



**SUCCEED
ENVIRONMENTAL
CONSULTING, LLC**



INDEPENDENT CLEANUP PATHWAY FINAL REPORT

For Brauer 1820 Vacant Lot Property

Tax Lot Nos. 3000 & 3800 (Tax Map 3S3E06B)
S Redland Road & S Fishers Mill Road
Clackamas County, Oregon
ECSI No. 6737

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**ACRONYMS AND ABBREVIATIONS**

Acronym	Definition
ASTM	American Society for Testing and Materials
BGS	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
cPAH	Carcinogenic Polycyclic Aromatic Hydrocarbon
CFSL	Clean Fill Screening Level
COPC	Contaminant of Potential Concern
COC	Contaminant of Concern
CSM	Conceptual Site Model
DEQ	Oregon Department of Environmental Quality
DRO	Diesel-Range Organics
ECSI	Environmental Cleanup Site Information (DEQ tracking number)
EPA	U.S. Environmental Protection Agency
FOC	Fraction of Organic Carbon
GRO	Gasoline-Range Organics
IDW	Investigation-Derived Waste
ICP	Independent Cleanup Pathway
MFA	Maul Foster & Alongi, Inc.
MS/MSD	Matrix Spike / Matrix Spike Duplicate
MTCA	Model Toxics Control Act (WA State)
NFA	No Further Action
OAR	Oregon Administrative Rule
OWRD	Oregon Water Resources Department
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PID	Photoionization Detector
QA/QC	Quality Assurance / Quality Control
RBC	Risk-Based Concentration
RBDM	Risk-Based Decision Matrix
ROW	Right-of-Way
SAP	Sampling and Analysis Plan
SEC	Succeed Environmental Consulting LLC
TCE	Trichloroethylene
TEE	Terrestrial Ecological Evaluation
TP-1	Test Pit 1 (site-specific location)
TPH	Total Petroleum Hydrocarbons
UIC	Underground Injection Control
USGS	United States Geological Survey
VOC	Volatile Organic Compound



1. INTRODUCTION

Succeed Environmental Consulting LLC (SEC) is pleased to submit this Independent Cleanup Pathway (ICP) final report on behalf of Brauer 1820 LLC for two vacant lots that comprise Cleanup Site No. 6737 (Subject Property). In the summer of 2021, an area of impacted soil was discovered proximate to a drainpipe that was discharging wastewater onto the Subject Property. The contamination appears to have originated from the up-gradient Redland Store property, which (1) historically operated as a Chevron-brand gas station with gasoline USTs and (2) historically utilized an unregistered UIC for sewage disposal. Based on the investigation discussed in this report, the Redland Store's sewer system discharged sewage to their former UIC, which was connected to a drainpipe that historically discharged wastewater, including petroleum constituents, onto the Subject Property.

The purpose of this report is to describe the discovery and subsequent cleanup of hazardous materials (primarily gasoline-range hydrocarbons) along the western portion of the Subject Property. (centered near the drainpipe). SEC conducted investigation activities at the Subject Property in conjunction with Maul Foster and Alongi (MFA), who also collected several of the samples at the Subject Property and surrounding rights-of-way (ROW). MFA provided SEC with their chemical analytical laboratory reports for the purpose of report preparation.

The objective of this report is to provide sufficient data, such that the Oregon Department of Environmental Quality (DEQ) can provide an opinion regarding the need for further action at the Subject Property. In our professional opinion, sufficient data has been obtained to issue a determination of No Further Action for the Subject Property.

2. SITE BACKGROUND

The 1.40-acre Subject Property includes Tax Lots 3000 and 3800 of Clackamas County Tax Map 3S3E06B and is located in the NW $\frac{1}{4}$ of Section 6, Township 3 South, Range 3 East of the Willamette Meridian. The Subject Property is bound to the southwest by S Redland Road, across which is the Redland Station; to the southeast by Redland Family Dentistry; to the Northeast by a gravel driveway, across which is a Clear Creek Communications (telecom business); and to the Northwest by S Fischers Mill Road, across which is the Redland Store (and associated feed & grain building), which is discussed further herein.

The Subject Property currently consists of vacant land that was purchased by Brauer 1820 LLC in 2012. SEC did not ascertain previous ownership history during this assessment. Based on our review of publicly available aerial photographs, the portion of the Subject Property that was impacted by the Redland Store has historically existed as vacant land.

According to the Clackamas County Zoning and Development Ordinance, the Subject Property is zoned as Rural Commercial (RC) land. It is our understanding that the future land use of the property will likely remain as commercial. SEC has no knowledge of environmental-related permits or violations associated with current or past uses of the Subject Property. Prior to enrollment in the ICP, there has been no environmental regulatory history associated with the Subject Property.

The Subject Property is shown relative to surrounding physical features on Figure 1. A site plan of the Subject Property is provided on Figure 2.

3. ENVIRONMENTAL SETTING

Climate Information

The climate at the Subject Property is characterized by hot, dry summers and cool, wet winters. The annual average temperature is 55.4°F, with the hottest months (July and August) averaging 70.8°F and the coldest month (December) averaging 41.8°F. The annual precipitation is 44.81 inches (1,138 mm), mostly concentrated during the winter months (November to March)¹.

Topography

The Subject Property is situated at elevations ranging between 340 and 350 feet NAVD 1988² and slopes slightly downwards towards the east-northeast.

Surface Water Hydrology

Surface water that accumulates at the Subject Property is generally expected to infiltrate the ground surface.

Geology and Soil Conditions

The Subject Property is located near the southeastern side of the Portland Basin, a fault-bounded basin situated between the Coast Ranges to the west and the Cascade Mountains to the east (Orr and Orr, 1999)³. Bedrock in this region consists of basalt flows emplaced approximately 15 million years ago as part of the Columbia River Basalt Group. Near-surface soil beneath the Subject Property is comprised of Miocene/Pleistocene terrestrial sedimentary rocks of the Willamette Group (Troutdale Formation)⁴ consisting primarily of fluvial mudstone, sandstone, and conglomerate. The soil observed at the subject property primarily consisted of conglomerated gravel, sand, and clay to depths of up to 15 feet below ground surface (BGS).

Hydrogeology

Groundwater beneath the Subject Property is generally expected to flow downwards towards the northeast, consistent with site topography. Seasonal shallow groundwater at the Subject Property has been encountered at depths as shallow as 7 and 12 feet BGS in the winter/spring months and has been dry to depths below 15 feet BGS during the summer fall/summer months. Based on our review of an adjacent well log (Well ID. 78898), productive deeper groundwater in the Subject Property vicinity occurs in a zone of sand and gravel situated at depths ranging between 178 and 190 feet BGS. There are no known plans to develop additional groundwater supply wells for drinking water supply within the Subject Property vicinity.

4. ON-SITE INVESTIGATION & CLEANUP ACTION

The following sections describe environmental investigation and cleanup actions that occurred at

¹ Taylor, George H.; Hannan, Chris (1999). *The Climate of Oregon: From Rain Forest to Desert*. Corvallis: Oregon State University Press. ISBN 978-0-87071-468-9.

² [Redland Quadrangle; Oregon – Clackamas County; 7.5-Minute Series, USGS, 2023](#)

³ Orr, E.L. and Orr, W.N., 1999, *Geology of Oregon*. Kendall/Hunt Publishing, Iowa: 254 p.

⁴ Madin, I.P., 2004, Preliminary digital geologic compilation map of the Greater Portland Urban Area, Oregon: Portland, Oreg., Oregon Dept. of Geology and Mineral Industries Open-File Report O-04-02, scale 1:24,000



the Subject Property between 2023 and 2025. The chemical analytical results associated with these activities are summarized in Tables 1 and 2, the exploration logs are provided in Appendix A, and the corresponding laboratory reports are provided in Appendix B. A summary of MFA and SECs sampling approach and results are provided below and relevant referenced sampling locations are shown on Figure 2:

- **On-Site Soil Investigation:** Between September 5 and 8, 2023, MFA advanced one test pit (TP-1) and two soil borings (B8 and B9) to explore subsurface conditions proximate to the western edge and above-noted drainpipe at the Subject Property. Elevated concentrations of petroleum hydrocarbons (primarily in the gasoline range) were detected in soil collected from depths ranging between 8.0 and 9.0 feet BGS.

The impacted soil identified during this investigation was situated directly below the drainpipe trench, with the highest concentrations of gasoline located proximate to the trench. This trend was demonstrated by the elevated hydrocarbon concentrations encountered in soil sample VL-TP1-S-001 (collected near the drainpipe), and the generally clean conditions encountered in soil samples VL-TP1-S-002, VL-B8-S-11.5 (shown on Figure 2 as B-8), and VL-B9-S-7 (shown as B-9), which were collected 10', 35', and 100' away from the drainpipe, respectively.

In addition, a water sample (CB-1) was collected from the on-site catch basin in September 2023. No petroleum hydrocarbons were detected in the water sample. High concentrations of E. coli bacteria were detected in this sample, which is discussed in the following sections.

- **Up-Gradient Investigation:** Between September 8 and November 10, 2023, MFA advanced two test pits (RS-TP1 & RS-TP2) and 13 borings (RS-B1 through RS-B6 & RS-B10 through RS-B16) to explore subsurface conditions in the up-gradient public right-of-way (ROW) and the Redland Store property. Elevated concentrations of petroleum hydrocarbons (primarily in the gasoline range) were detected in soil collected from borings B15 and B16 at depths ranging between 7.0 and 8.0 feet BGS. In addition, E. Coli was detected in shallow groundwater samples collected from both of the test pits.

In addition to the collection of soil and groundwater data, the following analyses of the up-gradient Redland Store was conducted:

1. On September 18 and 21, 2025, two utility locates (camera scopes) were conducted to identify the up-gradient source of the drainpipe. The drainpipe was traced beneath Fishers Mill Road to below the southeast corner of the feed & grain building, where the former UIC was located.
2. On November 8, 2023, green dye was placed in the toilet of the up-gradient Redland Store. Promptly thereafter, green-dyed water from the Store's toilet discharged directly into the former UIC at the Redland Store. Green dyed water also immediately flowed into the on-site catch basin via the drainpipe.

It is our understanding that the unregistered UIC at the Redland Store is no longer in use. However, the analyses conducted in 2023 (the camera scope, dye test, E. Coli analytical, and undeveloped history of the Subject Property) indicate that the drainpipe is the most likely pathway for sewage and other waste that originated at the Redland Store property to migrate to the Subject Property.



Out of an abundance of caution, three nearby drinking water wells (RG-GW-001, DB-GW-001, and RD-GW-001 shown on Figure 1) were additionally tested for E. coli in April 2024, with no detections of E. coli identified.

- **On-Site Remedial Action:** A remedial action consisting of the removal of petroleum-impacted soil was conducted at the Subject Property. Between September 5 and 20, 2023, an approximately 1,500-square-foot (SF) area of soil was excavated to depths of up to 15 feet BGS in the area shown on Figure 3. Groundwater was not encountered during excavation activities. Field evidence of impact in soil diminished with increased distance from the drainpipe.

The excavation continued vertically and horizontally until the visually impacted soil was removed. One minor pocket of inaccessible impacted soil extended beneath the roots of a large tree at the north end of the excavation and was left in-place, as removal would likely have killed the tree.

A total of 93.84 tons of soil that exhibited field evidence of impact (petroleum-like sheen, staining, and/or petroleum odor) was disposed of as non-hazardous waste at the Waste Management Hillsboro Landfill under permit no. 141172OR. The corresponding landfill disposal receipts are provided in Appendix C.

Following excavation activities, a total of 13 confirmation soil samples were collected near the limits of the remedial excavation at varying depths. Four of the 13 confirmation soil samples⁵ were collected from the base of the excavation, and nine of the 13 confirmation soil samples⁶ were collected from the lateral limits of the excavation.

All of the confirmation soil samples were submitted to Apex Laboratories following standard chain-of-custody protocol and analyzed for gasoline-, diesel-, and oil-range hydrocarbons and constituent VOCs (benzene, ethylbenzene, toluene, xylenes, and naphthalene). The chemical analytical results were compared to applicable DEQ Risk-Based Concentrations (RBCs discussed in Section 10), and none of the 13 confirmation soil samples contained petroleum hydrocarbons or constituent VOCs at concentrations greater than DEQ RBCs for occupational, construction worker, or excavation workers,

With the exception of the above-referenced inaccessible area of soil, which contained gasoline and naphthalene at concentrations exceeding DEQ's soil leaching to groundwater RBC for occupational receptors, the confirmation soil samples collected following the removal of petroleum-impacted soil did not contain contaminants of interest at concentrations greater than applicable DEQ RBCs.

Following remedial activities, SEC collected one water sample from a temporary well screen at sample location TP-1, where soil exhibited the highest concentrations of gasoline-range hydrocarbons and naphthalene before remedial activities. Water sample TP-1 was analyzed for gasoline-, diesel-, and oil-range hydrocarbons and associated VOCs (BTEX+N), and did not contain contaminants of interest at concentrations greater than any applicable DEQ RBCs.

⁵ VL-EB-S-001, VL-EB-S-002, VL-EB-S-003, and VL-EB-S-004

⁶ VL-SWW-S1-8.0, VL-SWW-S2-10.0, VL-SWW-S3-8.5, VL-SWW-S4-10.0, TP-2 (8.0-10.0), TP-3 (8.0-10.0), TP-4 (8.0-10.0), and TP-5 (8.0-10.0)

Clean overburden soil that was excavated during the remedial action, which did not exhibit field evidence of impact, was stockpiled separately on-site during excavation activities. Two soil stockpile characterization samples (VL-SP-CS-002 and VL-SP-CS-003) were collected and submitted to a chemical analytical laboratory for analysis of petroleum hydrocarbons and associated VOCs. A comparison of the resulting laboratory data to DEQ clean fill screening levels (CFSs updated February 2019) confirmed that the excavated overburden soil met CFSs. Accordingly, the clean overburden was used as backfill material following remedial excavation activities.

The approximate excavation limits and typical cross sections corresponding confirmation soil samples are presented on Figure 3. Photographs of investigation and cleanup activities that were conducted at the Subject Property are presented on Figures 4 through 8.

- **On-Site Drainpipe Reconfiguration: July 2021.** In July 2021, the drainpipe that originates at the up-gradient Redland Store property was re-routed to the catch basin located along the perimeter of the subject property (shown on Figure 2) using watertight dual-wall gasketed drainpipe, intended to restrict future leaks from exiting the drainpipe at the Subject Property. Following drainpipe reconfiguration, a sediment sample (VL-PIPE-SL1) was collected from a segment of the former drainpipe. Although no gasoline or associated VOCs were detected in the sediment sample, low levels of diesel-range hydrocarbons were detected.

5. SOURCE NATURE AND EXTENT OF CONTAMINATION

5.1 Source of Contamination

The impacted soil identified during this investigation appeared to be situated proximate to the drainpipe that historically discharged wastewater from the adjoining Redland Store property onto the Subject Property. Specifically, the highest concentrations of petroleum hydrocarbons were located proximate to the above-noted trench and drainpipe, which was traced back to the Redland Store's feed and grain building and, based on the results of green dye testing (Section 4), was also connected to the Redland Store's former unregistered UIC. It is our understanding that the former unregistered UIC has since been taken out of service.

5.2 Nature of Contamination

Based on the results of investigations conducted at the Subject Property, contaminants of potential concern (COPCs) included petroleum hydrocarbons and associated VOCs. E. Coli was historically identified in samples collected from an on-site catch basin, and in shallow groundwater collected from a test pit that was advanced in the up-gradient ROW (proximate to the Redland Store).

5.3 Extent of Contamination

Soil: Gasoline-range hydrocarbons and naphthalene were identified in soil at concentrations that exceed their corresponding DEQ Soil Leaching to Groundwater RBCs. Diesel-range hydrocarbons, oil-range hydrocarbons, ethylbenzene, and xylenes were also identified in soil at concentrations that do not exceed any corresponding RBCs.

Groundwater: Four water samples collected during this investigation were analyzed for the above-referenced COPCs. Although low concentrations of diesel-range hydrocarbons were identified in groundwater collected at the Subject Property, no COPCs were identified at concentrations exceeding any applicable RBCs.

With respect to the E. Coli was historically identified in samples collected from the on-site catch basin, and in shallow groundwater collected from a test pit that was advanced in the up-gradient ROW (proximate to the Redland Store), it is our understanding that the former unregistered UIC has since been taken out of service.

6. EXPOSURE PATHWAY SUMMARY

This section evaluates completed, potential, and eliminated exposure pathways associated with COPCs at the Subject Property, including petroleum hydrocarbons and associated volatile organic compounds (BTEX+N).

6.1 Groundwater Pathways for Exposure

Groundwater at the Subject Property is not currently used for drinking or other beneficial uses. In the event of future development, public water supply is available in the vicinity of the Subject Property.

Investigative activities confirmed the absence of petroleum-related contaminants above applicable RBCs in groundwater samples. This pathway is considered *incomplete*. There is no evidence of impacted groundwater posing a current or future risk to human health or the environment.

6.2 Direct Contact Pathways for Exposure

Impacted soil containing gasoline-range hydrocarbons and naphthalene was identified and subsequently excavated. Confirmation soil sampling confirmed that residual concentrations were below applicable DEQ RBCs for occupational, construction worker, and excavation worker scenarios, except for a minor pocket of inaccessible impacted soil located beneath a tree. This pathway is considered *eliminated* for current and future land use, based on site remediation, confirmation sampling, and limited receptor exposure.

6.3 Surface Water Pathways for Exposure

Surface water was not a significant migration or exposure mechanism at the Subject Property. No impacted surface water bodies exist on or adjacent to the site. In addition, surface water that accumulates at the Subject Property is generally expected to infiltrate the ground surface. This pathway is considered *incomplete*. Surface water is not a current or likely future receptor.

6.4 Air Pathways for Exposure

Impacted soil containing gasoline-range hydrocarbons and naphthalene was identified and subsequently excavated, except for a minor pocket of inaccessible impacted soil beneath a tree. Results of soil and groundwater chemical analysis conducted at the subject property showed no exceedances of the DEQ's RBCs for vapor intrusion or inhalation exposure. This pathway is considered *eliminated* based on empirical data and removal of impacted soil.

7. CONTAMINANT FATE AND TRANSPORT

This section evaluates the behaviour and mobility of COPCs identified during the site investigation, including petroleum hydrocarbons (gasoline-, diesel-, and oil-range) associated VOCs (BTEX+N). The evaluation considers site-specific geology, hydrogeology, and the results of



sampling and remedial actions.

7.1 Contaminant Transport

Contaminant migration at the Subject Property was primarily vertical, associated with infiltration of petroleum-impacted wastewater discharged via a historic drainpipe connected to the up-gradient Redland Store property. Impacted soil was limited to a localized area directly below where the drainpipe entered the Subject Property. No lateral transport was observed beyond 10 feet from the source area. Groundwater, encountered intermittently at depths >7 feet BGS during wetter seasons, did not exhibit evidence of significant contaminant transport.

7.2 Contaminant Degradation/Persistence

Gasoline-range hydrocarbons and VOCs, particularly naphthalene and BTEX compounds, are known to degrade under aerobic conditions common in the unsaturated zone at the Subject Property. Diesel- and oil-range hydrocarbons exhibit slower degradation rates but were present at concentrations below relevant RBCs. E. coli, while detected in historical catch basin and shallow ROW groundwater samples, is not persistent in subsurface conditions and was not detected in drinking water wells. No free-phase hydrocarbons or long-term persistent compounds were identified in site media.

7.3 Demonstration of No Impact to Groundwater

Four groundwater samples were collected and analysed for COPCs. No petroleum hydrocarbons or VOCs were detected above applicable DEQ RBCs. The primary impacted zone was shallow and unsaturated at the time of excavation. In addition, the minor pocket of inaccessible impacted soil is not expected to leach contaminants to groundwater due to its limited volume, root interference, and vertical separation from the saturated zone.

7.4 Preliminary Hot Spot Determination

A minor pocket of inaccessible impacted soil containing gasoline-range hydrocarbons and naphthalene at concentrations exceeding DEQ's soil leaching to groundwater RBCs remains beneath a large tree. Based on the limited extent, absence of detectable impacts in underlying groundwater, and lack of complete exposure pathways, this residual impact does not qualify as a "hot spot" per OAR 340-122-0085. All remaining accessible impacted soil was removed and confirmed clean via laboratory analysis.

7.5 Conceptual Site Model

The conceptual site model (CSM) identifies the historical unregistered UIC at the Redland Store and associated drainpipe as the source of petroleum impact to the Subject Property. Based on SEC's review of the data, contaminant migration occurred vertically through preferential flow paths in the drainpipe and associated trench backfill. Exposure pathways have been assessed and found to be incomplete or eliminated through source removal, pathway interruption (drainpipe rerouting), and confirmation sampling. No receptors are currently or potentially at risk.

7.6 Locality of the Facility

The Subject Property is located in a semi-rural commercial setting near the intersection of S Redland Road and S Fischers Mill Road in Clackamas County, Oregon. The property is surrounded by mixed-use commercial properties, including a dental clinic, telecom facility, and general store. The land use is expected to remain commercial. No surface water bodies or sensitive ecological receptors are located on-site or in immediate proximity.

8. LAND USE DETERMINATIONS

This section outlines the current and anticipated future land use of the Subject Property and identifies existing and potential beneficial uses of surface water and groundwater in the site vicinity.

8.1 Current and Future Land Use

The Subject Property consists of two vacant commercial tax lots (Tax Lots 3000 and 3800) located at the southeast corner of S Redland Road and S Fischers Mill Road in Clackamas County, Oregon. The parcels are zoned Rural Commercial (RC) under the Clackamas County Zoning and Development Ordinance.

There are no existing buildings or active operations on the Subject Property. Based on current zoning and communications with the property owner, the intended future use of the site will remain commercial. No changes to zoning, land use, or development restrictions are currently proposed or anticipated.

Remedial actions were completed to a standard protective of commercial land use. Cleanup levels were based on RBCs applicable to occupational, construction, and excavation worker scenarios. Therefore, residual contaminant concentrations, where present, are consistent with anticipated future use and pose no unacceptable risk under existing and reasonably likely foreseeable zoning and use scenarios.

8.2 Beneficial Uses of Water

Surface water that accumulates on-site is expected to infiltrate to shallow subsurface soil. Consequently, no current or potential surface water uses are relevant to the Subject Property.

Groundwater in the area occurs in both shallow perched zones (seasonally present) and deeper confined aquifers. While a shallow zone of seasonal groundwater was encountered during site investigation, no groundwater supply wells are present on the Subject Property. Three nearby domestic-use wells (RG-GW-001, DB-GW-001, and RD-GW-001) were tested for E. coli as a precaution in April 2024, and all were non-detect.

Per the Oregon Water Resources Department (OWRD) well logs, the nearest drinking water aquifer lies at approximately 180 to 190 feet BGS and is hydraulically separated from the shallow impacted zone. No impacts to beneficial uses of groundwater were identified.

9. RISK ASSESSMENT

This section presents a qualitative baseline risk assessment evaluating potential risks to human health and ecological receptors from residual contamination at the Subject Property following completion of investigation and remedial actions.

9.1 Baseline Human Health Risk Assessment

The human health risk assessment is based on site-specific data and DEQ's Risk-Based Decision Making (RBDM) guidance. Exposure scenarios were evaluated for the following relevant receptors under current and anticipated future commercial land use.

- Occupational workers



- Construction/excavation workers
- Other (e.g., utility personnel or transient public)

Key Findings:

- Petroleum hydrocarbons (gasoline-, diesel-, and oil-range) and associated VOCs were either removed or present at concentrations below applicable DEQ soil RBCs for occupational, construction, and excavation worker scenarios.
- One minor pocket of inaccessible impacted soil remains beneath a tree and contains gasoline and naphthalene above DEQ's soil leaching to groundwater RBCs. However, this area is inaccessible, does not represent a complete exposure pathway, and is vertically separated from groundwater.
- Groundwater sampling did not identify any contaminants at concentrations exceeding DEQ's groundwater RBCs.
- Although soil vapor sampling was not conducted, no COPCs were detected in groundwater at concentrations exceeding DEQ's groundwater RBCs protective of vapor intrusion. Therefore, the vapor intrusion pathway is considered incomplete by inference.

No unacceptable risks to human health were identified under current or foreseeable site use scenarios. All relevant exposure pathways have been addressed through removal, interruption, or are otherwise incomplete.

9.2 Baseline Ecological Risk Assessment

An ecological risk assessment was not conducted, as the site lacks features supportive of ecological receptors. Key considerations include:

- The Subject Property is a cleared, graded, and vacant commercial lot without surface water or ecologically significant vegetation.
- There are no wetlands, surface water bodies, or sensitive habitats at the site.
- Impacted soil was removed to the extent practicable, and remaining impacts are confined to subsurface areas not accessible to ecological receptors.

The potential for ecological exposure is negligible, and no further ecological evaluation is warranted under the Independent Cleanup Pathway.

10. CLEANUP STANDARDS AND HOT SPOTS

This section identifies the applicable cleanup standards used to evaluate residual contamination at the Subject Property and presents a determination regarding the absence of any remaining hot spots, pursuant to Oregon Administrative Rules (OAR 340-122-0085 and 340-122-0115). We also understand that potable water is currently available in the Subject Property vicinity.

10.1 Selection of Cleanup Standards

Cleanup levels were selected in accordance with DEQ RBCs for unrestricted and occupational land use scenarios. Given the site's zoning and intended future use as a commercial property, the following receptor scenarios were used:

- Occupational Worker Exposure



- Construction and Excavation Worker Exposure
- Soil Leaching to Groundwater
- Volatilization to Outdoor Air
- Vapor Intrusion into Buildings

Soil cleanup standards were based on the most conservative applicable RBC for each COPC and exposure scenario. Groundwater RBCs were used for comparison with sample results, although no beneficial groundwater use is present on-site and municipal water is available.

10.2 Final Hot Spot Determination

As defined by OAR 340-122-0115, a “hot spot” is a discrete area where a hazardous substance is present at concentrations significantly exceeding risk-based levels and poses a higher long-term risk. Our analysis is supported by the following:

- All impacted soil accessible for excavation was removed and confirmation sampled. Analytical results demonstrated compliance with applicable DEQ RBCs.
- One minor pocket of inaccessible impacted soil remains in place beneath the roots of a large tree. This area contains gasoline-range hydrocarbons and naphthalene at concentrations exceeding DEQ’s *soil leaching to groundwater* RBCs but does not exceed direct exposure RBCs for human receptors.
- Groundwater samples collected beneath and adjacent to the residual area did not contain COPCs above RBCs, supporting a conclusion of no impact to groundwater.
- The minor pocket of inaccessible impacted soil is not reasonably accessible, is stable, and is not located near sensitive receptors or media.

Based on the nature, extent, and context of the remaining contamination, the minor pocket of inaccessible impacted soil beneath the tree does not meet the regulatory definition of a hot spot. It does not pose a higher risk due to (1) lack of complete exposure pathways, (2) the limited volume and low mobility of the minor pocket of inaccessible impacted soil, and (3) the absence of ecological or human receptors. No other areas of contamination remain at concentrations that would qualify as hot spots.

11. FEASIBILITY STUDY

This section outlines the evaluation of remedial action alternatives for the Subject Property in accordance with Oregon Administrative Rules (OAR 340-122-0080), and identifies the selected remedy based on effectiveness, implementability, and cost.

11.1 Development of Remedial Action Alternatives

Based on site-specific conditions, contaminant nature and extent, and future land use, the following remedial alternatives were available to address petroleum hydrocarbon-impacted soil in a localized area of the Subject Property:

- **Alternative 1: No Action:** No additional investigation or remediation. This alternative does not meet the remedial action objectives and was rejected.
- **Alternative 2: Institutional Controls Only:** Use of deed restrictions or other institutional controls to limit exposure. This alternative would not adequately address the presence of mobile petroleum hydrocarbons and was deemed insufficient as a standalone remedy.



- **Alternative 3: Targeted Excavation and Off-Site Disposal (Selected Alternative):** Source removal through excavation of accessible impacted soil, off-site disposal at a permitted landfill, and confirmation sampling to document effectiveness.
- **Alternative 4: In-Situ Remediation:** In-situ chemical oxidation or bioremediation. Given the small volume and shallow depth of the impacted soil, this alternative was unnecessary and cost-inefficient.

11.2 Evaluation of Remedial Action Alternatives

The following table summarizes an evaluation of the following criteria from OAR 340-122-0090.

Evaluation Criteria	Alternative 1: No Action	Alternative 2: Institutional Controls	Alternative 3: Excavation (Selected)	Alternative 4: In-Situ
Protectiveness	✗	✗	✓	✓ (but excessive)
Implementability	✓	✓	✓	Moderate
Short-Term Effectiveness	✗	✗	✓	✓
Long-Term Effectiveness	✗	✗	✓	✓
Cost	Low	Low	Moderate	High

11.3 Recommended Remedial Action

Targeted Excavation and Off-Site Disposal (Alternative 3) was implemented and is considered the most effective and appropriate response action for the following reasons:

- Effectively removed impacted soil above RBCs.
- Reduced contaminant mass and mobility.
- Eliminated primary exposure pathways.
- Required no ongoing operation, maintenance, or monitoring.

A minor pocket of inaccessible impacted soil remains beneath a tree root mass but does not constitute a hot spot, nor does it present a completed exposure pathway or unacceptable risk.

12. REMEDIAL ACTION REPORT

This section documents the implementation of the selected remedial action, confirmation sampling, and evaluation of residual risks. It also confirms that no engineering or institutional controls are required to protect human health or the environment under current or anticipated future land use.

12.1 Work Completed

The selected remedial action (targeted excavation and off-site disposal) was performed at the Subject Property between September 5 and 20, 2023, and consisted of the following key activities:

- **Excavation of Impacted Soil:** An area covering approximately 1,500 square feet, containing



impacted soil proximate to the former drainpipe discharge zone, was excavated to depths of up to 15 feet BGS.

- **Soil Disposal:** A total of 93.84 tons of petroleum-impacted soil exhibiting field evidence (odor, sheen, staining) was transported and disposed of as non-hazardous waste at the Waste Management Hillsboro Landfill under Permit No. 141172OR. Landfill receipts are provided in Appendix C.
- **Drainpipe Rerouting:** In July 2021, the historical drainpipe was reconfigured using watertight, gasketed dual-wall piping to discharge into the on-site catch basin. This work eliminated the previous uncontrolled discharge pathway from the Redland Store property.
- **Use of On-Site Backfill:** Overburden soil with no field evidence of impact was stockpiled, sampled, confirmed to meet DEQ CFSLS, and was reused on-site as backfill material.

12.2 Verification Sampling

Following excavation, 13 confirmation soil samples were collected from near the base and sidewalls of the remedial excavation. All samples were analyzed for gasoline-, diesel-, and oil-range hydrocarbons by NWTPH-Gx and -Dx methods and for selected volatile organic compounds (BTEX + naphthalene) by EPA Method 8260D. In addition, one post-excavation groundwater sample was collected from location TP-1 (beneath the former source area) and analyzed for the same COPCs. All confirmation samples were below applicable DEQ RBCs for occupational, construction, and excavation worker exposure scenarios. One minor pocket of inaccessible impacted soil beneath a tree root mass contained gasoline and naphthalene above DEQ's soil leaching to groundwater RBCs. This soil was left in place to preserve the tree, is not accessible for excavation, and does not appear to present a completed exposure pathway or unacceptable risk.

12.3 Engineering Controls

No engineered barriers, capping, or physical controls were necessary to contain or isolate contaminants, as source material was generally removed, and no unacceptable residual risks remain.

12.4 Institutional Controls

No residual contamination exceeding unrestricted land use standards remains in accessible areas. No deed restrictions or land use limitations are necessary to prevent exposure to COPCs.

13. RESIDUAL RISK

This section provides an assessment of any residual risks remaining at the Subject Property following completion of remedial actions. It demonstrates that, under current and anticipated future land use, the Subject Property poses no unacceptable risk to human health or the environment.

13.1 Residual Risk Assessment

Remedial activities successfully removed all accessible petroleum-impacted soil. Post-excavation confirmation sampling confirmed that:

- No gasoline-, diesel-, or oil-range hydrocarbons remain at concentrations exceeding applicable DEQ RBCs for occupational, construction, or excavation worker scenarios.

- No VOCs (including BTEX or naphthalene) were detected at concentrations above relevant RBCs in confirmation soil or groundwater samples.
- No COPCs exceeded vapor intrusion thresholds in groundwater, and no soil vapor sampling was required given the absence of a complete vapor intrusion pathway.

The only remaining impacted material consists of a minor pocket of inaccessible impacted soil beneath the root system of a mature tree. This soil contains gasoline-range hydrocarbons and naphthalene above the soil leaching to groundwater RBCs. However:

- The minor pocket of inaccessible impacted soil is not reasonably accessible or subject to disturbance.
- Groundwater sampling below and adjacent to the historically impacted zone confirmed no leaching or exceedance of groundwater RBCs.
- The area is isolated, stable, and poses no realistic exposure pathway under current or anticipated site use.

13.2 Protection of Human Health and the Environment

Based on the data collected and remedial measures completed, it is our professional opinion that no current or future human receptors are at risk from residual contamination. Potential ecological receptors are not present in the residual impacted area and no surface water features exist that would be vulnerable to remaining soil conditions. Based on the foregoing, the residual risk is de minimis and does not warrant further action, institutional controls, or monitoring.

13.3 Inspection, Maintenance, and Residuals Management

No engineered controls were installed, and no ongoing maintenance appears warranted. All accessible impacted soil was disposed of off-site at a permitted landfill. No investigation-derived waste, stockpiles, or remediation residuals remain on the Subject Property.

14. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This report has been prepared for Cleanup Site No. 6737 located in Clackamas County, Oregon. The 1.40-acre Subject Property is comprised of Tax Lots 3000 and 3800 of Clackamas County Tax Map 3S3E06B and has generally consisted of vacant land.

Site investigation and cleanup activities included targeted subsurface investigation, removal of petroleum-impacted soil, rerouting of a historical offsite drainpipe, and confirmation sampling of soil and groundwater. The results of these efforts demonstrate that all accessible impacted media have been addressed and residual risk is within acceptable regulatory limits. No engineering or institutional controls are proposed or required.

Based on the data and conclusions presented in the report, we respectfully request a determination of No Further Action (NFA) for the Subject Property.



15. REFERENCES

- Taylor, G.H., & Hannan, C. (1999). *The Climates of Oregon: From Rain Forest to Desert*. Corvallis: Oregon State University Press. ISBN 978-0-87071-468-9.
- U.S. Geological Survey (USGS). (2023). *Redland Quadrangle, Oregon – Clackamas County; 7.5-Minute Series*. Reston, VA.
- Orr, E.L., & Orr, W.N. (1999). *Geology of Oregon*. Kendall/Hunt Publishing, Iowa. 254 pages.
- Madin, I.P. (2004). *Preliminary Digital Geologic Compilation Map of the Greater Portland Urban Area, Oregon: Portland, Oregon*. Oregon Department of Geology and Mineral Industries Open-File Report O-04-02, scale 1:24,000.
- Oregon Department of Environmental Quality (DEQ). (2024). *Risk-Based Decision Matrix (RBDM) – Soil, Groundwater, and Vapor RBC Tables*. Accessed February 2025. <https://www.oregon.gov/deq/Hazards-and-Cleanup/Cleanup/Pages/RBDM.aspx>
- Oregon DEQ. (2003). *Oregon Administrative Rules Chapter 340, Division 122 – Hazardous Substance Remedial Action Rules*. <https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=1006>
- Oregon Water Resources Department (OWRD). *Well Log Database*. Accessed April 2024. https://apps.wrd.state.or.us/apps/gw/well_log/
- Maul Foster & Alongi, Inc. (2023–2025). *Environmental Investigation Data and Laboratory Reports for Redland Store Vicinity and Subject Property*. Provided to SEC directly from MFA.
- Apex Laboratories, LLC. (2023–2024). *Analytical Reports and Quality Control Documentation for Soil and Groundwater Samples Collected by SEC*. Hillsboro, Oregon.
- Succeed Environmental Consulting LLC. (2023–2025). *Field Notes, Exploration Logs, and Site Documentation for Redland ICP Project*. Portland, Oregon.
- Clean Fill Determinations, Guidance prepared by DEQ Materials Management, dated February 21, 2019. <https://www.oregon.gov/deq/filtered%20library/imdcleanfill.pdf>



We sincerely appreciate the opportunity to be of service to you. Please call if you have questions regarding this report.

Sincerely,

Succeed Environmental Consulting LLC

A handwritten signature in blue ink that reads "Andrew Blake".

