E SIM		1	1 uL	1 uL	51352	12/11/24 21:55	NMI	EET SPK
Total/NA	Prep	3510C			238.4 mL	2 mL	51278	12/09/24 11:52	MRV	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	51304	12/09/24 19:20	NMI	EET SPK
Total Recoverable	Prep	3005A			50 mL	50 mL	51289	12/09/24 10:16	AMB	EET SPK
Total Recoverable	Analysis	6010D		1			51311	12/09/24 16:33	AMB	EET SPK
Total/NA	Prep	7470A			50 mL	50 mL	51307	12/09/24 10:17	AMB	EET SPK
Total/NA	Analysis	7470A		1			51308	12/09/24 16:32	AMB	EET SPK

Laboratory References:

EET SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: Martin S Burck Associates
Job ID: 590-28345-1
Project/Site: Lawrence Oil - St. Helens

Laboratory: Eurofins Spokane

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-025	01-07-25
Washington	State	C569	01-07-25

Method Summary

Client: Martin S Burck Associates
Project/Site: Lawrence Oil - St. Helens

Job ID: 590-28345-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	EET SPK
8270E SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	EET SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	EET SPK
6010D	Metals (ICP)	SW846	EET SPK
7470A	Mercury (CVAA)	SW846	EET SPK
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SPK
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET SPK
5030C	Purge and Trap	SW846	EET SPK
7470A	Preparation, Mercury	SW846	EET SPK

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Eurofins Spokane
11922 E 1st Avenue

Spokane, WA 99206-5302
phone 509.924.9200 fax 509.924.9290

Chain of Custody Record

eurofins | Environment Testing America

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

Eurofins Environment Testing America

Client Contact	Project Manager: Josh Owen	Site Contact:	Date:	COC No:
Martin S. Burck Associates	Email: jowen@msbaenvironmental.com	Lab Contact:	Carrier:	1 of 1 COCs
200 N Wasco Ct	Tel/Fax:			TALS Project #:
Hood River, OR 97031	**Analysis Turnaround Time**			Sampler:
Phone 541.387.4422	☐ CALENDAR DAYS ☐ WORKING DAYS			**For Lab Use Only**
FAX. 541.387.4813	TAT if different from Below _____			Walk-in Client.
Project Name: Lawrence Oil - St Helens	☐ 2 weeks			Lab Sampling:
Site.	☐ 1 week			
P O #	☐ 2 days			Job / SDG No.
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	NWTPH-Gx	NWTPH-Dx	8260D - VOCs	RCRA 8 metals	SVOCs - 8270E SIM	Sample Specific Notes.
Baker Tank H20	11/26/24	1534		Water				X	X	X	X	X	

590-28345 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No. | Cooler Temp (°C): Obs'd. 4.9 Corr'd. 5.1 | Therm ID No. IR Gun

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Relinquished by	Company	Date/Time:	Received by	Company	Date/Time:
Relinquished by	Company	Date/Time:	Received in Laboratory by:	Company: EBCSPO	Date/Time: 12/3/24 1050

Login Sample Receipt Checklist

Client: Martin S Burck Associates

Job Number: 590-28345-1

Login Number: 28345

List Source: Eurofins Spokane

List Number: 1

Creator: Morris, Mackenzie 1

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Attachment C

MSBA Field Methods and Procedures

FIELD METHODS AND PROCEDURES

The following section presents the general methods and procedures that are utilized to complete field activities. These activities include advancing borings and collecting soil and groundwater samples for laboratory analyses. Samples are collected, preserved, and transported for analysis in general accordance with DEQ methodology as presented in OAR 340-122-345 "Sample Collection Methods," and OAR 340-122-218 “Sampling and Analysis.” If not specified by current DEQ regulations, sampling and analytical methods are implemented in general accordance with EPA protocol and/or commonly accepted industry standards for this time and place.

Utility Locating

Utilities, including overhead and underground, are identified and located prior to conducting work at the site. For overhead utilities, a safe minimum working distance is maintained with all sampling equipment dependant on the activity. For drilling or direct push equipment, a minimum 15-20 foot buffer is recommended. For other work such as excavation by backhoe, hand augering, hand probing, etc., a minimum distance is maintained such that the sampling equipment cannot come in contact with the utilities.

Underground utilities are located by contacting Utility Notification Center (UNC) for all underground sampling, excavation, and all other activities performed below the surface. The notification is performed at least 48 hours in advance of the work or as required by local laws and regulations to allow sufficient time for marking of the affected utilities. When warranted, MSBA will arrange on-site meetings with the contracted locators for the utilities to resolve any issues of proximity to the planned work.

In addition to contacting the UNC, MSBA may also perform one or more of the following activities intended to help prevent incidental contact with underground utilities during subsurface activities.

1) **Field Observation**: MSBA observes the site and surroundings for any signs of overhead and/or underground utilities.

2) **Private Utility Locate**: MSBA may contract with private utility locators if warranted to provide additional clarification of potential utilities and their locations.

3) **Hand Clearing**: MSBA may clear up to a maximum of the first five feet of subsurface soil for potential underground utilities by hand digging, hand augering, or air knifing.

Grab Soil Sampling

Grab soil samples are collected by hand or using a decontaminated shovel or hand trowel directly from surface/shallow soil or the sidewalls/base of a test pit or excavation area up to a depth of 4 feet below surface grade (bsg). At depths deeper than 4 feet bsg, soil samples are collected from an excavator bucket. The excavator bucket may be decontaminated prior to sampling. Just prior to collecting each sample, approximately 3 inches of soil is scraped away from the sampling surface. Soil samples are collected with a minimum amount of disturbance.

Soil samples are placed into laboratory provided wide-mouth glass jars, leaving as little headspace as possible. Soil samples are also collected in 40 milliliter (ml) volatile organic analysis (VOA) EPA method 5035 vials with a preservative. The jar is immediately sealed firmly with a Teflon-lined screw cap. After the samples are properly sealed, they are placed in an ice chest with ice and maintained at a temperature of 4° C (+/- 2° C) until preparation for analysis by the laboratory. Soil samples are analyzed within the laboratory designated hold times.

Disposable latex gloves are worn by the sampler and discarded after each sample. Sampling equipment is thoroughly cleaned and decontaminated between sampling events to help eliminate the potential for cross-contamination between samples. Each sample is clearly labeled with a unique name. A written record is maintained which includes, but is not limited to, the date, time, and location where the sample is collected, and any conditions which may have affected the sample integrity.

Drilling Method and Soil Sampling

Subsurface explorations are completed using drilling equipment operated by a licensed drilling subcontractor. The drilling method is selected based on the anticipated subsurface conditions. In general, push-probe or hollow-stem methods are utilized for softer silty soils and sonic or air-rotary methods are utilized for harder, rocky conditions. An MSBA representative oversees and directs the explorations and obtains all soil and groundwater samples.

Soil samples are collected by MSBA and placed into laboratory provided wide-mouth glass jars, leaving as little headspace as possible. Soil samples are also collected in 40 ml VOA EPA method 5035 vials with a preservative. The jar is immediately sealed firmly with a Teflon-lined screw cap. After the samples are properly sealed, they are placed in an ice chest with ice and maintained at a temperature of 4° C (+/- 2° C) until preparation for analysis by the laboratory. Soil samples are analyzed within the laboratory designated hold times.

Disposable latex gloves are worn by the sampler and discarded after each sample. Sampling equipment is thoroughly cleaned and decontaminated between sampling events to help eliminate the potential for cross-contamination between samples. Each sample is clearly labeled with a unique name. A written record is maintained which includes, but is not limited to, the date, time, and location where the sample is collected, and any conditions which may have affected the sample integrity. The soil type and other pertinent information is recorded on a field Subsurface Exploration Log.

Hand Auger Soil Boring and Sampling

Auger borings are advanced by hand. Samples of soil are collected directly from the barrel of the auger at the target depth or as warranted based on observed conditions. A written record is maintained which includes, but is not limited to, the date, time, and location where the sample is collected, and any unusual conditions which may affect the sample integrity.

Soil samples are collected by MSBA and placed into laboratory provided wide-mouth glass jars, leaving as little headspace as possible. Soil samples are also collected in 40 ml VOA EPA method 5035 vials with a preservative. The jar is immediately sealed firmly with a Teflon-lined screw cap. After the samples are properly sealed, they are placed in an ice chest with ice and maintained at a temperature of 4° C (+/- 2° C) until preparation for analysis by the laboratory. Soil samples are analyzed within the laboratory designated hold times.

Disposable latex gloves are worn by the sampler and discarded after each sample. Sampling equipment is thoroughly cleaned and decontaminated between sampling events to help eliminate the potential for cross-contamination between samples. Each sample is clearly labeled with a unique name. A written record is maintained which includes, but is not limited to, the date, time, and location where the sample is collected, and any conditions which may have affected the sample integrity. The soil type and other pertinent information is recorded on a field Subsurface Exploration Log.

Soil Field Screening Methods

Field screening methods consist of visual observations, water sheen screening, and/or headspace vapor screening using a MiniRAE photoionization detector (PID). Visual screening methods include observations of staining, discoloration, and other indicators of petroleum. Water sheen screening involves placing a small amount of soil into water and making observations of any sheens. Water sheen classifications are made as follows:

No Sheen: No visible sheen on the water surface.

Slight Sheen: Faint and dull sheen with no color; dissipates quickly. Naturally occurring organic matter may produce a slight sheen.

Moderate Sheen: May have some color or iridescence; spread of sheen is irregular to flowing; most of water surface covered with sheen.

Heavy Sheen: Obvious color and iridescence; spread is rapid; entire water surface may be covered with sheen.

Headspace vapor screening is conducted by creating a small hole in the soil core or placing a small portion of soil into a Zip-Loc bag and sealing it shut. The probe of the PID is inserted into the soil core. The soil sample within the bag is allowed to volatilize and the probe of the PID is inserted into the bag. The reported accuracy of a MiniRAE PID is 10% discrepancy at concentrations between 1 and 2,000 ppm and 20% discrepancy at concentrations greater than 2,000 ppm. The PID is calibrated in accordance with the manufacturer recommended procedures prior to each day of use.

Temporary Well Installation

Following completion of the soil borings, temporary wells may be installed to allow for groundwater level monitoring and sample collection. Following completion of the groundwater level monitoring and sampling, the temporary well is abandoned within 72 hours in accordance with the Oregon Water Resources Department standards.

Well Development

Following installation, the temporary wells are developed to remove fines and to enhance the recharge and representative quality of water if sufficient water column and recharge is present. The development is performed using a bailer or pump (peristaltic or submersible). The well may be surged prior to development. Well development continues until the discharge is relatively sediment free. Well development may be discontinued if there is insufficient recharge.

Monitoring Well Elevation Survey

The top of each well casing is surveyed to within plus or minus (+/-) 0.01-foot relative to a common temporary benchmark. A temporary benchmark is designated with an assumed elevation relative to the approximate surface elevation above mean sea level (msl). The surveyed locations are marked on each casing for future reference and measuring. The purpose of the survey is to allow precise correlation of measured groundwater levels between each of the wells at the site. The survey information is recorded on a survey data sheet.

Groundwater Level Monitoring

The depth to groundwater (water level) is measured with an electronic, hand-held, water level indicator. The probe of the indicator is lowered in the well until contact with groundwater completes a circuit causing a buzzer to activate. The depth to water, measured from the surveyed point at the top of the well casing, is read directly from a graduated cord attached to the probe with marked increments of 0.01-foot. The groundwater level data is recorded on a groundwater level data sheet.