Andrew S. Blake, R.G.
Principal Geologist



Expires 6/30/2026



FIGURES



SUCCEED
ENVIRONMENTAL
CONSULTING, LLC

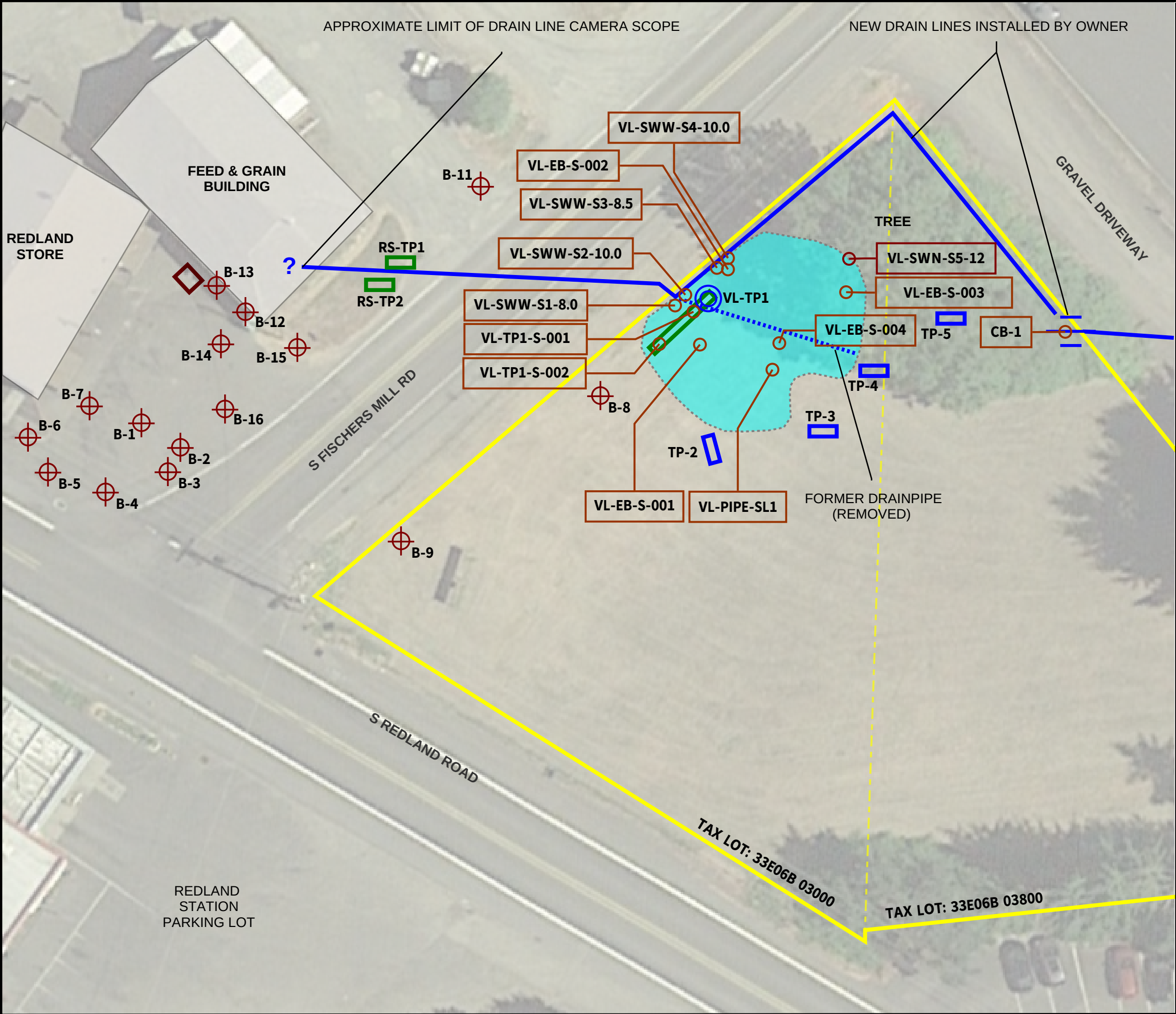
REDLAND-2-01

JUNE 2025

VICINITY MAP

BRAUER 1820 VACANT PROPERTY
CLACKAMAS COUNTY, OREGON

FIGURE 1



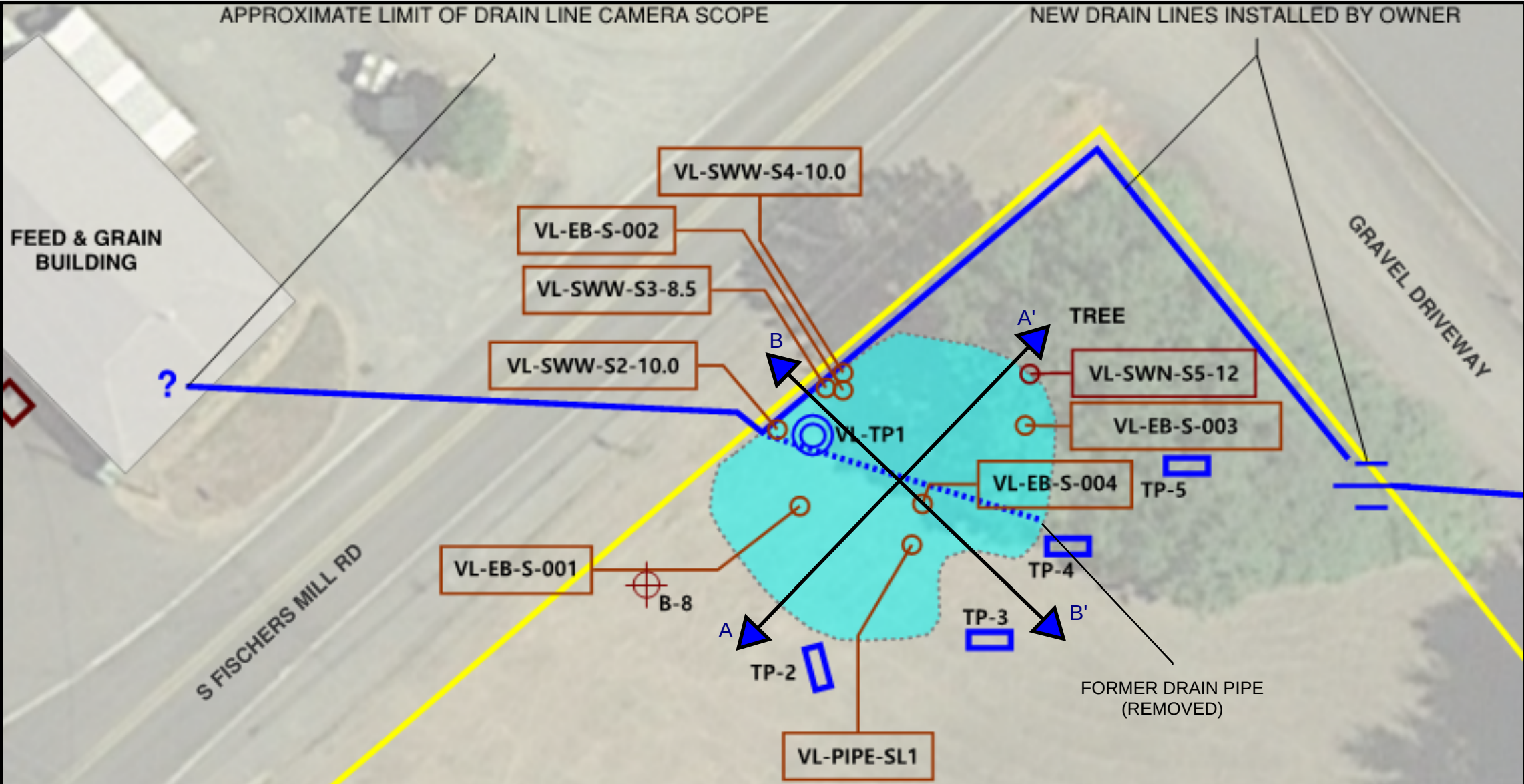
LEGEND:

- SUBJECT PROPERTY (SHOWN IN YELLOW)
- DRAIN PIPE LOCATION (DASHED WHERE REMOVED)
- POSSIBLE OFF-SITE UIC (FORMER WATER WELL)
- ON-SITE CATCH BASIN
- BORING LOCATION (MFA 2023)
- TEST PIT LOCATION (MFA 2023)
- REMEDIAL EXCAVATION LIMITS (2023)
- CONFIRMATION SOIL SAMPLE LOCATION (MFA 2023)
- TEST PIT LOCATION (SEC 2025)
- CONFIRMATION WATER SAMPLE LOCATION (SEC 2025)

(APPROXIMATE SCALE IN FEET)

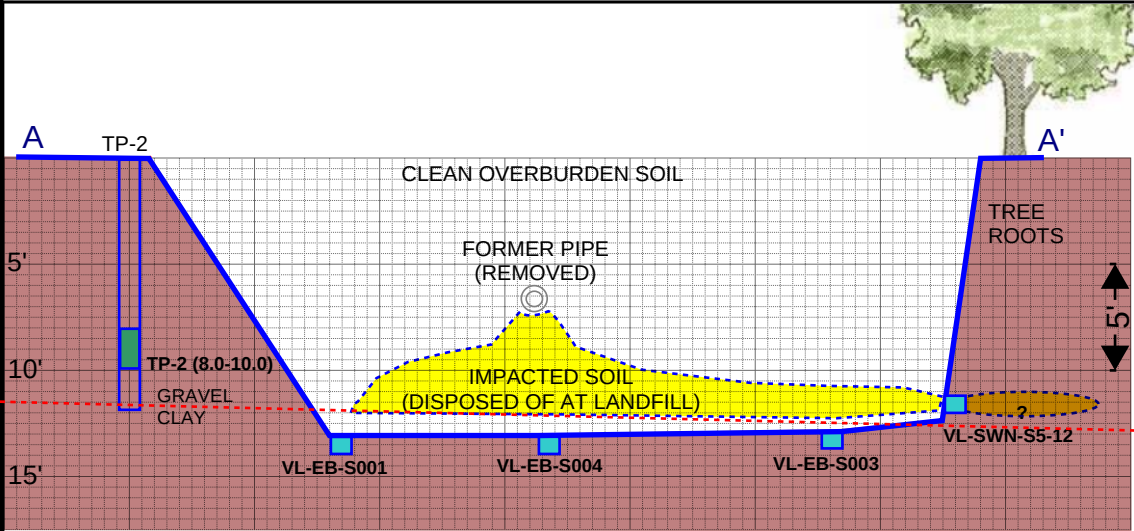
55

SITE PLAN BASED ON OBSERVATIONS MADE BY SEC. MEASUREMENTS DERIVED FROM THIS FIGURE SHOULD BE CONSIDERED APPROXIMATE.



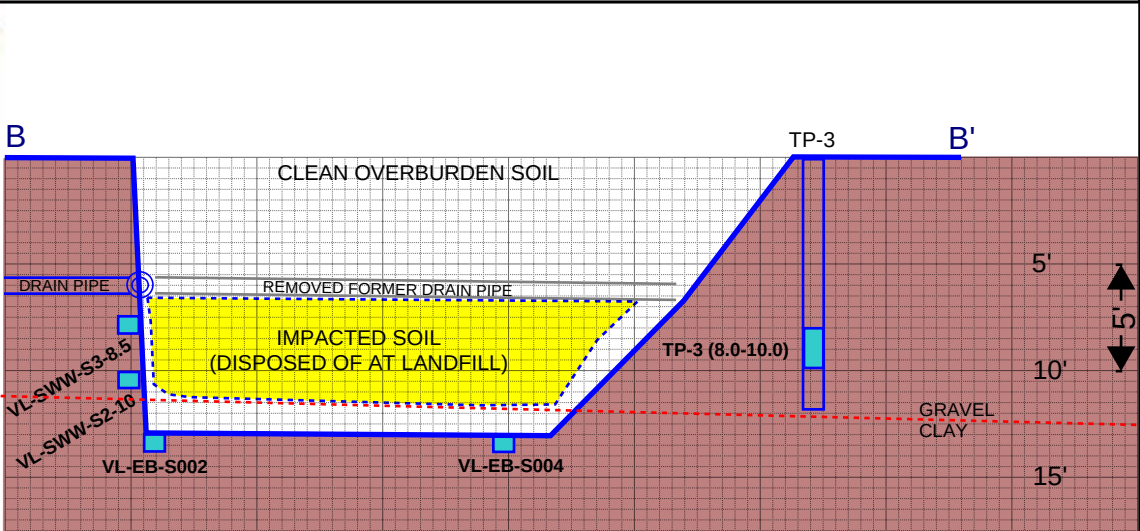
- LEGEND:**
- SUBJECT PROPERTY (SHOWN IN YELLOW)
 - DRAIN PIPE LOCATION (DASHED WHERE REMOVED)
 - POSSIBLE OFF-SITE UIC (FORMER WATER WELL)
 - ON-SITE CATCH BASIN
 - REMEDIAL EXCAVATION LIMITS (2023)
 - CONFIRMATION SOIL SAMPLE LOCATION (MFA 2023)
 - TEST PIT LOCATION (SEC 2025)
 - CONFIRMATION WATER SAMPLE LOCATION (SEC 2025)
 - CROSS SECTION TRANSECT (SECTIONS SHOWN BELOW)

CROSS SECTION A-A'



GRAVEL & COBBLES (VARYING SAND, SILT, AND CLAY)
CLAY CONTENT INCREASES AT APPROXIMATELY 12.0' BGS

CROSS SECTION B-B'



GRAVEL & COBBLES (VARYING SAND, SILT, AND CLAY)
CLAY CONTENT INCREASES AT APPROXIMATELY 12.0' BGS

- CROSS SECTION LEGEND:**
- CROSS SECTION (APPROXIMATE)
 - FORMER IMPACTED SOIL (REMOVED AND DISPOSED OF)
 - CONFIRMATION SAMPLE
- (APPROXIMATE SCALE IN FEET)
- 45
- SITE PLAN BASED ON OBSERVATIONS MADE BY SEC. MEASUREMENTS DERIVED FROM THIS FIGURE SHOULD BE CONSIDERED APPROXIMATE.

ONSITE TEST PIT "TP-1" SHOWN BELOW FORMER DRAIN PIPE DURING EXPLORATION. PHOTOGRAPH TAKEN FACING NORTH.



VIEW OF THE ONSITE TEST PIT "TP-1" DURING EXPLORATION. PHOTOGRAPH TAKEN FACING NORTHEAST.



VIEW OF THE ONSITE TEST PIT "TP-1" DURING EXPLORATION. PHOTOGRAPH TAKEN FACING NORTH.



VIEW OF IMPACTED SOIL ENCOUNTERED DURING EXPLORATION OF ONSITE TEST PIT "TP-1" TAKEN FACING NORTHEAST. THIS MATERIAL WAS LATER EXCAVATED AND DISPOSED OF.

 SUCCEED ENVIRONMENTAL CONSULTING, LLC	REDLAND-2-01	SITE PHOTOGRAPHS	
	JUNE 2025	BRAUER 1820 VACANT PROPERTY CLACKAMAS COUNTY, OREGON	FIGURE 4

NORTHERLY VIEW OF THE DRAIN PIPE TRENCH, WHERE THE OWNER RE-ROUTED THE NEW LINE USING WATERTIGHT, GASKETED DUAL-WALL PIPING.



VIEW OF AN EXCAVATED SEGMENT OF DRAIN PIPE THAT WAS REMOVED AFTER THE LINE WAS RE-ROUTED.



VIEW OF THE DRAIN PIPE, WHERE THE OWNER RE-ROUTED THE LINE USING WATERTIGHT, GASKETED DUAL-WALL PIPING.



NORTHERLY VIEW OF THE DRAIN PIPE, WHERE THE OWNER RE-ROUTED THE LINE USING WATERTIGHT, GASKETED DUAL-WALL PIPING.

 SUCCEED ENVIRONMENTAL CONSULTING, LLC	REDLAND-2-01	SITE PHOTOGRAPHS	
	JUNE 2025	BRAUER 1820 VACANT PROPERTY CLACKAMAS COUNTY, OREGON	FIGURE 5

VIEW OF GREEN DYE OBSERVED IN THE REDLAND STORE FORMER UIC IMMEDIATELY FOLLOWING INSERTION OF DYE INTO THE REDLAND STORE TOILET.



VIEW OF THE APPROXIMATE DRAIN LINE DURING UTILITY LOCATING ACTIVITIES AT THE SUBJECT PROPERTY. THE DRAIN LINE ORIGINATES AT THE REDLAND STORE.



VIEW OF THE TOILET AT THE REDLAND STORE, WHERE GREEN DYE WAS INSERTED. GREEN DYE WAS IMMEDIATELY OBSERVED IN THE FORMER UIC, AND IN THE ON-SITE CATCH BASIN SHORTLY THEREAFTER.



VIEW OF THE GREEN DYE DISCHARGING INTO THE ON-SITE CATCH BASIN FOLLOWING INSERTION INTO THE REDLAND STORE TOILET.

 SUCCEED ENVIRONMENTAL CONSULTING, LLC	REDLAND-2-01	SITE PHOTOGRAPHS	
	JUNE 2025	BRAUER 1820 VACANT PROPERTY CLACKAMAS COUNTY, OREGON	
		FIGURE 6	

VIEW OF FINAL REMEDIAL EXCAVATION LIMITS AT THE SUBJECT PROPERTY. PHOTOGRAPH TAKEN FACING WEST.



VIEW OF IMPACTED SOIL DISPOSAL DURING REMEDIAL EXCAVATION. IMPACTED SOIL WAS SENT TO THE HILLSBORO LANDFILL. PHOTOGRAPH TAKEN FACING EAST.



FIELD SCREENING PERFORMED DURING REMEDIAL EXCAVATION ACTIVITIES. PHOTOGRAPH TAKEN FACING WEST.



VIEW OF THE FINAL NORTHERN REMEDIAL EXCAVATION LIMITS. PHOTOGRAPH TAKEN FACING NORTH-NORTHWEST.

SUCCEED ENVIRONMENTAL CONSULTING, LLC	SITE PHOTOGRAPHS		FIGURE 7
	REDLAND-2-01	BRAUER 1820 VACANT PROPERTY CLACKAMAS COUNTY, OREGON	
		JUNE 2025	

THE REDLAND STORE'S FORMER UIC MONUMENT. PHOTO TAKEN PRIOR TO REMOVAL OF A LIMITED VOLUME OF LIQUID/SLUDGE VIA SEWAGE PUMP TRUCK.



VIEW OF THE CONTENTS OF THE REDLAND STORE'S FORMER UIC PRIOR TO PUMPING ACTIVITIES.



VIEW OF THE CONTENTS OF THE REDLAND STORE'S FORMER UIC DURING PUMPING ACTIVITIES.



VIEW OF THE CONTENTS OF THE REDLAND STORE'S FORMER UIC FOLLOWING PUMPING ACTIVITIES.



TABLES

TABLE 1
SOIL CHEMICAL ANALYTICAL RESULTS
BRAUER 1820 VACANT PROPERTY CLEANUP
S REDLAND ROAD & S FISHERS MILL ROAD
CLACKAMAS COUNTY, OREGON

Sample ID	Sample Depth (Feet BGS)	Date Collected	Collected By	Method	6020B	NWTPH- Gx HCID	NWTPH- Dx HCID	NWTPH- Dx HCID	8260D	8260D	8260D	8260D	8260D
				Analyte	TCLP LEAD	GASOLINE-RANGE	DIESEL-RANGE	OIL-RANGE	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES, TOTAL	NAPHTHALENE
				Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EXPLORATORY SOIL SAMPLES COLLECTED AT THE SUBJECT PROPERTY													
VL-TP1-S-001 ¹	8.0 - 9.0	9/5/2023	MFA	Result	0.0250 U	3,010	138	55.1 U	0.0788 U	0.394 U	0.331 J	0.591 U	1.21 J
VL-TP1-S-002 ¹	8.0 - 9.0	9/5/2023	MFA	Result	--	3.44 U	12.8 U	25.6 U	0.00688 U	0.0344 U	0.0172 U	0.0516 U	0.0688 U
VL-B8-S-11.5	11.5	9/8/2023	MFA	Result	--	3.52 U	13.9 U	27.8 U	0.00704 U	0.0352 U	0.0176 U	0.0528 U	0.0704 U
VL-B9-S-7	7.0	9/8/2023	MFA	Result	--	2.49 U	11.8 U	23.5 U	0.00497 U	0.0249 U	0.0124 U	0.0373 U	0.0497 U
VL-PIPE-SL1 ¹	NA	9/25/2023	MFA	Result	--	4.05 U	318	25.7 U	0.00810 U	0.0405 U	0.0203 U	0.0608 U	0.0810 U
SOIL STOCKPILE CHARACTERIZATION SAMPLES COLLECTED AT THE SUBJECT PROPERTY PRIOR TO BACKFILL													
VL-SP-CS-002	NA	9/19/2023	MFA	Result	--	2.74 U	11.6 U	48.2 F-03	0.00548 U	0.0274 U	0.0137 U	0.0411 U	0.0548 U
VL-SP-CS-003	NA	9/19/2023	MFA	Result	--	3.18 U	14.0 J	34.6 J	0.00635 U	0.0318 U	0.0159 U	0.0476 U	0.0635 U
CONFIRMATION SOIL SAMPLES COLLECTED AT THE SUBJECT PROPERTY FOLLOWING REMEDIAL EXCAVATION													
VL-SWW-S1-8.0	8.0	9/19/2023	MFA	Result	--	2.47 U	11.7 U	23.4 U	0.00494 U	0.0247 U	0.0124 U	0.0371 U	0.0494 U
VL-SWW-S2-10.0	10.0	9/19/2023	MFA	Result	--	12.9	13.1 U	26.2 U	0.00642 U	0.0321 U	0.0160 U	0.0481 U	0.0642 U
VL-SWW-S3-8.5	8.5	9/19/2023	MFA	Result	--	20.1	212 F-13	23.9 U	0.00514 U	0.0257 U	0.0129 U	0.0386 U	0.0514 U
VL-SWW-S4-10.0	10.0	9/19/2023	MFA	Result	--	14.7	35.7 F-13	23.9 U	0.00820 U	0.0410 U	0.0205 U	0.0615 U	0.0820 U
VL-EB-S-001	13.0 - 14.0	9/19/2023	MFA	Result	--	3.32 U	13.1 U	26.3 U	0.00665 U	0.0332 U	0.0166 U	0.0498 U	0.0665 U
VL-EB-S-002	13.0 - 14.0	9/19/2023	MFA	Result	--	3.43 U	13.4 J	25.0 U	0.00685 U	0.0343 U	0.0171 U	0.0514 U	0.0685 U
VL-EB-S-003	13.0 - 14.0	9/19/2023	MFA	Result	--	4.13 U	13.6 U	27.1 U	0.00826 U	0.0413 U	0.0206 U	0.0619 U	0.0826 U
VL-EB-S-004	13.0 - 14.0	9/19/2023	MFA	Result	--	3.69 U	13.1 U	26.1 U	0.00738 U	0.0369 U	0.0185 U	0.0554 U	0.0738 U
VL-SWN-S5-12.0	12.0	9/19/2023	MFA	Result	--	619	27.7 F-13	27.7 U	0.0138 U	0.0689 U	0.303	0.749	0.444
TP-2 (8.0-10.0)	8.0 - 10.0	4/13/2025	SEC	Result	--	9.97 U	24.9 U	49.8 U	0.0199 U	0.0997 U	0.0499 U	0.150 U	0.199 U
TP-3 (8.0-10.0)	8.0 - 10.0	4/13/2025	SEC	Result	--	11.4 U	25.4 U	50.7 U	0.0227 U	0.114 U	0.0568 U	0.170 U	0.227 U
TP-4 (8.0-10.0)	8.0 - 10.0	4/13/2025	SEC	Result	--	10.2 U	24.4 U	48.9 U	0.0205 U	0.102 U	0.0512 U	0.154 U	0.205 U
TP-5 (8.0-10.0)	8.0 - 10.0	4/13/2025	SEC	Result	--	8.00 U	23.2 U	46.4 U	0.0160 U	0.0800 U	0.0400 U	0.120 U	0.160 U
EXPLORATORY SAMPLES COLLECTED PROXIMATE THE UP-GRADIENT REDLAND STORE													
RS-B1-S-8.5	8.5	9/8/2023	MFA	Result	--	5.35 J	18.0 J	27.6 U	0.00734 U	0.0367 U	0.0183 U	0.0550 U	0.0734 U
RS-B2-S-8.5	8.5	9/8/2023	MFA	Result	--	2.77 U	36.3	113	0.00555 U	0.0277 U	0.0139 U	0.0416 U	0.0555 U
RS-B3-S-12	12.0	9/8/2023	MFA	Result	--	3.56 U	13.1 U	26.1 U	0.00713 U	0.0356 U	0.0178 U	0.0534 U	0.0713 U
RS-B4-S-8	8.0	9/8/2023	MFA	Result	--	2.74 U	12.2 U	24.4 U	0.00548 U	0.0274 U	0.0137 U	0.0411 U	0.0548 U
RS-B5-S-6	6.0	9/8/2023	MFA	Result	--	2.73 U	12.2 J	67.3	0.00545 U	0.0273 U	0.0136 U	0.0409 U	0.0545 U
RS-B6-S-8	8.0	9/8/2023	MFA	Result	--	3.47 U	13.5 U	27.0 U	0.00694 U	0.0347 U	0.0174 U	0.0521 U	0.0694 U
RS-B10-SS-15.0	15.0	10/31/2024	MFA	Result	--	2.28 U	11.5 U	244	0.00457 U	0.0228 U	0.0114 U	0.0343 U	0.0914 U
RS-B11-SS-16.0	16.0	10/31/2024	MFA	Result	--	3.49 U	13.6 U	27.1 U	0.00699 U	0.0349 U	0.0175 U	0.0524 U	0.140 U
RS-B12-SS-12.5	12.5	10/31/2024	MFA	Result	--	6.49 U	16.5 U	32.9 U	0.0130 U	0.0649 U	0.0324 U	0.0973 U	0.260 U
RS-B13-SS-12.5	12.5	10/31/2024	MFA	Result	--	4.72 U	15.9 U	31.8 U	0.00944 U	0.0472 U	0.0236 U	0.0708 U	0.189 U
RS-B14-SS-12.0	12.0	10/31/2024	MFA	Result	--	4.85 U	15.9 U	31.8 U	0.00969 U	0.0485 U	0.0242 U	0.0727 U	0.194 U
RS-B15-SS-8.0	8.0	10/31/2024	MFA	Result	--	143	14.0 U	28.1 U	0.00737 U	0.0368 U	0.0184 U	0.0553 U	0.147 U
RS-B16-SS-7.0	7.0	10/31/2024	MFA	Result	--	190	60.8	25.4 U	0.00597 U	0.0299 U	0.0149 U	0.0448 U	0.119 U
RSTP1-SS-8.0	8.0	10/31/2024	MFA	Result	--	3.00 U	12.2 U	24.4 U	0.00601 U	0.0300 U	0.0150 U	0.0451 U	0.120 U
RSTP1-SS-10.0	10.0	10/31/2024	MFA	Result	--	3.50 U	14.0 U	28.0 U	0.00700 U	0.035 U	0.0175 U	0.0525 U	0.140 U
RS-TP2-SS-10.5	10.5	11/10/2023	MFA	Result	--	4.43 U	13.2 U	26.4 U	0.00885 U	0.00443 U	0.0221 U	0.0664 U	0.177 U
RS-TP2-SS-11.5	11.5	11/10/2023	MFA	Result	--	4.27 U	14.4 U	28.8 U	0.00855 U	0.00427 U	0.0214 U	0.0641 U	0.171 U
RS-TP2-SS-11.7	11.7	11/10/2023	MFA	Result	--	4.33 U	15.0 U	29.9 U	0.00866 U	0.00433 U	0.0216 U	0.0649 U	0.173 U
DEQ Soil Ingestion, Dermal Contact, & Inhalation RBCs				Occupational	--	20,000	14,000	--	37	88,000	150	25,000	23
				Construction Worker	--	9,700	4,600	--	380	28,000	1,700	20,000	580
				Excavation Worker	--	>Max	>Max	--	11,000	770,000	49,000	560,000	16,000
DEQ Volatilization of Soil To Outdoor Air RBCs				Occupational	--	69,000	>Max	--	50	>Csat	160	>Csat	83
DEQ Soil Leaching to Groundwater RBCs				Occupational	--	130	>Max	--	0.1	490	0.9	100	0.34

TABLE 1
SOIL CHEMICAL ANALYTICAL RESULTS
BRAUER 1820 VACANT PROPERTY CLEANUP
S REDLAND ROAD & S FISHERS MILL ROAD
CLACKAMAS COUNTY, OREGON

Sample ID	Sample Depth (Feet BGS)	Date Collected	Collected By	Method	6020B	NWTPH- Gx HCID	NWTPH- Dx HCID	NWTPH- Dx HCID	8260D	8260D	8260D	8260D	8260D
				Analyte	TCLP LEAD	GASOLINE-RANGE	DIESEL-RANGE	OIL-RANGE	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES, TOTAL	NAPHTHALENE
				Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
DEQ CFSLs				-	31	1,100	-	0.023	23	0.22	1.4	0.077	

Notes:

1. Soil represented by this sample was excavated and disposed of at the Hillsboro Landfill.

--: Not Analyzed / Not Applicable

U: Not Detected at a Concentration Greater Than Corresponding RDL (Noted)

Shading Indicates Concentration Exceeding Applicable RBC

F-13: Chromatographic Pattern Does Not Resemble the Fuel Standard Used for Quantitation.

J: Estimated Result. Result Detected Below the Lowest Point of the Calibration Curve, but Above the MDL.

Bolding Indicates Analyte Detection.

DEQ RBCs dated August 2023.

DEQ CFSLs dated February 2019.

>Max: Does not pose a risk in this scenario.

>Csat: RBC Exceeds the limit of three-phase equilibrium partitioning.

TABLE 2
GROUNDWATER CHEMICAL ANALYTICAL RESULTS
BRAUER 1820 VACANT PROPERTY CLEANUP
S REDLAND ROAD & S FISHERS MILL ROAD
CLACKAMAS COUNTY, OREGON

Sample ID	Sample Location	Date Collected	Collected By	Method	C.M.P.	NWTPH-Gx HCID	NWTPH-Dx HCID	NWTPH-Dx HCID	8260D	8260D	8260D	8260D	8260D
				Analyte	E. coli	GASOLINE-RANGE	DIESEL-RANGE	OIL-RANGE	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES, TOTAL	NAPHTHALENE
				Units	MPN/100 mL	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
WATER SAMPLES COLLECTED AT THE SUBJECT PROPERTY													
CB-1	On-Site Catch Basin	9/5/2023	MFA	Result	1,730	50.0 U	99.0 U	198 U	0.100 U	0.500 U	0.250 U	0.750 U	2.00 U
VL-GW-001	On-Site Catch Basin	4/10/2024	MFA	Result	4.10	--	--	--	--	--	--	--	--
TP-1	On-Site TP-1	4/13/2025	SEC	Result	--	100 U	340	392 U	0.200 U	1.00 U	0.500 U	1.5 U	5.00 U
WATER SAMPLES COLLECTED IN THE SUBJECT PROPERTY VICINITY													
RG-GW-001	Redland Station Well	4/10/2024	MFA	Result	1.00 U	--	--	--	--	--	--	--	--
DB-GW-001	Dan Brauer's Well	4/10/2024	MFA	Result	1.00 U	--	--	--	--	--	--	--	--
RD-GW-001	Dental Office Well	4/10/2024	MFA	Result	1.00 U	--	--	--	--	--	--	--	--
RS-TP1-GW-9.5	ROW Test Pit 1	10/31/2023	MFA	Result	1,550	50.0 U	111 U	222 U	0.100 U	0.500 U	0.250 U	0.750 U	2.50 U
RS-TP2-GW-12.5	ROW Test Pit 2	11/10/2023	MFA	Result	--	50.0 U	115 U	230 U	0.100 U	0.500 U	0.250 U	0.750 U	2.50 U
RS-TP2-GW-ecoli		11/10/2023	MFA	Result	121	--	--	--	--	--	--	--	--
DEQ Ingestion, Dermal Contact, & Inhalation From Tapwater RBCs			Occupational	--	450	430	--	2.1	6,300	6.4	830	0.72	
DEQ Volatilization to Outdoor Air RBCs			Occupational	--	>S	>S	--	14,000	>S	43,000	>S	16,000	
DEQ Chronic Vapor Intrusion into Buildings RBCs			Commercial	--	520	1,700	--	12	150,000	31	3,300	50	
DEQ Acute Vapor Intrusion into Buildings RBCs			Commercial	--	--	--	--	650	160,000	420,000	200,000	83,000	
DEQ Groundwater in Excavation RBCs			Const. & Excavation Worker	--	14,000	>S	--	1,800	220,000	4,500	23,000	500	

Notes:

--: Not Analyzed / Not Applicable

U: Not Detected at a Concentration Greater Than Corresponding RDL (Noted)

Shading Indicates Concentration Exceeding Corresponding RBC

Bolding Indicates Analyte Detection.

DEQ RBCs dated August 2023. Vapor Intrusion RBCs dated March 2024.

>S: RBC Exceeds the solubility limit.

APPENDIX A

SEC observed subsurface explorations and obtained soil and vapor/air samples during this assessment. The soil encountered in the explorations was visually classified in general accordance with ASTM D 2488.

SOIL FIELD SCREENING AND SAMPLING

SEC performed field screening tests on selected soil samples collected from the explorations. Field screening results aided in the selection of soil samples for chemical analysis. Screening methods included visual examination, water sheen screening, and headspace vapor screening as described below:

Visual screening consisted of inspecting the soil for discoloration indicative of the presence of petroleum material in the sample.

Water sheen screening involved placing soil in water and observing the water surface for signs of sheen. Sheen classifications are as follows:

No Sheen: No visible sheen on the water surface.

Slight Sheen: Light, colorless, dull sheen; spread is irregular, not rapid; sheen dissipates rapidly. Natural organic matter in the soil may produce slight sheen.

Moderate Sheen: Light to heavy sheen; may have some color/iridescence; spread is irregular to flowing, may be rapid; few remaining areas of no sheen on water surface.

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

The samples selected for analysis were collected in laboratory-supplied containers and immediately placed in an ice chest and kept cool until delivery to the laboratory. Standard chain-of-custody procedures were observed during transport of the samples to the laboratory.

DECONTAMINATION

All sampling equipment used in the collection of samples was decontaminated prior to use. Decontamination was performed on all sample re-usable processing equipment that came into contact with sampling media, including tools, stainless steel implements, trowels, etc. Decontamination was performed prior to sampling each location using the following procedures:

1. Rinsed with tap water and scrubbed with a scrub brush until free of large particles (e.g., sediment or soil)
2. Washed with phosphate-free (Alconox™) detergent solution
3. Rinsed with tap water
4. Rinsed with distilled water

Logged By: A.B.		Date	Started:	4/13/25	Contractor:	Excavator Type:	
Excavator: D.J.			Completed:		D&K Excavation and Trucking LLC	Taceuchi TB250-2	
Locate Number:			Backfilled:			Bucket Size: 18"	
24331282			Groundwater Depth: Seep @ 10.0 Feet BGS		Elevation: Not Measured	Total Depth of Exploration: 12'	
Depth (feet)	Graphic Log		Description		PID Result (ppm)	Sheen Test Result	Additional Comments
5			Gray Gravel (GP), Trace Sand and Silt, Moist, FILL		0	NS	No Odors or Staining Observed
			Becomes Reddish-Brown. Sand Content Increases.				
			Becomes With Cobbles		0	NS	
			Becomes Reddish-Gray and With Varying Clay and Silt		0	NS	
					0	NS	
					0	NS	
10			Excavation Complete at 12 Feet BGS		0	NS	Water Sample TP-1 Collected via 1.0" PVC Well Screen
15							
 SUCCEED ENVIRONMENTAL CONSULTING, LLC 1631 NE Broadway #211, Portland, OR 97232 www.succeed-env.com 971.371.0404			Redland-2		Exploration TP-1		
			June 2025		Brauer 1820 Vacant Lot Clackamas Co., Oregon		Appendix A

Logged By: A.B.		Date	Started:	4/13/25	Contractor:	Excavator Type:		
Excavator: D.J.			Completed:		D&K Excavation and Trucking LLC	Taceuchi TB250-2		
Locate Number:			Backfilled:			Bucket Size: 18"		
24331282		Groundwater Depth:		Elevation:		Total Depth of Exploration:		
		Not Encountered		Not Measured		12'		
Depth (feet)	Graphic Log		Description			PID Result (ppm)	Sheen Test Result	Additional Comments
5			Gray Gravel (GP), Trace Sand and Silt, Moist, FILL			0	NS	Soil Sample TP-2(8.0-10.0) Collected No Odors or Staining Observed
			Becomes Reddish-Brown. Sand Content Increases.					
			Becomes With Cobbles			0	NS	
			Becomes Reddish-Gray and With Varying Clay and Silt			0	NS	
						0	NS	
						0	NS	
10			Excavation Complete at 12 Feet BGS					
15								
			Redland-2		Exploration TP-2			
1631 NE Broadway #211, Portland, OR 97232 www.succeed-env.com 971.371.0404			June 2025		Brauer 1820 Vacant Lot Clackamas Co., Oregon		Appendix A	

Logged By:		A.B.	Date	Started:	4/13/25	Contractor:	Excavator Type:	
Excavator:		D.J.		Completed:		D&K Excavation and Trucking LLC	Taceuchi TB250-2	
Locate Number:				Backfilled:			Bucket Size: 18"	
24331282			Groundwater Depth:		Elevation:	Total Depth of Exploration:		
			Not Encountered		Not Measured	12'		
Depth (feet)	Graphic Log			Description	PID Result (ppm)	Sheen Test Result	Additional Comments	
				Gray Gravel (GP), Trace Sand and Silt, Moist, FILL				
				Becomes Reddish-Brown with Cobble, Moist	0	NS	Soil Sample TP-3(8.0-10.0) Collected No Odors or Staining Observed	
					0	NS		
5				Becomes Reddish-Gray and With Varying Clay and Silt	0	NS		
					0	NS		
					0	NS		
					0	NS		
10				Excavation Complete at 12 Feet BGS				
15								
 SUCCEED ENVIRONMENTAL CONSULTING, LLC				Redland-2	Exploration TP-3			
1631 NE Broadway #211, Portland, OR 97232 www.succeed-env.com 971.371.0404				June 2025	Brauer 1820 Vacant Lot Clackamas Co., Oregon		Appendix A	

[illegible]

Logged By:		A.B.		Date	Started:		4/13/25	Contractor:		Excavator Type:	
Excavator:		D.J.			Completed:			D&K Excavation and Trucking LLC		Taceuchi TB250-2	
Locate Number:					Backfilled:					Bucket Size:	
24331282				Groundwater Depth:		Elevation:		Total Depth of Exploration:			
				Not Encountered		Not Measured		18"		12'	
Depth (feet)		Graphic Log				Description		PID Result (ppm)		Sheen Test Result	
5						Gray Gravel (GP), Trace Sand and Silt, Moist, FILL		0		NS	
						Becomes Reddish-Brown with Cobble, Moist		0		NS	
						Becomes Reddish-Gray and With Varying Clay and Silt		0		NS	
								0		NS	
								0		NS	
10								0		NS	
						Excavation Complete at 12 Feet BGS					
15											
 SUCCEED ENVIRONMENTAL CONSULTING, LLC						Redland-2		Exploration TP-5			
1631 NE Broadway #211, Portland, OR 97232 www.succeed-env.com 971.371.0404						June 2025		Brauer 1820 Vacant Lot Clackamas Co., Oregon		Appendix A	



MAUL FOSTER ALONGI

Geologic Borehole Log

Project Number
M0106.37.001Well Number
B-1Sheet
1 of 1

Project Name **Redlands Store**
Project Location **Redland, Oregon**
Start/End Date **9/8/2023 to 9/8/2023**
Driller/Equipment **Cascade Environmental/Geoprobe 7822 DT**
Geologist/Engineer **K. Crossley**
Sample Method **Macro-Core**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Total Depth of Borehole **15.0 feet**
Outer Hole Diam **2.25 inch**

Depth (feet, bgs)	Water Levels	Percent Recovery	Sample Data		Lithologic Column	Soil Description
			Sample ID	PID (ppm)		
1		50		0		0.0 to 0.3 feet: ASPHALT.
2						0.3 to 1.3 feet: GRAVEL WITH SILT (GW-GM); gray; 15% fines; 85% gravel, fine to coarse, subangular; compact; dry. (FILL)
3						1.3 to 5.0 feet: SANDY SILT WITH GRAVEL (ML); dark brown; 50% fines; 30% sand; 20% gravel, fine to coarse, subangular; compact; dry. (FILL)
4		95	RS-B1-S-8.5	37		2.5 to 5.0 feet: No recovery.
5						5.0 to 7.0 feet: GRAVELLY SILT (ML); gray with brown mottling; 70% fines; 30% gravel, fine to coarse, subangular; compact; dry. (FILL)
6						7.0 to 9.75 feet: CLAY (CL); gray with reddish brown mottling; 95% fines, medium to high plasticity; 5% gravel, fine to coarse, subangular; firm; hydrocarbon-like odor; moist.
7						9.75 to 10.0 feet: No recovery.
8		95		10		10.0 to 14.75 feet: CLAY (CL); reddish brown with gray and blue mottling; 100% fines, medium to high plasticity; firm; slight hydrocarbon-like odor; moist.
9						14.75 to 15.0 feet: No recovery. Refusal at 15 feet.
10						
11						
12						
13						
14						
15						

Total Depth = 15.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Completion Details

0.0 to 15.0 feet: 2.25-inch borehole

Borehole Abandonment Details

0.0 to 0.3 feet: Asphalt cold patch.

0.3 to 15.0 feet: Bentonite chips hydrated with potable water.