If present, free product thickness in a well is measured with an electronic, hand-held oil/water interface probe. The oil/water interface probe is lowered into the well until contact with fluids initiates a signal tone. An intermittent tone indicates water and a continuous tone indicates product. A measuring tape in increments of 0.01-foot is attached to the probe and is used to measure thickness of product in a well.

Groundwater Sampling

Groundwater samples are collected using a bailer, submersible pump, or peristaltic pump with dedicated tubing, under low flow conditions to minimize the loss of volatile components, if present. The groundwater is transferred into laboratory provided containers. Some containers may contain a preservative. The type of container, and whether or not it is preserved, is determined by the type of laboratory analysis to be performed. Groundwater samples collected in VOAs are transferred with minimal agitation and sealed with Teflon-lined septum lids so that no head space is present. Samples collected in VOA vials are submitted for volatile organic compound (VOC) analysis. The vials may contain 2-5 drops of dilute HCL as a preservative increasing the sample hold time from 7 to 14 days. Groundwater samples are collected in preserved or non-preserved amber glass jars for analysis of non-volatile petroleum constituents. Groundwater samples are collected in 250 ml polyethylene bottles for analysis of metals. Samples collected for analysis of dissolved metals are filtered in the field to remove 0.45 micron size particles or immediately upon receipt by the laboratory. Samples collected for analysis of total metals are not filtered. After the samples are properly sealed, they are placed immediately in an ice chest with ice and maintained at a temperature of 4° C (+/- 2° C) until being prepared by the laboratory for analysis.

Chain-of-Custody and Labeling

The Chain-of-Custody (COC) is a form that documents the custody of a sample from the time of origin to the time of disposal or destruction. A COC is initiated in the field at the time the samples are collected. The sampler documents such information as the time, date, type of sample, and requested analyses. Any individual in custody of the samples, including the laboratory, is required to document the transfer of custody (beginning with the sampler) by signing the COC (including date and time of transfer).

Equipment Decontamination

Equipment used to collect soil and groundwater samples such as: bailers, water level indicators, etc., is decontaminated prior to each use. Strict decontamination procedures are utilized to help eliminate the potential for cross-contamination between samples and sample locations.

The decontamination procedure includes a thorough washing in tap water with Liquinox followed by two rinses in tap water and a third and final spray rinse using distilled water. If time permits, the sampling equipment is allowed to air dry. Disposable latex gloves are worn during sampling to help eliminate the potential for cross-contamination by the sampler. The gloves are discarded after each sample event and a new pair is utilized for each subsequent sampling event.

Investigation Derived Waste

Investigation derived waste (IDW) accumulated during the explorations typically consists of soil, groundwater, or decontamination and rinse waters. Soil and water are collected and placed into suitable containers. A label is affixed to each storage container including the date, contents, and contact information. The containers are stored onsite in a secure location pending disposal at an authorized facility. Disposable items such as sampling gloves, paper towels, and plastic sheeting are placed into plastic garbage bags and disposed in a municipal trash receptacle.

Attachment D

Quality Control Plan

SAMPLING AND ANALYSIS PLAN

Field Quality Assurance

Soil and Groundwater Sampling

All soil and groundwater samples are collected using disposable nitrile gloves, which are discarded after each sample. Sampling equipment is thoroughly cleaned between sampling events to minimize the potential of cross-contamination between samples. Samples are placed in laboratory-provided containers and promptly put into a cooler with ice to maintain the temperature at approximately 4° C (+/- 2° C). Each sample container is labeled with the project name, sample identification, date, and time of collection. Samples collected during the investigation are tracked from the time of collection until received by the laboratory using a chain-of-custody. The chain-of-custody includes sample identification information and serves as an analytical request document.

Eurofins Test America, in Spokane, Washington, is performing the laboratory analysis of the soil and groundwater samples and supplying MSBA with the appropriate containers. Each sample is promptly delivered to the laboratory for analysis of gasoline, diesel, oil, and the subsequent constituents of interest using appropriate methods to achieve reporting limits lower than or as low as is reasonably achievable as compared to the applicable soil and groundwater RBCs. Tables presenting the laboratory sample specifications and the laboratory detection objectives based on the minimum applicable DEQ RBCs for soil and groundwater are included in this Attachment (Tables 1, 4, and 5).

A minimum of 1 soil and groundwater equipment blank is collected during each field event at a rate of 1 per 20 samples for each matrix (i.e. soil and groundwater). Equipment blanks are submitted for laboratory analysis to evaluate potential cross-contamination of the samples. In addition, a minimum of 1 field duplicate soil and groundwater sample is collected during each field event at a rate of 1 per 20 samples for each matrix. Field duplicates are submitted for laboratory analysis of COIs to evaluate precision with respect to sampling and analytical procedures. If samples are collected for the analysis of volatile organic compounds (VOCs), a minimum of 1 laboratory-provided trip blank will accompany the samples at a rate of 1 per cooler. Trip blanks are submitted for analysis of VOCs to evaluate potential contamination of the samples during transport from/to the lab.

Laboratory Quality Control

The analytical laboratory maintains an internal quality assurance program consisting of a combination of the following:

Blanks - Blanks are laboratory-prepared, contaminant-free water samples. The blanks are carried through the analysis procedure along with the field samples to document that contaminants were not introduced to the samples during sample handling and analysis.

Surrogate Recoveries - Surrogates are organic compounds that are similar in nature to the analytes of concern, but are not normally found in nature. The surrogates are added to quality control and field samples prior to analysis. The percent recovery of the surrogate is calculated to demonstrate acceptable method performance.

LCS Recoveries - A Laboratory Control Sample (LCS) is a sample of known analytes and concentration, often a reference material containing certified amounts of target analytes or prepared by the laboratory. The percent recovery of the known concentration of analytes added to the LCS sample is calculated after chemical analyses to demonstrate acceptable method performance and to determine whether the laboratory is capable of making accurate and precise measurements at the required reporting limit.

Duplicates - Duplicates are obtained by splitting a sample into two parts which are then carried through the analyses. The analytical results are then compared by calculating the relative percent difference between the two samples.

MS/MSD Recoveries - A Matrix Spike (MS) sample is a sample that has been split into a second portion. The Matrix Spike Duplicate (MSD) is obtained by further splitting the MS sample. A known concentration of the analyte of interest is added to the MS and MSD samples. The analytical results for both samples are then compared for relative percent difference and percent recovery to demonstrate acceptable method performance.

BS and BSD Recoveries - Blank Spike (BS) and Blank Spike Duplicate (BSD) samples are obtained and analyzed in the same procedures as the MS/MSD samples. However, the laboratory blank sample is used to obtain the BS/BSD samples. The percent recovery and relative percent difference of the known concentration of the analyte added to the BS/BSD sample are calculated after chemical analyses to demonstrate acceptable method performance.

Review of Analytical Data

MSBA reviews the laboratory analytical reports for data quality exceptions and deviations from acceptable method performance criteria. Any exceptions and deviations, and the significance thereof, are discussed in the subsequent report.

TABLE 1
LABORATORY SAMPLE SPECIFICATIONS

Analyte	Analytical Method	Sample Media	Required Sample Volume	Number of Containers * Size	Container Preservative	Hold Time
Gasoline-Range Organics	NWTPH-Gx	Water	120 ml [a]	3 * 40 ml VOA [b]	HCl [c] pH<2	14 days
	NWTPH-Gx	Soil	10 gram	2 * 40 ml VOA	MeOH [d]	14 days
	EPA [e] TO-15	Soil Vapor	1 liter	1 * summa canister	None	30 days
Diesel-Range Organics	NWTPH-Dx	Water	2 liter	2 * 1 liter amber	HCl pH<2	14 days extraction 40 days analysis
	NWTPH-Dx	Soil	50 gram	1 * 8 oz [f] glass jar	Cool 4º C	14 days extraction 40 days analysis
	EPA TO-17	Soil Vapor	200 ml	1 * sorbent tube	Cool 4º C	30 days
Oil-Range Organics	NWTPH-Dx	Water	2 liter	2 * 1 liter amber	HCl pH<2	14 days extraction 40 days analysis
	NWTPH-Dx	Soil	50 gram	1 * 8 oz glass jar	Cool 4º C	14 days extraction 40 days analysis
Volatile Organic Compounds	EPA [f] 8260C	Water	120 ml	3 * 40 ml VOA	HCl pH<2	14 days
	EPA 8260C	Soil	10 gram	2 * 40 ml VOA	MeOH	14 days
	EPA TO-17	Soil Vapor	200 ml	1 * sorbent tube	Cool 4º C	30 days
	EPA TO-15	Soil Vapor	1 liter	1 * summa canister	None	30 days
Polynuclear Aromatic Hydrocarbons	EPA 8270D SIM	Water	120 ml	3 * 40 ml VOA	Cool 4º C	7 days extraction 40 days analysis
	EPA 8270D SIM	Soil	30 gram	1 * 8 oz glass jar	Cool 4º C	14 days extraction 40 days analysis
RCRA 8 Metals	EPA 6020B and 7470A	Water	100 ml	1 * 250 ml HDPE [g]	HNO_3 [h]	180 days
	EPA 6020B and 7470A	Soil	0.5 gram	1 * 8 oz glass jar	Cool 4º C	180 days

a milliliter (ml)
b Volatile organic analysis (VOA)
c Hydrochloric Acid (HCl)
d Methanol (MeOH)
e Environmental Protection Agency (EPA)
f ounce (oz)
g High density polyethylene (HDPE)
h Nitric Acid (HNO_3)