MAUL FOSTER ALONGI

Geologic Borehole Log

Project Number
M0106.37.001Well Number
B-2Sheet
1 of 1

Project Name **Redlands Store**
 Project Location **Redland, Oregon**
 Start/End Date **9/8/2023 to 9/8/2023**
 Driller/Equipment **Cascade Environmental/Geoprobe 7822 DT**
 Geologist/Engineer **K. Crossley**
 Sample Method **Macro-Core**

TOC Elevation (feet)
 Surface Elevation (feet)
 Northing
 Easting
 Total Depth of Borehole **15.0 feet**
 Outer Hole Diam **2.25 inch**

Depth (feet, bgs)	Water Levels	Percent Recovery	Sample Data		Lithologic Column	Soil Description
			Sample ID	PID (ppm)		
1						0.0 to 0.3 feet: ASPHALT.
2		50		0		0.3 to 1.25 feet: GRAVEL WITH SILT AND SAND (GW-GM); brownish gray; 15% fines; 15% sand, fine; 70% gravel, fine to coarse, subangular; compact; dry. (FILL)
3						1.25 to 2.5 feet: SILTY SANDY GRAVEL (GM); brownish gray; 25% fines; 25% sand, fine; 50% gravel, fine to coarse, subangular; compact; dry. (FILL)
4						2.5 to 5.0 feet: No recovery.
5				0		1.25 to 2.5 feet: SILTY GRAVEL (GM); reddish brown; 30% fines; 70% gravel, fine to coarse, subangular; compact; dry. (FILL)
6						7.0 to 9.75 feet: CLAY (CL); reddish brown with gray mottling; 90% fines, medium to high plasticity; 10% gravel, fine to coarse, subangular; firm; slight hydrocarbon-like odor; moist.
7		95		0		9.75 to 10.0 feet: No recovery.
8						10.0 to 13.5 feet: CLAY (CL); reddish brown with gray mottling; 90% fines, medium to high plasticity; 10% gravel, fine to coarse, subangular; firm; slight hydrocarbon-like odor; moist.
9			RS-B2-S-8.5 Diesel: 36.3 mg/kg Oil: 113 mg/kg	1		@ 13.3 feet: Becomes red.
10						13.5 to 15.0 feet: No recovery. Refusal at 15 feet.
11		60		0		
12						
13						
14						
15						

Total Depth = 15.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Completion Details

0.0 to 15.0 feet: 2.25-inch borehole

Borehole Abandonment Details

0.0 to 0.3 feet: Asphalt cold patch.

0.3 to 15.0 feet: Bentonite chips hydrated with potable water.



MAUL FOSTER ALONGI

Geologic Borehole Log

Project Number
M0106.37.001Well Number
B-3Sheet
1 of 1

Project Name **Redlands Store**
 Project Location **Redland, Oregon**
 Start/End Date **9/8/2023 to 9/8/2023**
 Driller/Equipment **Cascade Environmental/Geoprobe 7822 DT**
 Geologist/Engineer **K. Crossley**
 Sample Method **Macro-Core**

TOC Elevation (feet)
 Surface Elevation (feet)
 Northing
 Easting
 Total Depth of Borehole **20.0 feet**
 Outer Hole Diam **2.25 inch**

Depth (feet, bgs)	Water Levels	Percent Recovery	Sample Data		Lithologic Column	Soil Description
			Sample ID	PID (ppm)		
1						0.0 to 0.3 feet: ASPHALT.
2						0.3 to 2.5 feet: SILTY GRAVEL (GM); brownish gray; 25% fines; 25% sand, fine; 50% gravel, fine to coarse, subangular; compact; dry. (GRAVEL BACKFILL)
3		50		0		2.5 to 5.0 feet: No recovery.
4						
5						
6				0		5.0 to 6.0 feet: GRAVELLY CLAY WITH SAND (CL); reddish brown with gray mottling; 65% fines, medium to high plasticity; 10% sand, fine; 25% gravel, fine to coarse, subangular; firm; moist. (FILL)
7						6.0 to 10.0 feet: No recovery.
8		20				
9						
10						
11				0		10.0 to 15.0 feet: CLAY (CL); reddish brown with gray mottling; 95% fines, medium to high plasticity; 5% gravel, fine to coarse, subangular; firm; moist.
12						
13		100	RS-B3-S-12			
14						
15						
16						15.0 to 15.25 feet: GRAVEL WITH SILT (GP-GM); brownish gray; 5% fines; 95% gravel, coarse, subangular; compact; dry.
17						15.25 to 16.0 feet: No recovery. Refusal at 20 feet.
18		5				@ 16.0 feet: Boring advanced to 20 feet for temporary well installation using a core barrel with an expendable tip; no core collected.
19						
20						

Total Depth = 20.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Completion Details

0.0 to 20.0 feet: 2.25-inch borehole

Borehole Abandonment Details

0.0 to 0.3 feet: Asphalt cold patch.

0.3 to 20.0 feet: Bentonite chips hydrated with potable water.



MAUL FOSTER ALONGI

Geologic Borehole Log

Project Number
M0106.37.001Well Number
B-4Sheet
1 of 1

Project Name **Redlands Store**
Project Location **Redland, Oregon**
Start/End Date **9/8/2023 to 9/8/2023**
Driller/Equipment **Cascade Environmental/Geoprobe 7822 DT**
Geologist/Engineer **K. Crossley**
Sample Method **Macro-Core**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Total Depth of Borehole **15.0 feet**
Outer Hole Diam **2.25 inch**

Depth (feet, bgs)	Water Levels	Percent Recovery	Sample Data		Lithologic Column	Soil Description
			Sample ID	PID (ppm)		
1		60		0		0.0 to 0.3 feet: ASPHALT.
2						0.3 to 3.0 feet: GRAVEL WITH SILT AND SAND (GW-GM); brownish gray; 10% fines; 10% sand, fine; 80% gravel, fine to coarse, subangular; compact; dry. (FILL)
3						
4		95	RS-B4-S-8	0		3.0 to 5.0 feet: No recovery.
5						
6						5.0 to 9.75 feet: CLAY (CL); reddish brown with gray mottling; 95% fines, medium to high plasticity; 5% gravel, fine to coarse, subangular; firm; moist.
7		95		0		9.75 to 10.0 feet: No recovery.
8						10.0 to 14.75 feet: CLAY (CL); reddish brown with gray mottling; 100% fines, medium to high plasticity; firm; moist.
9						@ 11.0 feet: Orange mottling.
10		95		0		
11						
12						
13		95		0		
14						
15						14.75 to 15.0 feet: No recovery. Refusal at 15 feet.

Total Depth = 15.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Completion Details

0.0 to 15.0 feet: 2.25-inch borehole

Borehole Abandonment Details

0.0 to 0.3 feet: Asphalt cold patch.

0.3 to 15.0 feet: Bentonite chips hydrated with potable water.



MAUL FOSTER ALONGI

Geologic Borehole Log

Project Number
M0106.37.001Well Number
B-5Sheet
1 of 1

Project Name **Redlands Store**
 Project Location **Redland, Oregon**
 Start/End Date **9/8/2023 to 9/8/2023**
 Driller/Equipment **Cascade Environmental/Geoprobe 7822 DT**
 Geologist/Engineer **K. Crossley**
 Sample Method **Macro-Core**

TOC Elevation (feet)
 Surface Elevation (feet)
 Northing
 Easting
 Total Depth of Borehole **15.0 feet**
 Outer Hole Diam **2.25 inch**

Depth (feet, bgs)	Water Levels	Percent Recovery	Sample Data		Lithologic Column	Soil Description
			Sample ID	PID (ppm)		
1				0		0.0 to 0.3 feet: ASPHALT.
2						0.3 to 0.8 feet: GRAVEL WITH SILT AND SAND (GW-GM); brownish gray; 10% fines; 10% sand, fine; 80% gravel, fine to coarse, subangular; compact; dry. (FILL)
3		15				0.8 to 5.0: No recovery.
4						
5						
6			RS-B5-S-6	283		5.0 to 7.0 feet: SILT WITH SAND AND GRAVEL (ML); reddish grayish brown; 80% fines; 10% sand, fine; 10% gravel, fine to coarse; subangular; firm; slight hydrocarbon-like odor; dry. (FILL)
7			Oil: 67.3 mg/kg			At 6.0 feet: Darker brownish gray coloration.
8		90		31		7.0 to 9.5 feet: CLAY (CL); reddish brown with gray mottling; 90% fines, medium to high plasticity; 10% gravel, fine to coarse; subangular; firm; slight hydrocarbon-like odor; dry.
9						
10						9.5 to 10.0 feet: No recovery.
11						10.0 to 15.0 feet: CLAY (CL); reddish brown with gray mottling; 100% fines, medium to high plasticity; firm; slight hydrocarbon-like odor; dry. Refusal at 15 feet.
12						
13		100		9		
14						
15						

Total Depth = 15.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Completion Details

0.0 to 15.0 feet: 2.25-inch borehole

Borehole Abandonment Details

0.0 to 0.3 feet: Asphalt cold patch.

0.3 to 15.0 feet: Bentonite chips hydrated with potable water.



MAUL FOSTER ALONGI

Geologic Borehole Log

Project Number
M0106.37.001Well Number
B-6Sheet
1 of 1

Project Name **Redlands Store**
 Project Location **Redland, Oregon**
 Start/End Date **9/8/2023 to 9/8/2023**
 Driller/Equipment **Cascade Environmental/Geoprobe 7822 DT**
 Geologist/Engineer **K. Crossley**
 Sample Method **Macro-Core**

TOC Elevation (feet)
 Surface Elevation (feet)
 Northing
 Easting
 Total Depth of Borehole **15.0 feet**
 Outer Hole Diam **2.25 inch**

Depth (feet, bgs)	Water Levels	Percent Recovery	Sample Data		Lithologic Column	Soil Description
			Sample ID	PID (ppm)		
1						0.0 to 0.3 feet: ASPHALT.
2						0.3 to 1.5 feet: GRAVEL WITH SILT AND SAND (GW-GM); blackish grayish brown; 10% fines; 10% sand, fine; 80% gravel, fine to coarse, subangular; compact; dry. (GRAVEL BACKFILL)
3		30		0		1.5 to 5.0 feet: No recovery.
4						
5						
6						5.0 to 9.0 feet: CLAY (CL); reddish brown with gray mottling; 90% fines, medium to high plasticity; 10% gravel, fine to coarse; subangular; firm; dry.
7						
8		80		0		@ 7.5 feet: Red coloration.
9			RS-B6-S-8			9.0 to 10.0 feet: No recovery.
10						
11						10.0 to 13.75 feet: CLAY (CL); reddish brown with gray mottling; 90% fines, medium to high plasticity; 10% gravel, fine to coarse; subangular; firm; dry.
12						
13		75		0		
14						13.75 to 15.0 feet: No recovery. Refusal at 15 feet.
15						

Total Depth = 15.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Completion Details

0.0 to 15.0 feet: 2.25-inch borehole

Borehole Abandonment Details

0.0 to 0.3 feet: Asphalt cold patch.

0.3 to 15.0 feet: Bentonite chips hydrated with potable water.



MAUL FOSTER ALONG I

Geologic Borehole Log

Project Number
M0106.37.001Well Number
B-7Sheet
1 of 1

Project Name **Redlands Store**
Project Location **Redland, Oregon**
Start/End Date **9/8/2023 to 9/8/2023**
Driller/Equipment **Cascade Environmental/Geoprobe 7822 DT**
Geologist/Engineer **K. Crossley**
Sample Method **Macro-Core**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Total Depth of Borehole **10.0 feet**
Outer Hole Diam **2.25 inch**

Depth (feet, bgs)	Water Levels	Percent Recovery	Sample Data		Lithologic Column	Soil Description
			Sample ID	PID (ppm)		
1		70				0.0 to 0.3 feet: ASPHALT.
2						0.3 to 3.5 feet: SANDY GRAVELLY SILT (ML); 60% fines; 20% sand, fine; 20% gravel, fine to coarse; subangular; firm; dry. (FILL)
3						@ 2.5 feet: Layer of very coarse gravel.
4				0		3.5 to 5.0 feet: No recovery.
5		70				5.0 to 8.5 feet: CLAY (CL); reddish brown with gray mottling; 90% fines, medium to high plasticity; 10% gravel, fine to coarse, subangular; firm; slight hydrocarbon-like odor; moist.
6						
7						
8						
9				0		8.5 to 10.0 feet: No recovery. Refusal at 10 feet.
10						

Total Depth = 10.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Completion Details

0.0 to 10.0 feet: 2.25-inch borehole

Borehole Abandonment Details

0.0 to 0.3 feet: Asphalt cold patch.

0.3 to 10.0 feet: Bentonite chips hydrated with potable water.

No soil sample collected for laboratory analysis.



MAUL FOSTER ALONGI

Geologic Borehole Log

Project Number
M0106.37.001Well Number
B-8Sheet
1 of 1

Project Name **Redlands Store**
Project Location **Redland, Oregon**
Start/End Date **9/8/2023 to 9/8/2023**
Driller/Equipment **Cascade Environmental/Geoprobe 7822 DT**
Geologist/Engineer **K. Crossley**
Sample Method **Macro-Core**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Total Depth of Borehole **15.0 feet**
Outer Hole Diam **2.25 inch**

Depth (feet, bgs)	Water Levels	Percent Recovery	Sample Data		Lithologic Column	Soil Description
			Sample ID	PID (ppm)		
1						0.0 to 4.5 feet: SILT WITH SAND AND GRAVEL (ML); 80% fines; 10% sand, fine; 10% gravel, fine to coarse, subangular; firm; dry. (FILL)
2						
3		90				At 2.0 feet; Layer of organic material.
4						
5				0		4.5 to 5.0 feet: No recovery.
6						5.0 to 9.5 feet: CLAY (CL); reddish brown with gray mottling; 90% fines, medium to high plasticity; 10% gravel, fine to coarse, subangular; firm; dry.
7						
8		90				@ 8.0 feet: Becomes grayish blue.
9						
10				0		9.5 to 10.0 feet: No recovery.
11						10.0 to 15.0 feet: CLAY (CL); reddish brown with gray mottling; 100% fines, medium to high plasticity; firm; moist. Refusal at 15 feet.
12				0		@ 11.0 to 12.0 feet: Becomes wet.
13		100	VL-B8-S-11.5			
14						
15						

Total Depth = 15.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Completion Details

0.0 to 15.0 feet: 2.25-inch borehole

Borehole Abandonment Details

0.0 to 15.0 feet: Bentonite chips hydrated with potable water.



MAUL FOSTER ALONGI

Geologic Borehole Log

Project Number
M0106.37.001Well Number
B-9Sheet
1 of 1

Project Name **Redlands Store**
Project Location **Redland, Oregon**
Start/End Date **9/8/2023 to 9/8/2023**
Driller/Equipment **Cascade Environmental/Geoprobe 7822 DT**
Geologist/Engineer **K. Crossley**
Sample Method **Macro-Core**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Total Depth of Borehole **15.0 feet**
Outer Hole Diam **2.25 inch**

Depth (feet, bgs)	Water Levels	Percent Recovery	Sample Data		Lithologic Column	Soil Description
			Sample ID	PID (ppm)		
1						0.0 to 7.0 feet: SILT (ML); 80% fines; 10% sand, fine; 10% gravel, fine to coarse, subangular; firm; dry. (FILL)
2						
3		100		0		
4						
5						
6						7.0 to 10.0 feet: CLAY (CL); reddish brown with gray mottling; 100% fines, medium to high plasticity; firm; moist.
7			VL-B9-S-7			
8		100		0		
9						
10						
11						10.0 to 15.0 feet: CLAY WITH GRAVEL (CL); reddish brown with orange and gray mottling; 75% fines, medium to high plasticity; 25% gravel, fine to coarse, subangular; firm; moist. Refusal at 15 feet. @ 12.5 feet: Layer of very coarse orangish red gravel.
12						
13		100		0		
14						
15						

Total Depth = 15.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Completion Details

0.0 to 15.0 feet: 2.25-inch borehole

Borehole Abandonment Details

0.0 to 15.0 feet: Bentonite chips hydrated with potable water.



MAUL FOSTER ALONGI

Geologic Borehole Log

Project Number
M0106.37.001

Well Number
B-11

Sheet
1 of 1

Project Name **Redlands Store**
Project Location **Redland, Oregon**
Start/End Date **10/31/2023 to 10/31/2023**
Driller/Equipment **Cascade Environmental/Geoprobe 7822 DT**
Geologist/Engineer **K. Crossley**
Sample Method **Macro-Core**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Total Depth of Borehole **20.0 feet**
Outer Hole Diam **2.25 inch**

Depth (feet, bgs)	Water Levels	Percent Recovery	Sample Data		Lithologic Column	Soil Description
			Sample ID	PID (ppm)		
1		100		0.3		0.0 to 0.25 feet: GRAVEL (GW); gray; 100% gravel, fine to coarse, subangular to subrounded; compact; dry.
2				3.4		0.25 to 0.5 feet: SILTY GRAVEL (GM); dark gray; 45% fines; 5% sand, fine to medium, subangular to subrounded; 50% gravel, fine to medium, subangular to subrounded; compact; dry.
3				0.3		0.5 to 6.0 feet: SILT WITH GRAVEL (ML); reddish brown; 75% fines; 5% sand, fine to medium, subangular to subrounded; 20% gravel, fine to medium, subangular to subrounded; compact; moist.
4		100		0.3		
5						
6				0.2		6.0 to 10.0 feet: SILT (ML); reddish brown with tan and gray mottling; 100% fines, medium plasticity; compact; trace coarse gravel; moist.
7						
8		100		0.3		
9						
10						10.0 to 20.0 feet: CLAY (CL); brownish tan with gray and red mottling; 90% fines, medium to high plasticity; 10% gravel, fine to coarse, subangular to subrounded; stiff; moist. Refusal at 20 feet.
11						@ 10.1 to 11.0 feet: Becomes wet.
12						
13		100		0.2		
14						
15				0.1		
16						@ 16.0 to 17.0 feet: Becomes wet.
17			RS-B11-SS-16.0			
18		100		0.4		
19						
20						

Total Depth = 20.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Completion Details

0.0 to 20.0 feet: 2.25-inch borehole.

Borehole Abandonment Details

0.0 to 20.0 feet: Bentonite chips hydrated with potable water.

MFA BOREHOLE W/ WELL W:\GINT\GINT\PROJECTS\0106.37\10.31\10.31 BORINGS.GPJ 2/19/24



MAUL FOSTER ALONGI

Geologic Borehole Log

Project Number
M0106.37.001Well Number
B-12Sheet
1 of 1

Project Name **Redlands Store**
 Project Location **Redland, Oregon**
 Start/End Date **10/31/2023 to 10/31/2023**
 Driller/Equipment **Cascade Environmental/Geoprobe 7822 DT**
 Geologist/Engineer **K. Crossley**
 Sample Method **Macro-Core**

TOC Elevation (feet)
 Surface Elevation (feet)
 Northing
 Easting
 Total Depth of Borehole **20.0 feet**
 Outer Hole Diam **2.25 inch**

Depth (feet, bgs)	Water Levels	Percent Recovery	Sample Data		Lithologic Column	Soil Description
			Sample ID	PID (ppm)		
1		100		0.5		@ 0.0 to 0.3 feet: ASPHALT.
2				0.5		0.3 to 1.0 feet: GRAVEL WITH SILT (GW-GM); dark gray; 10% fines; 90% gravel, fine to coarse, subangular to subrounded; compact; dry.
3						1.0 to 5.0 feet: SILT (ML); dark grayish brown; 90% fines, medium plasticity; 10% gravel, fine to coarse, subangular to subrounded; compact; dry.
4		100		0.3		
5						
6						5.0 to 10.0 feet: CLAY (CL); reddish brown; 100% fines, medium to high plasticity; firm; trace coarse gravel; moist.
7						
8		100		0.3		
9						
10						
11						10.0 to 20.0 feet: CLAY (CL); tan with red and brown mottling; 100% fines, medium to high plasticity; trace coarse gravel; firm; moist. Refusal at 20 feet.
12				0.3		@ 12.0 to 13.0 feet: Becomes wet.
13		100	RS-B12-SS-12.5			
14						
15						@ 14.9 feet: Becomes gray.
16						
17						
18	▽	100		0.1		
19						
20						

Total Depth = 20.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Completion Details

0.0 to 20.0 feet: 2.25-inch borehole.

Borehole Abandonment Details

0.0 to 0.3 feet: Asphalt cold patch.

0.3 to 20.0 feet: Bentonite chips hydrated with potable water.

▽ Water level measured at 18.0 feet bgs following drilling.



MAUL FOSTER ALONGI

Geologic Borehole Log

Project Number
M0106.37.001

Well Number
B-13

Sheet
1 of 1

Project Name **Redlands Store**
Project Location **Redland, Oregon**
Start/End Date **10/31/2023 to 10/31/2023**
Driller/Equipment **Cascade Environmental/Geoprobe 7822 DT**
Geologist/Engineer **K. Crossley**
Sample Method **Macro-Core**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Total Depth of Borehole **20.0 feet**
Outer Hole Diam **2.25 inch**

Depth (feet, bgs)	Water Levels	Percent Recovery	Sample Data		Lithologic Column	Soil Description
			Sample ID	PID (ppm)		
1		95		1.8		0.0 to 0.3 feet: ASPHALT.
2						0.3 to 0.5 feet: GRAVEL (GW); dark gray; 5% fines; 95% gravel, fine to coarse, subangular to subrounded; compact; dry.
3						0.5 to 4.75 feet: CLAY (CL); reddish brown; 90% fines, medium to high plasticity; 10% gravel, fine to coarse, subangular to subrounded; firm; moist.
4				1.8		
5		100				4.75 to 5.0 feet: NO RECOVERY.
6						5.0 to 10.0 feet: CLAY (CL); reddish brown; 90% fines, medium to high plasticity; 10% gravel, fine to coarse, subangular to subrounded; firm; moist.
7						
8				5.9		@ 9.0 feet: Becomes yellow.
9		100				10.0 to 12.5 feet: CLAY (CL); tannish gray with brown; 90% fines, medium to high plasticity; 10% gravel, fine to medium, subangular to subrounded; firm; moist.
11						
12				0.7		12.5 to 15.0 feet: CLAY (CL); tannish brown with red and gray mottling; 90% fines, medium to high plasticity; 10% gravel, fine to medium, subangular to subrounded; stiff; moist to wet.
13			RS-B13-SS-12.5			@ 12.75 feet: Becomes soft; wet.
14		100		0.7		
15						15.0 to 20.0 feet: CLAY (CL); gray with brown, red, and tan mottling; 100% fines, medium to high plasticity; stiff; moist. Refusal at 20 feet.
16						
17						
18				0.1		
19						
20						

Total Depth = 20.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Completion Details

0.0 to 20.0 feet: 2.25-inch borehole.

Borehole Abandonment Details

0.0 to 0.3 feet: Asphalt cold patch.

0.3 to 20.0 feet: Bentonite chips hydrated with potable water.

MFA BOREHOLE W/ WELL W:\GINT\GINT\PROJECTS\0106.37\10.31\10.31 BORINGS.GPJ 2/19/24



MAUL FOSTER ALONGI

Geologic Borehole Log

Project Number
M0106.37.001Well Number
B-14Sheet
1 of 1

Project Name **Redlands Store**
 Project Location **Redland, Oregon**
 Start/End Date **10/31/2023 to 10/31/2023**
 Driller/Equipment **Cascade Environmental/Geoprobe 7822 DT**
 Geologist/Engineer **K. Crossley**
 Sample Method **Macro-Core**

TOC Elevation (feet)
 Surface Elevation (feet)
 Northing
 Easting
 Total Depth of Borehole **20.0 feet**
 Outer Hole Diam **2.25 inch**

Depth (feet, bgs)	Water Levels	Percent Recovery	Sample Data		Lithologic Column	Soil Description
			Sample ID	PID (ppm)		
1		100		0.3		0.0 to 0.3 feet: ASPHALT.
2				0.3		0.3 to 0.5 feet: GRAVEL WITH SILT (GW-GM); dark gray; 10% fines; 90% gravel, fine to coarse, subangular to subrounded; compact; dry.
3						0.5 to 2.0 feet: SILT (ML); reddish brown; 90% fines, medium plasticity; 10% gravel, fine to medium, subangular to subrounded; compact; moist.
4		100		0.3		2.0 to 5.0 feet: SILT (ML); reddish brown; 90% fines, medium plasticity; 10% gravel, fine to medium, subangular to subrounded; compact; moist. @ 3.0 to 4.0 feet: Becomes dark brown.
5						
6						5.0 to 7.0 feet: SILT (ML); reddish brown; 90% fines, medium plasticity; 10% gravel, fine to medium, subangular to subrounded; compact; moist.
7				0.1		
8		100				7.0 to 10.0 feet: CLAY (CL); brownish tan with red mottling; 90% fines, medium to high plasticity; 10% gravel, fine to medium, subangular to subrounded; firm; moist.
9				0.1		
10						
11						10.0 to 13.0 feet: CLAY (CL); brownish tan with red mottling; 90% fines, medium to high plasticity; 10% gravel, fine to medium, subangular to subrounded; firm; moist. @ 11.0 to 12.0 feet: Becomes wet.
12		100	RS-B14-SS-12.0	0.2		
13						
14				0.2		13.0 to 20.0 feet: CLAY (CL); gray with brown and red mottling; 100% fines, medium to high plasticity; stiff; moist. Refusal at 20 feet.
15						
16						
17						
18		100				
19						@ 19.0 feet: Becomes green.
20				0.2		

Total Depth = 20.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Completion Details

0.0 to 20.0 feet: 2.25-inch borehole.

Borehole Abandonment Details

0.0 to 0.3 feet: Asphalt cold patch.

0.3 to 20.0 feet: Bentonite chips hydrated with potable water.



MAUL FOSTER ALONGI

Geologic Borehole Log

Project Number
M0106.37.001Well Number
B-15Sheet
1 of 1

Project Name **Redlands Store**
 Project Location **Redland, Oregon**
 Start/End Date **10/31/2023 to 10/31/2023**
 Driller/Equipment **Cascade Environmental/Geoprobe 7822 DT**
 Geologist/Engineer **K. Crossley**
 Sample Method **Macro-Core**

TOC Elevation (feet)
 Surface Elevation (feet)
 Northing
 Easting
 Total Depth of Borehole **20.0 feet**
 Outer Hole Diam **2.25 inch**

Depth (feet, bgs)	Water Levels	Percent Recovery	Sample Data		Lithologic Column	Soil Description
			Sample ID	PID (ppm)		
1		100		0.1		0.0 to 0.3 feet: ASPHALT.
2				0.1		0.3 to 0.5 feet: GRAVEL WITH SILT (GW-GM); dark gray; 10% fines; 90% gravel, fine to coarse, subangular to subrounded; compact; dry.
3						0.5 to 2.0 feet: SILT (ML); dark brown; 90% fines, medium plasticity; 10% gravel, fine to medium, subangular to subrounded; compact; moist.
4		100		0.1		2.0 to 5.0 feet: SILT (ML); dark brown with gray mottling; 90% fines, medium plasticity; 10% gravel, fine to medium, subangular to subrounded; compact; moist.
5						
6				0.3		5.0 to 7.0 feet: SILT (ML); brownish red; 90% fines, medium plasticity; 10% gravel, fine to medium, subangular to subrounded; compact; moist.
7						
8		100	RS-B15-SS-8.0	323.6		7.0 to 10.0 feet: CLAY (CL); gray with brown mottling; 100% fines, medium to high plasticity; slight hydrocarbon-like odor; firm; moist.
9						
10						10.0 to 15.0 feet: CLAY (CL); reddish brown; 100% fines, medium to high plasticity; stiff; moist.
11						
12						@ 12.0 feet: Becomes gray.
13		100		0.5		
14						
15						15.0 to 20.0 feet: CLAY (CL); reddish brown; 100% fines, medium to high plasticity; trace very coarse gravel; stiff; moist. Refusal at 20 feet.
16						
17						
18		100		0.1		@ 18.0 feet: Becomes orangish tan with blue mottling.
19						
20						

Total Depth = 20.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Completion Details

0.0 to 20.0 feet: 2.25-inch borehole.

Borehole Abandonment Details

0.0 to 0.3 feet: Asphalt cold patch.

0.3 to 20.0 feet: Bentonite chips hydrated with potable water.



MAUL FOSTER ALONGI

Geologic Borehole Log

Project Number
M0106.37.001Well Number
B-16Sheet
1 of 1

Project Name **Redlands Store**
 Project Location **Redland, Oregon**
 Start/End Date **10/31/2023 to 10/31/2023**
 Driller/Equipment **Cascade Environmental/Geoprobe 7822 DT**
 Geologist/Engineer **K. Crossley**
 Sample Method **Macro-Core**

TOC Elevation (feet)
 Surface Elevation (feet)
 Northing
 Easting
 Total Depth of Borehole **20.0 feet**
 Outer Hole Diam **2.25 inch**

Depth (feet, bgs)	Water Levels	Percent Recovery	Sample Data		Lithologic Column	Soil Description
			Sample ID	PID (ppm)		
1		100		0.4		0.0 to 0.3 feet: ASPHALT.
2				0.4		0.3 to 0.5 feet: GRAVEL WITH SILT (GW-GM); dark gray; 10% fines; 90% gravel, fine to coarse, subangular to subrounded; compact; trace very coarse gravel; dry.
3						0.5 to 2.0 feet: SILT (ML); dark brown; 90% fines; 10% gravel, fine to coarse, subangular to subrounded; compact; trace very coarse gravel; trace wood debris; moist.
4		100		0.4		2.0 to 5.0 feet: SILT (ML); dark brown; 90% fines; 10% gravel, fine to coarse, subangular to subrounded; compact; trace very coarse gravel; moist to wet. @ 3.0 to 4.0 feet: Becomes wet.
5						
6						5.0 to 10.0 feet: CLAY (CL); reddish brown with gray mottling; 90% fines, medium to high plasticity; 10% gravel, fine to medium, subangular to subrounded; firm; trace coarse gravel; slight hydrocarbon-like odor; moist to wet.
7						
8		100	RS-B16-SS-7.0	9.1		
9						
10						10.0 to 15.0 feet: CLAY (CL); grayish tan with brown mottling; 100% fines, high plasticity; stiff; brown streaking throughout; moist to wet. @ 10.0 to 11.0 feet: Becomes wet.
11						
12		100		0.5		
13						
14						
15						15.0 to 20.0 feet: CLAY (CL); grayish tan with brown mottling; 100% fines, high plasticity; stiff; brown streaking throughout; trace very coarse gravel; moist. Refusal at 20 feet.
16						
17						
18		100		0.7		@ 17.5 feet: Yellow mottling.
19						
20						

Total Depth = 20.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Completion Details

0.0 to 20.0 feet: 2.25-inch borehole.

Borehole Abandonment Details

0.0 to 0.3 feet: Asphalt cold patch.

0.3 to 20.0 feet: Bentonite chips hydrated with potable water.

APPENDIX B

CHEMICAL ANALYTICAL PROGRAM

Chain-of-custody procedures were followed during handling and transport of the samples to the analytical laboratory. The laboratory holds the samples in cold storage pending extraction and/or analysis. The analytical results, analytical methods reference, and laboratory QC records are presented in this appendix. The analytical results also are summarized in the tables of this report.

REVIEW OF ANALYTICAL DATA

The analytical laboratories used for this project maintain an internal quality assurance programs consisting of a combination of the following:

Blanks: Blanks are laboratory-prepared water samples that are free of contaminants. 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 QC and field samples prior to analysis. The percent recovery of the surrogate is calculated to demonstrate acceptable method performance.

Duplicates: Duplicates are obtained by splitting a sample into two parts. The two separate parts are carried through the analyses. The analytical results are then compared by calculating the RPD between the samples.

MS/MSD Recoveries: An MS sample is a sample that has been split into a second portion. The 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 RPD and percent recovery to demonstrate acceptable method performance.

BS/BSD Recoveries: BS and BSD samples are obtained and analyzed in the same procedure as the MS/MSD samples; however, the laboratory blank sample is used to obtain the BS/BSD samples. The percent recovery and RPD of the known concentration of analyte of interest added to the BS/BSD sample is calculated after chemical analyses to demonstrate acceptable method performance.

SUMMARY OF ANALYTICAL DATA REVIEW

SEC reviewed the attached analytical data reports for data quality exceptions and deviations from acceptable method performance criteria. Based on our review of the analytical reports, the analytical data appear acceptable for their intended use.



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Wednesday, November 22, 2023

David Weatherby

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

RE: A3I0736 - Redland - 0106.37.001

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 A3I0736, which was received by the laboratory on 9/5/2023 at 12:19:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@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 8.7 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

Philip Nerenberg

Philip Nerenberg, Lab 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.



ANALYTICAL REPORT

Apex Laboratories, LLC

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

Maul Foster & Alongi, INC.

3140 NE Broadway Street
Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I0736 - 11 22 23 1556

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CB-1	A3I0736-01	Water	09/05/23 11:00	09/05/23 12:19
TRIP	A3I0736-02	Water	09/05/23 11:00	09/05/23 12:19

Apex Laboratories

Philip Nerenberg, Lab 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.



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I0736 - 11 22 23 1556

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
CB-1 (A3I0736-01)		Matrix: Water			Batch: 23I0247			
Diesel	ND	0.0990	0.198	mg/L	1	09/09/23 00:00	NWTPH-Dx	
Oil	ND	0.198	0.396	mg/L	1	09/09/23 00:00	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 89 %		Limits: 50-150 %	1	09/09/23 00:00	NWTPH-Dx	

Apex Laboratories

Philip Nerenberg, Lab 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.



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I0736 - 11 22 23 1556

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CB-1 (A3I0736-01)		Matrix: Water			Batch: 23I0123			
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	09/06/23 18:39	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 90 %	Limits: 50-150 %	1	09/06/23 18:39	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		110 %	50-150 %	1	09/06/23 18:39	NWTPH-Gx (MS)		
TRIP (A3I0736-02)		Matrix: Water			Batch: 23I0123			
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	09/06/23 13:00	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 87 %	Limits: 50-150 %	1	09/06/23 13:00	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		110 %	50-150 %	1	09/06/23 13:00	NWTPH-Gx (MS)		

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I0736 - 11 22 23 1556**

ANALYTICAL SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CB-1 (A3I0736-01)		Matrix: Water			Batch: 23I0123			
Benzene	ND	0.100	0.200	ug/L	1	09/06/23 18:39	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	09/06/23 18:39	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	09/06/23 18:39	EPA 8260D	
Xylenes, total	ND	0.750	1.50	ug/L	1	09/06/23 18:39	EPA 8260D	
Naphthalene	ND	2.00	4.00	ug/L	1	09/06/23 18:39	EPA 8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/06/23 18:39</i>	<i>EPA 8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>105 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/06/23 18:39</i>	<i>EPA 8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/06/23 18:39</i>	<i>EPA 8260D</i>	
TRIP (A3I0736-02)		Matrix: Water			Batch: 23I0123			
Benzene	ND	0.100	0.200	ug/L	1	09/06/23 13:00	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	09/06/23 13:00	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	09/06/23 13:00	EPA 8260D	
Xylenes, total	ND	0.750	1.50	ug/L	1	09/06/23 13:00	EPA 8260D	
Naphthalene	ND	2.00	4.00	ug/L	1	09/06/23 13:00	EPA 8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 93 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/06/23 13:00</i>	<i>EPA 8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>106 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/06/23 13:00</i>	<i>EPA 8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/06/23 13:00</i>	<i>EPA 8260D</i>	

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Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I0736 - 11 22 23 1556

ANALYTICAL SAMPLE RESULTS

Conventional Microbiology Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CB-1 (A3I0736-01)		Matrix: Water						
Batch: 23I0101								
E. coli	1730	1.00	1.00	MPN/100 mL	1	09/06/23 16:12	SM 9223 B	

Apex Laboratories

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ORELAP ID: OR100062**Maul Foster & Alongi, INC.**3140 NE Broadway Street
Portland, OR 97232Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I0736 - 11 22 23 1556**

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 2310247 - EPA 3510C (Fuels/Acid Ext.)						Water							
Blank (2310247-BLK1)			Prepared: 09/08/23 12:25		Analyzed: 09/08/23 22:58								
NWTPH-Dx													
Diesel	ND	0.100	0.200	mg/L	1	---	---	---	---	---	---		
Oil	ND	0.200	0.400	mg/L	1	---	---	---	---	---	---		
Surr: o-Terphenyl (Surr)		Recovery: 91 %		Limits: 50-150 %		Dilution: 1x							
LCS (2310247-BS1)			Prepared: 09/08/23 12:25		Analyzed: 09/08/23 23:19								
NWTPH-Dx													
Diesel	0.609	0.100	0.200	mg/L	1	1.25	---	49	36-132%	---	---		
Surr: o-Terphenyl (Surr)		Recovery: 87 %		Limits: 50-150 %		Dilution: 1x							
LCS Dup (2310247-BSD1)			Prepared: 09/08/23 12:25		Analyzed: 09/08/23 23:39								Q-19
NWTPH-Dx													
Diesel	0.597	0.100	0.200	mg/L	1	1.25	---	48	36-132%	2	30%		
Surr: o-Terphenyl (Surr)		Recovery: 89 %		Limits: 50-150 %		Dilution: 1x							

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Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310736 - 11 22 23 1556**

QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 2310123 - EPA 5030C						Water						
Blank (2310123-BLK1)			Prepared: 09/06/23 10:00		Analyzed: 09/06/23 12:35							
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Surr)		Recovery: 88 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)		111 %		50-150 %		"						
LCS (2310123-BS2)			Prepared: 09/06/23 10:00		Analyzed: 09/06/23 11:28							
NWTPH-Gx (MS)												
Gasoline Range Organics	0.518	0.0500	0.100	mg/L	1	0.500	---	104	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Surr)		Recovery: 91 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)		109 %		50-150 %		"						
Duplicate (2310123-DUP1)			Prepared: 09/06/23 10:00		Analyzed: 09/06/23 20:55							
QC Source Sample: Non-SDG (A310709-05)												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Surr)		Recovery: 89 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)		110 %		50-150 %		"						

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Portland, OR 97232Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310736 - 11 22 23 1556**

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 2310123 - EPA 5030C						Water						
Blank (2310123-BLK1)			Prepared: 09/06/23 10:00		Analyzed: 09/06/23 12:35							
EPA 8260D												
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Xylenes, total	ND	0.750	1.50	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	2.00	4.00	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 95 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		107 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		100 %		80-120 %		"						
LCS (2310123-BS1)						Prepared: 09/06/23 10:00		Analyzed: 09/06/23 11:50				
EPA 8260D												
Benzene	20.4	0.100	0.200	ug/L	1	20.0	---	102	80-120%	---	---	
Toluene	21.8	0.500	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
Ethylbenzene	21.9	0.250	0.500	ug/L	1	20.0	---	110	80-120%	---	---	
Xylenes, total	67.0	0.750	1.50	ug/L	1	60.0	---	112	80-120%	---	---	
Naphthalene	17.7	2.00	4.00	ug/L	1	20.0	---	89	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 94 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		103 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		90 %		80-120 %		"						
Duplicate (2310123-DUP1)						Prepared: 09/06/23 10:00		Analyzed: 09/06/23 20:55				
QC Source Sample: Non-SDG (A310709-05)												
Benzene	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	30%	
Toluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Xylenes, total	ND	0.750	1.50	ug/L	1	---	ND	---	---	---	30%	
Naphthalene	ND	2.00	4.00	ug/L	1	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 97 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		106 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		96 %		80-120 %		"						
Matrix Spike (2310123-MS1)						Prepared: 09/06/23 10:00		Analyzed: 09/06/23 17:09				

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ORELAP ID: OR100062

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3140 NE Broadway Street

Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A310736 - 11 22 23 1556

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 2310123 - EPA 5030C						Water						
Matrix Spike (2310123-MS1)			Prepared: 09/06/23 10:00 Analyzed: 09/06/23 17:09									
<u>QC Source Sample: Non-SDG (A310780-01)</u>												
<u>EPA 8260D</u>												
Benzene	21.3	0.100	0.200	ug/L	1	20.0	ND	106	79-120%	---	---	
Toluene	21.8	0.500	1.00	ug/L	1	20.0	ND	109	80-121%	---	---	
Ethylbenzene	22.2	0.250	0.500	ug/L	1	20.0	ND	111	79-121%	---	---	
Xylenes, total	66.6	0.750	1.50	ug/L	1	60.0	ND	111	79-121%	---	---	
Naphthalene	16.9	2.00	4.00	ug/L	1	20.0	ND	85	61-128%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 96 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		102 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		90 %		80-120 %		"						

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3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I0736 - 11 22 23 1556**

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3510C (Fuels/Acid Ext.)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23I0247							
A3I0736-01	Water	NWTPH-Dx	09/05/23 11:00	09/08/23 12:25	1010mL/5mL	1000mL/5mL	0.99

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

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23I0123							
A3I0736-01	Water	NWTPH-Gx (MS)	09/05/23 11:00	09/06/23 10:00	5mL/5mL	5mL/5mL	1.00
A3I0736-02	Water	NWTPH-Gx (MS)	09/05/23 11:00	09/06/23 10:00	5mL/5mL	5mL/5mL	1.00

BTEX+N Compounds by EPA 8260D

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23I0123							
A3I0736-01	Water	EPA 8260D	09/05/23 11:00	09/06/23 10:00	5mL/5mL	5mL/5mL	1.00
A3I0736-02	Water	EPA 8260D	09/05/23 11:00	09/06/23 10:00	5mL/5mL	5mL/5mL	1.00

Conventional Microbiology Parameters

Prep: Method Prep: Aq

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23I0101							
A3I0736-01	Water	SM 9223 B	09/05/23 11:00	09/05/23 15:46	100mL/100mL	100mL/100mL	1.00

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A3I0736 - 11 22 23 1556

QUALIFIER DEFINITIONS

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

Apex Laboratories

Q-19 Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.