#N/A

TABLE 2
LABORATORY DETECTION OBJECTIVES - SOIL
PHCs, VOCs, PAHs, AND METALS

Analyte	Analytical Method	CAS [a] Registry Number	Laboratory Method Detection Limit [b] (ppm) [c]	Minimum Applicable DEQ RBCs [d] (ppm)	
				Human Receptors	Ecological Receptors
Petroleum Hydrocarbons (PHCs)					
Gasoline-Range Organics	NWTPH-Gx	- [e]	2.8	31	120
Diesel-Range Organics	NWTPH-Dx	-	5.0	1,100	260
Oil-Range Organics	NWTPH-Dx	-	5.9	1,100	260
Volatile Organic Compounds (VOCs)					
1,1,1,2-Tetrachloroethane	EPA 8260D	630-20-6	0.030	NA [f]	NA
1,1,1-Trichloroethane	EPA 8260D	71-55-6	0.027	190	260
1,1,2,2-Tetrachloroethane	EPA 8260D	79-34-5	0.045	NA	NA
1,1,2-Trichloroethane	EPA 8260D	79-00-5	0.055	0.0063	NA
1,1-Dichloroethane	EPA 8260D	75-34-3	0.041	0.044	210
1,1-Dichloroethene	EPA 8260D	75-35-4	0.053	6.7	11
1,1-Dichloropropene	EPA 8260D	563-58-6	0.027	NA	NA
1,2,3-Trichlorobenzene	EPA 8260D	87-61-6	0.052	NA	NA
1,2,3-Trichloropropane	EPA 8260D	96-18-4	0.057	NA	NA
1,2,4-Trimethylbenzene	EPA 8260D	95-63-6	0.036	10	NA
1,2-Dibromo-3-Chloropropane	EPA 8260D	96-12-8	0.093	NA	NA
1,2-Dibromoethane (EDB)	EPA 8260D	106-93-4	0.052	0.00012	NA
1,2-Dichlorobenzene	EPA 8260D	95-50-1	0.036	36	0.92
1,2-Dichloroethane (EDC)	EPA 8260D	107-06-2	0.034	0.0028	0.85
1,2-Dichloropropane	EPA 8260D	78-87-5	0.047	NA	NA
1,3,5-Trimethylbenzene	EPA 8260D	108-67-8	0.049	11	NA
1,3-Dichlorobenzene	EPA 8260D	541-73-1	0.019	NA	0.74
1,3-Dichloropropane	EPA 8260D	142-28-9	0.046	NA	NA
1,4-Dichlorobenzene	EPA 8260D	106-46-7	0.032	0.057	0.89
2,2-Dichloropropane	EPA 8260D	594-20-7	0.038	NA	NA
2-Chlorotoluene	EPA 8260D	95-49-8	0.025	NA	NA
4-Chlorotoluene	EPA 8260D	106-43-4	0.036	NA	NA
Benzene	EPA 8260D	71-43-2	0.015	0.23	24
Bromobenzene	EPA 8260D	108-86-1	0.034	NA	NA
Bromochloromethane	EPA 8260D	74-97-5	0.062	NA	NA
Bromodichloromethane	EPA 8260D	75-27-4	0.096	NA	NA
Bromoform	EPA 8260D	75-25-2	0.030	0.20	NA
Bromomethane	EPA 8260D	74-83-9	0.051	0.083	NA
Carbon tetrachloride	EPA 8260D	56-23-5	0.017	0.013	2
Chlorobenzene	EPA 8260D	108-90-7	0.032	5.8	2.4
Chloroethane	EPA 8260D	75-00-3	0.087	310	NA
Chloroform	EPA 8260D	67-66-3	0.036	0.0034	8
Chloromethane	EPA 8260D	74-87-3	0.064	2.2	NA
cis-1,2-Dichloroethene	EPA 8260D	156-59-2	0.032	0.63	NA
cis-1,3-Dichloropropene	EPA 8260D	10061-01-5	0.032	NA	NA
Dibromochloromethane	EPA 8260D	124-48-1	0.025	NA	NA
Dibromomethane	EPA 8260D	74-95-3	0.034	NA	NA
Dichlorodifluoromethane	EPA 8260D	75-71-8	0.043	NA	NA
Ethylbenzene	EPA 8260D	100-41-4	0.025	0.22	NA
Hexachlorobutadiene	EPA 8260D	87-68-3	0.025	NA	NA
Isopropylbenzene	EPA 8260D	98-82-8	0.048	96	NA
Methyl tert-butyl ether	EPA 8260D	1634-04-4	0.046	0.11	NA
Methylene Chloride	EPA 8260D	75-09-2	0.310	0.14	2.6
Naphthalene	EPA 8260D	91-20-3	0.043	0.077	1
n-Butylbenzene	EPA 8260D	104-51-8	0.043	NA	NA
N-Propylbenzene	EPA 8260D	103-65-1	0.041	NA	NA
p-Isopropyltoluene	EPA 8260D	99-87-6	0.032	NA	NA
sec-Butylbenzene	EPA 8260D	135-98-8	0.029	NA	NA
Styrene	EPA 8260D	100-42-5	0.036	170	1.2
tert-Butylbenzene	EPA 8260D	98-06-6	0.030	NA	NA
Tetrachloroethene	EPA 8260D	127-18-4	0.027	0.46	0.18
Toluene	EPA 8260D	108-88-3	0.070	84	23
trans-1,2-Dichloroethene	EPA 8260D	156-60-5	0.035	7	NA
trans-1,3-Dichloropropene	EPA 8260D	10061-02-6	0.041	NA	NA
Trichloroethene	EPA 8260D	79-01-6	0.012	0.013	42
Trichlorofluoromethane	EPA 8260D	75-69-4	0.051	61	52
Total Xylenes	EPA 8260D	1330-20-7	0.080	23	1.4
Vinyl chloride	EPA 8260D	75-01-4	0.031	0.00057	0.12

TABLE 2 (continued)

TABLE 2 (Continued)
LABORATORY DETECTION OBJECTIVES - SOIL
PHCs, VOCs, PAHs, AND METALS

Analyte	Analytical Method	CAS [a] Registry Number	Laboratory Method Detection Limit [b] (ppm) [c]	Minimum Applicable DEQ RBCs [d] (ppm)	
				Human Receptors	Ecological Receptors
Polynuclear Aromatic Hydrocarbons (PAHs)					
Acenaphthene	EPA 8260E-SIM	83-32-9	0.0029	4,700	0.25
Acenaphthylene	EPA 8260E-SIM	208-96-8	0.0038	NA	NA
Anthracene	EPA 8260E-SIM	120-12-7	0.0023	23,000	6.8
Benzo[a]anthracene	EPA 8260E-SIM	56-55-3	0.0025	1.1	18
Benzo[a]pyrene	EPA 8260E-SIM	50-32-8	0.0049	0.11	NA
Benzo[b]fluoranthene	EPA 8260E-SIM	205-99-2	0.0040	1.1	18
Benzo[g,h,i]perylene	EPA 8260E-SIM	191-24-2	0.0027	NA	NA
Benzo[k]fluoranthene	EPA 8260E-SIM	207-08-9	0.0029	11	NA
Chrysene	EPA 8260E-SIM	218-01-9	0.0018	110	NA
Dibenz(a,h)anthracene	EPA 8260E-SIM	53-70-3	0.0033	0.11	NA
Fluoranthene	EPA 8260E-SIM	206-44-0	0.0029	2,400	NA
Fluorene	EPA 8260E-SIM	86-73-7	0.0025	3,100	NA
Indeno[1,2,3-cd]pyrene	EPA 8260E-SIM	193-39-5	0.0034	1.1	NA
Naphthalene	EPA 8260E-SIM	91-20-3	0.0025	0.077	1
Phenanthrene	EPA 8260E-SIM	85-01-8	0.0042	NA	NA
Pyrene	EPA 8260E-SIM	129-00-0	0.0044	0.077	NA
1-Methylnaphthalene	EPA 8260E-SIM	90-12-0	0.0026	NA	NA
2-Methylnaphthalene	EPA 8260E-SIM	91-57-6	0.0036	1800	NA
Total Metals					
Arsenic	6010D	7440-38-2	0.50	0.43	6.8
Chromium	6010D	-	0.18	0.30 / 120000	23
Copper	6010D	7440-50-8	0.761	3100	14
Lead	6010D	7439-92-1	1.5	30	11

a Chemical Abstracts Services (CAS)
b Eurofins Test America laboratory reporting limit, assuming dilution is not required for analysis
c parts per million (ppm)
d Minimum applicable soil risk-based concentrations (RBCs) as presented in Appendix A of the DEQ RBDM guidance document "Risk Based Decision Making for the Remediation of Contaminated Sites" (Revised August 2023)
e (-) Not applicable
f (NA) Not available (Oregon DEQ has not established an RBC value for the respective analyte)