Apex Laboratories

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

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

Detection Limits: Limit of Detection (LOD)

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

Reporting Limits: Limit of Quantitation (LOQ)

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

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.

The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

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

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

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

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).

Apex Laboratories

Philip Nerenberg, Lab Director

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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 ½ the Reporting Limit (RL).

-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-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

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Philip Nerenberg, Lab Director



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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
<u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u>					

Secondary Accreditations

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

Subcontract Laboratory Accreditations

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

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

Field Testing Parameters

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

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310736 - 11 22 23 1556****APEX LABS COOLER RECEIPT FORM**Client: MFA Element WO#: A3E 0736Project/Project #: Redland 0106.37.001**Delivery Info:**Date/time received: 9/5/23 @ 12:19 By: AAWDelivered by: Apex Client ☒ ESS FedEx ☐ UPS ☐ Radio ☐ Morgan ☐ SDS ☐ Evergreen ☐ Other ☐**Cooler Inspection** Date/time inspected: 9/5/23 @ 12:20 By: AAWChain of Custody included? Yes ☒ No ☐Signed/dated by client? Yes ☒ No ☐

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>8.7</u>						
Custody seals? (Y/N)	<u>N</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition (In/Out):	<u>Out</u>						

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

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

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 9-5-23 @ 1240 By: DJSAll samples intact? Yes ☒ No ☐ Comments: _____Bottle labels/COCs agree? Yes ☒ No ☐ Comments: _____COC/container discrepancies form initiated? Yes ☐ No ☒Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments: _____Do VOA vials have visible headspace? Yes ☒ No ☐ NA ☐Comments 1/3 HS.Water samples: pH checked: Yes ☒ No ☐ NA ☐ pH appropriate? Yes ☒ No ☐ NA ☐

Comments: _____

Additional information: FB #3380

Labeled by:

DJS

Witness:

AAW

Cooler Inspected by:

DJS

Form Y-003 R-00 -

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

Wednesday, November 22, 2023

David Weatherby
Maul Foster & Alongi, INC.
3140 NE Broadway Street
Portland, OR 97232

RE: A3I0754 - Redland - 0106.37.001

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 A3I0754, which was received by the laboratory on 9/5/2023 at 12:19:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@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	
<u>Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.</u>	
(See Cooler Receipt Form for details)	
Default Cooler	<u>8.7 degC</u>

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

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



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ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street
Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I0754 - 11 22 23 1600

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VL-TP1-S-001	A3I0754-01	Soil	09/05/23 09:42	09/05/23 12:19
VL-TP1-S-002	A3I0754-02	Soil	09/05/23 10:00	09/05/23 12:19

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Philip Nerenberg, Lab Director

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**ANALYTICAL REPORT****Apex Laboratories, LLC**

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I0754 - 11 22 23 1600****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
VL-TP1-S-001 (A3I0754-01)		Matrix: Soil			Batch: 23I0266			
Diesel	138	27.6	55.1	mg/kg dry	1	09/11/23 20:05	NWTPH-Dx	F-18
Oil	ND	55.1	110	mg/kg dry	1	09/11/23 20:05	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 74 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/11/23 20:05</i>	<i>NWTPH-Dx</i>	
VL-TP1-S-002 (A3I0754-02)		Matrix: Soil			Batch: 23I0266			
Diesel	ND	12.8	25.6	mg/kg dry	1	09/11/23 20:28	NWTPH-Dx	
Oil	ND	25.6	51.3	mg/kg dry	1	09/11/23 20:28	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 57 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/11/23 20:28</i>	<i>NWTPH-Dx</i>	

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Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I0754 - 11 22 23 1600

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VL-TP1-S-001 (A3I0754-01RE1)		Matrix: Soil			Batch: 23I0233			
Gasoline Range Organics	3010	39.4	78.8	mg/kg dry	500	09/08/23 14:33	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 107 %	Limits: 50-150 %	1	09/08/23 14:33	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		107 %	50-150 %	1	09/08/23 14:33	NWTPH-Gx (MS)		
VL-TP1-S-002 (A3I0754-02)		Matrix: Soil			Batch: 23I0187			
Gasoline Range Organics	ND	3.44	6.88	mg/kg dry	50	09/07/23 20:55	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 104 %	Limits: 50-150 %	1	09/07/23 20:55	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		105 %	50-150 %	1	09/07/23 20:55	NWTPH-Gx (MS)		

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3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I0754 - 11 22 23 1600**

ANALYTICAL SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VL-TP1-S-001 (A3I0754-01RE1)		Matrix: Soil			Batch: 23I0233			
Benzene	ND	78.8	158	ug/kg dry	500	09/08/23 14:33	5035A/8260D	
Toluene	ND	394	788	ug/kg dry	500	09/08/23 14:33	5035A/8260D	
Ethylbenzene	331	197	394	ug/kg dry	500	09/08/23 14:33	5035A/8260D	J
Xylenes, total	ND	591	1180	ug/kg dry	500	09/08/23 14:33	5035A/8260D	
Naphthalene	1210	788	1580	ug/kg dry	500	09/08/23 14:33	5035A/8260D	J
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 104 %	Limits: 80-120 %	1	09/08/23 14:33	5035A/8260D		
Toluene-d8 (Surr)		103 %	80-120 %	1	09/08/23 14:33	5035A/8260D		
4-Bromofluorobenzene (Surr)		97 %	79-120 %	1	09/08/23 14:33	5035A/8260D		
VL-TP1-S-002 (A3I0754-02)		Matrix: Soil			Batch: 23I0187			
Benzene	ND	6.88	13.8	ug/kg dry	50	09/07/23 20:55	5035A/8260D	
Toluene	ND	34.4	68.8	ug/kg dry	50	09/07/23 20:55	5035A/8260D	
Ethylbenzene	ND	17.2	34.4	ug/kg dry	50	09/07/23 20:55	5035A/8260D	
Xylenes, total	ND	51.6	103	ug/kg dry	50	09/07/23 20:55	5035A/8260D	
Naphthalene	ND	68.8	138	ug/kg dry	50	09/07/23 20:55	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 100 %	Limits: 80-120 %	1	09/07/23 20:55	5035A/8260D		
Toluene-d8 (Surr)		100 %	80-120 %	1	09/07/23 20:55	5035A/8260D		
4-Bromofluorobenzene (Surr)		97 %	79-120 %	1	09/07/23 20:55	5035A/8260D		

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503-718-2323
ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street
Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I0754 - 11 22 23 1600

ANALYTICAL SAMPLE RESULTS

TCLP Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VL-TP1-S-001 (A3I0754-01)				Matrix: Soil				
Batch: 23I0430								
Lead	ND	0.0250	0.0500	mg/L	5	09/15/23 09:33	1311/6020B	

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A3I0754 - 11 22 23 1600

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VL-TP1-S-001 (A3I0754-01)				Matrix: Soil		Batch: 23I0124		
% Solids	69.8	1.00	1.00	%	1	09/07/23 07:14	EPA 8000D	
VL-TP1-S-002 (A3I0754-02)				Matrix: Soil		Batch: 23I0124		
% Solids	73.4	1.00	1.00	%	1	09/07/23 07:14	EPA 8000D	

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A3I0754 - 11 22 23 1600

ANALYTICAL SAMPLE RESULTS

TCLP Extraction by EPA 1311

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VL-TP1-S-001 (A3I0754-01)				Matrix: Soil		Batch: 23I0366		
TCLP Extraction	PREP			N/A	1	09/13/23 15:00	EPA 1311	

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503-718-2323
ORELAP ID: OR100062**Maul Foster & Alongi, INC.**3140 NE Broadway Street
Portland, OR 97232Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310754 - 11 22 23 1600**

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 2310266 - EPA 3546 (Fuels)						Soil						
Blank (2310266-BLK1)			Prepared: 09/11/23 04:37 Analyzed: 09/11/23 08:33									
NWTPH-Dx												
Diesel	ND	10.0	20.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	20.0	40.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery:	80 %	Limits:	50-150 %		Dilution: 1x					
LCS (2310266-BS1)			Prepared: 09/11/23 04:37 Analyzed: 09/11/23 08:54									
NWTPH-Dx												
Diesel	113	10.0	20.0	mg/kg wet	1	125	---	90	38-132%	---	---	
Surr: o-Terphenyl (Surr)		Recovery:	91 %	Limits:	50-150 %		Dilution: 1x					
Duplicate (2310266-DUP1)			Prepared: 09/11/23 04:37 Analyzed: 09/11/23 09:34									
QC Source Sample: Non-SDG (A310920-01)												
Diesel	ND	10.5	20.9	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	20.9	41.8	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery:	68 %	Limits:	50-150 %		Dilution: 1x					
Duplicate (2310266-DUP3)			Prepared: 09/11/23 10:06 Analyzed: 09/12/23 08:18									
QC Source Sample: Non-SDG (A310919-07RE1)												
Diesel	28300	560	1120	mg/kg dry	50	---	28600	---	---	1	30%	
Oil	ND	1120	2240	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery:	%	Limits:	50-150 %		Dilution: 50x				S-01	

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Portland, OR 97232Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A310754 - 11 22 23 1600

QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 2310187 - EPA 5035A						Soil						
Blank (2310187-BLK1)			Prepared: 09/07/23 10:06 Analyzed: 09/07/23 14:04									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	2.50	5.00	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 98 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		109 %		50-150 %		"						
LCS (2310187-BS2)			Prepared: 09/07/23 10:06 Analyzed: 09/07/23 13:34									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	28.2	2.50	5.00	mg/kg wet	50	25.0	---	113	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 98 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		107 %		50-150 %		"						
Duplicate (2310187-DUP1)			Prepared: 09/05/23 11:30 Analyzed: 09/07/23 19:13									
<u>QC Source Sample: Non-SDG (A310772-01)</u>												
Gasoline Range Organics	849	7.35	14.7	mg/kg dry	100	---	902	---	---	6	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 107 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		106 %		50-150 %		"						

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Portland, OR 97232Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310754 - 11 22 23 1600**

QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 2310233 - EPA 5035A						Soil						
Blank (2310233-BLK1)			Prepared: 09/08/23 10:18 Analyzed: 09/08/23 13:42									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	2.50	5.00	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 103 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		102 %		50-150 %		"						
LCS (2310233-BS2)			Prepared: 09/08/23 10:18 Analyzed: 09/08/23 13:13									
NWTPH-Gx (MS)												
Gasoline Range Organics	27.8	2.50	5.00	mg/kg wet	50	25.0	---	111	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 105 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		104 %		50-150 %		"						
Duplicate (2310233-DUP1)			Prepared: 09/06/23 15:27 Analyzed: 09/08/23 18:23									V-15
QC Source Sample: Non-SDG (A310793-01)												
Gasoline Range Organics	ND	5.38	10.8	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 103 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		110 %		50-150 %		"						

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Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310754 - 11 22 23 1600**

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 2310187 - EPA 5035A												
Soil												
Blank (2310187-BLK1) Prepared: 09/07/23 10:06 Analyzed: 09/07/23 14:04												
5035A/8260D												
Benzene	ND	5.00	10.0	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	12.5	25.0	ug/kg wet	50	---	---	---	---	---	---	
Xylenes, total	ND	37.5	75.0	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	50.0	100	ug/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 103 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		103 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		96 %		79-120 %		"						
LCS (2310187-BS1) Prepared: 09/07/23 10:06 Analyzed: 09/07/23 13:09												
5035A/8260D												
Benzene	1050	5.00	10.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Toluene	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Ethylbenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Xylenes, total	2980	37.5	75.0	ug/kg wet	50	3000	---	99	80-120%	---	---	
Naphthalene	854	50.0	100	ug/kg wet	50	1000	---	85	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 101 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		103 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		92 %		79-120 %		"						
Duplicate (2310187-DUP1) Prepared: 09/05/23 11:30 Analyzed: 09/07/23 19:13												
QC Source Sample: Non-SDG (A310772-01)												
Benzene	176	14.7	29.4	ug/kg dry	100	---	194	---	---	10	30%	
Toluene	ND	73.5	147	ug/kg dry	100	---	ND	---	---	---	30%	
Ethylbenzene	163	36.7	73.5	ug/kg dry	100	---	182	---	---	11	30%	
Xylenes, total	ND	110	220	ug/kg dry	100	---	ND	---	---	---	30%	
Naphthalene	ND	1470	1470	ug/kg dry	100	---	ND	---	---	---	30%	R-02
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 101 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		96 %		79-120 %		"						
Matrix Spike (2310187-MS1) Prepared: 09/07/23 09:39 Analyzed: 09/07/23 16:40												
V-15												

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A310754 - 11 22 23 1600

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 2310187 - EPA 5035A						Soil						
Matrix Spike (2310187-MS1)			Prepared: 09/07/23 09:39		Analyzed: 09/07/23 16:40		V-15					
QC Source Sample: Non-SDG (A310824-03)												
5035A/8260D												
Benzene	1670	7.79	15.6	ug/kg dry	50	1560	ND	107	77-121%	---	---	
Toluene	1630	39.0	77.9	ug/kg dry	50	1560	ND	105	77-121%	---	---	
Ethylbenzene	1610	19.5	39.0	ug/kg dry	50	1560	ND	104	76-122%	---	---	
Xylenes, total	4770	58.4	117	ug/kg dry	50	4670	ND	102	78-124%	---	---	
Naphthalene	1430	77.9	156	ug/kg dry	50	1560	ND	92	62-129%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 102 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		97 %		79-120 %		"						

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Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310754 - 11 22 23 1600**

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 2310233 - EPA 5035A												
Soil												
Blank (2310233-BLK1)												
Prepared: 09/08/23 10:18 Analyzed: 09/08/23 13:42												
5035A/8260D												
Benzene	ND	5.00	10.0	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	12.5	25.0	ug/kg wet	50	---	---	---	---	---	---	
Xylenes, total	ND	37.5	75.0	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	50.0	100	ug/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 106 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		79-120 %		"						
LCS (2310233-BS1)												
Prepared: 09/08/23 10:18 Analyzed: 09/08/23 12:22												
5035A/8260D												
Benzene	1020	5.00	10.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Toluene	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Ethylbenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Xylenes, total	3040	37.5	75.0	ug/kg wet	50	3000	---	101	80-120%	---	---	
Naphthalene	909	50.0	100	ug/kg wet	50	1000	---	91	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 (2310233-DUP1)												
Prepared: 09/06/23 15:27 Analyzed: 09/08/23 18:23												
QC Source Sample: Non-SDG (A310793-01)												
Benzene	ND	10.8	21.5	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	53.8	108	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	26.9	53.8	ug/kg dry	50	---	ND	---	---	---	30%	
Xylenes, total	ND	80.7	161	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	108	215	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 102 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		102 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		96 %		79-120 %		"						
Matrix Spike (2310233-MS1)												
Prepared: 09/05/23 17:50 Analyzed: 09/08/23 20:31												

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Philip Nerenberg, Lab Director



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Project: **Redland**

Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A310754 - 11 22 23 1600

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 2310233 - EPA 5035A						Soil						
Matrix Spike (2310233-MS1)			Prepared: 09/05/23 17:50 Analyzed: 09/08/23 20:31									
QC Source Sample: Non-SDG (A310802-11)												
5035A/8260D												
Benzene	1300	5.48	11.0	ug/kg dry	50	1100	ND	119	77-121%	---	---	
Toluene	1260	27.4	54.8	ug/kg dry	50	1100	ND	115	77-121%	---	---	
Ethylbenzene	1220	13.7	27.4	ug/kg dry	50	1100	ND	111	76-122%	---	---	
Xylenes, total	3580	41.1	82.2	ug/kg dry	50	3290	ND	109	78-124%	---	---	
Naphthalene	967	54.8	110	ug/kg dry	50	1100	ND	88	62-129%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 102 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		102 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		90 %		79-120 %		"						

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Philip Nerenberg

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ORELAP ID: OR100062Maul Foster & Alongi, INC.3140 NE Broadway Street
Portland, OR 97232Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A310754 - 11 22 23 1600

QUALITY CONTROL (QC) SAMPLE RESULTS

TCLP 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 23I0430 - EPA 1311/3015A						Solid						
Blank (23I0430-BLK1)			Prepared: 09/14/23 11:02 Analyzed: 09/15/23 09:23									
<u>1311/6020B</u>												
Lead	ND	0.0250	0.0500	mg/L	10	---	---	---	---	---	---	TCLP
LCS (23I0430-BS1)			Prepared: 09/14/23 11:02 Analyzed: 09/15/23 09:28									
<u>1311/6020B</u>												
Lead	5.50	0.0250	0.0500	mg/L	10	5.00	---	110	80-120%	---	---	TCLP
Duplicate (23I0430-DUP1)			Prepared: 09/14/23 11:02 Analyzed: 09/15/23 09:38									
<u>QC Source Sample: VL-TP1-S-001 (A3I0754-01)</u>												
<u>1311/6020B</u>												
Lead	ND	0.0250	0.0500	mg/L	5	---	ND	---	---	---	20%	
Matrix Spike (23I0430-MS1)			Prepared: 09/14/23 11:02 Analyzed: 09/15/23 09:43									
<u>QC Source Sample: VL-TP1-S-001 (A3I0754-01)</u>												
<u>1311/6020B</u>												
Lead	11.1	0.0500	0.100	mg/L	10	10.0	ND	111	50-150%	---	---	
Matrix Spike (23I0430-MS2)			Prepared: 09/14/23 11:02 Analyzed: 09/15/23 10:04									
<u>QC Source Sample: Non-SDG (A3I0912-01)</u>												
<u>1311/6020B</u>												
Lead	5.49	0.0250	0.0500	mg/L	10	5.00	ND	110	50-150%	---	---	CONT
Matrix Spike (23I0430-MS3)			Prepared: 09/14/23 11:02 Analyzed: 09/15/23 10:14									
<u>QC Source Sample: Non-SDG (A3I0913-01)</u>												
<u>1311/6020B</u>												
Lead	5.42	0.0250	0.0500	mg/L	10	5.00	ND	108	50-150%	---	---	
Matrix Spike (23I0430-MS4)			Prepared: 09/14/23 11:02 Analyzed: 09/15/23 10:24									
<u>QC Source Sample: Non-SDG (A3I1017-01)</u>												
<u>1311/6020B</u>												
Lead	5.54	0.0250	0.0500	mg/L	10	5.00	ND	111	50-150%	---	---	CONT

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503-718-2323
ORELAP ID: OR100062**Maul Foster & Alongi, INC.**3140 NE Broadway Street
Portland, OR 97232Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310754 - 11 22 23 1600****QUALITY CONTROL (QC) SAMPLE RESULTS****Percent Dry Weight**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23I0124 - Total Solids (Dry Weight) - 2022							Soil					
Duplicate (23I0124-DUP1)			Prepared: 09/06/23 09:14 Analyzed: 09/07/23 07:14									
<u>QC Source Sample: Non-SDG (A3I0752-01)</u>												
% Solids	88.4	1.00	1.00	%	1	---	88.3	---	---	0.1	10%	
Duplicate (23I0124-DUP2)			Prepared: 09/06/23 09:14 Analyzed: 09/07/23 07:14									
<u>QC Source Sample: Non-SDG (A3I0752-02)</u>												
% Solids	88.0	1.00	1.00	%	1	---	88.1	---	---	0.09	10%	
Duplicate (23I0124-DUP3)			Prepared: 09/06/23 09:14 Analyzed: 09/07/23 07:14									
<u>QC Source Sample: Non-SDG (A3I0752-03)</u>												
% Solids	87.0	1.00	1.00	%	1	---	87.5	---	---	0.6	10%	
Duplicate (23I0124-DUP4)			Prepared: 09/06/23 09:14 Analyzed: 09/07/23 07:14									
<u>QC Source Sample: Non-SDG (A3I0752-04)</u>												
% Solids	92.5	1.00	1.00	%	1	---	92.6	---	---	0.1	10%	
Duplicate (23I0124-DUP5)			Prepared: 09/06/23 09:14 Analyzed: 09/07/23 07:14									
<u>QC Source Sample: Non-SDG (A3I0752-05)</u>												
% Solids	88.1	1.00	1.00	%	1	---	85.6	---	---	3	10%	
Duplicate (23I0124-DUP6)			Prepared: 09/06/23 20:00 Analyzed: 09/07/23 07:14									
<u>QC Source Sample: Non-SDG (A3I0792-01)</u>												
% Solids	76.4	1.00	1.00	%	1	---	76.5	---	---	0.2	10%	
Duplicate (23I0124-DUP7)			Prepared: 09/06/23 20:00 Analyzed: 09/07/23 07:14									
<u>QC Source Sample: Non-SDG (A3I0812-01)</u>												
% Solids	77.1	1.00	1.00	%	1	---	79.5	---	---	3	10%	
Duplicate (23I0124-DUP8)			Prepared: 09/06/23 20:00 Analyzed: 09/07/23 07:14									
<u>QC Source Sample: Non-SDG (A3I0817-01)</u>												
% Solids	90.8	1.00	1.00	%	1	---	90.6	---	---	0.2	10%	

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Philip Nerenberg, Lab Director

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3140 NE Broadway Street
Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A310754 - 11 22 23 1600

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 2310124 - Total Solids (Dry Weight) - 2022							Soil					
Duplicate (2310124-DUP9)			Prepared: 09/06/23 20:00		Analyzed: 09/07/23 07:14							
<u>QC Source Sample: Non-SDG (A310822-01)</u>												
% Solids	64.5	1.00	1.00	%	1	---	48.7	---	---	28	10%	Q-17

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

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3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310754 - 11 22 23 1600****SAMPLE PREPARATION INFORMATION****Diesel and/or Oil Hydrocarbons by NWTPH-Dx****Prep: EPA 3546 (Fuels)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 2310266							
A310754-01	Soil	NWTPH-Dx	09/05/23 09:42	09/11/23 10:06	5.2g/5mL	10g/5mL	1.92
A310754-02	Soil	NWTPH-Dx	09/05/23 10:00	09/11/23 10:06	10.63g/5mL	10g/5mL	0.94

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

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 2310187							
A310754-02	Soil	NWTPH-Gx (MS)	09/05/23 10:00	09/05/23 10:00	6.72g/5mL	5g/5mL	0.74
Batch: 2310233							
A310754-01RE1	Soil	NWTPH-Gx (MS)	09/05/23 09:42	09/05/23 09:42	6.27g/5mL	5g/5mL	0.80

BTEX+N Compounds by EPA 8260D**Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 2310187							
A310754-02	Soil	5035A/8260D	09/05/23 10:00	09/05/23 10:00	6.72g/5mL	5g/5mL	0.74
Batch: 2310233							
A310754-01RE1	Soil	5035A/8260D	09/05/23 09:42	09/05/23 09:42	6.27g/5mL	5g/5mL	0.80

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

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 2310430							
A310754-01	Soil	1311/6020B	09/05/23 09:42	09/14/23 11:02	5mL/50mL	10mL/50mL	2.00

Percent Dry Weight**Prep: Total Solids (Dry Weight) - 2022**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 2310124							
A310754-01	Soil	EPA 8000D	09/05/23 09:42	09/06/23 09:14			NA
A310754-02	Soil	EPA 8000D	09/05/23 10:00	09/06/23 09:14			NA

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Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I0754 - 11 22 23 1600

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

TCLP Extraction by EPA 1311

Prep: EPA 1311 (TCLP)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23I0366</u>							
A3I0754-01	Soil	EPA 1311	09/05/23 09:42	09/13/23 15:00	100g/2000.3g	100g/2000g	NA

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Project: **Redland**

Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A310754 - 11 22 23 1600

QUALIFIER DEFINITIONS

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

Apex Laboratories

- 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.
- F-18** Result for Diesel (Diesel Range Organics, C12-C25) is due to overlap from Gasoline or a Gasoline Range product.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- Q-17** RPD between original and duplicate sample, or spike duplicates, is outside of established control limits.
- 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.
- TCLP** This batch QC sample was prepared with TCLP or SPLP fluid from preparation batch 23I0366.
- V-15** Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

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A3I0754 - 11 22 23 1600

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

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

Detection Limits: Limit of Detection (LOD)

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

Reporting Limits: Limit of Quantitation (LOQ)

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

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.

The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

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

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

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

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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Project: **Redland**

Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A310754 - 11 22 23 1600

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).

-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-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

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

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

Maul Foster & Alongi, INC.

3140 NE Broadway Street
Portland, OR 97232

Project: **Redland**

Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A310754 - 11 22 23 1600

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
<u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u>					

Secondary Accreditations

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

Subcontract Laboratory Accreditations

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

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

Field Testing Parameters

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

Apex Laboratories

Philip Nerenberg, Lab Director

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Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310754 - 11 22 23 1600****APEX LABS COOLER RECEIPT FORM**Client: MFA Element WO#: A310754Project/Project #: Redland 0106.37.001**Delivery Info:**Date/time received: 9/5/23 @ 12:19 By: APWDelivered by: Apex Client ☒ ESS FedEx ☐ UPS ☐ Radio ☐ Morgan ☐ SDS ☐ Evergreen ☐ Other ☐**Cooler Inspection** Date/time inspected: 9/5/23 @ 12:20 By: APWChain of Custody included? Yes ☒ No ☐Signed/dated by client? Yes ☒ No ☐

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>8.7</u>						
Custody seals? (Y/N)	<u>N</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition (In/Out):	<u>Out</u>						

Cooler out of temp? (Y/N) Possible reason why: sampled recentlyGreen dots applied to out of temperature samples? Yes ☐ No ☒Out of temperature samples form initiated? Yes ☐ No ☒**Sample Inspection:** Date/time inspected: 9/5/23 @ 15:51 By: APWAll samples intact? Yes ☒ No ☐ Comments: _____Bottle labels/COCs agree? Yes ☒ No ☐ Comments: _____COC/container discrepancies form initiated? Yes ☐ No ☒Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments: _____Do VOA vials have visible headspace? Yes ☐ No ☐ NA ☒

Comments: _____

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

Comments: _____

Additional information:Labeled by: APWWitness: WCooler Inspected by: APW

Form Y-003 R-00

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

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

Wednesday, November 22, 2023

David Weatherby
Maul Foster & Alongi, INC.
3140 NE Broadway Street
Portland, OR 97232

RE: A3I0917 - Redland - 0106.37.001

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 A3I0917, which was received by the laboratory on 9/8/2023 at 5:52:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@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	
<u>Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.</u>	
(See Cooler Receipt Form for details)	
Default Cooler	<u>14.6 degC</u>

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

Philip Nerenberg

Philip Nerenberg, Lab Director

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503-718-2323
ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street
Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I0917 - 11 22 23 1601

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RS-B1-S-8.5	A3I0917-01	Soil	09/08/23 09:50	09/08/23 17:52
RS-B2-S-8.5	A3I0917-02	Soil	09/08/23 10:25	09/08/23 17:52
RS-B3-S-12	A3I0917-03	Soil	09/08/23 11:45	09/08/23 17:52
RS-B4-S-8	A3I0917-04	Soil	09/08/23 13:28	09/08/23 17:52
RS-B5-S-6	A3I0917-05	Soil	09/08/23 13:58	09/08/23 17:52
RS-B6-S-8	A3I0917-06	Soil	09/08/23 14:35	09/08/23 17:52
VL-B8-S-11.5	A3I0917-07	Soil	09/08/23 16:17	09/08/23 17:52
VL-B9-S-7	A3I0917-08	Soil	09/08/23 16:39	09/08/23 17:52

Apex Laboratories

Philip Nerenberg, Lab Director

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Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I0917 - 11 22 23 1601

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
RS-B1-S-8.5 (A3I0917-01)		Matrix: Soil		Batch: 23I0357				
Diesel	18.0	13.8	27.6	mg/kg dry	1	09/13/23 23:10	NWTPH-Dx	J
Oil	ND	27.6	55.2	mg/kg dry	1	09/13/23 23:10	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 61 %		Limits: 50-150 %	1	09/13/23 23:10	NWTPH-Dx	
RS-B2-S-8.5 (A3I0917-02)		Matrix: Soil		Batch: 23I0357				
Diesel	36.3	11.5	23.1	mg/kg dry	1	09/13/23 23:30	NWTPH-Dx	F-20
Oil	113	23.1	46.2	mg/kg dry	1	09/13/23 23:30	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 80 %		Limits: 50-150 %	1	09/13/23 23:30	NWTPH-Dx	
RS-B3-S-12 (A3I0917-03)		Matrix: Soil		Batch: 23I0357				
Diesel	ND	13.1	26.1	mg/kg dry	1	09/14/23 00:10	NWTPH-Dx	
Oil	ND	26.1	52.3	mg/kg dry	1	09/14/23 00:10	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 57 %		Limits: 50-150 %	1	09/14/23 00:10	NWTPH-Dx	
RS-B4-S-8 (A3I0917-04)		Matrix: Soil		Batch: 23I0357				
Diesel	ND	12.2	24.4	mg/kg dry	1	09/14/23 00:31	NWTPH-Dx	
Oil	ND	24.4	48.8	mg/kg dry	1	09/14/23 00:31	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 74 %		Limits: 50-150 %	1	09/14/23 00:31	NWTPH-Dx	
RS-B5-S-6 (A3I0917-05)		Matrix: Soil		Batch: 23I0357				
Diesel	12.2	12.0	24.1	mg/kg dry	1	09/14/23 00:51	NWTPH-Dx	J
Oil	67.3	24.1	48.2	mg/kg dry	1	09/14/23 00:51	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 77 %		Limits: 50-150 %	1	09/14/23 00:51	NWTPH-Dx	
RS-B6-S-8 (A3I0917-06)		Matrix: Soil		Batch: 23I0357				
Diesel	ND	13.5	27.0	mg/kg dry	1	09/14/23 01:31	NWTPH-Dx	
Oil	ND	27.0	54.1	mg/kg dry	1	09/14/23 01:31	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 70 %		Limits: 50-150 %	1	09/14/23 01:31	NWTPH-Dx	
VL-B8-S-11.5 (A3I0917-07)		Matrix: Soil		Batch: 23I0357				
Diesel	ND	13.9	27.8	mg/kg dry	1	09/14/23 01:52	NWTPH-Dx	
Oil	ND	27.8	55.6	mg/kg dry	1	09/14/23 01:52	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 61 %		Limits: 50-150 %	1	09/14/23 01:52	NWTPH-Dx	

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A310917 - 11 22 23 1601

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
VL-B9-S-7 (A310917-08)		Matrix: Soil			Batch: 2310357			
Diesel	ND	11.8	23.5	mg/kg dry	1	09/14/23 02:12	NWTPH-Dx	
Oil	ND	23.5	47.1	mg/kg dry	1	09/14/23 02:12	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 87 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/14/23 02:12</i>	<i>NWTPH-Dx</i>	

Apex Laboratories

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Portland, OR 97232Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I0917 - 11 22 23 1601

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RS-B1-S-8.5 (A3I0917-01RE1)		Matrix: Soil			Batch: 23I0350			
Gasoline Range Organics	5.35	3.67	7.34	mg/kg dry	50	09/12/23 19:24	NWTPH-Gx (MS)	J
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 105 %	Limits: 50-150 %	1	09/12/23 19:24	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		109 %	50-150 %	1	09/12/23 19:24	NWTPH-Gx (MS)		
RS-B2-S-8.5 (A3I0917-02)		Matrix: Soil			Batch: 23I0283			
Gasoline Range Organics	ND	2.77	5.55	mg/kg dry	50	09/11/23 19:12	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 99 %	Limits: 50-150 %	1	09/11/23 19:12	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		108 %	50-150 %	1	09/11/23 19:12	NWTPH-Gx (MS)		
RS-B3-S-12 (A3I0917-03)		Matrix: Soil			Batch: 23I0283			
Gasoline Range Organics	ND	3.56	7.13	mg/kg dry	50	09/11/23 19:38	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 96 %	Limits: 50-150 %	1	09/11/23 19:38	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		108 %	50-150 %	1	09/11/23 19:38	NWTPH-Gx (MS)		
RS-B4-S-8 (A3I0917-04)		Matrix: Soil			Batch: 23I0283			
Gasoline Range Organics	ND	2.74	5.48	mg/kg dry	50	09/11/23 20:03	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 98 %	Limits: 50-150 %	1	09/11/23 20:03	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		109 %	50-150 %	1	09/11/23 20:03	NWTPH-Gx (MS)		
RS-B5-S-6 (A3I0917-05)		Matrix: Soil			Batch: 23I0283			
Gasoline Range Organics	ND	2.73	5.45	mg/kg dry	50	09/11/23 20:29	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 101 %	Limits: 50-150 %	1	09/11/23 20:29	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		110 %	50-150 %	1	09/11/23 20:29	NWTPH-Gx (MS)		
RS-B6-S-8 (A3I0917-06)		Matrix: Soil			Batch: 23I0283			
Gasoline Range Organics	ND	3.47	6.94	mg/kg dry	50	09/11/23 20:54	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 101 %	Limits: 50-150 %	1	09/11/23 20:54	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		109 %	50-150 %	1	09/11/23 20:54	NWTPH-Gx (MS)		
VL-B8-S-11.5 (A3I0917-07)		Matrix: Soil			Batch: 23I0283			
Gasoline Range Organics	ND	3.52	7.04	mg/kg dry	50	09/11/23 21:20	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 98 %	Limits: 50-150 %	1	09/11/23 21:20	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		110 %	50-150 %	1	09/11/23 21:20	NWTPH-Gx (MS)		

Apex Laboratories

Philip Nerenberg, Lab Director

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3140 NE Broadway Street
Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A310917 - 11 22 23 1601

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VL-B9-S-7 (A310917-08)		Matrix: Soil			Batch: 2310283			
Gasoline Range Organics	ND	2.49	4.97	mg/kg dry	50	09/11/23 21:46	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 97 %	Limits: 50-150 %	1	09/11/23 21:46	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		110 %	50-150 %	1	09/11/23 21:46	NWTPH-Gx (MS)		

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Portland, OR 97232Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I0917 - 11 22 23 1601

ANALYTICAL SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RS-B1-S-8.5 (A3I0917-01)		Matrix: Soil			Batch: 23I0283			
Benzene	ND	7.34	14.7	ug/kg dry	50	09/11/23 18:21	5035A/8260D	
Toluene	ND	36.7	73.4	ug/kg dry	50	09/11/23 18:21	5035A/8260D	
Ethylbenzene	ND	18.3	36.7	ug/kg dry	50	09/11/23 18:21	5035A/8260D	
Xylenes, total	ND	55.0	110	ug/kg dry	50	09/11/23 18:21	5035A/8260D	
Naphthalene	ND	73.4	147	ug/kg dry	50	09/11/23 18:21	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/11/23 18:21</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/11/23 18:21</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>79-120 %</i>	<i>1</i>	<i>09/11/23 18:21</i>	<i>5035A/8260D</i>	
RS-B2-S-8.5 (A3I0917-02)		Matrix: Soil			Batch: 23I0283			
Benzene	ND	5.55	11.1	ug/kg dry	50	09/11/23 19:12	5035A/8260D	
Toluene	ND	27.7	55.5	ug/kg dry	50	09/11/23 19:12	5035A/8260D	
Ethylbenzene	ND	13.9	27.7	ug/kg dry	50	09/11/23 19:12	5035A/8260D	
Xylenes, total	ND	41.6	83.2	ug/kg dry	50	09/11/23 19:12	5035A/8260D	
Naphthalene	ND	55.5	111	ug/kg dry	50	09/11/23 19:12	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/11/23 19:12</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/11/23 19:12</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>	<i>1</i>	<i>09/11/23 19:12</i>	<i>5035A/8260D</i>	
RS-B3-S-12 (A3I0917-03)		Matrix: Soil			Batch: 23I0283			
Benzene	ND	7.13	14.3	ug/kg dry	50	09/11/23 19:38	5035A/8260D	
Toluene	ND	35.6	71.3	ug/kg dry	50	09/11/23 19:38	5035A/8260D	
Ethylbenzene	ND	17.8	35.6	ug/kg dry	50	09/11/23 19:38	5035A/8260D	
Xylenes, total	ND	53.4	107	ug/kg dry	50	09/11/23 19:38	5035A/8260D	
Naphthalene	ND	71.3	143	ug/kg dry	50	09/11/23 19:38	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/11/23 19:38</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>104 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/11/23 19:38</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>	<i>1</i>	<i>09/11/23 19:38</i>	<i>5035A/8260D</i>	
RS-B4-S-8 (A3I0917-04)		Matrix: Soil			Batch: 23I0283			
Benzene	ND	5.48	11.0	ug/kg dry	50	09/11/23 20:03	5035A/8260D	
Toluene	ND	27.4	54.8	ug/kg dry	50	09/11/23 20:03	5035A/8260D	
Ethylbenzene	ND	13.7	27.4	ug/kg dry	50	09/11/23 20:03	5035A/8260D	
Xylenes, total	ND	41.1	82.2	ug/kg dry	50	09/11/23 20:03	5035A/8260D	