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TABLE 3
LABORATORY DETECTION OBJECTIVES - SEDIMENT
PHCs, VOCs, PAHs, AND METALS

Analyte	Analytical Method	CAS [a] Registry Number	Laboratory Method Detection Limit [b] (ppm) [c]	Minimum Applicable DEQ RBCs [d] (ppm) Freshwater
Petroleum Hydrocarbons (PHCs)				
Gasoline-Range Organics	NWTPH-Gx	- [e]	2.8	NA
Diesel-Range Organics	NWTPH-Dx	-	5.0	NA
Oil-Range Organics	NWTPH-Dx	-	5.9	NA
Volatile Organic Compounds (VOCs)				
1,1,1,2-Tetrachloroethane	EPA 8260D	630-20-6	0.030	NA
1,1,1-Trichloroethane	EPA 8260D	71-55-6	0.027	NA
1,1,2,2-Tetrachloroethane	EPA 8260D	79-34-5	0.045	NA
1,1,2-Trichloroethane	EPA 8260D	79-00-5	0.055	NA
1,1-Dichloroethane	EPA 8260D	75-34-3	0.041	NA
1,1-Dichloroethene	EPA 8260D	75-35-4	0.053	NA
1,1-Dichloropropene	EPA 8260D	563-58-6	0.027	NA
1,2,3-Trichlorobenzene	EPA 8260D	87-61-6	0.052	NA
1,2,3-Trichloropropane	EPA 8260D	96-18-4	0.057	NA
1,2,4-Trimethylbenzene	EPA 8260D	95-63-6	0.036	NA
1,2-Dibromo-3-Chloropropane	EPA 8260D	96-12-8	0.093	NA
1,2-Dibromoethane (EDB)	EPA 8260D	106-93-4	0.052	NA
1,2-Dichlorobenzene	EPA 8260D	95-50-1	0.036	NA
1,2-Dichloroethane (EDC)	EPA 8260D	107-06-2	0.034	NA
1,2-Dichloropropane	EPA 8260D	78-87-5	0.047	NA
1,3,5-Trimethylbenzene	EPA 8260D	108-67-8	0.049	NA
1,3-Dichlorobenzene	EPA 8260D	541-73-1	0.019	NA
1,3-Dichloropropane	EPA 8260D	142-28-9	0.046	NA
1,4-Dichlorobenzene	EPA 8260D	106-46-7	0.032	NA
2,2-Dichloropropane	EPA 8260D	594-20-7	0.038	NA
2-Chlorotoluene	EPA 8260D	95-49-8	0.025	NA
4-Chlorotoluene	EPA 8260D	106-43-4	0.036	NA
Benzene	EPA 8260D	71-43-2	0.015	NA
Bromobenzene	EPA 8260D	108-86-1	0.034	NA
Bromochloromethane	EPA 8260D	74-97-5	0.062	NA
Bromodichloromethane	EPA 8260D	75-27-4	0.096	NA
Bromoform	EPA 8260D	75-25-2	0.030	NA
Bromomethane	EPA 8260D	74-83-9	0.051	NA
Carbon tetrachloride	EPA 8260D	56-23-5	0.017	NA
Chlorobenzene	EPA 8260D	108-90-7	0.032	NA
Chloroethane	EPA 8260D	75-00-3	0.087	NA
Chloroform	EPA 8260D	67-66-3	0.036	NA
Chloromethane	EPA 8260D	74-87-3	0.064	NA
cis-1,2-Dichloroethene	EPA 8260D	156-59-2	0.032	NA
cis-1,3-Dichloropropene	EPA 8260D	10061-01-5	0.032	NA
Dibromochloromethane	EPA 8260D	124-48-1	0.025	NA
Dibromomethane	EPA 8260D	74-95-3	0.034	NA
Dichlorodifluoromethane	EPA 8260D	75-71-8	0.043	NA
Ethylbenzene	EPA 8260D	100-41-4	0.025	NA
Hexachlorobutadiene	EPA 8260D	87-68-3	0.025	NA
Isopropylbenzene	EPA 8260D	98-82-8	0.048	NA
Methyl tert-butyl ether	EPA 8260D	1634-04-4	0.046	NA
Methylene Chloride	EPA 8260D	75-09-2	0.310	NA
Naphthalene	EPA 8260D	91-20-3	0.043	176
n-Butylbenzene	EPA 8260D	104-51-8	0.043	NA
N-Propylbenzene	EPA 8260D	103-65-1	0.041	NA
p-Isopropyltoluene	EPA 8260D	99-87-6	0.032	NA
sec-Butylbenzene	EPA 8260D	135-98-8	0.029	NA
Styrene	EPA 8260D	100-42-5	0.036	NA
tert-Butylbenzene	EPA 8260D	98-06-6	0.030	NA
Tetrachloroethene	EPA 8260D	127-18-4	0.027	NA
Toluene	EPA 8260D	108-88-3	0.070	NA
trans-1,2-Dichloroethene	EPA 8260D	156-60-5	0.035	NA
trans-1,3-Dichloropropene	EPA 8260D	10061-02-6	0.041	NA
Trichloroethene	EPA 8260D	79-01-6	0.012	NA
Trichlorofluoromethane	EPA 8260D	75-69-4	0.051	NA
Total Xylenes	EPA 8260D	1330-20-7	0.080	NA
Vinyl chloride	EPA 8260D	75-01-4	0.031	NA

TABLE 3 (continued)

TABLE 3 (Continued)
LABORATORY DETECTION OBJECTIVES - SEDIMENT
PHCs, VOCs, PAHs, AND METALS

Analyte	Analytical Method	CAS [a] Registry Number	Laboratory Method Detection Limit [b] (ppm) [c]	Minimum Applicable DEQ RBCs [d] (ppm) Ecological Receptors
Polynuclear Aromatic Hydrocarbons (PAHs)				
Acenaphthene	EPA 8260E-SIM	83-32-9	0.0029	290
Acenaphthylene	EPA 8260E-SIM	208-96-8	0.0038	160
Anthracene	EPA 8260E-SIM	120-12-7	0.0023	57
Benzo[a]anthracene	EPA 8260E-SIM	56-55-3	0.0025	32
Benzo[a]pyrene	EPA 8260E-SIM	50-32-8	0.0049	32
Benzo[b]fluoranthene	EPA 8260E-SIM	205-99-2	0.0040	NA
Benzo[g,h,i]perylene	EPA 8260E-SIM	191-24-2	0.0027	300
Benzo[k]fluoranthene	EPA 8260E-SIM	207-08-9	0.0029	27
Chrysene	EPA 8260E-SIM	218-01-9	0.0018	57
Dibenz(a,h)anthracene	EPA 8260E-SIM	53-70-3	0.0033	33
Fluoranthene	EPA 8260E-SIM	206-44-0	0.0029	111
Fluorene	EPA 8260E-SIM	86-73-7	0.0025	77
Indeno[1,2,3-cd]pyrene	EPA 8260E-SIM	193-39-5	0.0034	17
Naphthalene	EPA 8260E-SIM	91-20-3	0.0025	176
Phenanthrene	EPA 8260E-SIM	85-01-8	0.0042	42
Pyrene	EPA 8260E-SIM	129-00-0	0.0044	53
1-Methylnaphthalene	EPA 8260E-SIM	90-12-0	0.0026	NA
2-Methylnaphthalene	EPA 8260E-SIM	91-57-6	0.0036	NA
Total Metals				
Arsenic	6010D	7440-38-2	0.50	6.0
Chromium	6010D	-	0.18	37
Copper	6010D	7440-50-8	0.761	36
Lead	6010D	7439-92-1	1.5	35

a Chemical Abstracts Services (CAS)
b Eurofins Test America laboratory reporting limit, assuming dilution is not required for analysis
c parts per million (ppm)
d Minimum applicable sediment risk-based concentrations (RBCs) as presented in DEQ Table 3: Risk Based Concentrations For Sediment
e (-) Not applicable
f (NA) Not available (Oregon DEQ has not established an RBC value for the respective analyte)

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TABLE 4
LABORATORY DETECTION OBJECTIVES - WATER
PHCs, VOCs, PAHs, AND METALS

Analyte	Analytical Method	CAS [a] Registry Number	Laboratory Method Detection Limit [b] (ppb) [c]	Minimum Applicable DEQ RBCs [d] (ppb)	
				Human Receptors	Ecological Receptors
Petroleum Hydrocarbons (PHCs)					
Gasoline-Range Organics	NWTPH-Gx	- [e]	54	110	120
Diesel-Range Organics	NWTPH-Dx	-	0.12	100	260
Oil-Range Organics	NWTPH-Dx	-	0.13	100	260
Volatile Organic Compounds (VOCs)					
1,1,1,2-Tetrachloroethane	EPA 8260D	630-20-6	0.48	NA [f]	NA
1,1,1-Trichloroethane	EPA 8260D	71-55-6	0.17	8,000	4,400,000
1,1,2,2-Tetrachloroethane	EPA 8260D	79-34-5	0.32	NA	NA
1,1,2-Trichloroethane	EPA 8260D	79-00-5	0.43	0.28	NA
1,1-Dichloroethane	EPA 8260D	75-34-3	0.29	2.8	1,700,000
1,1-Dichloroethene	EPA 8260D	75-35-4	0.20	280	130,000
1,1-Dichloropropene	EPA 8260D	563-58-6	0.50	NA	NA
1,2,3-Trichlorobenzene	EPA 8260D	87-61-6	0.33	NA	NA
1,2,3-Trichloropropane	EPA 8260D	96-18-4	0.50	NA	NA
1,2,4-Trichlorobenzene	EPA 8260D	120-82-1	0.50	NA	6,600
1,2,4-Trimethylbenzene	EPA 8260D	95-63-6	0.31	54	NA
1,2-Dibromo-3-Chloropropane	EPA 8260D	96-12-8	1.50	NA	NA
1,2-Dibromoethane (EDB)	EPA 8260D	106-93-4	0.20	0.0075	NA
1,2-Dichlorobenzene	EPA 8260D	95-50-1	0.23	300	NA
1,2-Dichloroethane (EDC)	EPA 8260D	107-06-2	0.31	0.17	19,000
1,2-Dichloropropane	EPA 8260D	78-87-5	0.23	NA	NA
1,3,5-Trimethylbenzene	EPA 8260D	108-67-8	0.32	59	NA
1,3-Dichlorobenzene	EPA 8260D	541-73-1	0.14	NA	NA
1,3-Dichloropropane	EPA 8260D	142-28-9	0.21	NA	NA
1,4-Dichlorobenzene	EPA 8260D	106-46-7	0.28	0.48	11,000
2,2-Dichloropropane	EPA 8260D	594-20-7	0.66	NA	NA
2-Chlorotoluene	EPA 8260D	95-49-8	0.36	NA	NA
4-Chlorotoluene	EPA 8260D	106-43-4	0.26	NA	NA
Benzene	EPA 8260D	71-43-2	0.093	0.46	110,000
Bromobenzene	EPA 8260D	108-86-1	0.28	NA	NA
Bromochloromethane	EPA 8260D	74-97-5	0.44	NA	NA
Bromodichloromethane	EPA 8260D	75-27-4	0.29	NA	NA
Bromoform	EPA 8260D	75-25-2	0.66	3.30	NA
Bromomethane	EPA 8260D	74-83-9	0.76	7.5	NA
Carbon tetrachloride	EPA 8260D	56-23-5	0.40	0.46	NA
Chlorobenzene	EPA 8260D	108-90-7	0.32	77	260,000
Chloroethane	EPA 8260D	75-00-3	0.40	21,000	NA
Chloroform	EPA 8260D	67-66-3	0.24	0.22	67,000
Chloromethane	EPA 8260D	74-87-3	0.50	190	NA
cis-1,2-Dichloroethene	EPA 8260D	156-59-2	0.23	36	NA
cis-1,3-Dichloropropene	EPA 8260D	10061-01-5	0.25	NA	NA
Dibromochloromethane	EPA 8260D	124-48-1	0.33	NA	NA
Dibromomethane	EPA 8260D	74-95-3	0.50	NA	NA
Dichlorodifluoromethane	EPA 8260D	75-71-8	0.64	NA	NA
Ethylbenzene	EPA 8260D	100-41-4	0.20	1.5	NA
Hexachlorobutadiene	EPA 8260D	87-68-3	0.21	NA	NA
Isopropylbenzene	EPA 8260D	98-82-8	0.24	440	NA
Methyl tert-butyl ether	EPA 8260D	1634-04-4	0.16	14	NA
Methylene Chloride	EPA 8260D	75-09-2	2.2	11	26,000
Naphthalene	EPA 8260D	91-20-3	0.63	0.17	NA
n-Butylbenzene	EPA 8260D	104-51-8	0.2	NA	NA
N-Propylbenzene	EPA 8260D	103-65-1	0.25	NA	NA
p-Isopropyltoluene	EPA 8260D	99-87-6	0.27	NA	NA
sec-Butylbenzene	EPA 8260D	135-98-8	0.22	NA	NA
Styrene	EPA 8260D	100-42-5	0.24	1,200	NA
tert-Butylbenzene	EPA 8260D	98-06-6	0.12	NA	NA
Tetrachloroethene	EPA 8260D	127-18-4	0.22	12	8,900
Toluene	EPA 8260D	108-88-3	0.31	1,100	110,000
trans-1,2-Dichloroethene	EPA 8260D	156-60-5	0.2	360	NA
trans-1,3-Dichloropropene	EPA 8260D	10061-02-6	0.45	NA	NA
Trichloroethene	EPA 8260D	79-01-6	0.2	0.49	440,000
Trichlorofluoromethane	EPA 8260D	75-69-4	0.2	1,100	NA
Total Xylenes	EPA 8260D	1330-20-7	0.13	190	9,400
Vinyl chloride	EPA 8260D	75-01-4	0.13	0.027	NA