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062Maul Foster & Alongi, INC.3140 NE Broadway Street
Portland, OR 97232Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I0917 - 11 22 23 1601

ANALYTICAL SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RS-B4-S-8 (A3I0917-04)		Matrix: Soil			Batch: 23I0283			
Naphthalene	ND	54.8	110	ug/kg dry	50	09/11/23 20:03	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	102 %	Limits:	80-120 %	1	09/11/23 20:03	5035A/8260D
Toluene-d8 (Surr)			103 %		80-120 %	1	09/11/23 20:03	5035A/8260D
4-Bromofluorobenzene (Surr)			94 %		79-120 %	1	09/11/23 20:03	5035A/8260D
RS-B5-S-6 (A3I0917-05)		Matrix: Soil			Batch: 23I0283			
Benzene	ND	5.45	10.9	ug/kg dry	50	09/11/23 20:29	5035A/8260D	
Toluene	ND	27.3	54.5	ug/kg dry	50	09/11/23 20:29	5035A/8260D	
Ethylbenzene	ND	13.6	27.3	ug/kg dry	50	09/11/23 20:29	5035A/8260D	
Xylenes, total	ND	40.9	81.8	ug/kg dry	50	09/11/23 20:29	5035A/8260D	
Naphthalene	ND	54.5	109	ug/kg dry	50	09/11/23 20:29	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	102 %	Limits:	80-120 %	1	09/11/23 20:29	5035A/8260D
Toluene-d8 (Surr)			102 %		80-120 %	1	09/11/23 20:29	5035A/8260D
4-Bromofluorobenzene (Surr)			96 %		79-120 %	1	09/11/23 20:29	5035A/8260D
RS-B6-S-8 (A3I0917-06)		Matrix: Soil			Batch: 23I0283			
Benzene	ND	6.94	13.9	ug/kg dry	50	09/11/23 20:54	5035A/8260D	
Toluene	ND	34.7	69.4	ug/kg dry	50	09/11/23 20:54	5035A/8260D	
Ethylbenzene	ND	17.4	34.7	ug/kg dry	50	09/11/23 20:54	5035A/8260D	
Xylenes, total	ND	52.1	104	ug/kg dry	50	09/11/23 20:54	5035A/8260D	
Naphthalene	ND	69.4	139	ug/kg dry	50	09/11/23 20:54	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	102 %	Limits:	80-120 %	1	09/11/23 20:54	5035A/8260D
Toluene-d8 (Surr)			102 %		80-120 %	1	09/11/23 20:54	5035A/8260D
4-Bromofluorobenzene (Surr)			95 %		79-120 %	1	09/11/23 20:54	5035A/8260D
VL-B8-S-11.5 (A3I0917-07)		Matrix: Soil			Batch: 23I0283			
Benzene	ND	7.04	14.1	ug/kg dry	50	09/11/23 21:20	5035A/8260D	
Toluene	ND	35.2	70.4	ug/kg dry	50	09/11/23 21:20	5035A/8260D	
Ethylbenzene	ND	17.6	35.2	ug/kg dry	50	09/11/23 21:20	5035A/8260D	
Xylenes, total	ND	52.8	106	ug/kg dry	50	09/11/23 21:20	5035A/8260D	
Naphthalene	ND	70.4	141	ug/kg dry	50	09/11/23 21:20	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	102 %	Limits:	80-120 %	1	09/11/23 21:20	5035A/8260D
Toluene-d8 (Surr)			104 %		80-120 %	1	09/11/23 21:20	5035A/8260D
4-Bromofluorobenzene (Surr)			95 %		79-120 %	1	09/11/23 21:20	5035A/8260D

Apex Laboratories

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I0917 - 11 22 23 1601

ANALYTICAL SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VL-B9-S-7 (A3I0917-08)		Matrix: Soil			Batch: 23I0283			
Benzene	ND	4.97	9.95	ug/kg dry	50	09/11/23 21:46	5035A/8260D	
Toluene	ND	24.9	49.7	ug/kg dry	50	09/11/23 21:46	5035A/8260D	
Ethylbenzene	ND	12.4	24.9	ug/kg dry	50	09/11/23 21:46	5035A/8260D	
Xylenes, total	ND	37.3	74.6	ug/kg dry	50	09/11/23 21:46	5035A/8260D	
Naphthalene	ND	49.7	99.5	ug/kg dry	50	09/11/23 21:46	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>103 %</i>	<i>Limits:</i>	<i>80-120 %</i>	<i>1</i>	<i>09/11/23 21:46</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>			<i>103 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/11/23 21:46</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>			<i>95 %</i>		<i>79-120 %</i>	<i>1</i>	<i>09/11/23 21:46</i>	<i>5035A/8260D</i>

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Portland, OR 97232Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I0917 - 11 22 23 1601

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RS-B1-S-8.5 (A3I0917-01)				Matrix: Soil		Batch: 23I0284		
% Solids	71.6	1.00	1.00	%	1	09/12/23 06:49	EPA 8000D	
RS-B2-S-8.5 (A3I0917-02)				Matrix: Soil		Batch: 23I0284		
% Solids	81.3	1.00	1.00	%	1	09/12/23 06:49	EPA 8000D	
RS-B3-S-12 (A3I0917-03)				Matrix: Soil		Batch: 23I0284		
% Solids	70.9	1.00	1.00	%	1	09/12/23 06:49	EPA 8000D	
RS-B4-S-8 (A3I0917-04)				Matrix: Soil		Batch: 23I0284		
% Solids	79.7	1.00	1.00	%	1	09/12/23 06:49	EPA 8000D	
RS-B5-S-6 (A3I0917-05)				Matrix: Soil		Batch: 23I0284		
% Solids	80.8	1.00	1.00	%	1	09/12/23 06:49	EPA 8000D	
RS-B6-S-8 (A3I0917-06)				Matrix: Soil		Batch: 23I0284		
% Solids	73.2	1.00	1.00	%	1	09/12/23 06:49	EPA 8000D	
VL-B8-S-11.5 (A3I0917-07)				Matrix: Soil		Batch: 23I0284		
% Solids	68.7	1.00	1.00	%	1	09/12/23 06:49	EPA 8000D	
VL-B9-S-7 (A3I0917-08)				Matrix: Soil		Batch: 23I0284		
% Solids	83.6	1.00	1.00	%	1	09/12/23 06:49	EPA 8000D	

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Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310917 - 11 22 23 1601**

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 2310357 - EPA 3546 (Fuels)						Soil						
Blank (2310357-BLK1)			Prepared: 09/13/23 07:56 Analyzed: 09/13/23 21:07									
NWTPH-Dx												
Diesel	ND	10.0	20.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	20.0	40.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 86 %		Limits: 50-150 %		Dilution: 1x						
LCS (2310357-BS1)			Prepared: 09/13/23 07:56 Analyzed: 09/13/23 21:27									
NWTPH-Dx												
Diesel	103	10.0	20.0	mg/kg wet	1	125	---	83	38-132%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 90 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (2310357-DUP2)			Prepared: 09/13/23 07:56 Analyzed: 09/14/23 07:16									
QC Source Sample: Non-SDG (A311025-01)												
Diesel	143	10.1	20.2	mg/kg dry	1	---	147	---	---	3	30%	F-24
Oil	ND	20.2	40.4	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 91 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (2310357-DUP3)			Prepared: 09/13/23 07:56 Analyzed: 09/14/23 11:47									
QC Source Sample: Non-SDG (A310914-01RE1)												
Diesel	21800	1230	2470	mg/kg dry	100	---	24500	---	---	12	30%	F-15
Oil	25500	2470	4930	mg/kg dry	100	---	32400	---	---	24	30%	F-16
Surr: o-Terphenyl (Surr)		Recovery: %		Limits: 50-150 %		Dilution: 100x					S-01	

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3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310917 - 11 22 23 1601**

QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 2310283 - EPA 5035A												Soil
Blank (2310283-BLK1)												Prepared: 09/11/23 10:31 Analyzed: 09/11/23 12:49
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	2.50	5.00	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	100 %	Limits:	50-150 %		Dilution:	1x				
1,4-Difluorobenzene (Sur)			107 %		50-150 %			"				
LCS (2310283-BS2)												Prepared: 09/11/23 10:31 Analyzed: 09/11/23 12:19
NWTPH-Gx (MS)												
Gasoline Range Organics	27.2	2.50	5.00	mg/kg wet	50	25.0	---	109	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	98 %	Limits:	50-150 %		Dilution:	1x				
1,4-Difluorobenzene (Sur)			106 %		50-150 %			"				
Duplicate (2310283-DUP1)												Prepared: 09/05/23 09:40 Analyzed: 09/11/23 15:48
QC Source Sample: Non-SDG (A310919-01)												
Gasoline Range Organics	ND	3.77	7.54	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	100 %	Limits:	50-150 %		Dilution:	1x				
1,4-Difluorobenzene (Sur)			108 %		50-150 %			"				
Duplicate (2310283-DUP2)												Prepared: 09/08/23 09:50 Analyzed: 09/11/23 18:47
QC Source Sample: RS-B1-S-8.5 (A310917-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	6.54	3.67	7.34	mg/kg dry	50	---	8.02	---	---	20	30%	J
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	103 %	Limits:	50-150 %		Dilution:	1x				
1,4-Difluorobenzene (Sur)			107 %		50-150 %			"				

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503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310917 - 11 22 23 1601**

QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 2310350 - EPA 5035A						Soil						
Blank (2310350-BLK1)			Prepared: 09/12/23 16:16 Analyzed: 09/12/23 18:59									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	2.50	5.00	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 97 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		109 %		50-150 %		"						
LCS (2310350-BS2)			Prepared: 09/12/23 16:16 Analyzed: 09/12/23 18:33									
NWTPH-Gx (MS)												
Gasoline Range Organics	29.1	2.50	5.00	mg/kg wet	50	25.0	---	116	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 93 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		107 %		50-150 %		"						
Duplicate (2310350-DUP1)			Prepared: 09/12/23 10:35 Analyzed: 09/12/23 20:15									V-15
QC Source Sample: Non-SDG (A310965-01)												
Gasoline Range Organics	ND	4.42	8.85	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 98 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		109 %		50-150 %		"						

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Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310917 - 11 22 23 1601**

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 2310283 - EPA 5035A												
Soil												
Blank (2310283-BLK1)												
Prepared: 09/11/23 10:31 Analyzed: 09/11/23 12:49												
5035A/8260D												
Benzene	ND	5.00	10.0	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	12.5	25.0	ug/kg wet	50	---	---	---	---	---	---	
Xylenes, total	ND	37.5	75.0	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	50.0	100	ug/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 102 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		102 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		79-120 %		"						
LCS (2310283-BS1)												
Prepared: 09/11/23 10:31 Analyzed: 09/11/23 11:54												
5035A/8260D												
Benzene	1020	5.00	10.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Toluene	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Ethylbenzene	988	12.5	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Xylenes, total	2920	37.5	75.0	ug/kg wet	50	3000	---	97	80-120%	---	---	
Naphthalene	872	50.0	100	ug/kg wet	50	1000	---	87	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 101 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		103 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		94 %		79-120 %		"						
Duplicate (2310283-DUP1)												
Prepared: 09/05/23 09:40 Analyzed: 09/11/23 15:48												
QC Source Sample: Non-SDG (A310919-01)												
Benzene	ND	7.54	15.1	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	37.7	75.4	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	18.9	37.7	ug/kg dry	50	---	ND	---	---	---	30%	
Xylenes, total	ND	56.6	113	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	75.4	151	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 102 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		102 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		95 %		79-120 %		"						
Duplicate (2310283-DUP2)												
Prepared: 09/08/23 09:50 Analyzed: 09/11/23 18:47												

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Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310917 - 11 22 23 1601**

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23I0283 - EPA 5035A						Soil						
Duplicate (23I0283-DUP2)			Prepared: 09/08/23 09:50 Analyzed: 09/11/23 18:47									
QC Source Sample: RS-B1-S-8.5 (A3I0917-01)												
5035A/8260D												
Benzene	ND	7.34	14.7	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	36.7	73.4	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	18.3	36.7	ug/kg dry	50	---	ND	---	---	---	30%	
Xylenes, total	ND	55.0	110	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	73.4	147	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery:		101 %	Limits: 80-120 %		Dilution: 1x					
Toluene-d8 (Surr)				101 %	80-120 %		"					
4-Bromofluorobenzene (Surr)				96 %	79-120 %		"					
Matrix Spike (23I0283-MS1)			Prepared: 09/07/23 17:00 Analyzed: 09/11/23 14:31									
QC Source Sample: Non-SDG (A3I0910-02)												
5035A/8260D												
Benzene	1250	5.59	11.2	ug/kg dry	50	1120	ND	112	77-121%	---	---	
Toluene	1230	28.0	55.9	ug/kg dry	50	1120	ND	110	77-121%	---	---	
Ethylbenzene	1210	14.0	28.0	ug/kg dry	50	1120	ND	108	76-122%	---	---	
Xylenes, total	3580	41.9	83.9	ug/kg dry	50	3350	ND	107	78-124%	---	---	
Naphthalene	971	55.9	112	ug/kg dry	50	1120	ND	87	62-129%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery:		100 %	Limits: 80-120 %		Dilution: 1x					
Toluene-d8 (Surr)				101 %	80-120 %		"					
4-Bromofluorobenzene (Surr)				92 %	79-120 %		"					

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062Maul Foster & Alongi, INC.3140 NE Broadway Street
Portland, OR 97232Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A310917 - 11 22 23 1601

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 2310284 - Total Solids (Dry Weight) - 2022							Soil					
Duplicate (2310284-DUP1)			Prepared: 09/11/23 10:25		Analyzed: 09/12/23 06:49							
<u>QC Source Sample: Non-SDG (A310907-01)</u>												
% Solids	78.1	1.00	1.00	%	1	---	78.3	---	---	0.2	10%	
Duplicate (2310284-DUP2)			Prepared: 09/11/23 10:25		Analyzed: 09/12/23 06:49							
<u>QC Source Sample: Non-SDG (A310907-02)</u>												
% Solids	77.6	1.00	1.00	%	1	---	78.6	---	---	1	10%	
Duplicate (2310284-DUP3)			Prepared: 09/11/23 10:25		Analyzed: 09/12/23 06:49							
<u>QC Source Sample: Non-SDG (A310907-03)</u>												
% Solids	81.9	1.00	1.00	%	1	---	81.9	---	---	0.04	10%	
Duplicate (2310284-DUP4)			Prepared: 09/11/23 10:25		Analyzed: 09/12/23 06:49							
<u>QC Source Sample: Non-SDG (A310907-04)</u>												
% Solids	67.5	1.00	1.00	%	1	---	67.4	---	---	0.2	10%	
Duplicate (2310284-DUP5)			Prepared: 09/11/23 10:25		Analyzed: 09/12/23 06:49							
<u>QC Source Sample: Non-SDG (A310907-05)</u>												
% Solids	77.5	1.00	1.00	%	1	---	76.6	---	---	1	10%	
Duplicate (2310284-DUP6)			Prepared: 09/11/23 18:49		Analyzed: 09/12/23 06:49							
<u>QC Source Sample: Non-SDG (A310949-01)</u>												
% Solids	69.4	1.00	1.00	%	1	---	69.9	---	---	0.6	10%	
Duplicate (2310284-DUP7)			Prepared: 09/11/23 18:49		Analyzed: 09/12/23 06:49							
<u>QC Source Sample: Non-SDG (A310962-02)</u>												
% Solids	92.5	1.00	1.00	%	1	---	93.6	---	---	1	10%	

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

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310917 - 11 22 23 1601**

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 2310357							
A310917-01	Soil	NWTPH-Dx	09/08/23 09:50	09/13/23 07:56	10.12g/5mL	10g/5mL	0.99
A310917-02	Soil	NWTPH-Dx	09/08/23 10:25	09/13/23 07:56	10.65g/5mL	10g/5mL	0.94
A310917-03	Soil	NWTPH-Dx	09/08/23 11:45	09/13/23 07:56	10.8g/5mL	10g/5mL	0.93
A310917-04	Soil	NWTPH-Dx	09/08/23 13:28	09/13/23 07:56	10.29g/5mL	10g/5mL	0.97
A310917-05	Soil	NWTPH-Dx	09/08/23 13:58	09/13/23 07:56	10.28g/5mL	10g/5mL	0.97
A310917-06	Soil	NWTPH-Dx	09/08/23 14:35	09/13/23 07:56	10.11g/5mL	10g/5mL	0.99
A310917-07	Soil	NWTPH-Dx	09/08/23 16:17	09/13/23 07:56	10.48g/5mL	10g/5mL	0.95
A310917-08	Soil	NWTPH-Dx	09/08/23 16:39	09/13/23 07:56	10.16g/5mL	10g/5mL	0.98

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

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 2310283							
A310917-02	Soil	NWTPH-Gx (MS)	09/08/23 10:25	09/08/23 10:25	6.99g/5mL	5g/5mL	0.72
A310917-03	Soil	NWTPH-Gx (MS)	09/08/23 11:45	09/08/23 11:45	6.96g/5mL	5g/5mL	0.72
A310917-04	Soil	NWTPH-Gx (MS)	09/08/23 13:28	09/08/23 13:28	7.46g/5mL	5g/5mL	0.67
A310917-05	Soil	NWTPH-Gx (MS)	09/08/23 13:58	09/08/23 13:58	7.26g/5mL	5g/5mL	0.69
A310917-06	Soil	NWTPH-Gx (MS)	09/08/23 14:35	09/08/23 14:35	6.69g/5mL	5g/5mL	0.75
A310917-07	Soil	NWTPH-Gx (MS)	09/08/23 16:17	09/08/23 16:17	7.64g/5mL	5g/5mL	0.65
A310917-08	Soil	NWTPH-Gx (MS)	09/08/23 16:39	09/08/23 16:39	7.48g/5mL	5g/5mL	0.67
Batch: 2310350							
A310917-01RE1	Soil	NWTPH-Gx (MS)	09/08/23 09:50	09/08/23 09:50	6.53g/5mL	5g/5mL	0.77

BTEX+N Compounds by EPA 8260D

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 2310283							
A310917-01	Soil	5035A/8260D	09/08/23 09:50	09/08/23 09:50	6.53g/5mL	5g/5mL	0.77
A310917-02	Soil	5035A/8260D	09/08/23 10:25	09/08/23 10:25	6.99g/5mL	5g/5mL	0.72
A310917-03	Soil	5035A/8260D	09/08/23 11:45	09/08/23 11:45	6.96g/5mL	5g/5mL	0.72
A310917-04	Soil	5035A/8260D	09/08/23 13:28	09/08/23 13:28	7.46g/5mL	5g/5mL	0.67
A310917-05	Soil	5035A/8260D	09/08/23 13:58	09/08/23 13:58	7.26g/5mL	5g/5mL	0.69
A310917-06	Soil	5035A/8260D	09/08/23 14:35	09/08/23 14:35	6.69g/5mL	5g/5mL	0.75
A310917-07	Soil	5035A/8260D	09/08/23 16:17	09/08/23 16:17	7.64g/5mL	5g/5mL	0.65

Apex Laboratories

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Philip Nerenberg, Lab Director

Page 17 of 24

**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Maul Foster & Alongi, INC.**3140 NE Broadway Street
Portland, OR 97232Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310917 - 11 22 23 1601****SAMPLE PREPARATION INFORMATION****BTEX+N Compounds by EPA 8260D****Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A310917-08	Soil	5035A/8260D	09/08/23 16:39	09/08/23 16:39	7.48g/5mL	5g/5mL	0.67

Percent Dry Weight**Prep: Total Solids (Dry Weight) - 2022**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 2310284</u>							
A310917-01	Soil	EPA 8000D	09/08/23 09:50	09/11/23 10:25			NA
A310917-02	Soil	EPA 8000D	09/08/23 10:25	09/11/23 10:25			NA
A310917-03	Soil	EPA 8000D	09/08/23 11:45	09/11/23 10:25			NA
A310917-04	Soil	EPA 8000D	09/08/23 13:28	09/11/23 10:25			NA
A310917-05	Soil	EPA 8000D	09/08/23 13:58	09/11/23 10:25			NA
A310917-06	Soil	EPA 8000D	09/08/23 14:35	09/11/23 10:25			NA
A310917-07	Soil	EPA 8000D	09/08/23 16:17	09/11/23 10:25			NA
A310917-08	Soil	EPA 8000D	09/08/23 16:39	09/11/23 10:25			NA

Apex Laboratories

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Apex Laboratories, LLC

6700 S.W. Sandburg Street
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ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street
Portland, OR 97232

Project: **Redland**

Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A310917 - 11 22 23 1601

QUALIFIER DEFINITIONS

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

Apex Laboratories

- F-15** Results for diesel are estimated due to overlap from the reported oil result.
- F-16** Results for oil are estimated due to overlap from the reported diesel result.
- F-20** Result for Diesel is Estimated due to overlap from Gasoline Range Organics or other VOCs.
- F-24** The chromatographic pattern does not resemble the fuel standard used for quantitation. The Diesel result represents carbon range C10 to C25, and the Oil result represents >C25 to C40.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- S-01** Surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.
- V-15** Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

Apex Laboratories

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Project Manager: **David Weatherby**

Report ID:

A310917 - 11 22 23 1601

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

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

Detection Limits: Limit of Detection (LOD)

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

Reporting Limits: Limit of Quantitation (LOQ)

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

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.

The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

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

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

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

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).

Apex Laboratories

Philip Nerenberg, Lab Director

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Project: **Redland**

Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A310917 - 11 22 23 1601

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).

-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-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

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

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Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A310917 - 11 22 23 1601

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
<u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u>					

Secondary Accreditations

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

Subcontract Laboratory Accreditations

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

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

Field Testing Parameters

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

Apex Laboratories

Philip Nerenberg, Lab Director

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Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A310917 - 11 22 23 1601

APEX LABS 6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323		CHAIN OF CUSTODY		Lab # <u>A310917</u> of <u>000</u>	
Company: <u>MFA</u>	Project Mgr: <u>D. Weatherby</u>	Project Name: <u>Redland Store</u>	Project #: <u>0106.37.001</u>	PO #	
Address: <u>3140 NE Broadway St</u>	Phone: _____	Email: <u>David Weatherby@MFA.com</u>	Maul Foster & Alongi, INC.		
Sampled by: <u>K. Crossin</u>	ANALYSIS REQUEST				
Site Location: _____	Frozen Archive				
State: <u>OR</u>	Hold Sample				
County: _____	TCLP Metals (8)				
SAMPLE ID	TOTAL DISS.				
<u>RS-B1-S-8.5</u>	Se, Ag, Na, TL, V, Zn				
<u>RS-B2-S-8.5</u>	Hg, Mg, Mn, Mo, Ni, K				
<u>RS-B3-S-12</u>	Cd, Cr, Co, Cu, Fe, Pb				
<u>RS-B4-S-8</u>	Al, Sb, As, Ba, Be, Cd				
<u>RS-B5-S-6</u>	Priority Metals (13)				
<u>RS-B6-S-6</u>	RCRA Metals (8)				
<u>VL-B8-S-11.5</u>	8081 Pesticides				
<u>VL-B9-S-7</u>	8082 PCBs				
	8270 Semi-Vols Full List				
	8270 SIM PAHs				
	8260 VOCs Full List				
	8260 Halo VOCs				
	8260 RBDM VOCs				
	8260 BTEX				
	NTPH-Gx/BTEX+N				
	NTPH-Dx				
	NTPH-HCID				
	# OF CONTAINERS				
	MATRIX				
	TIME				
	DATE				
	Standard Turn Around Time (TAT) = 10 Business Days				
	TAT Requested (circle)				
	1 Day 2 Day 3 Day 5 Day Standard Other: _____				
SPECIAL INSTRUCTIONS: <u>H: hold for PAHs</u>					
RELINQUISHED BY:		RECEIVED BY:		RECEIVED BY:	
Signature: _____	Date: <u>090823</u>	Signature: <u>David Weatherby</u>	Date: <u>9/18/23</u>	Signature: _____	Date: _____
Printed Name: <u>Kieran Crossin</u>	Time: <u>1752</u>	Printed Name: <u>David Weatherby</u>	Time: _____	Printed Name: _____	Time: _____
Company: <u>MFA</u>		Company: _____		Company: _____	

Form Y-002 R-00

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A310917 - 11 22 23 1601****APEX LABS COOLER RECEIPT FORM**Client: MFA Element WO#: A310917Project/Project #: Redland store/ 0106.37.001**Delivery Info:**Date/time received: 9/8/23 @ 1752 By: RhpDelivered by: Apex ☒ Client ☐ ESS ☐ FedEx ☐ UPS ☐ Radio ☐ Morgan ☐ SDS ☐ Evergreen ☐ Other ☐**Cooler Inspection** Date/time inspected: 9/8/23 @ 1752 By: RhpChain of Custody included? Yes ☒ No ☐Signed/dated by client? Yes ☒ No ☐

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>14.6</u>						
Custody seals? (Y/N)	<u>N</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition (In/Out):	<u>Out</u>						

Cooler out of temp? ☒ (N) Possible reason why: Recently sampledGreen dots applied to out of temperature samples? Yes ☒ No ☐Out of temperature samples form initiated? Yes ☒ No ☐**Sample Inspection:** Date/time inspected: 9/8/23 @ 18:04 By: axmAll samples intact? Yes ☒ No ☐ Comments: _____Bottle labels/COCs agree? Yes ☒ No ☐ Comments: _____COC/container discrepancies form initiated? Yes ☐ No ☒Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments: _____Do VOA vials have visible headspace? Yes ☐ No ☐ NA ☒

Comments: _____

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

Comments: _____

Additional information: _____Labeled by: axm Witness: b Cooler Inspected by: Rhp

Form Y-003 R-00

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

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

Wednesday, November 22, 2023

David Weatherby
Maul Foster & Alongi, INC.
3140 NE Broadway Street
Portland, OR 97232

RE: A311236 - Redland - 0106.37.001

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 A311236, which was received by the laboratory on 9/19/2023 at 5:40:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@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	
<u>Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.</u>	
(See Cooler Receipt Form for details)	
Default Cooler	<u>1.5 degC</u>

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

Philip Nerenberg

Philip Nerenberg, Lab Director

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**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Maul Foster & Alongi, INC.**3140 NE Broadway Street
Portland, OR 97232Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I1236 - 11 22 23 1603****ANALYTICAL REPORT FOR SAMPLES****SAMPLE INFORMATION**

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VL-SWW-S1-8.0	A3I1236-01	Soil	09/19/23 14:27	09/19/23 17:40
VL-SWW-S2-10.0	A3I1236-02	Soil	09/19/23 14:35	09/19/23 17:40
VL-SWW-S3-8.5	A3I1236-03	Soil	09/19/23 14:42	09/19/23 17:40
VL-SWW-S4-10.0	A3I1236-04	Soil	09/19/23 14:48	09/19/23 17:40
VL-SP-CS-002	A3I1236-05	Soil	09/19/23 15:20	09/19/23 17:40
VL-SP-CS-003	A3I1236-06	Soil	09/19/23 15:25	09/19/23 17:40
VL-EB-S-001	A3I1236-07	Soil	09/19/23 16:03	09/19/23 17:40
VL-EB-S-002	A3I1236-08	Soil	09/19/23 16:13	09/19/23 17:40
VL-EB-S-003	A3I1236-09	Soil	09/19/23 16:24	09/19/23 17:40
VL-EB-S-004	A3I1236-10	Soil	09/19/23 16:38	09/19/23 17:40
VL-SWN-S5-12.0	A3I1236-11	Soil	09/19/23 16:45	09/19/23 17:40

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Portland, OR 97232Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I1236 - 11 22 23 1603

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
VL-SWW-S1-8.0 (A3I1236-01RE1)				Matrix: Soil		Batch: 23I0784		
Diesel	ND	11.7	23.4	mg/kg dry	1	09/26/23 18:57	NWTPH-Dx	
Oil	ND	23.4	46.8	mg/kg dry	1	09/26/23 18:57	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 92 %		Limits: 50-150 %	1	09/26/23 18:57	NWTPH-Dx	
VL-SWW-S2-10.0 (A3I1236-02RE1)				Matrix: Soil		Batch: 23I0784		
Diesel	ND	13.1	26.2	mg/kg dry	1	09/26/23 19:45	NWTPH-Dx	
Oil	ND	26.2	52.3	mg/kg dry	1	09/26/23 19:45	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 90 %		Limits: 50-150 %	1	09/26/23 19:45	NWTPH-Dx	
VL-SWW-S3-8.5 (A3I1236-03RE1)				Matrix: Soil		Batch: 23I0784		
Diesel	212	11.9	23.9	mg/kg dry	1	09/26/23 20:08	NWTPH-Dx	F-13
Oil	ND	23.9	47.7	mg/kg dry	1	09/26/23 20:08	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 87 %		Limits: 50-150 %	1	09/26/23 20:08	NWTPH-Dx	
VL-SWW-S4-10.0 (A3I1236-04RE1)				Matrix: Soil		Batch: 23I0784		
Diesel	35.7	14.1	28.2	mg/kg dry	1	09/26/23 20:31	NWTPH-Dx	F-13
Oil	ND	28.2	56.4	mg/kg dry	1	09/26/23 20:31	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 81 %		Limits: 50-150 %	1	09/26/23 20:31	NWTPH-Dx	
VL-SP-CS-002 (A3I1236-05)				Matrix: Soil		Batch: 23I0661		
Diesel	ND	11.6	23.1	mg/kg dry	1	09/22/23 04:43	NWTPH-Dx	
Oil	48.2	23.1	46.3	mg/kg dry	1	09/22/23 04:43	NWTPH-Dx	F-03
Surrogate: o-Terphenyl (Surr)		Recovery: 80 %		Limits: 50-150 %	1	09/22/23 04:43	NWTPH-Dx	
VL-SP-CS-003 (A3I1236-06)				Matrix: Soil		Batch: 23I0661		
Diesel	14.0	11.6	23.2	mg/kg dry	1	09/22/23 05:25	NWTPH-Dx	J
Oil	34.6	23.2	46.3	mg/kg dry	1	09/22/23 05:25	NWTPH-Dx	J
Surrogate: o-Terphenyl (Surr)		Recovery: 90 %		Limits: 50-150 %	1	09/22/23 05:25	NWTPH-Dx	
VL-EB-S-001 (A3I1236-07RE1)				Matrix: Soil		Batch: 23I0784		
Diesel	ND	13.1	26.3	mg/kg dry	1	09/26/23 20:55	NWTPH-Dx	
Oil	ND	26.3	52.6	mg/kg dry	1	09/26/23 20:55	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 83 %		Limits: 50-150 %	1	09/26/23 20:55	NWTPH-Dx	

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ORELAP ID: OR100062**Maul Foster & Alongi, INC.**3140 NE Broadway Street
Portland, OR 97232Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I1236 - 11 22 23 1603****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
VL-EB-S-002 (A3I1236-08RE1)				Matrix: Soil		Batch: 23I0784		
Diesel	13.4	12.5	25.0	mg/kg dry	1	09/26/23 21:18	NWTPH-Dx	J
Oil	ND	25.0	50.0	mg/kg dry	1	09/26/23 21:18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 81 %		Limits: 50-150 %	1	09/26/23 21:18	NWTPH-Dx	
VL-EB-S-003 (A3I1236-09RE1)				Matrix: Soil		Batch: 23I0784		
Diesel	ND	13.6	27.1	mg/kg dry	1	09/26/23 21:42	NWTPH-Dx	
Oil	ND	27.1	54.3	mg/kg dry	1	09/26/23 21:42	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 83 %		Limits: 50-150 %	1	09/26/23 21:42	NWTPH-Dx	
VL-EB-S-004 (A3I1236-10RE1)				Matrix: Soil		Batch: 23I0784		
Diesel	ND	13.1	26.1	mg/kg dry	1	09/26/23 22:05	NWTPH-Dx	
Oil	ND	26.1	52.3	mg/kg dry	1	09/26/23 22:05	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 58 %		Limits: 50-150 %	1	09/26/23 22:05	NWTPH-Dx	
VL-SWN-S5-12.0 (A3I1236-11RE1)				Matrix: Soil		Batch: 23I0784		
Diesel	27.7	13.9	27.7	mg/kg dry	1	09/26/23 22:28	NWTPH-Dx	F-13
Oil	ND	27.7	55.4	mg/kg dry	1	09/26/23 22:28	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 78 %		Limits: 50-150 %	1	09/26/23 22:28	NWTPH-Dx	

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Portland, OR 97232Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I1236 - 11 22 23 1603

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VL-SWW-S1-8.0 (A3I1236-01)		Matrix: Soil			Batch: 23I0624			
Gasoline Range Organics	ND	2.47	4.94	mg/kg dry	50	09/20/23 22:15	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 103 %	Limits: 50-150 %	1	09/20/23 22:15	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		106 %	50-150 %	1	09/20/23 22:15	NWTPH-Gx (MS)		
VL-SWW-S2-10.0 (A3I1236-02)		Matrix: Soil			Batch: 23I0624			
Gasoline Range Organics	12.9	3.21	6.42	mg/kg dry	50	09/20/23 17:07	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 101 %	Limits: 50-150 %	1	09/20/23 17:07	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		105 %	50-150 %	1	09/20/23 17:07	NWTPH-Gx (MS)		
VL-SWW-S3-8.5 (A3I1236-03)		Matrix: Soil			Batch: 23I0624			
Gasoline Range Organics	20.1	2.57	5.14	mg/kg dry	50	09/20/23 17:58	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 98 %	Limits: 50-150 %	1	09/20/23 17:58	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		104 %	50-150 %	1	09/20/23 17:58	NWTPH-Gx (MS)		
VL-SWW-S4-10.0 (A3I1236-04)		Matrix: Soil			Batch: 23I0624			
Gasoline Range Organics	14.7	4.10	8.20	mg/kg dry	50	09/20/23 18:24	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 103 %	Limits: 50-150 %	1	09/20/23 18:24	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		105 %	50-150 %	1	09/20/23 18:24	NWTPH-Gx (MS)		
VL-SP-CS-002 (A3I1236-05)		Matrix: Soil			Batch: 23I0624			
Gasoline Range Organics	ND	2.74	5.48	mg/kg dry	50	09/20/23 18:50	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 100 %	Limits: 50-150 %	1	09/20/23 18:50	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		105 %	50-150 %	1	09/20/23 18:50	NWTPH-Gx (MS)		
VL-SP-CS-003 (A3I1236-06)		Matrix: Soil			Batch: 23I0624			
Gasoline Range Organics	ND	3.18	6.35	mg/kg dry	50	09/20/23 19:15	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 98 %	Limits: 50-150 %	1	09/20/23 19:15	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		106 %	50-150 %	1	09/20/23 19:15	NWTPH-Gx (MS)		
VL-EB-S-001 (A3I1236-07)		Matrix: Soil			Batch: 23I0624			
Gasoline Range Organics	ND	3.32	6.65	mg/kg dry	50	09/20/23 19:41	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 102 %	Limits: 50-150 %	1	09/20/23 19:41	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		105 %	50-150 %	1	09/20/23 19:41	NWTPH-Gx (MS)		

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I1236 - 11 22 23 1603

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VL-EB-S-002 (A3I1236-08)		Matrix: Soil			Batch: 23I0624			
Gasoline Range Organics	ND	3.43	6.85	mg/kg dry	50	09/20/23 20:07	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 103 %	Limits: 50-150 %	1	09/20/23 20:07	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		105 %	50-150 %	1	09/20/23 20:07	NWTPH-Gx (MS)		
VL-EB-S-003 (A3I1236-09)		Matrix: Soil			Batch: 23I0624			
Gasoline Range Organics	ND	4.13	8.26	mg/kg dry	50	09/20/23 20:32	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 102 %	Limits: 50-150 %	1	09/20/23 20:32	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		107 %	50-150 %	1	09/20/23 20:32	NWTPH-Gx (MS)		
VL-EB-S-004 (A3I1236-10)		Matrix: Soil			Batch: 23I0624			
Gasoline Range Organics	ND	3.69	7.38	mg/kg dry	50	09/20/23 20:58	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 101 %	Limits: 50-150 %	1	09/20/23 20:58	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		107 %	50-150 %	1	09/20/23 20:58	NWTPH-Gx (MS)		
VL-SWN-S5-12.0 (A3I1236-11)		Matrix: Soil			Batch: 23I0624			
Gasoline Range Organics	619	6.89	13.8	mg/kg dry	100	09/20/23 21:24	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 108 %	Limits: 50-150 %	1	09/20/23 21:24	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		106 %	50-150 %	1	09/20/23 21:24	NWTPH-Gx (MS)		

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ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I1236 - 11 22 23 1603**

ANALYTICAL SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VL-SWW-S1-8.0 (A3I1236-01)		Matrix: Soil			Batch: 23I0624			
Benzene	ND	4.94	9.89	ug/kg dry	50	09/20/23 22:15	5035A/8260D	
Toluene	ND	24.7	49.4	ug/kg dry	50	09/20/23 22:15	5035A/8260D	
Ethylbenzene	ND	12.4	24.7	ug/kg dry	50	09/20/23 22:15	5035A/8260D	
Xylenes, total	ND	37.1	74.2	ug/kg dry	50	09/20/23 22:15	5035A/8260D	
Naphthalene	ND	49.4	98.9	ug/kg dry	50	09/20/23 22:15	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/20/23 22:15</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/20/23 22:15</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>	<i>1</i>	<i>09/20/23 22:15</i>	<i>5035A/8260D</i>	
VL-SWW-S2-10.0 (A3I1236-02)		Matrix: Soil			Batch: 23I0624			
Benzene	ND	6.42	12.8	ug/kg dry	50	09/20/23 17:07	5035A/8260D	
Toluene	ND	32.1	64.2	ug/kg dry	50	09/20/23 17:07	5035A/8260D	
Ethylbenzene	ND	16.0	32.1	ug/kg dry	50	09/20/23 17:07	5035A/8260D	
Xylenes, total	ND	48.1	96.2	ug/kg dry	50	09/20/23 17:07	5035A/8260D	
Naphthalene	ND	64.2	128	ug/kg dry	50	09/20/23 17:07	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/20/23 17:07</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/20/23 17:07</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>	<i>1</i>	<i>09/20/23 17:07</i>	<i>5035A/8260D</i>	
VL-SWW-S3-8.5 (A3I1236-03)		Matrix: Soil			Batch: 23I0624			
Benzene	ND	5.14	10.3	ug/kg dry	50	09/20/23 17:58	5035A/8260D	
Toluene	ND	25.7	51.4	ug/kg dry	50	09/20/23 17:58	5035A/8260D	
Ethylbenzene	ND	12.9	25.7	ug/kg dry	50	09/20/23 17:58	5035A/8260D	
Xylenes, total	ND	38.6	77.1	ug/kg dry	50	09/20/23 17:58	5035A/8260D	
Naphthalene	ND	51.4	103	ug/kg dry	50	09/20/23 17:58	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/20/23 17:58</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/20/23 17:58</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>	<i>1</i>	<i>09/20/23 17:58</i>	<i>5035A/8260D</i>	
VL-SWW-S4-10.0 (A3I1236-04)		Matrix: Soil			Batch: 23I0624			
Benzene	ND	8.20	16.4	ug/kg dry	50	09/20/23 18:24	5035A/8260D	
Toluene	ND	41.0	82.0	ug/kg dry	50	09/20/23 18:24	5035A/8260D	
Ethylbenzene	ND	20.5	41.0	ug/kg dry	50	09/20/23 18:24	5035A/8260D	
Xylenes, total	ND	61.5	123	ug/kg dry	50	09/20/23 18:24	5035A/8260D	

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Portland, OR 97232Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I1236 - 11 22 23 1603

ANALYTICAL SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VL-SWW-S4-10.0 (A3I1236-04)		Matrix: Soil			Batch: 23I0624			
Naphthalene	ND	82.0	164	ug/kg dry	50	09/20/23 18:24	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	98 %	Limits:	80-120 %	1	09/20/23 18:24	5035A/8260D
Toluene-d8 (Surr)			99 %		80-120 %	1	09/20/23 18:24	5035A/8260D
4-Bromofluorobenzene (Surr)			100 %		79-120 %	1	09/20/23 18:24	5035A/8260D
VL-SP-CS-002 (A3I1236-05)		Matrix: Soil			Batch: 23I0624			
Benzene	ND	5.48	11.0	ug/kg dry	50	09/20/23 18:50	5035A/8260D	
Toluene	ND	27.4	54.8	ug/kg dry	50	09/20/23 18:50	5035A/8260D	
Ethylbenzene	ND	13.7	27.4	ug/kg dry	50	09/20/23 18:50	5035A/8260D	
Xylenes, total	ND	41.1	82.1	ug/kg dry	50	09/20/23 18:50	5035A/8260D	
Naphthalene	ND	54.8	110	ug/kg dry	50	09/20/23 18:50	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	97 %	Limits:	80-120 %	1	09/20/23 18:50	5035A/8260D
Toluene-d8 (Surr)			100 %		80-120 %	1	09/20/23 18:50	5035A/8260D
4-Bromofluorobenzene (Surr)			101 %		79-120 %	1	09/20/23 18:50	5035A/8260D
VL-SP-CS-003 (A3I1236-06)		Matrix: Soil			Batch: 23I0624			
Benzene	ND	6.35	12.7	ug/kg dry	50	09/20/23 19:15	5035A/8260D	
Toluene	ND	31.8	63.5	ug/kg dry	50	09/20/23 19:15	5035A/8260D	
Ethylbenzene	ND	15.9	31.8	ug/kg dry	50	09/20/23 19:15	5035A/8260D	
Xylenes, total	ND	47.6	95.3	ug/kg dry	50	09/20/23 19:15	5035A/8260D	
Naphthalene	ND	63.5	127	ug/kg dry	50	09/20/23 19:15	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	98 %	Limits:	80-120 %	1	09/20/23 19:15	5035A/8260D
Toluene-d8 (Surr)			101 %		80-120 %	1	09/20/23 19:15	5035A/8260D
4-Bromofluorobenzene (Surr)			99 %		79-120 %	1	09/20/23 19:15	5035A/8260D
VL-EB-S-001 (A3I1236-07)		Matrix: Soil			Batch: 23I0624			
Benzene	ND	6.65	13.3	ug/kg dry	50	09/20/23 19:41	5035A/8260D	
Toluene	ND	33.2	66.5	ug/kg dry	50	09/20/23 19:41	5035A/8260D	
Ethylbenzene	ND	16.6	33.2	ug/kg dry	50	09/20/23 19:41	5035A/8260D	
Xylenes, total	ND	49.8	99.7	ug/kg dry	50	09/20/23 19:41	5035A/8260D	
Naphthalene	ND	66.5	133	ug/kg dry	50	09/20/23 19:41	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	98 %	Limits:	80-120 %	1	09/20/23 19:41	5035A/8260D
Toluene-d8 (Surr)			99 %		80-120 %	1	09/20/23 19:41	5035A/8260D
4-Bromofluorobenzene (Surr)			100 %		79-120 %	1	09/20/23 19:41	5035A/8260D

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Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062Maul Foster & Alongi, INC.3140 NE Broadway Street
Portland, OR 97232Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I1236 - 11 22 23 1603

ANALYTICAL SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VL-EB-S-002 (A3I1236-08)		Matrix: Soil			Batch: 23I0624			
Benzene	ND	6.85	13.7	ug/kg dry	50	09/20/23 20:07	5035A/8260D	
Toluene	ND	34.3	68.5	ug/kg dry	50	09/20/23 20:07	5035A/8260D	
Ethylbenzene	ND	17.1	34.3	ug/kg dry	50	09/20/23 20:07	5035A/8260D	
Xylenes, total	ND	51.4	103	ug/kg dry	50	09/20/23 20:07	5035A/8260D	
Naphthalene	ND	68.5	137	ug/kg dry	50	09/20/23 20:07	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 98 %	Limits: 80-120 %	1	09/20/23 20:07	5035A/8260D		
Toluene-d8 (Surr)		99 %	80-120 %	1	09/20/23 20:07	5035A/8260D		
4-Bromofluorobenzene (Surr)		100 %	79-120 %	1	09/20/23 20:07	5035A/8260D		
VL-EB-S-003 (A3I1236-09)		Matrix: Soil			Batch: 23I0624			
Benzene	ND	8.26	16.5	ug/kg dry	50	09/20/23 20:32	5035A/8260D	
Toluene	ND	41.3	82.6	ug/kg dry	50	09/20/23 20:32	5035A/8260D	
Ethylbenzene	ND	20.6	41.3	ug/kg dry	50	09/20/23 20:32	5035A/8260D	
Xylenes, total	ND	61.9	124	ug/kg dry	50	09/20/23 20:32	5035A/8260D	
Naphthalene	ND	82.6	165	ug/kg dry	50	09/20/23 20:32	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 99 %	Limits: 80-120 %	1	09/20/23 20:32	5035A/8260D		
Toluene-d8 (Surr)		98 %	80-120 %	1	09/20/23 20:32	5035A/8260D		
4-Bromofluorobenzene (Surr)		100 %	79-120 %	1	09/20/23 20:32	5035A/8260D		
VL-EB-S-004 (A3I1236-10)		Matrix: Soil			Batch: 23I0624			
Benzene	ND	7.38	14.8	ug/kg dry	50	09/20/23 20:58	5035A/8260D	
Toluene	ND	36.9	73.8	ug/kg dry	50	09/20/23 20:58	5035A/8260D	
Ethylbenzene	ND	18.5	36.9	ug/kg dry	50	09/20/23 20:58	5035A/8260D	
Xylenes, total	ND	55.4	111	ug/kg dry	50	09/20/23 20:58	5035A/8260D	
Naphthalene	ND	73.8	148	ug/kg dry	50	09/20/23 20:58	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 98 %	Limits: 80-120 %	1	09/20/23 20:58	5035A/8260D		
Toluene-d8 (Surr)		100 %	80-120 %	1	09/20/23 20:58	5035A/8260D		
4-Bromofluorobenzene (Surr)		100 %	79-120 %	1	09/20/23 20:58	5035A/8260D		
VL-SWN-S5-12.0 (A3I1236-11)		Matrix: Soil			Batch: 23I0624			
Benzene	ND	13.8	27.5	ug/kg dry	100	09/20/23 21:24	5035A/8260D	
Toluene	ND	68.9	138	ug/kg dry	100	09/20/23 21:24	5035A/8260D	
Ethylbenzene	303	34.4	68.9	ug/kg dry	100	09/20/23 21:24	5035A/8260D	

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I1236 - 11 22 23 1603

ANALYTICAL SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VL-SWN-S5-12.0 (A3I1236-11)				Matrix: Soil		Batch: 23I0624		
Xylenes, total	749	103	207	ug/kg dry	100	09/20/23 21:24	5035A/8260D	
Naphthalene	444	138	275	ug/kg dry	100	09/20/23 21:24	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	98 %	Limits: 80-120 %	1	09/20/23 21:24	5035A/8260D	
Toluene-d8 (Surr)			98 %	80-120 %	1	09/20/23 21:24	5035A/8260D	
4-Bromofluorobenzene (Surr)			98 %	79-120 %	1	09/20/23 21:24	5035A/8260D	

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Project Manager: **David Weatherby**

Report ID:

A3I1236 - 11 22 23 1603

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VL-SWW-S1-8.0 (A3I1236-01)				Matrix: Soil		Batch: 23I0626		
% Solids	84.1	1.00	1.00	%	1	09/21/23 07:45	EPA 8000D	
VL-SWW-S2-10.0 (A3I1236-02)				Matrix: Soil		Batch: 23I0626		
% Solids	75.5	1.00	1.00	%	1	09/21/23 07:45	EPA 8000D	
VL-SWW-S3-8.5 (A3I1236-03)				Matrix: Soil		Batch: 23I0626		
% Solids	82.3	1.00	1.00	%	1	09/21/23 07:45	EPA 8000D	
VL-SWW-S4-10.0 (A3I1236-04)				Matrix: Soil		Batch: 23I0626		
% Solids	69.0	1.00	1.00	%	1	09/21/23 07:45	EPA 8000D	
VL-SP-CS-002 (A3I1236-05)				Matrix: Soil		Batch: 23I0626		
% Solids	83.8	1.00	1.00	%	1	09/21/23 07:45	EPA 8000D	
VL-SP-CS-003 (A3I1236-06)				Matrix: Soil		Batch: 23I0626		
% Solids	83.8	1.00	1.00	%	1	09/21/23 07:45	EPA 8000D	
VL-EB-S-001 (A3I1236-07)				Matrix: Soil		Batch: 23I0626		
% Solids	74.7	1.00	1.00	%	1	09/21/23 07:45	EPA 8000D	
VL-EB-S-002 (A3I1236-08)				Matrix: Soil		Batch: 23I0626		
% Solids	73.6	1.00	1.00	%	1	09/21/23 07:45	EPA 8000D	
VL-EB-S-003 (A3I1236-09)				Matrix: Soil		Batch: 23I0626		
% Solids	72.2	1.00	1.00	%	1	09/21/23 07:45	EPA 8000D	
VL-EB-S-004 (A3I1236-10)				Matrix: Soil		Batch: 23I0626		
% Solids	73.1	1.00	1.00	%	1	09/21/23 07:45	EPA 8000D	
VL-SWN-S5-12.0 (A3I1236-11)				Matrix: Soil		Batch: 23I0626		
% Solids	71.9	1.00	1.00	%	1	09/21/23 07:45	EPA 8000D	

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503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I1236 - 11 22 23 1603**

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 23I0661 - EPA 3546 (Fuels)						Soil						
Blank (23I0661-BLK1)			Prepared: 09/21/23 09:06 Analyzed: 09/22/23 00:36									
NWTPH-Dx												
Diesel	ND	10.0	20.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	20.0	40.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 84 %		Limits: 50-150 %		Dilution: 1x						
LCS (23I0661-BS1)			Prepared: 09/21/23 09:06 Analyzed: 09/22/23 00:57									
NWTPH-Dx												
Diesel	114	10.0	20.0	mg/kg wet	1	125	---	91	38-132%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 91 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (23I0661-DUP1)			Prepared: 09/21/23 09:06 Analyzed: 09/22/23 01:38									
QC Source Sample: Non-SDG (A3I0996-04)												
Diesel	ND	11.8	23.7	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	23.7	47.3	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 68 %		Limits: 50-150 %		Dilution: 1x						
Batch 23I0784 - EPA 3546 (Fuels)						Soil						
Blank (23I0784-BLK2)			Prepared: 09/25/23 10:23 Analyzed: 09/26/23 18:11									
NWTPH-Dx												
Diesel	ND	10.0	20.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	20.0	40.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 88 %		Limits: 50-150 %		Dilution: 1x						
LCS (23I0784-BS2)			Prepared: 09/25/23 10:23 Analyzed: 09/26/23 18:34									
NWTPH-Dx												
Diesel	105	10.0	20.0	mg/kg wet	1	125	---	84	38-132%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 90 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (23I0784-DUP3)			Prepared: 09/25/23 10:23 Analyzed: 09/26/23 19:21									
QC Source Sample: VL-SWW-S1-8.0 (A3I1236-01RE1)												
NWTPH-Dx												
Diesel	ND	11.0	22.1	mg/kg dry	1	---	ND	---	---	---	30%	

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503-718-2323

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3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I1236 - 11 22 23 1603**

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 23I0784 - EPA 3546 (Fuels)						Soil						
Duplicate (23I0784-DUP3)			Prepared: 09/25/23 10:23 Analyzed: 09/26/23 19:21									
QC Source Sample: VL-SWW-S1-8.0 (A3I1236-01RE1)												
Oil	ND	22.1	44.1	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 90 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (23I0784-DUP4)			Prepared: 09/25/23 10:23 Analyzed: 09/27/23 03:55									
QC Source Sample: Non-SDG (A3I1301-02RE1)												
Diesel	1570	137	275	mg/kg dry	10	---	2250	---	---	36	30%	F-15, Q-04
Oil	1140	275	550	mg/kg dry	10	---	1660	---	---	37	30%	F-16, Q-04
Surr: o-Terphenyl (Surr)		Recovery: 54 %		Limits: 50-150 %		Dilution: 10x						

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QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23I0624 - EPA 5035A						Soil						
Blank (23I0624-BLK1)			Prepared: 09/20/23 11:54 Analyzed: 09/20/23 13:14									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	2.50	5.00	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 98 %	Limits: 50-150 %			Dilution: 1x					
1,4-Difluorobenzene (Sur)			106 %	50-150 %			"					
LCS (23I0624-BS2)			Prepared: 09/20/23 11:54 Analyzed: 09/20/23 12:44									
NWTPH-Gx (MS)												
Gasoline Range Organics	27.5	2.50	5.00	mg/kg wet	50	25.0	---	110	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 95 %	Limits: 50-150 %			Dilution: 1x					
1,4-Difluorobenzene (Sur)			105 %	50-150 %			"					
Duplicate (23I0624-DUP1)			Prepared: 09/19/23 14:35 Analyzed: 09/20/23 17:32									
QC Source Sample: VL-SWW-S2-10.0 (A3I1236-02)												
NWTPH-Gx (MS)												
Gasoline Range Organics	11.8	3.21	6.42	mg/kg dry	50	---	12.9	---	---	9	30%	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 101 %	Limits: 50-150 %			Dilution: 1x					
1,4-Difluorobenzene (Sur)			104 %	50-150 %			"					
Duplicate (23I0624-DUP2)			Prepared: 09/19/23 16:45 Analyzed: 09/20/23 21:50									
QC Source Sample: VL-SWN-S5-12.0 (A3I1236-11)												
NWTPH-Gx (MS)												
Gasoline Range Organics	602	6.89	13.8	mg/kg dry	100	---	619	---	---	3	30%	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 101 %	Limits: 50-150 %			Dilution: 1x					
1,4-Difluorobenzene (Sur)			106 %	50-150 %			"					

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ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I1236 - 11 22 23 1603**

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23I0624 - EPA 5035A						Soil						
Blank (23I0624-BLK1)			Prepared: 09/20/23 11:54		Analyzed: 09/20/23 13:14							
5035A/8260D												
Benzene	ND	5.00	10.0	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	12.5	25.0	ug/kg wet	50	---	---	---	---	---	---	
Xylenes, total	ND	37.5	75.0	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	50.0	100	ug/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 98 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		100 %		79-120 %		"						
LCS (23I0624-BS1)						Prepared: 09/20/23 11:54		Analyzed: 09/20/23 12:18				
5035A/8260D												
Benzene	1010	5.00	10.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Toluene	1000	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Ethylbenzene	1000	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Xylenes, total	3060	37.5	75.0	ug/kg wet	50	3000	---	102	80-120%	---	---	
Naphthalene	915	50.0	100	ug/kg wet	50	1000	---	92	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 97 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		98 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		99 %		79-120 %		"						
Duplicate (23I0624-DUP1)						Prepared: 09/19/23 14:35		Analyzed: 09/20/23 17:32				
QC Source Sample: VL-SWW-S2-10.0 (A3I1236-02)												
5035A/8260D												
Benzene	ND	6.42	12.8	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	32.1	64.2	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	16.0	32.1	ug/kg dry	50	---	ND	---	---	---	30%	
Xylenes, total	ND	48.1	96.2	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	64.2	128	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 98 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		99 %		79-120 %		"						

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QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23I0624 - EPA 5035A						Soil						
Duplicate (23I0624-DUP2)			Prepared: 09/19/23 16:45 Analyzed: 09/20/23 21:50									
QC Source Sample: VL-SWN-S5-12.0 (A3I1236-11)												
5035A/8260D												
Benzene	ND	13.8	27.5	ug/kg dry	100	---	ND	---	---	---	30%	
Toluene	ND	68.9	138	ug/kg dry	100	---	ND	---	---	---	30%	
Ethylbenzene	298	34.4	68.9	ug/kg dry	100	---	303	---	---	2	30%	
Xylenes, total	716	103	207	ug/kg dry	100	---	749	---	---	5	30%	
Naphthalene	460	138	275	ug/kg dry	100	---	444	---	---	4	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 99 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		97 %		79-120 %		"						
Matrix Spike (23I0624-MS1)						Prepared: 09/19/23 14:27 Analyzed: 09/20/23 22:41						
QC Source Sample: VL-SWW-S1-8.0 (A3I1236-01)												
5035A/8260D												
Benzene	1060	4.94	9.89	ug/kg dry	50	989	ND	108	77-121%	---	---	
Toluene	1060	24.7	49.4	ug/kg dry	50	989	ND	107	77-121%	---	---	
Ethylbenzene	1060	12.4	24.7	ug/kg dry	50	989	ND	107	76-122%	---	---	
Xylenes, total	3160	37.1	74.2	ug/kg dry	50	2970	ND	106	78-124%	---	---	
Naphthalene	901	49.4	98.9	ug/kg dry	50	989	ND	91	62-129%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 98 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		79-120 %		"						

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: RedlandProject Number: **0106.37.001**Project Manager: **David Weatherby**Report ID:**A3I1236 - 11 22 23 1603**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23I0626 - Total Solids (Dry Weight) - 2022							Soil					
Duplicate (23I0626-DUP1)			Prepared: 09/20/23 10:53 Analyzed: 09/21/23 07:45									
<u>QC Source Sample: Non-SDG (A3I1204-01)</u>												
% Solids	94.0	1.00	1.00	%	1	---	92.1	---	---	2	10%	
Duplicate (23I0626-DUP2)			Prepared: 09/20/23 10:53 Analyzed: 09/21/23 07:45									
<u>QC Source Sample: Non-SDG (A3I1204-02)</u>												
% Solids	89.5	1.00	1.00	%	1	---	90.1	---	---	0.6	10%	
Duplicate (23I0626-DUP3)			Prepared: 09/20/23 10:53 Analyzed: 09/21/23 07:45									
<u>QC Source Sample: Non-SDG (A3I1204-03)</u>												
% Solids	93.7	1.00	1.00	%	1	---	91.6	---	---	2	10%	
Duplicate (23I0626-DUP4)			Prepared: 09/20/23 10:53 Analyzed: 09/21/23 07:45									
<u>QC Source Sample: Non-SDG (A3I1204-04)</u>												
% Solids	89.5	1.00	1.00	%	1	---	89.1	---	---	0.4	10%	
Duplicate (23I0626-DUP5)			Prepared: 09/20/23 10:53 Analyzed: 09/21/23 07:45									
<u>QC Source Sample: Non-SDG (A3I1204-05)</u>												
% Solids	89.9	1.00	1.00	%	1	---	90.5	---	---	0.7	10%	
Duplicate (23I0626-DUP6)			Prepared: 09/20/23 10:53 Analyzed: 09/21/23 07:45									
<u>QC Source Sample: Non-SDG (A3I1204-06)</u>												
% Solids	90.4	1.00	1.00	%	1	---	92.2	---	---	2	10%	
Duplicate (23I0626-DUP7)			Prepared: 09/20/23 10:53 Analyzed: 09/21/23 07:45									
<u>QC Source Sample: Non-SDG (A3I1204-07)</u>												
% Solids	88.2	1.00	1.00	%	1	---	87.0	---	---	1	10%	
Duplicate (23I0626-DUP8)			Prepared: 09/20/23 10:53 Analyzed: 09/21/23 07:45									
<u>QC Source Sample: Non-SDG (A3I1204-08)</u>												
% Solids	88.3	1.00	1.00	%	1	---	89.5	---	---	1	10%	

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Philip Nerenberg, Lab Director

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Maul Foster & Alongi, INC.

3140 NE Broadway Street
Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I1236 - 11 22 23 1603

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23I0626 - Total Solids (Dry Weight) - 2022							Soil					
Duplicate (23I0626-DUP9)			Prepared: 09/20/23 10:53 Analyzed: 09/21/23 07:45									
QC Source Sample: Non-SDG (A3I1204-09)												
% Solids	87.0	1.00	1.00	%	1	---	86.4	---	---	0.6	10%	

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

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3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I1236 - 11 22 23 1603**

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 2310661							
A3I1236-05	Soil	NWTPH-Dx	09/19/23 15:20	09/21/23 09:06	10.31g/5mL	10g/5mL	0.97
A3I1236-06	Soil	NWTPH-Dx	09/19/23 15:25	09/21/23 09:06	10.3g/5mL	10g/5mL	0.97
Batch: 2310784							
A3I1236-01RE1	Soil	NWTPH-Dx	09/19/23 14:27	09/25/23 10:23	10.16g/5mL	10g/5mL	0.98
A3I1236-02RE1	Soil	NWTPH-Dx	09/19/23 14:35	09/25/23 10:23	10.12g/5mL	10g/5mL	0.99
A3I1236-03RE1	Soil	NWTPH-Dx	09/19/23 14:42	09/25/23 10:23	10.18g/5mL	10g/5mL	0.98
A3I1236-04RE1	Soil	NWTPH-Dx	09/19/23 14:48	09/25/23 10:23	10.28g/5mL	10g/5mL	0.97
A3I1236-07RE1	Soil	NWTPH-Dx	09/19/23 16:03	09/25/23 10:23	10.19g/5mL	10g/5mL	0.98
A3I1236-08RE1	Soil	NWTPH-Dx	09/19/23 16:13	09/25/23 10:23	10.88g/5mL	10g/5mL	0.92
A3I1236-09RE1	Soil	NWTPH-Dx	09/19/23 16:24	09/25/23 10:23	10.21g/5mL	10g/5mL	0.98
A3I1236-10RE1	Soil	NWTPH-Dx	09/19/23 16:38	09/25/23 10:23	10.46g/5mL	10g/5mL	0.96
A3I1236-11RE1	Soil	NWTPH-Dx	09/19/23 16:45	09/25/23 10:23	10.04g/5mL	10g/5mL	1.00

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

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 2310624							
A3I1236-01	Soil	NWTPH-Gx (MS)	09/19/23 14:27	09/19/23 14:27	7.43g/5mL	5g/5mL	0.67
A3I1236-02	Soil	NWTPH-Gx (MS)	09/19/23 14:35	09/19/23 14:35	6.9g/5mL	5g/5mL	0.73
A3I1236-03	Soil	NWTPH-Gx (MS)	09/19/23 14:42	09/19/23 14:42	7.47g/5mL	5g/5mL	0.67
A3I1236-04	Soil	NWTPH-Gx (MS)	09/19/23 14:48	09/19/23 14:48	6.08g/5mL	5g/5mL	0.82
A3I1236-05	Soil	NWTPH-Gx (MS)	09/19/23 15:20	09/19/23 15:20	6.61g/5mL	5g/5mL	0.76
A3I1236-06	Soil	NWTPH-Gx (MS)	09/19/23 15:25	09/19/23 15:25	5.54g/5mL	5g/5mL	0.90
A3I1236-07	Soil	NWTPH-Gx (MS)	09/19/23 16:03	09/19/23 16:03	6.76g/5mL	5g/5mL	0.74
A3I1236-08	Soil	NWTPH-Gx (MS)	09/19/23 16:13	09/19/23 16:13	6.72g/5mL	5g/5mL	0.74
A3I1236-09	Soil	NWTPH-Gx (MS)	09/19/23 16:24	09/19/23 16:24	5.47g/5mL	5g/5mL	0.91
A3I1236-10	Soil	NWTPH-Gx (MS)	09/19/23 16:38	09/19/23 16:38	6.16g/5mL	5g/5mL	0.81
A3I1236-11	Soil	NWTPH-Gx (MS)	09/19/23 16:45	09/19/23 16:45	7.05g/5mL	5g/5mL	0.71

BTEX+N Compounds by EPA 8260D

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 2310624							
A3I1236-01	Soil	5035A/8260D	09/19/23 14:27	09/19/23 14:27	7.43g/5mL	5g/5mL	0.67

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3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I1236 - 11 22 23 1603**

SAMPLE PREPARATION INFORMATION

BTEX+N Compounds by EPA 8260D

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A3I1236-02	Soil	5035A/8260D	09/19/23 14:35	09/19/23 14:35	6.9g/5mL	5g/5mL	0.73
A3I1236-03	Soil	5035A/8260D	09/19/23 14:42	09/19/23 14:42	7.47g/5mL	5g/5mL	0.67
A3I1236-04	Soil	5035A/8260D	09/19/23 14:48	09/19/23 14:48	6.08g/5mL	5g/5mL	0.82
A3I1236-05	Soil	5035A/8260D	09/19/23 15:20	09/19/23 15:20	6.61g/5mL	5g/5mL	0.76
A3I1236-06	Soil	5035A/8260D	09/19/23 15:25	09/19/23 15:25	5.54g/5mL	5g/5mL	0.90
A3I1236-07	Soil	5035A/8260D	09/19/23 16:03	09/19/23 16:03	6.76g/5mL	5g/5mL	0.74
A3I1236-08	Soil	5035A/8260D	09/19/23 16:13	09/19/23 16:13	6.72g/5mL	5g/5mL	0.74
A3I1236-09	Soil	5035A/8260D	09/19/23 16:24	09/19/23 16:24	5.47g/5mL	5g/5mL	0.91
A3I1236-10	Soil	5035A/8260D	09/19/23 16:38	09/19/23 16:38	6.16g/5mL	5g/5mL	0.81
A3I1236-11	Soil	5035A/8260D	09/19/23 16:45	09/19/23 16:45	7.05g/5mL	5g/5mL	0.71

Percent Dry Weight

Prep: Total Solids (Dry Weight) - 2022

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23I0626							
A3I1236-01	Soil	EPA 8000D	09/19/23 14:27	09/20/23 10:53			NA
A3I1236-02	Soil	EPA 8000D	09/19/23 14:35	09/20/23 10:53			NA
A3I1236-03	Soil	EPA 8000D	09/19/23 14:42	09/20/23 10:53			NA
A3I1236-04	Soil	EPA 8000D	09/19/23 14:48	09/20/23 10:53			NA
A3I1236-05	Soil	EPA 8000D	09/19/23 15:20	09/20/23 10:53			NA
A3I1236-06	Soil	EPA 8000D	09/19/23 15:25	09/20/23 10:53			NA
A3I1236-07	Soil	EPA 8000D	09/19/23 16:03	09/20/23 10:53			NA
A3I1236-08	Soil	EPA 8000D	09/19/23 16:13	09/20/23 10:53			NA
A3I1236-09	Soil	EPA 8000D	09/19/23 16:24	09/20/23 10:53			NA
A3I1236-10	Soil	EPA 8000D	09/19/23 16:38	09/20/23 10:53			NA
A3I1236-11	Soil	EPA 8000D	09/19/23 16:45	09/20/23 10:53			NA

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Project: **Redland**

Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A3I1236 - 11 22 23 1603

QUALIFIER DEFINITIONS

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

Apex Laboratories

- F-03** The result for this hydrocarbon range is elevated due to the presence of individual analyte peaks in the quantitation range that are not representative of the fuel pattern reported.
- F-13** The chromatographic pattern does not resemble the fuel standard used for quantitation
- F-15** Results for diesel are estimated due to overlap from the reported oil result.
- F-16** Results for oil are estimated due to overlap from the reported diesel result.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- Q-04** Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- S-05** Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

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

Detection Limits: Limit of Detection (LOD)

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

Reporting Limits: Limit of Quantitation (LOQ)

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

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.

The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

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

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

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

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 ½ the Reporting Limit (RL).

-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-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

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Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A3I1236 - 11 22 23 1603

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
<u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u>					

Secondary Accreditations

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

Subcontract Laboratory Accreditations

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

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

Field Testing Parameters

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

Apex Laboratories

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Maul Foster & Alongi, INC.

3140 NE Broadway Street
Portland, OR 97232

Project: RedlandProject Number: 0106.37.001Project Manager: David Weatherby

Report ID:

A311236 - 11 22 23 1603

APEX LABS		CHAIN OF CUSTODY		Lab # <u>B31136006 (old)</u>	
Company: <u>MFA</u>	Project Mgr: <u>D. Weatherby</u>	Project Name: <u>Redlands</u>	Project #: <u>0106.37.001</u>		
Address: <u>3140 NE Broadway St. Tigard, OR</u>	Phone: <u>503-718-2323</u>	Email: <u>David Weatherby@maul-foster.com</u>	PO #		
Sampled by: <u>K. Crossin</u>	ANALYSIS REQUEST				
Site Location:					
State: <u>OR</u>					
County:					
SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID
<u>VL-SW-82-8.0</u>	<u>09/20</u>	<u>1427</u>	<u>S</u>	<u>3</u>	<u>X</u>
<u>VL-SW-82-10.0</u>	<u>1435</u>	<u>1435</u>	<u>S</u>	<u>3</u>	<u>1</u>
<u>VL-SW-83-8.5</u>	<u>1442</u>	<u>1442</u>	<u>S</u>	<u>3</u>	<u>1</u>
<u>VL-SW-84-10.0</u>	<u>1448</u>	<u>1448</u>	<u>S</u>	<u>3</u>	<u>1</u>
<u>VL-SP-CS-002</u>	<u>1520</u>	<u>1520</u>	<u>S</u>	<u>3</u>	<u>1</u>
<u>VL-SP-CS-003</u>	<u>1525</u>	<u>1525</u>	<u>S</u>	<u>3</u>	<u>1</u>
<u>VL-EB-S-001</u>	<u>1603</u>	<u>1603</u>	<u>S</u>	<u>3</u>	<u>1</u>
<u>VL-EB-S-002</u>	<u>1613</u>	<u>1613</u>	<u>S</u>	<u>3</u>	<u>1</u>
<u>VL-EB-S-003</u>	<u>1624</u>	<u>1624</u>	<u>S</u>	<u>3</u>	<u>1</u>
<u>VL-EB-S-004</u>	<u>1638</u>	<u>1638</u>	<u>S</u>	<u>3</u>	<u>1</u>
Standard Turn Around Time (TAT) = 10 Business Days					
TAT Requested (circle) <u>5 Day</u> Standard Other: _____					
SPECIAL INSTRUCTIONS: <u>VL-SP-CS-002 > 3 day TAT</u> <u>VL-SP-CS-003</u>					
RECEIVED BY: <u>[Signature]</u> Date: <u>09/23</u>			RECEIVED BY: _____ Date: _____		
Signature: <u>[Signature]</u>			Signature: _____		
Printed Name: <u>Kieron Crossin</u>			Printed Name: _____		
Time: <u>1710</u>			Time: _____		
Company: <u>MFA</u>			Company: _____		
Form Y-002 R-00					

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I1236 - 11 22 23 1603****APEX LABS COOLER RECEIPT FORM**Client: MFA Element WO#: A3 I1236Project/Project #: Redlands / 0106-37.001**Delivery Info:**Date/time received: 9/14/23 @ 1740 By: WDelivered by: Apex ☒ Client ☒ ESS ☐ FedEx ☐ UPS ☐ Swift ☐ Senvoy ☐ SDS ☐ Other ☐**Cooler Inspection** Date/time inspected: 9/14/23 @ 1740 By: WChain of Custody included? Yes ☒ No ☐ Custody seals? Yes ☐ No ☒Signed/dated by client? Yes ☒ No ☐Signed/dated by Apex? Yes ☒ No ☐

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>1.5</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition (In/Out):	<u>In</u>						

Cooler out of temp? (Y/N) Y 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: 9/14/23 @ 18:59 By: AWAll samples intact? Yes ☒ No ☐ Comments: _____Bottle labels/COCs agree? Yes ☒ No ☐ Comments: _____COC/container discrepancies form initiated? Yes ☐ No ☒Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments: _____Do VOA vials have visible headspace? Yes ☐ No ☐ NA ☒

Comments: _____

Water samples: pH checked: Yes ☐ No ☐ NA ☒ pH appropriate? Yes ☐ No ☐ NA ☒ Strip ID: A23A348 ☐

Comments: _____

Additional information:Labeled by: RMPWitness: AWCooler Inspected by: AW

Form Y-003 R-01

Apex Laboratories

Philip Nerenberg, Lab Director

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Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Thursday, December 14, 2023

David Weatherby

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

RE: A311409 - Redland - 0106.37.001

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 A311409, which was received by the laboratory on 9/25/2023 at 3:20:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@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 0.7 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

Philip Nerenberg

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Philip Nerenberg, Lab Director



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Maul Foster & Alongi, INC.

3140 NE Broadway Street
Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I1409 - 12 14 23 1555

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VL-PIPE-SL1	A3I1409-01	Soil	09/25/23 14:30	09/25/23 15:20

Apex Laboratories

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Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I1409 - 12 14 23 1555

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
VL-PIPE-SL1 (A3I1409-01)		Matrix: Soil			Batch: 23I0978			
Diesel	318	12.9	25.7	mg/kg dry	1	09/29/23 22:05	NWTPH-Dx	F-11
Oil	ND	25.7	51.4	mg/kg dry	1	09/29/23 22:05	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 77 %		Limits: 50-150 %	1	09/29/23 22:05	NWTPH-Dx	

Apex Laboratories

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Project Manager: David Weatherby

Report ID:

A3I1409 - 12 14 23 1555

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VL-PIPE-SL1 (A3I1409-01)				Matrix: Soil		Batch: 23I0885		V-15
Gasoline Range Organics	ND	4.05	8.10	mg/kg dry	50	09/27/23 14:47	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 85 %	Limits: 50-150 %	1	09/27/23 14:47	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		105 %	50-150 %	1	09/27/23 14:47	NWTPH-Gx (MS)		

Apex Laboratories

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Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I1409 - 12 14 23 1555**

ANALYTICAL SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VL-PIPE-SL1 (A3I1409-01)		Matrix: Soil			Batch: 23I0885		V-15	
Benzene	ND	8.10	16.2	ug/kg dry	50	09/27/23 14:47	5035A/8260D	
Toluene	ND	40.5	81.0	ug/kg dry	50	09/27/23 14:47	5035A/8260D	
Ethylbenzene	ND	20.3	40.5	ug/kg dry	50	09/27/23 14:47	5035A/8260D	
Xylenes, total	ND	60.8	122	ug/kg dry	50	09/27/23 14:47	5035A/8260D	
Naphthalene	ND	81.0	162	ug/kg dry	50	09/27/23 14:47	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>108 %</i>	<i>Limits:</i>	<i>80-120 %</i>	<i>1</i>	<i>09/27/23 14:47</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>			<i>113 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/27/23 14:47</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>		<i>79-120 %</i>	<i>1</i>	<i>09/27/23 14:47</i>	<i>5035A/8260D</i>

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Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I1409 - 12 14 23 1555

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VL-PIPE-SL1 (A3I1409-01)				Matrix: Soil		Batch: 23I0821		
% Solids	76.3	1.00	1.00	%	1	09/27/23 08:15	EPA 8000D	

Apex Laboratories

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6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062**Maul Foster & Alongi, INC.**3140 NE Broadway Street
Portland, OR 97232Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I1409 - 12 14 23 1555**

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 23I0978 - EPA 3546 (Fuels)						Soil						
Blank (23I0978-BLK1)			Prepared: 09/29/23 06:08		Analyzed: 09/29/23 20:24							
NWTPH-Dx												
Diesel	ND	10.0	20.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	20.0	40.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 88 %		Limits: 50-150 %		Dilution: 1x						
LCS (23I0978-BS1)			Prepared: 09/29/23 06:08		Analyzed: 09/29/23 20:44							
NWTPH-Dx												
Diesel	117	10.0	20.0	mg/kg wet	1	125	---	94	38-132%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 92 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (23I0978-DUP1)			Prepared: 09/29/23 06:08		Analyzed: 09/29/23 21:25							
QC Source Sample: Non-SDG (A3I1266-27)												
Diesel	ND	13.2	26.4	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	26.4	52.7	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 78 %		Limits: 50-150 %		Dilution: 1x						

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Portland, OR 97232Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I1409 - 12 14 23 1555**

QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23I0885 - EPA 5035A						Soil						
Blank (23I0885-BLK1)			Prepared: 09/27/23 09:35 Analyzed: 09/27/23 14:21									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	2.50	5.00	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 95 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		99 %		50-150 %		"						
LCS (23I0885-BS2)			Prepared: 09/27/23 09:35 Analyzed: 09/27/23 13:56									
NWTPH-Gx (MS)												
Gasoline Range Organics	25.4	2.50	5.00	mg/kg wet	50	25.0	---	102	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 96 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		98 %		50-150 %		"						
Duplicate (23I0885-DUP1)			Prepared: 09/25/23 12:20 Analyzed: 09/27/23 19:51									
QC Source Sample: Non-SDG (A3I1473-01)												
Gasoline Range Organics	234	3.31	6.61	mg/kg dry	50	---	258	---	---	10	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 102 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		96 %		50-150 %		"						

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3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I1409 - 12 14 23 1555**

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 23I0885 - EPA 5035A													
Soil													
Blank (23I0885-BLK1)													
Prepared: 09/27/23 09:35 Analyzed: 09/27/23 14:21													
5035A/8260D													
Benzene	ND	5.00	10.0	ug/kg wet	50	---	---	---	---	---	---		
Toluene	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---		
Ethylbenzene	ND	12.5	25.0	ug/kg wet	50	---	---	---	---	---	---		
Xylenes, total	ND	37.5	75.0	ug/kg wet	50	---	---	---	---	---	---		
Naphthalene	ND	50.0	100	ug/kg wet	50	---	---	---	---	---	---		
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 111 %		Limits: 80-120 %		Dilution: 1x							
Toluene-d8 (Surr)		102 %		80-120 %		"							
4-Bromofluorobenzene (Surr)		107 %		79-120 %		"							
LCS (23I0885-BS1)													
Prepared: 09/27/23 09:35 Analyzed: 09/27/23 13:25													
5035A/8260D													
Benzene	1060	5.00	10.0	ug/kg wet	50	1000	---	106	80-120%	---	---		
Toluene	984	25.0	50.0	ug/kg wet	50	1000	---	98	80-120%	---	---		
Ethylbenzene	1020	12.5	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---		
Xylenes, total	3150	37.5	75.0	ug/kg wet	50	3000	---	105	80-120%	---	---		
Naphthalene	1070	50.0	100	ug/kg wet	50	1000	---	107	80-120%	---	---		
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 112 %		Limits: 80-120 %		Dilution: 1x							
Toluene-d8 (Surr)		101 %		80-120 %		"							
4-Bromofluorobenzene (Surr)		103 %		79-120 %		"							
Duplicate (23I0885-DUP1)													
Prepared: 09/25/23 12:20 Analyzed: 09/27/23 19:51													
QC Source Sample: Non-SDG (A3I1473-01)													
Benzene	ND	6.61	13.2	ug/kg dry	50	---	ND	---	---	---	30%		
Toluene	ND	33.1	66.1	ug/kg dry	50	---	ND	---	---	---	30%		
Ethylbenzene	107	16.5	33.1	ug/kg dry	50	---	112	---	---	4	30%		
Xylenes, total	66.1	49.6	99.2	ug/kg dry	50	---	69.4	---	---	5	30%		
Naphthalene	3330	66.1	132	ug/kg dry	50	---	3540	---	---	6	30%		
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 131 %		Limits: 80-120 %		Dilution: 1x							S-06
Toluene-d8 (Surr)		96 %		80-120 %		"							
4-Bromofluorobenzene (Surr)		107 %		79-120 %		"							
Matrix Spike (23I0885-MS1)													
Prepared: 09/19/23 13:30 Analyzed: 09/27/23 16:54													

Apex Laboratories

Philip Nerenberg, Lab Director

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3140 NE Broadway Street
Portland, OR 97232

Project: **Redland**

Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A3I1409 - 12 14 23 1555

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23I0885 - EPA 5035A						Soil						
Matrix Spike (23I0885-MS1)			Prepared: 09/19/23 13:30 Analyzed: 09/27/23 16:54									
QC Source Sample: Non-SDG (A3I1265-02)												
5035A/8260D												
Benzene	1110	5.08	10.2	ug/kg dry	50	1020	ND	109	77-121%	---	---	
Toluene	1040	25.4	50.8	ug/kg dry	50	1020	ND	102	77-121%	---	---	
Ethylbenzene	1080	12.7	25.4	ug/kg dry	50	1020	ND	106	76-122%	---	---	
Xylenes, total	3340	38.1	76.2	ug/kg dry	50	3060	ND	109	78-124%	---	---	
Naphthalene	1020	50.8	102	ug/kg dry	50	1020	ND	101	62-129%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 106 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		94 %		79-120 %		"						

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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ORELAP ID: OR100062Maul Foster & Alongi, INC.3140 NE Broadway Street
Portland, OR 97232Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3I1409 - 12 14 23 1555

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23I0821 - Total Solids (Dry Weight) - 2022							Soil					
Duplicate (23I0821-DUP1)			Prepared: 09/26/23 09:18 Analyzed: 09/27/23 08:15									
<u>QC Source Sample: Non-SDG (A3I1420-01)</u>												
% Solids	81.9	1.00	1.00	%	1	---	81.6	---	---	0.3	10%	
Duplicate (23I0821-DUP2)			Prepared: 09/26/23 09:18 Analyzed: 09/27/23 08:15									
<u>QC Source Sample: Non-SDG (A3I1420-02)</u>												
% Solids	72.5	1.00	1.00	%	1	---	73.5	---	---	1	10%	
Duplicate (23I0821-DUP3)			Prepared: 09/26/23 09:18 Analyzed: 09/27/23 08:15									
<u>QC Source Sample: Non-SDG (A3I1420-03)</u>												
% Solids	76.0	1.00	1.00	%	1	---	76.3	---	---	0.4	10%	
Duplicate (23I0821-DUP4)			Prepared: 09/26/23 19:10 Analyzed: 09/27/23 08:15									
<u>QC Source Sample: Non-SDG (A3I1470-01)</u>												
% Solids	81.8	1.00	1.00	%	1	---	83.1	---	---	2	10%	
Duplicate (23I0821-DUP5)			Prepared: 09/26/23 19:10 Analyzed: 09/27/23 08:15									
<u>QC Source Sample: Non-SDG (A3I1473-01)</u>												
% Solids	74.2	1.00	1.00	%	1	---	74.2	---	---	0.003	10%	
Duplicate (23I0821-DUP6)			Prepared: 09/26/23 19:10 Analyzed: 09/27/23 08:15									
<u>QC Source Sample: Non-SDG (A3I1483-02)</u>												
% Solids	94.7	1.00	1.00	%	1	---	94.4	---	---	0.3	10%	

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

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3I1409 - 12 14 23 1555**

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23I0978							
A3I1409-01	Soil	NWTPH-Dx	09/25/23 14:30	09/29/23 06:08	10.19g/5mL	10g/5mL	0.98

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

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23I0885							
A3I1409-01	Soil	NWTPH-Gx (MS)	09/25/23 14:30	09/25/23 16:20	5g/5mL	5g/5mL	1.00

BTEX+N Compounds by EPA 8260D

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23I0885							
A3I1409-01	Soil	5035A/8260D	09/25/23 14:30	09/25/23 16:20	5g/5mL	5g/5mL	1.00

Percent Dry Weight

Prep: Total Solids (Dry Weight) - 2022

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23I0821							
A3I1409-01	Soil	EPA 8000D	09/25/23 14:30	09/26/23 09:18			NA

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A3I1409 - 12 14 23 1555

QUALIFIER DEFINITIONS

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

Apex Laboratories

- F-11** The hydrocarbon pattern indicates possible weathered diesel, mineral oil, or a contribution from a related component.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- S-06** Surrogate recovery is outside of established control limits.
- V-15** Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

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

Detection Limits: Limit of Detection (LOD)

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

Reporting Limits: Limit of Quantitation (LOQ)

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

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.