TABLE 4 (continued)

TABLE 4 (Continued)
LABORATORY DETECTION OBJECTIVES - WATER
PHCs, VOCs, PAHs, AND METALS

Analyte	Analytical Method	CAS [a] Registry Number	Laboratory Method Detection Limit [b] (ppb) [c]	Minimum Applicable DEQ RBCs [d] (ppb)	
				Human Receptors	Ecological Receptors
Polynuclear Aromatic Hydrocarbons (PAHs)					
Acenaphthene	EPA 8260E-SIM	83-32-9	0.022	510	310,000
Acenaphthylene	EPA 8260E-SIM	208-96-8	0.016	NA	310,000
Anthracene	EPA 8260E-SIM	120-12-7	0.025	> S	440,000
Benzo[a]anthracene	EPA 8260E-SIM	56-55-3	0.028	0.030	760
Benzo[a]pyrene	EPA 8260E-SIM	50-32-8	0.012	0.025	4,400
Benzo[b]fluoranthene	EPA 8260E-SIM	205-99-2	0.025	0.25	17,000
Benzo[g,h,i]perylene	EPA 8260E-SIM	191-24-2	0.021	NA	32,000
Benzo[k]fluoranthene	EPA 8260E-SIM	207-08-9	0.015	NA	32,000
Chrysene	EPA 8260E-SIM	218-01-9	0.010	NA	760
Dibenz(a,h)anthracene	EPA 8260E-SIM	53-70-3	0.013	0.025	5,900
Fluoranthene	EPA 8260E-SIM	206-44-0	0.017	NA	56,000
Fluorene	EPA 8260E-SIM	86-73-7	0.016	280	560,000
Indeno[1,2,3-cd]pyrene	EPA 8260E-SIM	193-39-5	0.022	NA	32,000
Naphthalene	EPA 8260E-SIM	91-20-3	0.053	0.17	57
Phenanthrene	EPA 8260E-SIM	85-01-8	0.057	NA	23,000
Pyrene	EPA 8260E-SIM	129-00-0	0.026	110	33,000
1-Methylnaphthalene	EPA 8260E-SIM	90-12-0	0.023	NA	NA
2-Methylnaphthalene	EPA 8260E-SIM	91-57-6	0.044	NA	71,000
Total Metals					
Arsenic	6010D	7440-38-2	0.010	0.052	560
Chromium	6010D	-	0.0017	30,000	7,100
Copper	6010D	7440-50-8	0.014	800	12,000
Lead	6010D	7439-92-1	0.0051	15	4,300

a Chemical Abstracts Services (CAS)
b Eurofins Test America laboratory reporting limit, assuming dilution is not required for analysis
c parts per billion (ppb)
d Minimum applicable risk-based concentrations (RBCs) as presented in Appendix A of the DEQ RBDM guidance document "Risk Based Decision Making for the Remediation of Contaminated Sites" (Revised August 2023)
e (-) Not applicable
f (NA) Not available (Oregon DEQ has not established an RBC value for the respective analyte)

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