The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

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

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

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

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 ½ the Reporting Limit (RL).

-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-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.

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Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A3I1409 - 12 14 23 1555

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
<u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u>					

Secondary Accreditations

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

Subcontract Laboratory Accreditations

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

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

Field Testing Parameters

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

Apex Laboratories

Philip Nerenberg, Lab Director

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3140 NE Broadway Street

Portland, OR 97232

Project: RedlandProject Number: 0106.37.001Project Manager: David WeatherbyReport ID:

A311409 - 12 14 23 1555

APEX LABS		CHAIN OF CUSTODY		Lab # <u>A311409</u> coc ____ of ____	
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323		Project Mgr: <u>David Weatherby</u>		Project # <u>0106.37.001</u>	
Company: <u>Maul Foster & Alongi, INC.</u>		Project Name: <u>Redland</u>		Project # <u>0106.37.001</u>	
Address: <u>3140 NE Broadway Street</u>		Phone: <u>503-501-5200</u>		Email: <u>dweatherby@maulfo.com</u>	
Sampled by: <u>Gina Burdagna</u>		ANALYSIS REQUEST		Hold Sample	
Site Location: <u>OR</u>		Matrix: <u>Soil</u>		Frozen Archive	
State: <u>OR</u>		DATE: <u>9/25/23</u>		TCLP Metals (8)	
County: <u>Clatsop</u>		TIME: <u>1520</u>		TOTAL DISS. TCLP	
SAMPLE ID: <u>VL-PIPE-SL1</u>		# OF CONTAINERS: <u>3</u>		Sb, As, Ba, Be, Cd, Cr, Cu, Fe, Pb, Hg, Mn, Mo, Ni, K, Se, Ag, Na, TL, V, Zn	
		MATRIX: <u>Soil</u>		Priority Metals (13)	
		TIME: <u>1520</u>		AL, Sb, As, Ba, Be, Cd, Cr, Cu, Fe, Pb, Hg, Mn, Mo, Ni, K, Se, Ag, Na, TL, V, Zn	
		# OF CONTAINERS: <u>3</u>		RCRA Metals (8)	
		DATE: <u>9/25/23</u>		8081 Pesticides	
		TIME: <u>1520</u>		8082 PCBs	
		# OF CONTAINERS: <u>3</u>		8270 Semi-Volat Full List	
		DATE: <u>9/25/23</u>		8270 SIM PAHs	
		TIME: <u>1520</u>		8260 VOCs Full List	
		# OF CONTAINERS: <u>3</u>		8260 Halo VOCs	
		DATE: <u>9/25/23</u>		8260 RBDM VOCs	
		TIME: <u>1520</u>		8260 BTEX	
		# OF CONTAINERS: <u>3</u>		NWTPH-GX/BTEX+V	
		DATE: <u>9/25/23</u>		NWTPH-DX	
		TIME: <u>1520</u>		NWTPH-HCID	
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		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
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		DATE: <u>9/25/23</u>		NWTPH-HCID	
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		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
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		DATE: <u>9/25/23</u>		NWTPH-HCID	
		TIME: <u>1520</u>		NWTPH-HCID	
		# OF CONTAINERS: <u>3</u>		NWTPH-HCID	
		DATE: <u>9/25/23</</u>			



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: RedlandProject Number: 0106.37.001Project Manager: David WeatherbyReport ID:A3I1409 - 12 14 23 1555APEX LABS COOLER RECEIPT FORMClient: Maul Foster Alongi Element WO#: A3I1409Project/Project #: Redland 0106.37.007Delivery Info:Date/time received: 9/25/23 @ 1520 By: ESTDelivered by: Apex ☒ Client ☒ ESS ☐ FedEx ☐ UPS ☐ Radio ☐ Morgan ☐ SDS ☐ Evergreen ☐ Other ☐Cooler Inspection Date/time inspected: 9/25/23 @ 1520 By: ESTChain of Custody included? Yes ☒ No ☐Signed/dated by client? Yes ☒ No ☐

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>0.7</u>						
Custody seals? (Y/N)	<u>N</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition (In/Out):	<u>IN</u>						

Cooler out of temp? (Y/N) 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: 9/25/23 @ 16:04 By: APWAll samples intact? Yes ☒ No ☐ Comments:Bottle labels/COCs agree? Yes ☐ No ☒ Comments: Cont. IDs read VL-PIPE-SLCOC/container discrepancies form initiated? Yes ☐ No ☒Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments: 4/2 MeOH Vials received are overfilledDo VOA vials have visible headspace? Yes ☐ No ☐ NA ☒

Comments:

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

Comments:

Additional information:Labeled by: APW

Witness:

Cooler Inspected by: APW

Form Y-003 R-01

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

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

Wednesday, November 22, 2023

David Weatherby
Maul Foster & Alongi, INC.
3140 NE Broadway Street
Portland, OR 97232

RE: A3J1887 - Redland - 0106.37.001

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 A3J1887, which was received by the laboratory on 10/31/2023 at 6:00:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@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	
<u>Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.</u>	
(See Cooler Receipt Form for details)	
Default Cooler	1.6 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

Philip Nerenberg

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Philip Nerenberg, Lab Director

**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Maul Foster & Alongi, INC.**3140 NE Broadway Street
Portland, OR 97232Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3J1887 - 11 22 23 1606****ANALYTICAL REPORT FOR SAMPLES****SAMPLE INFORMATION**

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RS-B10-SS-15.0	A3J1887-01	Soil	10/31/23 10:20	10/31/23 18:00
RS-B11-SS-16.0	A3J1887-02	Soil	10/31/23 11:27	10/31/23 18:00
RS-B12-SS-12.5	A3J1887-03	Soil	10/31/23 12:40	10/31/23 18:00
RS-B13-SS-12.5	A3J1887-04	Soil	10/31/23 13:30	10/31/23 18:00
RS-B14-SS-12.0	A3J1887-05	Soil	10/31/23 14:54	10/31/23 18:00
RS-B15-SS-8.0	A3J1887-06	Soil	10/31/23 15:45	10/31/23 18:00
RS-B16-SS-7.0	A3J1887-07	Soil	10/31/23 16:34	10/31/23 18:00
RSTP1-SS-8.0	A3J1887-08	Soil	10/31/23 13:55	10/31/23 18:00
RSTP1-SS-10.0	A3J1887-09	Soil	10/31/23 13:56	10/31/23 18:00
RSTP1-GW-9.5	A3J1887-10	Water	10/31/23 14:25	10/31/23 18:00

Apex Laboratories

Philip Nerenberg, Lab Director

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ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3J1887 - 11 22 23 1606

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
RS-B10-SS-15.0 (A3J1887-01RE1)				Matrix: Soil		Batch: 23K0196		
Diesel	ND	11.5	23.1	mg/kg dry	1	11/07/23 09:18	NWTPH-Dx	
Oil	244	23.1	46.2	mg/kg dry	1	11/07/23 09:18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 87 %		Limits: 50-150 %	1	11/07/23 09:18	NWTPH-Dx	
RS-B11-SS-16.0 (A3J1887-02)				Matrix: Soil		Batch: 23K0196		
Diesel	ND	13.6	27.1	mg/kg dry	1	11/07/23 00:01	NWTPH-Dx	
Oil	ND	27.1	54.2	mg/kg dry	1	11/07/23 00:01	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 97 %		Limits: 50-150 %	1	11/07/23 00:01	NWTPH-Dx	
RS-B12-SS-12.5 (A3J1887-03RE1)				Matrix: Soil		Batch: 23K0247		
Diesel	ND	16.5	32.9	mg/kg dry	1	11/07/23 21:42	NWTPH-Dx	
Oil	ND	32.9	65.9	mg/kg dry	1	11/07/23 21:42	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 65 %		Limits: 50-150 %	1	11/07/23 21:42	NWTPH-Dx	
RS-B13-SS-12.5 (A3J1887-04)				Matrix: Soil		Batch: 23K0196		
Diesel	ND	15.9	31.8	mg/kg dry	1	11/07/23 00:41	NWTPH-Dx	
Oil	ND	31.8	63.6	mg/kg dry	1	11/07/23 00:41	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 86 %		Limits: 50-150 %	1	11/07/23 00:41	NWTPH-Dx	
RS-B14-SS-12.0 (A3J1887-05)				Matrix: Soil		Batch: 23K0196		
Diesel	ND	15.9	31.8	mg/kg dry	1	11/07/23 01:02	NWTPH-Dx	
Oil	ND	31.8	63.7	mg/kg dry	1	11/07/23 01:02	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 89 %		Limits: 50-150 %	1	11/07/23 01:02	NWTPH-Dx	
RS-B15-SS-8.0 (A3J1887-06)				Matrix: Soil		Batch: 23K0196		
Diesel	ND	14.0	28.1	mg/kg dry	1	11/07/23 01:22	NWTPH-Dx	
Oil	ND	28.1	56.1	mg/kg dry	1	11/07/23 01:22	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 95 %		Limits: 50-150 %	1	11/07/23 01:22	NWTPH-Dx	
RS-B16-SS-7.0 (A3J1887-07)				Matrix: Soil		Batch: 23K0196		
Diesel	60.8	12.7	25.4	mg/kg dry	1	11/07/23 01:42	NWTPH-Dx	F-13
Oil	ND	25.4	50.7	mg/kg dry	1	11/07/23 01:42	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 98 %		Limits: 50-150 %	1	11/07/23 01:42	NWTPH-Dx	

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

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

Maul Foster & Alongi, INC.

3140 NE Broadway Street
Portland, OR 97232

Project: **Redland**

Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A3J1887 - 11 22 23 1606

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
RSTP1-SS-8.0 (A3J1887-08)		Matrix: Soil		Batch: 23K0196				
Diesel	ND	12.2	24.4	mg/kg dry	1	11/07/23 03:24	NWTPH-Dx	
Oil	ND	24.4	48.9	mg/kg dry	1	11/07/23 03:24	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 91 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>11/07/23 03:24</i>	<i>NWTPH-Dx</i>	
RSTP1-SS-10.0 (A3J1887-09)		Matrix: Soil		Batch: 23K0196				
Diesel	ND	14.0	28.0	mg/kg dry	1	11/07/23 03:44	NWTPH-Dx	
Oil	ND	28.0	56.1	mg/kg dry	1	11/07/23 03:44	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 90 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>11/07/23 03:44</i>	<i>NWTPH-Dx</i>	
RSTP1-GW-9.5 (A3J1887-10RE1)		Matrix: Water		Batch: 23K0132				
Diesel	ND	0.111	0.222	mg/L	1	11/04/23 02:00	NWTPH-Dx	
Oil	ND	0.222	0.444	mg/L	1	11/04/23 02:00	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 85 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>11/04/23 02:00</i>	<i>NWTPH-Dx</i>	

Apex Laboratories

Philip Nerenberg, Lab Director

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Portland, OR 97232Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3J1887 - 11 22 23 1606

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RS-B10-SS-15.0 (A3J1887-01)		Matrix: Soil		Batch: 23K0024				
Gasoline Range Organics	ND	2.28	4.57	mg/kg dry	50	11/01/23 15:25	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 107 %	Limits: 50-150 %	1	11/01/23 15:25	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		98 %	50-150 %	1	11/01/23 15:25	NWTPH-Gx (MS)		
RS-B11-SS-16.0 (A3J1887-02)		Matrix: Soil		Batch: 23K0024				
Gasoline Range Organics	ND	3.49	6.99	mg/kg dry	50	11/01/23 15:51	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 109 %	Limits: 50-150 %	1	11/01/23 15:51	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		99 %	50-150 %	1	11/01/23 15:51	NWTPH-Gx (MS)		
RS-B12-SS-12.5 (A3J1887-03)		Matrix: Soil		Batch: 23K0024				
Gasoline Range Organics	ND	6.49	13.0	mg/kg dry	50	11/01/23 16:17	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 107 %	Limits: 50-150 %	1	11/01/23 16:17	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		100 %	50-150 %	1	11/01/23 16:17	NWTPH-Gx (MS)		
RS-B13-SS-12.5 (A3J1887-04)		Matrix: Soil		Batch: 23K0024				
Gasoline Range Organics	ND	4.72	9.44	mg/kg dry	50	11/01/23 16:43	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 108 %	Limits: 50-150 %	1	11/01/23 16:43	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		100 %	50-150 %	1	11/01/23 16:43	NWTPH-Gx (MS)		
RS-B14-SS-12.0 (A3J1887-05)		Matrix: Soil		Batch: 23K0024				
Gasoline Range Organics	ND	4.85	9.69	mg/kg dry	50	11/01/23 17:09	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 109 %	Limits: 50-150 %	1	11/01/23 17:09	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		100 %	50-150 %	1	11/01/23 17:09	NWTPH-Gx (MS)		
RS-B15-SS-8.0 (A3J1887-06)		Matrix: Soil		Batch: 23K0024				
Gasoline Range Organics	143	3.68	7.37	mg/kg dry	50	11/01/23 20:09	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 139 %	Limits: 50-150 %	1	11/01/23 20:09	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		101 %	50-150 %	1	11/01/23 20:09	NWTPH-Gx (MS)		
RS-B16-SS-7.0 (A3J1887-07)		Matrix: Soil		Batch: 23K0024				
Gasoline Range Organics	190	2.99	5.97	mg/kg dry	50	11/01/23 21:01	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 143 %	Limits: 50-150 %	1	11/01/23 21:01	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		98 %	50-150 %	1	11/01/23 21:01	NWTPH-Gx (MS)		

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3J1887 - 11 22 23 1606

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RSTP1-SS-8.0 (A3J1887-08)		Matrix: Soil			Batch: 23K0024			
Gasoline Range Organics	ND	3.00	6.01	mg/kg dry	50	11/01/23 17:34	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 106 %	Limits: 50-150 %	1	11/01/23 17:34	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		99 %	50-150 %	1	11/01/23 17:34	NWTPH-Gx (MS)		
RSTP1-SS-10.0 (A3J1887-09)		Matrix: Soil			Batch: 23K0024			
Gasoline Range Organics	ND	3.50	7.00	mg/kg dry	50	11/01/23 18:00	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 106 %	Limits: 50-150 %	1	11/01/23 18:00	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		100 %	50-150 %	1	11/01/23 18:00	NWTPH-Gx (MS)		
RSTP1-GW-9.5 (A3J1887-10)		Matrix: Water			Batch: 23K0065			
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	11/02/23 17:34	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 96 %	Limits: 50-150 %	1	11/02/23 17:34	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		93 %	50-150 %	1	11/02/23 17:34	NWTPH-Gx (MS)		

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062Maul Foster & Alongi, INC.3140 NE Broadway Street
Portland, OR 97232Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3J1887 - 11 22 23 1606

ANALYTICAL SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RS-B10-SS-15.0 (A3J1887-01)		Matrix: Soil			Batch: 23K0024			
Benzene	ND	4.57	9.14	ug/kg dry	50	11/01/23 15:25	5035A/8260D	
Toluene	ND	22.8	45.7	ug/kg dry	50	11/01/23 15:25	5035A/8260D	
Ethylbenzene	ND	11.4	22.8	ug/kg dry	50	11/01/23 15:25	5035A/8260D	
Xylenes, total	ND	34.3	68.5	ug/kg dry	50	11/01/23 15:25	5035A/8260D	
Naphthalene	ND	91.4	183	ug/kg dry	50	11/01/23 15:25	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 99 %		Limits: 80-120 %	1	11/01/23 15:25	5035A/8260D	
Toluene-d8 (Surr)		95 %		80-120 %	1	11/01/23 15:25	5035A/8260D	
4-Bromofluorobenzene (Surr)		103 %		79-120 %	1	11/01/23 15:25	5035A/8260D	
RS-B11-SS-16.0 (A3J1887-02)		Matrix: Soil			Batch: 23K0024			
Benzene	ND	6.99	14.0	ug/kg dry	50	11/01/23 15:51	5035A/8260D	
Toluene	ND	34.9	69.9	ug/kg dry	50	11/01/23 15:51	5035A/8260D	
Ethylbenzene	ND	17.5	34.9	ug/kg dry	50	11/01/23 15:51	5035A/8260D	
Xylenes, total	ND	52.4	105	ug/kg dry	50	11/01/23 15:51	5035A/8260D	
Naphthalene	ND	140	279	ug/kg dry	50	11/01/23 15:51	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 100 %		Limits: 80-120 %	1	11/01/23 15:51	5035A/8260D	
Toluene-d8 (Surr)		94 %		80-120 %	1	11/01/23 15:51	5035A/8260D	
4-Bromofluorobenzene (Surr)		102 %		79-120 %	1	11/01/23 15:51	5035A/8260D	
RS-B12-SS-12.5 (A3J1887-03)		Matrix: Soil			Batch: 23K0024			
Benzene	ND	13.0	26.0	ug/kg dry	50	11/01/23 16:17	5035A/8260D	
Toluene	ND	64.9	130	ug/kg dry	50	11/01/23 16:17	5035A/8260D	
Ethylbenzene	ND	32.4	64.9	ug/kg dry	50	11/01/23 16:17	5035A/8260D	
Xylenes, total	ND	97.3	195	ug/kg dry	50	11/01/23 16:17	5035A/8260D	
Naphthalene	ND	260	519	ug/kg dry	50	11/01/23 16:17	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 101 %		Limits: 80-120 %	1	11/01/23 16:17	5035A/8260D	
Toluene-d8 (Surr)		95 %		80-120 %	1	11/01/23 16:17	5035A/8260D	
4-Bromofluorobenzene (Surr)		103 %		79-120 %	1	11/01/23 16:17	5035A/8260D	
RS-B13-SS-12.5 (A3J1887-04)		Matrix: Soil			Batch: 23K0024			
Benzene	ND	9.44	18.9	ug/kg dry	50	11/01/23 16:43	5035A/8260D	
Toluene	ND	47.2	94.4	ug/kg dry	50	11/01/23 16:43	5035A/8260D	
Ethylbenzene	ND	23.6	47.2	ug/kg dry	50	11/01/23 16:43	5035A/8260D	
Xylenes, total	ND	70.8	142	ug/kg dry	50	11/01/23 16:43	5035A/8260D	

Apex Laboratories

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ANALYTICAL REPORT

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ORELAP ID: OR100062Maul Foster & Alongi, INC.3140 NE Broadway Street
Portland, OR 97232Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3J1887 - 11 22 23 1606

ANALYTICAL SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RS-B13-SS-12.5 (A3J1887-04)		Matrix: Soil			Batch: 23K0024			
Naphthalene	ND	189	378	ug/kg dry	50	11/01/23 16:43	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	101 %	Limits:	80-120 %	1	11/01/23 16:43	5035A/8260D
Toluene-d8 (Surr)			94 %		80-120 %	1	11/01/23 16:43	5035A/8260D
4-Bromofluorobenzene (Surr)			102 %		79-120 %	1	11/01/23 16:43	5035A/8260D
RS-B14-SS-12.0 (A3J1887-05)		Matrix: Soil			Batch: 23K0024			
Benzene	ND	9.69	19.4	ug/kg dry	50	11/01/23 17:09	5035A/8260D	
Toluene	ND	48.5	96.9	ug/kg dry	50	11/01/23 17:09	5035A/8260D	
Ethylbenzene	ND	24.2	48.5	ug/kg dry	50	11/01/23 17:09	5035A/8260D	
Xylenes, total	ND	72.7	145	ug/kg dry	50	11/01/23 17:09	5035A/8260D	
Naphthalene	ND	194	388	ug/kg dry	50	11/01/23 17:09	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	101 %	Limits:	80-120 %	1	11/01/23 17:09	5035A/8260D
Toluene-d8 (Surr)			94 %		80-120 %	1	11/01/23 17:09	5035A/8260D
4-Bromofluorobenzene (Surr)			102 %		79-120 %	1	11/01/23 17:09	5035A/8260D
RS-B15-SS-8.0 (A3J1887-06)		Matrix: Soil			Batch: 23K0024			
Benzene	ND	7.37	14.7	ug/kg dry	50	11/01/23 20:09	5035A/8260D	
Toluene	ND	36.8	73.7	ug/kg dry	50	11/01/23 20:09	5035A/8260D	
Ethylbenzene	ND	18.4	36.8	ug/kg dry	50	11/01/23 20:09	5035A/8260D	
Xylenes, total	ND	55.3	111	ug/kg dry	50	11/01/23 20:09	5035A/8260D	
Naphthalene	ND	147	295	ug/kg dry	50	11/01/23 20:09	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	102 %	Limits:	80-120 %	1	11/01/23 20:09	5035A/8260D
Toluene-d8 (Surr)			85 %		80-120 %	1	11/01/23 20:09	5035A/8260D
4-Bromofluorobenzene (Surr)			108 %		79-120 %	1	11/01/23 20:09	5035A/8260D
RS-B16-SS-7.0 (A3J1887-07)		Matrix: Soil			Batch: 23K0024			
Benzene	ND	5.97	11.9	ug/kg dry	50	11/01/23 21:01	5035A/8260D	
Toluene	ND	29.9	59.7	ug/kg dry	50	11/01/23 21:01	5035A/8260D	
Ethylbenzene	ND	14.9	29.9	ug/kg dry	50	11/01/23 21:01	5035A/8260D	
Xylenes, total	ND	44.8	89.6	ug/kg dry	50	11/01/23 21:01	5035A/8260D	
Naphthalene	ND	119	239	ug/kg dry	50	11/01/23 21:01	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	99 %	Limits:	80-120 %	1	11/01/23 21:01	5035A/8260D
Toluene-d8 (Surr)			81 %		80-120 %	1	11/01/23 21:01	5035A/8260D
4-Bromofluorobenzene (Surr)			107 %		79-120 %	1	11/01/23 21:01	5035A/8260D

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Portland, OR 97232Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3J1887 - 11 22 23 1606

ANALYTICAL SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RSTP1-SS-8.0 (A3J1887-08)		Matrix: Soil			Batch: 23K0024			
Benzene	ND	6.01	12.0	ug/kg dry	50	11/01/23 17:34	5035A/8260D	
Toluene	ND	30.0	60.1	ug/kg dry	50	11/01/23 17:34	5035A/8260D	
Ethylbenzene	ND	15.0	30.0	ug/kg dry	50	11/01/23 17:34	5035A/8260D	
Xylenes, total	ND	45.1	90.1	ug/kg dry	50	11/01/23 17:34	5035A/8260D	
Naphthalene	ND	120	240	ug/kg dry	50	11/01/23 17:34	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>11/01/23 17:34</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>95 %</i>		<i>80-120 %</i>	<i>1</i>	<i>11/01/23 17:34</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>103 %</i>		<i>79-120 %</i>	<i>1</i>	<i>11/01/23 17:34</i>	<i>5035A/8260D</i>	
RSTP1-SS-10.0 (A3J1887-09)		Matrix: Soil			Batch: 23K0024			
Benzene	ND	7.00	14.0	ug/kg dry	50	11/01/23 18:00	5035A/8260D	
Toluene	ND	35.0	70.0	ug/kg dry	50	11/01/23 18:00	5035A/8260D	
Ethylbenzene	ND	17.5	35.0	ug/kg dry	50	11/01/23 18:00	5035A/8260D	
Xylenes, total	ND	52.5	105	ug/kg dry	50	11/01/23 18:00	5035A/8260D	
Naphthalene	ND	140	280	ug/kg dry	50	11/01/23 18:00	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>11/01/23 18:00</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>	<i>1</i>	<i>11/01/23 18:00</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>102 %</i>		<i>79-120 %</i>	<i>1</i>	<i>11/01/23 18:00</i>	<i>5035A/8260D</i>	
RSTP1-GW-9.5 (A3J1887-10)		Matrix: Water			Batch: 23K0065			
Benzene	ND	0.100	0.200	ug/L	1	11/02/23 17:34	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	11/02/23 17:34	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	11/02/23 17:34	EPA 8260D	
Xylenes, total	ND	0.750	1.50	ug/L	1	11/02/23 17:34	EPA 8260D	
Naphthalene	ND	2.50	5.00	ug/L	1	11/02/23 17:34	EPA 8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>11/02/23 17:34</i>	<i>EPA 8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>	<i>1</i>	<i>11/02/23 17:34</i>	<i>EPA 8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>105 %</i>		<i>80-120 %</i>	<i>1</i>	<i>11/02/23 17:34</i>	<i>EPA 8260D</i>	

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**ANALYTICAL REPORT****Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3J1887 - 11 22 23 1606****ANALYTICAL SAMPLE RESULTS****Conventional Microbiology Parameters**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RSTP1-GW-9.5 (A3J1887-10)				Matrix: Water				
Batch: 23J1234								
E. coli	1550	1.00	1.00	MPN/100 mL	1	11/01/23 18:50	SM 9223 B	

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Project Manager: David Weatherby

Report ID:

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RS-B10-SS-15.0 (A3J1887-01)				Matrix: Soil		Batch: 23K0029		
% Solids	84.3	1.00	1.00	%	1	11/02/23 07:02	EPA 8000D	
RS-B11-SS-16.0 (A3J1887-02)				Matrix: Soil		Batch: 23K0029		
% Solids	72.5	1.00	1.00	%	1	11/02/23 07:02	EPA 8000D	
RS-B12-SS-12.5 (A3J1887-03)				Matrix: Soil		Batch: 23K0029		
% Solids	59.7	1.00	1.00	%	1	11/02/23 07:02	EPA 8000D	
RS-B13-SS-12.5 (A3J1887-04)				Matrix: Soil		Batch: 23K0029		
% Solids	60.6	1.00	1.00	%	1	11/02/23 07:02	EPA 8000D	
RS-B14-SS-12.0 (A3J1887-05)				Matrix: Soil		Batch: 23K0029		
% Solids	60.5	1.00	1.00	%	1	11/02/23 07:02	EPA 8000D	
RS-B15-SS-8.0 (A3J1887-06)				Matrix: Soil		Batch: 23K0029		
% Solids	69.6	1.00	1.00	%	1	11/02/23 07:02	EPA 8000D	
RS-B16-SS-7.0 (A3J1887-07)				Matrix: Soil		Batch: 23K0029		
% Solids	76.5	1.00	1.00	%	1	11/02/23 07:02	EPA 8000D	
RSTP1-SS-8.0 (A3J1887-08)				Matrix: Soil		Batch: 23K0029		
% Solids	78.3	1.00	1.00	%	1	11/02/23 07:02	EPA 8000D	
RSTP1-SS-10.0 (A3J1887-09)				Matrix: Soil		Batch: 23K0029		
% Solids	70.7	1.00	1.00	%	1	11/02/23 07:02	EPA 8000D	

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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 23K0132 - EPA 3510C (Fuels/Acid Ext.)						Water						
Blank (23K0132-BLK1)			Prepared: 11/03/23 05:41 Analyzed: 11/03/23 21:52									
NWTPH-Dx												
Diesel	ND	0.100	0.200	mg/L	1	---	---	---	---	---	---	
Oil	ND	0.200	0.400	mg/L	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 83 %		Limits: 50-150 %		Dilution: 1x						
LCS (23K0132-BS1)			Prepared: 11/03/23 05:41 Analyzed: 11/03/23 22:13									
NWTPH-Dx												
Diesel	0.964	0.100	0.200	mg/L	1	1.25	---	77	36-132%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 90 %		Limits: 50-150 %		Dilution: 1x						
LCS Dup (23K0132-BSD1)			Prepared: 11/03/23 05:41 Analyzed: 11/03/23 22:34									Q-19
NWTPH-Dx												
Diesel	1.02	0.100	0.200	mg/L	1	1.25	---	82	36-132%	6	30%	
Surr: o-Terphenyl (Surr)		Recovery: 90 %		Limits: 50-150 %		Dilution: 1x						
Batch 23K0196 - EPA 3546 (Fuels)						Soil						
Blank (23K0196-BLK1)			Prepared: 11/06/23 05:11 Analyzed: 11/06/23 19:57									
NWTPH-Dx												
Diesel	ND	10.0	20.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	20.0	40.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 107 %		Limits: 50-150 %		Dilution: 1x						
LCS (23K0196-BS1)			Prepared: 11/06/23 05:11 Analyzed: 11/06/23 20:18									
NWTPH-Dx												
Diesel	124	10.0	20.0	mg/kg wet	1	125	---	99	38-132%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 98 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (23K0196-DUP1)			Prepared: 11/06/23 05:11 Analyzed: 11/06/23 20:58									
QC Source Sample: Non-SDG (A3J1766-01)												
Diesel	ND	11.7	23.5	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	23.5	47.0	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 96 %		Limits: 50-150 %		Dilution: 1x						

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Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3J1887 - 11 22 23 1606**

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 23K0196 - EPA 3546 (Fuels)						Soil						
Duplicate (23K0196-DUP2)						Prepared: 11/06/23 05:11 Analyzed: 11/07/23 04:45						
QC Source Sample: Non-SDG (A3K0839-02)												
Diesel	ND	10.3	20.5	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	20.5	41.0	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 99 %		Limits: 50-150 %		Dilution: 1x						

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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 23K0247 - EPA 3546 (Fuels)						Soil						
Blank (23K0247-BLK1)			Prepared: 11/07/23 06:23			Analyzed: 11/07/23 09:44						
NWTPH-Dx												
Diesel	ND	10.0	20.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	20.0	40.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 99 %		Limits: 50-150 %		Dilution: 1x						
LCS (23K0247-BS1)			Prepared: 11/07/23 06:23			Analyzed: 11/07/23 10:13						
NWTPH-Dx												
Diesel	132	10.0	20.0	mg/kg wet	1	125	---	106	38-132%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 105 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (23K0247-DUP1)			Prepared: 11/07/23 06:23			Analyzed: 11/07/23 10:54						
QC Source Sample: Non-SDG (A3K0948-01)												
Diesel	77.5	11.3	22.7	mg/kg dry	1	---	74.4	---	---	4	30%	F-11
Oil	ND	22.7	45.3	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 92 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (23K0247-DUP2)			Prepared: 11/07/23 17:31			Analyzed: 11/08/23 03:52						
QC Source Sample: Non-SDG (A3K1028-02)												
Diesel	12900	102	203	mg/kg dry	10	---	13800	---	---	7	30%	
Oil	ND	203	407	mg/kg dry	10	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 84 %		Limits: 50-150 %		Dilution: 10x					S-05	

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Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3J1887 - 11 22 23 1606**

QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23K0024 - EPA 5035A						Soil						
Blank (23K0024-BLK1)			Prepared: 11/01/23 10:00 Analyzed: 11/01/23 12:25									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	2.50	5.00	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	99 %	Limits:	50-150 %	Dilution: 1x						
1,4-Difluorobenzene (Sur)			96 %		50-150 %	"						
LCS (23K0024-BS2)			Prepared: 11/01/23 10:00 Analyzed: 11/01/23 11:59									
NWTPH-Gx (MS)												
Gasoline Range Organics	22.9	2.50	5.00	mg/kg wet	50	25.0	---	92	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	100 %	Limits:	50-150 %	Dilution: 1x						
1,4-Difluorobenzene (Sur)			94 %		50-150 %	"						
Duplicate (23K0024-DUP1)			Prepared: 10/30/23 08:00 Analyzed: 11/01/23 14:08									TEMP
QC Source Sample: Non-SDG (A3J1841-01)												
Gasoline Range Organics	ND	3.01	6.03	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	108 %	Limits:	50-150 %	Dilution: 1x						
1,4-Difluorobenzene (Sur)			98 %		50-150 %	"						
Duplicate (23K0024-DUP2)			Prepared: 10/31/23 15:45 Analyzed: 11/01/23 20:35									
QC Source Sample: RS-B15-SS-8.0 (A3J1887-06)												
NWTPH-Gx (MS)												
Gasoline Range Organics	146	3.68	7.37	mg/kg dry	50	---	143	---	---	2	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	134 %	Limits:	50-150 %	Dilution: 1x						
1,4-Difluorobenzene (Sur)			100 %		50-150 %	"						

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062**Maul Foster & Alongi, INC.**3140 NE Broadway Street
Portland, OR 97232Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3J1887 - 11 22 23 1606**

QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23K0065 - EPA 5030C						Water						
Blank (23K0065-BLK1)			Prepared: 11/02/23 09:00 Analyzed: 11/02/23 12:17									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	95 %	Limits:	50-150 %		Dilution:	1x				
1,4-Difluorobenzene (Sur)			91 %		50-150 %			"				
LCS (23K0065-BS2)			Prepared: 11/02/23 09:00 Analyzed: 11/02/23 11:55									
NWTPH-Gx (MS)												
Gasoline Range Organics	0.452	0.0500	0.100	mg/L	1	0.500	---	90	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	97 %	Limits:	50-150 %		Dilution:	1x				
1,4-Difluorobenzene (Sur)			90 %		50-150 %			"				
Duplicate (23K0065-DUP1)			Prepared: 11/02/23 12:11 Analyzed: 11/02/23 19:49						CONT, V-01			
QC Source Sample: Non-SDG (A3J1779-01RE1)												
Gasoline Range Organics	40.2	0.500	1.00	mg/L	10	---	43.4	---	---	8	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	109 %	Limits:	50-150 %		Dilution:	1x				
1,4-Difluorobenzene (Sur)			89 %		50-150 %			"				
Duplicate (23K0065-DUP2)			Prepared: 11/02/23 12:11 Analyzed: 11/02/23 17:57									
QC Source Sample: RSTPI-GW-9.5 (A3J1887-10)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	93 %	Limits:	50-150 %		Dilution:	1x				
1,4-Difluorobenzene (Sur)			91 %		50-150 %			"				

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503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3J1887 - 11 22 23 1606**

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 23K0024 - EPA 5035A						Soil							
Blank (23K0024-BLK1)			Prepared: 11/01/23 10:00 Analyzed: 11/01/23 12:25										
5035A/8260D													
Benzene	ND	5.00	10.0	ug/kg wet	50	---	---	---	---	---	---		
Toluene	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---		
Ethylbenzene	ND	12.5	25.0	ug/kg wet	50	---	---	---	---	---	---		
Xylenes, total	ND	37.5	75.0	ug/kg wet	50	---	---	---	---	---	---		
Naphthalene	ND	100	200	ug/kg wet	50	---	---	---	---	---	---		
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 98 %		Limits: 80-120 %		Dilution: 1x							
Toluene-d8 (Surr)		97 %		80-120 %		"							
4-Bromofluorobenzene (Surr)		103 %		79-120 %		"							
LCS (23K0024-BS1)			Prepared: 11/01/23 10:00 Analyzed: 11/01/23 11:33										
5035A/8260D													
Benzene	948	5.00	10.0	ug/kg wet	50	1000	---	95	80-120%	---	---		
Toluene	972	25.0	50.0	ug/kg wet	50	1000	---	97	80-120%	---	---		
Ethylbenzene	1090	12.5	25.0	ug/kg wet	50	1000	---	109	80-120%	---	---		
Xylenes, total	3030	37.5	75.0	ug/kg wet	50	3000	---	101	80-120%	---	---		
Naphthalene	847	100	200	ug/kg wet	50	1000	---	85	80-120%	---	---		
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 96 %		Limits: 80-120 %		Dilution: 1x							
Toluene-d8 (Surr)		97 %		80-120 %		"							
4-Bromofluorobenzene (Surr)		99 %		79-120 %		"							
Duplicate (23K0024-DUP1)			Prepared: 10/30/23 08:00 Analyzed: 11/01/23 14:08										TEMP
QC Source Sample: Non-SDG (A3J1841-01)													
Benzene	ND	6.03	12.1	ug/kg dry	50	---	ND	---	---	---	30%		
Toluene	ND	30.1	60.3	ug/kg dry	50	---	ND	---	---	---	30%		
Ethylbenzene	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%		
Xylenes, total	ND	45.2	90.4	ug/kg dry	50	---	ND	---	---	---	30%		
Naphthalene	ND	121	241	ug/kg dry	50	---	ND	---	---	---	30%		
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 99 %		Limits: 80-120 %		Dilution: 1x							
Toluene-d8 (Surr)		94 %		80-120 %		"							
4-Bromofluorobenzene (Surr)		104 %		79-120 %		"							
Duplicate (23K0024-DUP2)			Prepared: 10/31/23 15:45 Analyzed: 11/01/23 20:35										

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Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3J1887 - 11 22 23 1606**

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 23K0024 - EPA 5035A							Soil						
Duplicate (23K0024-DUP2)			Prepared: 10/31/23 15:45 Analyzed: 11/01/23 20:35										
QC Source Sample: RS-B15-SS-8.0 (A3J1887-06)													
5035A/8260D													
Benzene	ND	7.37	14.7	ug/kg dry	50	---	ND	---	---	---	30%		
Toluene	ND	36.8	73.7	ug/kg dry	50	---	ND	---	---	---	30%		
Ethylbenzene	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%		
Xylenes, total	ND	55.3	111	ug/kg dry	50	---	ND	---	---	---	30%		
Naphthalene	ND	147	295	ug/kg dry	50	---	ND	---	---	---	30%		
Surr: 1,4-Difluorobenzene (Surr)		Recovery:		102 %	Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)				86 %	80-120 %		"						
4-Bromofluorobenzene (Surr)				107 %	79-120 %		"						
Matrix Spike (23K0024-MS1)			Prepared: 11/01/23 08:50 Analyzed: 11/01/23 19:18										V-16
QC Source Sample: Non-SDG (A3J1631-22)													
5035A/8260D													
Benzene	3110	15.5	31.1	ug/kg dry	50	3110	ND	100	77-121%	---	---		
Toluene	3120	77.7	155	ug/kg dry	50	3110	ND	100	77-121%	---	---		
Ethylbenzene	3540	38.9	77.7	ug/kg dry	50	3110	ND	114	76-122%	---	---		
Xylenes, total	9550	117	233	ug/kg dry	50	9330	ND	102	78-124%	---	---		
Naphthalene	2340	311	622	ug/kg dry	50	3110	ND	75	62-129%	---	---		
Surr: 1,4-Difluorobenzene (Surr)		Recovery:		95 %	Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)				94 %	80-120 %		"						
4-Bromofluorobenzene (Surr)				100 %	79-120 %		"						

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3J1887 - 11 22 23 1606**

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23K0065 - EPA 5030C						Water						
Blank (23K0065-BLK1)			Prepared: 11/02/23 09:00 Analyzed: 11/02/23 12:17									
EPA 8260D												
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Xylenes, total	ND	0.750	1.50	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 97 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		97 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		104 %		80-120 %		"						
LCS (23K0065-BS1)			Prepared: 11/02/23 09:00 Analyzed: 11/02/23 11:23									
EPA 8260D												
Benzene	18.0	0.100	0.200	ug/L	1	20.0	---	90	80-120%	---	---	
Toluene	19.6	0.500	1.00	ug/L	1	20.0	---	98	80-120%	---	---	
Ethylbenzene	21.6	0.250	0.500	ug/L	1	20.0	---	108	80-120%	---	---	
Xylenes, total	68.8	0.750	1.50	ug/L	1	60.0	---	115	80-120%	---	---	
Naphthalene	16.2	2.50	5.00	ug/L	1	20.0	---	81	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 94 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		96 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		99 %		80-120 %		"						
Duplicate (23K0065-DUP1)			Prepared: 11/02/23 12:11 Analyzed: 11/02/23 19:49									
QC Source Sample: Non-SDG (A3J1779-01RE1)												
Benzene	2.60	1.00	2.00	ug/L	10	---	2.40	---	---	8	30%	
Toluene	167	5.00	10.0	ug/L	10	---	166	---	---	0.6	30%	
Ethylbenzene	494	2.50	5.00	ug/L	10	---	499	---	---	1	30%	
Xylenes, total	4130	7.50	15.0	ug/L	10	---	4240	---	---	3	30%	
Naphthalene	844	25.0	50.0	ug/L	10	---	810	---	---	4	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 99 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		92 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		105 %		80-120 %		"						
Duplicate (23K0065-DUP2)			Prepared: 11/02/23 12:11 Analyzed: 11/02/23 17:57									

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ANALYTICAL REPORT

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503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3J1887 - 11 22 23 1606**

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23K0065 - EPA 5030C						Water						
Duplicate (23K0065-DUP2)			Prepared: 11/02/23 12:11 Analyzed: 11/02/23 17:57									
QC Source Sample: RSTP1-GW-9.5 (A3J1887-10)												
EPA 8260D												
Benzene	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	30%	
Toluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Xylenes, total	ND	0.750	1.50	ug/L	1	---	ND	---	---	---	30%	
Naphthalene	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 98 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		96 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		104 %		80-120 %		"						
Matrix Spike (23K0065-MS1)						Prepared: 11/02/23 12:11 Analyzed: 11/02/23 18:42						
QC Source Sample: Non-SDG (A3K0766-01)												
EPA 8260D												
Benzene	19.2	0.100	0.200	ug/L	1	20.0	ND	96	79-120%	---	---	
Toluene	20.2	0.500	1.00	ug/L	1	20.0	ND	101	80-121%	---	---	
Ethylbenzene	22.5	0.250	0.500	ug/L	1	20.0	ND	113	79-121%	---	---	
Xylenes, total	71.0	0.750	1.50	ug/L	1	60.0	ND	118	79-121%	---	---	
Naphthalene	16.0	2.50	5.00	ug/L	1	20.0	ND	80	61-128%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 97 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		94 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		97 %		80-120 %		"						

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062**Maul Foster & Alongi, INC.**3140 NE Broadway Street
Portland, OR 97232Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3J1887 - 11 22 23 1606**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23K0029 - Total Solids (Dry Weight) - 2022							Soil					
Duplicate (23K0029-DUP1)			Prepared: 11/01/23 10:13 Analyzed: 11/02/23 07:02									
QC Source Sample: Non-SDG (A3J1856-01)												
% Solids	75.4	1.00	1.00	%	1	---	74.7	---	---	1	10%	
Duplicate (23K0029-DUP2)			Prepared: 11/01/23 10:13 Analyzed: 11/02/23 07:02									
QC Source Sample: Non-SDG (A3J1856-02)												
% Solids	75.2	1.00	1.00	%	1	---	74.9	---	---	0.4	10%	
Duplicate (23K0029-DUP3)			Prepared: 11/01/23 10:13 Analyzed: 11/02/23 07:02									
QC Source Sample: Non-SDG (A3J1856-03)												
% Solids	91.1	1.00	1.00	%	1	---	90.1	---	---	1	10%	
Duplicate (23K0029-DUP4)			Prepared: 11/01/23 10:13 Analyzed: 11/02/23 07:02									
QC Source Sample: Non-SDG (A3J1856-04)												
% Solids	81.7	1.00	1.00	%	1	---	82.1	---	---	0.5	10%	
Duplicate (23K0029-DUP5)			Prepared: 11/01/23 19:21 Analyzed: 11/02/23 07:02									
QC Source Sample: Non-SDG (A3K0768-01)												
% Solids	74.8	1.00	1.00	%	1	---	74.7	---	---	0.1	10%	
Duplicate (23K0029-DUP6)			Prepared: 11/01/23 19:21 Analyzed: 11/02/23 07:02									
QC Source Sample: Non-SDG (A3K0801-03)												
% Solids	78.9	1.00	1.00	%	1	---	81.5	---	---	3	10%	

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

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Philip Nerenberg, Lab Director

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**ANALYTICAL REPORT****Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3J1887 - 11 22 23 1606****SAMPLE PREPARATION INFORMATION****Diesel and/or Oil Hydrocarbons by NWTPH-Dx****Prep: EPA 3510C (Fuels/Acid Ext.)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23K0132</u>							
A3J1887-10RE1	Water	NWTPH-Dx	10/31/23 14:25	11/03/23 05:41	900mL/5mL	1000mL/5mL	1.11

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23K0196</u>							
A3J1887-01RE1	Soil	NWTPH-Dx	10/31/23 10:20	11/06/23 05:11	10.28g/5mL	10g/5mL	0.97
A3J1887-02	Soil	NWTPH-Dx	10/31/23 11:27	11/06/23 05:11	10.17g/5mL	10g/5mL	0.98
A3J1887-04	Soil	NWTPH-Dx	10/31/23 13:30	11/06/23 05:11	10.38g/5mL	10g/5mL	0.96
A3J1887-05	Soil	NWTPH-Dx	10/31/23 14:54	11/06/23 05:11	10.38g/5mL	10g/5mL	0.96
A3J1887-06	Soil	NWTPH-Dx	10/31/23 15:45	11/06/23 05:11	10.25g/5mL	10g/5mL	0.98
A3J1887-07	Soil	NWTPH-Dx	10/31/23 16:34	11/06/23 05:11	10.31g/5mL	10g/5mL	0.97
A3J1887-08	Soil	NWTPH-Dx	10/31/23 13:55	11/06/23 05:11	10.45g/5mL	10g/5mL	0.96
A3J1887-09	Soil	NWTPH-Dx	10/31/23 13:56	11/06/23 05:11	10.09g/5mL	10g/5mL	0.99

Batch: 23K0247

A3J1887-03RE1	Soil	NWTPH-Dx	10/31/23 12:40	11/07/23 10:10	10.17g/5mL	10g/5mL	0.98
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Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**Prep: EPA 5030C**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23K0065</u>							
A3J1887-10	Water	NWTPH-Gx (MS)	10/31/23 14:25	11/02/23 12:11	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23K0024</u>							
A3J1887-01	Soil	NWTPH-Gx (MS)	10/31/23 10:20	10/31/23 10:20	8.16g/5mL	5g/5mL	0.61
A3J1887-02	Soil	NWTPH-Gx (MS)	10/31/23 11:27	10/31/23 11:27	6.77g/5mL	5g/5mL	0.74
A3J1887-03	Soil	NWTPH-Gx (MS)	10/31/23 12:40	10/31/23 12:40	4.36g/5mL	5g/5mL	1.15
A3J1887-04	Soil	NWTPH-Gx (MS)	10/31/23 13:30	10/31/23 13:30	6.67g/5mL	5g/5mL	0.75
A3J1887-05	Soil	NWTPH-Gx (MS)	10/31/23 14:54	10/31/23 14:54	6.43g/5mL	5g/5mL	0.78
A3J1887-06	Soil	NWTPH-Gx (MS)	10/31/23 15:45	10/31/23 15:45	6.94g/5mL	5g/5mL	0.72
A3J1887-07	Soil	NWTPH-Gx (MS)	10/31/23 16:34	10/31/23 16:34	7.37g/5mL	5g/5mL	0.68
A3J1887-08	Soil	NWTPH-Gx (MS)	10/31/23 13:55	10/31/23 13:55	6.91g/5mL	5g/5mL	0.72
A3J1887-09	Soil	NWTPH-Gx (MS)	10/31/23 13:56	10/31/23 13:56	7.18g/5mL	5g/5mL	0.70

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Philip Nerenberg, Lab Director

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Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3J1887 - 11 22 23 1606****SAMPLE PREPARATION INFORMATION****Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx****BTEX+N Compounds by EPA 8260D****Prep: EPA 5030C**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23K0065							
A3J1887-10	Water	EPA 8260D	10/31/23 14:25	11/02/23 12:11	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23K0024							
A3J1887-01	Soil	5035A/8260D	10/31/23 10:20	10/31/23 10:20	8.16g/5mL	5g/5mL	0.61
A3J1887-02	Soil	5035A/8260D	10/31/23 11:27	10/31/23 11:27	6.77g/5mL	5g/5mL	0.74
A3J1887-03	Soil	5035A/8260D	10/31/23 12:40	10/31/23 12:40	4.36g/5mL	5g/5mL	1.15
A3J1887-04	Soil	5035A/8260D	10/31/23 13:30	10/31/23 13:30	6.67g/5mL	5g/5mL	0.75
A3J1887-05	Soil	5035A/8260D	10/31/23 14:54	10/31/23 14:54	6.43g/5mL	5g/5mL	0.78
A3J1887-06	Soil	5035A/8260D	10/31/23 15:45	10/31/23 15:45	6.94g/5mL	5g/5mL	0.72
A3J1887-07	Soil	5035A/8260D	10/31/23 16:34	10/31/23 16:34	7.37g/5mL	5g/5mL	0.68
A3J1887-08	Soil	5035A/8260D	10/31/23 13:55	10/31/23 13:55	6.91g/5mL	5g/5mL	0.72
A3J1887-09	Soil	5035A/8260D	10/31/23 13:56	10/31/23 13:56	7.18g/5mL	5g/5mL	0.70

Conventional Microbiology Parameters**Prep: Method Prep: Ag**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23J1234							
A3J1887-10	Water	SM 9223 B	10/31/23 14:25	10/31/23 18:47	100mL/100mL	100mL/100mL	1.00

Percent Dry Weight**Prep: Total Solids (Dry Weight) - 2022**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23K0029							
A3J1887-01	Soil	EPA 8000D	10/31/23 10:20	11/01/23 10:13			NA
A3J1887-02	Soil	EPA 8000D	10/31/23 11:27	11/01/23 10:13			NA
A3J1887-03	Soil	EPA 8000D	10/31/23 12:40	11/01/23 10:13			NA
A3J1887-04	Soil	EPA 8000D	10/31/23 13:30	11/01/23 10:13			NA
A3J1887-05	Soil	EPA 8000D	10/31/23 14:54	11/01/23 10:13			NA
A3J1887-06	Soil	EPA 8000D	10/31/23 15:45	11/01/23 10:13			NA
A3J1887-07	Soil	EPA 8000D	10/31/23 16:34	11/01/23 10:13			NA

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Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3J1887 - 11 22 23 1606

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

Prep: Total Solids (Dry Weight) - 2022

					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
A3J1887-08	Soil	EPA 8000D	10/31/23 13:55	11/01/23 10:13			NA
A3J1887-09	Soil	EPA 8000D	10/31/23 13:56	11/01/23 10:13			NA

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A3J1887 - 11 22 23 1606

QUALIFIER DEFINITIONS

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

Apex Laboratories

- 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.
- F-11** The hydrocarbon pattern indicates possible weathered diesel, mineral oil, or a contribution from a related component.
- F-13** The chromatographic pattern does not resemble the fuel standard used for quantitation
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- S-05** Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
- TEMP** Sample was received outside of recommended temperature.
- V-01** Sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).
- V-16** Sample aliquot was subsampled from the sample container in the laboratory. The subsampled aliquot was not preserved within 48 hours of sampling.

Apex Laboratories

Philip Nerenberg, Lab Director

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

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

Detection Limits: Limit of Detection (LOD)

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

Reporting Limits: Limit of Quantitation (LOQ)

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

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.

The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

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

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

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

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 ½ the Reporting Limit (RL).

-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-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.

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Report ID:

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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
<u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u>					

Secondary Accreditations

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

Subcontract Laboratory Accreditations

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

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

Field Testing Parameters

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

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Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3J1887 - 11 22 23 1606

APEX LABS		CHAIN OF CUSTODY		Project Name: Redlands Gas Station		Project #: 0106.37.001	
6700 SW Sandburg St, Tigard, OR 97223 Ph: 503-718-2323		Project Mgr: D. Weatherby		Email: Dweatherby@com		PO #	
Company: MFA		Address: 3140 NE Broadway		Phone:		Project #	
Sampled by: K. Crossin		Site Location:		State: OR		County:	
SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-DX	NWTPH-GX + GEX + N
RS-B10-SS-15.0	10/3/23	10:00	S	3		X	
RS-B11-SS-16.0	11/27	11:27	S	3			
RS-B12-SS-12.5	12/40	12:40					
RS-B13-SS-12.5	13/30	13:30					
RS-B14-SS-12.0	14/54	14:54					
RS-B15-SS-8.0	15/45	15:45					
RS-B16-SS-7.0	16/34	16:34					
RS-B17-SS-8.0	17/35	17:35					
RS-B18-SS-10.0	18/36	18:36					
RS-B19-SS-9.5	19/25	19:25					
RS-B20-SS-9.5	20/25	20:25					
RS-B21-SS-9.5	21/25	21:25					
RS-B22-SS-9.5	22/25	22:25					
RS-B23-SS-9.5	23/25	23:25					
RS-B24-SS-9.5	24/25	24:25					
RS-B25-SS-9.5	25/25	25:25					
RS-B26-SS-9.5	26/25	26:25					
RS-B27-SS-9.5	27/25	27:25					
RS-B28-SS-9.5	28/25	28:25					
RS-B29-SS-9.5	29/25	29:25					
RS-B30-SS-9.5	30/25	30:25					
RS-B31-SS-9.5	31/25	31:25					
RS-B32-SS-9.5	32/25	32:25					
RS-B33-SS-9.5	33/25	33:25					
RS-B34-SS-9.5	34/25	34:25					
RS-B35-SS-9.5	35/25	35:25					
RS-B36-SS-9.5	36/25	36:25					
RS-B37-SS-9.5	37/25	37:25					
RS-B38-SS-9.5	38/25	38:25					
RS-B39-SS-9.5	39/25	39:25					
RS-B40-SS-9.5	40/25	40:25					
RS-B41-SS-9.5	41/25	41:25					
RS-B42-SS-9.5	42/25	42:25					
RS-B43-SS-9.5	43/25	43:25					
RS-B44-SS-9.5	44/25	44:25					
RS-B45-SS-9.5	45/25	45:25					
RS-B46-SS-9.5	46/25	46:25					
RS-B47-SS-9.5	47/25	47:25					
RS-B48-SS-9.5	48/25	48:25					
RS-B49-SS-9.5	49/25	49:25					
RS-B50-SS-9.5	50/25	50:25					
RS-B51-SS-9.5	51/25	51:25					
RS-B52-SS-9.5	52/25	52:25					
RS-B53-SS-9.5	53/25	53:25					
RS-B54-SS-9.5	54/25	54:25					
RS-B55-SS-9.5	55/25	55:25					
RS-B56-SS-9.5	56/25	56:25					
RS-B57-SS-9.5	57/25	57:25					
RS-B58-SS-9.5	58/25	58:25					
RS-B59-SS-9.5	59/25	59:25					
RS-B60-SS-9.5	60/25	60:25					
RS-B61-SS-9.5	61/25	61:25					
RS-B62-SS-9.5	62/25	62:25					
RS-B63-SS-9.5	63/25	63:25					
RS-B64-SS-9.5	64/25	64:25					
RS-B65-SS-9.5	65/25	65:25					
RS-B66-SS-9.5	66/25	66:25					
RS-B67-SS-9.5	67/25	67:25					
RS-B68-SS-9.5	68/25	68:25					
RS-B69-SS-9.5	69/25	69:25					
RS-B70-SS-9.5	70/25	70:25					
RS-B71-SS-9.5	71/25	71:25					
RS-B72-SS-9.5	72/25	72:25					
RS-B73-SS-9.5	73/25	73:25					
RS-B74-SS-9.5	74/25	74:25					
RS-B75-SS-9.5	75/25	75:25					
RS-B76-SS-9.5	76/25	76:25					
RS-B77-SS-9.5	77/25	77:25					
RS-B78-SS-9.5	78/25	78:25					
RS-B79-SS-9.5	79/25	79:25					
RS-B80-SS-9.5	80/25	80:25					
RS-B81-SS-9.5	81/25	81:25					
RS-B82-SS-9.5	82/25	82:25					
RS-B83-SS-9.5	83/25	83:25					
RS-B84-SS-9.5	84/25	84:25					
RS-B85-SS-9.5	85/25	85:25					
RS-B86-SS-9.5	86/25	86:25					
RS-B87-SS-9.5	87/25	87:25					
RS-B88-SS-9.5	88/25	88:25					
RS-B89-SS-9.5	89/25	89:25					
RS-B90-SS-9.5	90/25	90:25					
RS-B91-SS-9.5	91/25	91:25					
RS-B92-SS-9.5	92/25	92:25					
RS-B93-SS-9.5	93/25	93:25					
RS-B94-SS-9.5	94/25	94:25					
RS-B95-SS-9.5	95/25	95:25					
RS-B96-SS-9.5	96/25	96:25					
RS-B97-SS-9.5	97/25	97:25					
RS-B98-SS-9.5	98/25	98:25					
RS-B99-SS-9.5	99/25	99:25					
RS-B100-SS-9.5	100/25	100:25					

TAT Requested (circle)		Standard Turn Around Time (TAT) = 10 Business Days	
1 Day	2 Day	3 Day	Other

RECEIVED BY:		RECEIVED BY:	
Signature	Date	Signature	Date
	10/3/23		10/3/23

RECEIVED BY:		RECEIVED BY:	
Signature	Date	Signature	Date
	10/3/23		10/3/23

RECEIVED BY:		RECEIVED BY:	
Signature	Date	Signature	Date
	10/3/23		10/3/23

RECEIVED BY:		RECEIVED BY:	
Signature	Date	Signature	Date
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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: RedlandProject Number: 0106.37.001Project Manager: David WeatherbyReport ID:A3J1887 - 11 22 23 1606

APEX LABS COOLER RECEIPT FORM

Client: MFA Element WO#: A3J1887Project/Project #: Redlands Gas Station total 37001 0106.37.001acc for kam 10/31/23Delivery Info:Date/time received: 10/31/23 @ 18:00 By: RAMDelivered by: Apex Client ☒ ESS ☐ FedEx ☐ UPS ☐ Radio ☐ Morgan ☐ SDS ☐ Evergreen ☐ Other ☐Cooler Inspection Date/time inspected: 10/31/23 @ 18:00 By: RAMChain of Custody included? Yes ☒ No ☐Signed/dated by client? Yes ☒ No ☐

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>1.6</u>						
Custody seals? (Y/N)	<u>N</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition (In/Out):	<u>17</u>						

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: 10/31/23 @ 18:12 By: RAMAll samples intact? Yes ☒ No ☐ Comments: RAM 10/31/23Bottle labels/COCs agree? Yes ☒ No ☒ Comments: 1/3 HCL VOA reads sample ID45 0106.37.001, 11/2 14 Ambers reads ID 95 R5TPT7-GR 9.5 & bagged in set.COC/container discrepancies form initiated? Yes ☐ No ☒ acc for kam 11/1/23Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments: Do VOA vials have visible headspace? Yes ☒ No ☐ NA ☐Comments 2/3 hrs 45, 3/3 have secWater samples: pH checked: Yes ☒ No ☐ NA ☐ pH appropriate? Yes ☒ No ☐ NA ☐ pH ID: Comments: Additional information:Labeled by: RAMWitness: AWCooler Inspected by: RAM

Form Y-003 R-01

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

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

Wednesday, November 22, 2023

David Weatherby
Maul Foster & Alongi, INC.
3140 NE Broadway Street
Portland, OR 97232

RE: A3K1209 - Redland - 0106.37.001

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 A3K1209, which was received by the laboratory on 11/10/2023 at 3:06:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@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		
<u>Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.</u>		
(See Cooler Receipt Form for details)		
Default Cooler	3.5	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

Philip Nerenberg

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

Apex Laboratories, LLC

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

Maul Foster & Alongi, INC.

3140 NE Broadway Street
Portland, OR 97232

Project: **Redland**

Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A3K1209 - 11 22 23 1607

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RS-TP2-SS-10.5	A3K1209-01	Soil	11/10/23 10:47	11/10/23 15:06
RS-TP2-SS-11.5	A3K1209-02	Soil	11/10/23 11:43	11/10/23 15:06
RS-TP2-SS-11.7	A3K1209-03	Soil	11/10/23 11:47	11/10/23 15:06
RS-TP2-GW-12.5	A3K1209-04	Water	11/10/23 12:30	11/10/23 15:06
RS-TP2-GW-ecoli	A3K1209-05	Water	11/10/23 13:41	11/10/23 15:06

Apex Laboratories

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3140 NE Broadway Street

Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3K1209 - 11 22 23 1607

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
RS-TP2-SS-10.5 (A3K1209-01)				Matrix: Soil		Batch: 23K0648		CONT
Diesel	ND	13.2	26.4	mg/kg dry	1	11/16/23 23:03	NWTPH-Dx	
Oil	ND	26.4	52.8	mg/kg dry	1	11/16/23 23:03	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 73 %		Limits: 50-150 %	1	11/16/23 23:03	NWTPH-Dx	
RS-TP2-SS-11.5 (A3K1209-02)				Matrix: Soil		Batch: 23K0648		CONT
Diesel	ND	14.4	28.8	mg/kg dry	1	11/16/23 23:24	NWTPH-Dx	
Oil	ND	28.8	57.5	mg/kg dry	1	11/16/23 23:24	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 78 %		Limits: 50-150 %	1	11/16/23 23:24	NWTPH-Dx	
RS-TP2-SS-11.7 (A3K1209-03)				Matrix: Soil		Batch: 23K0648		CONT
Diesel	ND	15.0	29.9	mg/kg dry	1	11/16/23 23:45	NWTPH-Dx	
Oil	ND	29.9	59.8	mg/kg dry	1	11/16/23 23:45	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 80 %		Limits: 50-150 %	1	11/16/23 23:45	NWTPH-Dx	
RS-TP2-GW-12.5 (A3K1209-04)				Matrix: Water		Batch: 23K0645		
Diesel	ND	0.115	0.230	mg/L	1	11/16/23 20:15	NWTPH-Dx	
Oil	ND	0.230	0.460	mg/L	1	11/16/23 20:15	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 87 %		Limits: 50-150 %	1	11/16/23 20:15	NWTPH-Dx	

Apex Laboratories

Philip Nerenberg, Lab Director

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3140 NE Broadway Street

Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3K1209 - 11 22 23 1607

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RS-TP2-SS-10.5 (A3K1209-01)		Matrix: Soil			Batch: 23K0500			
Gasoline Range Organics	ND	4.43	8.85	mg/kg dry	50	11/13/23 22:17	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 108 %	Limits: 50-150 %	1	11/13/23 22:17	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		97 %	50-150 %	1	11/13/23 22:17	NWTPH-Gx (MS)		
RS-TP2-SS-11.5 (A3K1209-02)		Matrix: Soil			Batch: 23K0500			
Gasoline Range Organics	ND	4.27	8.55	mg/kg dry	50	11/13/23 22:43	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 108 %	Limits: 50-150 %	1	11/13/23 22:43	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		98 %	50-150 %	1	11/13/23 22:43	NWTPH-Gx (MS)		
RS-TP2-SS-11.7 (A3K1209-03)		Matrix: Soil			Batch: 23K0500			
Gasoline Range Organics	ND	4.33	8.66	mg/kg dry	50	11/13/23 23:08	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 107 %	Limits: 50-150 %	1	11/13/23 23:08	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		97 %	50-150 %	1	11/13/23 23:08	NWTPH-Gx (MS)		
RS-TP2-GW-12.5 (A3K1209-04)		Matrix: Water			Batch: 23K0479			
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	11/13/23 15:46	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 90 %	Limits: 50-150 %	1	11/13/23 15:46	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		98 %	50-150 %	1	11/13/23 15:46	NWTPH-Gx (MS)		

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062Maul Foster & Alongi, INC.3140 NE Broadway Street
Portland, OR 97232Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3K1209 - 11 22 23 1607

ANALYTICAL SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RS-TP2-SS-10.5 (A3K1209-01)		Matrix: Soil			Batch: 23K0500			
Benzene	ND	8.85	17.7	ug/kg dry	50	11/13/23 22:17	5035A/8260D	
Toluene	ND	44.3	88.5	ug/kg dry	50	11/13/23 22:17	5035A/8260D	
Ethylbenzene	ND	22.1	44.3	ug/kg dry	50	11/13/23 22:17	5035A/8260D	
Xylenes, total	ND	66.4	133	ug/kg dry	50	11/13/23 22:17	5035A/8260D	
Naphthalene	ND	177	354	ug/kg dry	50	11/13/23 22:17	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>11/13/23 22:17</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>94 %</i>		<i>80-120 %</i>	<i>1</i>	<i>11/13/23 22:17</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>104 %</i>		<i>79-120 %</i>	<i>1</i>	<i>11/13/23 22:17</i>	<i>5035A/8260D</i>	
RS-TP2-SS-11.5 (A3K1209-02)		Matrix: Soil			Batch: 23K0500			
Benzene	ND	8.55	17.1	ug/kg dry	50	11/13/23 22:43	5035A/8260D	
Toluene	ND	42.7	85.5	ug/kg dry	50	11/13/23 22:43	5035A/8260D	
Ethylbenzene	ND	21.4	42.7	ug/kg dry	50	11/13/23 22:43	5035A/8260D	
Xylenes, total	ND	64.1	128	ug/kg dry	50	11/13/23 22:43	5035A/8260D	
Naphthalene	ND	171	342	ug/kg dry	50	11/13/23 22:43	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>11/13/23 22:43</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>94 %</i>		<i>80-120 %</i>	<i>1</i>	<i>11/13/23 22:43</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>103 %</i>		<i>79-120 %</i>	<i>1</i>	<i>11/13/23 22:43</i>	<i>5035A/8260D</i>	
RS-TP2-SS-11.7 (A3K1209-03)		Matrix: Soil			Batch: 23K0500			
Benzene	ND	8.66	17.3	ug/kg dry	50	11/13/23 23:08	5035A/8260D	
Toluene	ND	43.3	86.6	ug/kg dry	50	11/13/23 23:08	5035A/8260D	
Ethylbenzene	ND	21.6	43.3	ug/kg dry	50	11/13/23 23:08	5035A/8260D	
Xylenes, total	ND	64.9	130	ug/kg dry	50	11/13/23 23:08	5035A/8260D	
Naphthalene	ND	173	346	ug/kg dry	50	11/13/23 23:08	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>11/13/23 23:08</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>95 %</i>		<i>80-120 %</i>	<i>1</i>	<i>11/13/23 23:08</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>104 %</i>		<i>79-120 %</i>	<i>1</i>	<i>11/13/23 23:08</i>	<i>5035A/8260D</i>	
RS-TP2-GW-12.5 (A3K1209-04)		Matrix: Water			Batch: 23K0479			
Benzene	ND	0.100	0.200	ug/L	1	11/13/23 15:46	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	11/13/23 15:46	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	11/13/23 15:46	EPA 8260D	
Xylenes, total	ND	0.750	1.50	ug/L	1	11/13/23 15:46	EPA 8260D	

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

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6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3K1209 - 11 22 23 1607

ANALYTICAL SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RS-TP2-GW-12.5 (A3K1209-04)		Matrix: Water			Batch: 23K0479			
Naphthalene	ND	2.50	5.00	ug/L	1	11/13/23 15:46	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	106 %	Limits:	80-120 %	1	11/13/23 15:46	EPA 8260D
Toluene-d8 (Surr)			100 %		80-120 %	1	11/13/23 15:46	EPA 8260D
4-Bromofluorobenzene (Surr)			100 %		80-120 %	1	11/13/23 15:46	EPA 8260D

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Project: **Redland**

Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A3K1209 - 11 22 23 1607

ANALYTICAL SAMPLE RESULTS

Conventional Microbiology Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RS-TP2-GW-ecoli (A3K1209-05)				Matrix: Water				
Batch: 23K0454								
E. coli	121	1.00	1.00	MPN/100 mL	1	11/11/23 17:30	SM 9223 B	

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Philip Nerenberg, Lab Director

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**ANALYTICAL REPORT****Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3K1209 - 11 22 23 1607****ANALYTICAL SAMPLE RESULTS****Percent Dry Weight**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RS-TP2-SS-10.5 (A3K1209-01)				Matrix: Soil		Batch: 23K0486		CONT
% Solids	72.9	1.00	1.00	%	1	11/14/23 06:47	EPA 8000D	
RS-TP2-SS-11.5 (A3K1209-02)				Matrix: Soil		Batch: 23K0486		CONT
% Solids	66.7	1.00	1.00	%	1	11/14/23 06:47	EPA 8000D	
RS-TP2-SS-11.7 (A3K1209-03)				Matrix: Soil		Batch: 23K0486		CONT
% Solids	65.2	1.00	1.00	%	1	11/14/23 06:47	EPA 8000D	

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062**Maul Foster & Alongi, INC.**3140 NE Broadway Street
Portland, OR 97232Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3K1209 - 11 22 23 1607**

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 23K0645 - EPA 3510C (Fuels/Acid Ext.)						Water						
Blank (23K0645-BLK1)			Prepared: 11/16/23 06:05 Analyzed: 11/16/23 17:31									
NWTPH-Dx												
Diesel	ND	0.100	0.200	mg/L	1	---	---	---	---	---	---	
Oil	ND	0.200	0.400	mg/L	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 81 %		Limits: 50-150 %		Dilution: 1x						
LCS (23K0645-BS1)			Prepared: 11/16/23 06:05 Analyzed: 11/16/23 17:55									
NWTPH-Dx												
Diesel	1.01	0.100	0.200	mg/L	1	1.25	---	81	36-132%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 94 %		Limits: 50-150 %		Dilution: 1x						
LCS Dup (23K0645-BSD1)			Prepared: 11/16/23 06:05 Analyzed: 11/16/23 18:18									Q-19
NWTPH-Dx												
Diesel	0.910	0.100	0.200	mg/L	1	1.25	---	73	36-132%	10	30%	
Surr: o-Terphenyl (Surr)		Recovery: 89 %		Limits: 50-150 %		Dilution: 1x						
Batch 23K0648 - EPA 3546 (Fuels)						Soil						
Blank (23K0648-BLK1)			Prepared: 11/16/23 06:41 Analyzed: 11/16/23 20:18									
NWTPH-Dx												
Diesel	ND	10.0	20.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	20.0	40.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 97 %		Limits: 50-150 %		Dilution: 1x						
LCS (23K0648-BS1)			Prepared: 11/16/23 06:41 Analyzed: 11/16/23 20:39									
NWTPH-Dx												
Diesel	116	10.0	20.0	mg/kg wet	1	125	---	93	38-132%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 105 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (23K0648-DUP1)			Prepared: 11/16/23 06:41 Analyzed: 11/16/23 21:20									
QC Source Sample: Non-SDG (A3K0960-02)												
Diesel	ND	1110	2220	mg/kg dry	100	---	ND	---	---	---	30%	
Oil	5710	2220	4430	mg/kg dry	100	---	6090	---	---	7	30%	
Surr: o-Terphenyl (Surr)		Recovery: %		Limits: 50-150 %		Dilution: 100x					S-01	

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ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A3K1209 - 11 22 23 1607

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 23K0648 - EPA 3546 (Fuels)							Soil					
Duplicate (23K0648-DUP2)			Prepared: 11/16/23 06:41 Analyzed: 11/17/23 05:34									
QC Source Sample: Non-SDG (A3K1227-02)												
Diesel	ND	10.7	21.4	mg/kg dry	1	---	ND	---	---	---	30%	F-13
Oil	57.0	21.4	42.7	mg/kg dry	1	---	59.6	---	---	4	30%	
Surr: o-Terphenyl (Surr)		Recovery: 75 %		Limits: 50-150 %		Dilution: 1x						

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ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3K1209 - 11 22 23 1607**

QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23K0479 - EPA 5030C						Water						
Blank (23K0479-BLK1)			Prepared: 11/13/23 08:31		Analyzed: 11/13/23 14:16							
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 93 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		102 %		50-150 %		"						
LCS (23K0479-BS2)			Prepared: 11/13/23 08:31		Analyzed: 11/13/23 13:53							
NWTPH-Gx (MS)												
Gasoline Range Organics	0.465	0.0500	0.100	mg/L	1	0.500	---	93	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 94 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		100 %		50-150 %		"						
Duplicate (23K0479-DUP1)			Prepared: 11/13/23 08:31		Analyzed: 11/13/23 20:17							
QC Source Sample: Non-SDG (A3K1230-04)												
Gasoline Range Organics	36.1	2.50	5.00	mg/L	50	---	36.2	---	---	0.3	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 101 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		100 %		50-150 %		"						

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QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23K0500 - EPA 5035A						Soil						
Blank (23K0500-BLK1)			Prepared: 11/13/23 07:58 Analyzed: 11/13/23 14:07									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	2.50	5.00	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	100 %	Limits:	50-150 %	Dilution: 1x						
1,4-Difluorobenzene (Sur)			94 %		50-150 %	"						
LCS (23K0500-BS2)			Prepared: 11/13/23 07:58 Analyzed: 11/13/23 13:41									
NWTPH-Gx (MS)												
Gasoline Range Organics	22.4	2.50	5.00	mg/kg wet	50	25.0	---	89	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	100 %	Limits:	50-150 %	Dilution: 1x						
1,4-Difluorobenzene (Sur)			91 %		50-150 %	"						
Duplicate (23K0500-DUP1)			Prepared: 11/10/23 09:25 Analyzed: 11/13/23 14:58									
QC Source Sample: Non-SDG (A3K1226-01)												
Gasoline Range Organics	ND	2.39	4.78	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	106 %	Limits:	50-150 %	Dilution: 1x						
1,4-Difluorobenzene (Sur)			95 %		50-150 %	"						
Duplicate (23K0500-DUP2)			Prepared: 11/09/23 07:25 Analyzed: 11/13/23 19:42									
QC Source Sample: Non-SDG (A3K1149-01)												
Gasoline Range Organics	ND	2.89	5.77	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	108 %	Limits:	50-150 %	Dilution: 1x						
1,4-Difluorobenzene (Sur)			98 %		50-150 %	"						

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Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3K1209 - 11 22 23 1607**

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23K0479 - EPA 5030C						Water						
Blank (23K0479-BLK1)			Prepared: 11/13/23 08:31 Analyzed: 11/13/23 14:16									
EPA 8260D												
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Xylenes, total	ND	0.750	1.50	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 112 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		99 %		80-120 %		"						
LCS (23K0479-BS1)			Prepared: 11/13/23 08:31 Analyzed: 11/13/23 13:17									
EPA 8260D												
Benzene	21.8	0.100	0.200	ug/L	1	20.0	---	109	80-120%	---	---	
Toluene	20.1	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
Ethylbenzene	20.6	0.250	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
Xylenes, total	60.2	0.750	1.50	ug/L	1	60.0	---	100	80-120%	---	---	
Naphthalene	16.4	2.50	5.00	ug/L	1	20.0	---	82	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 109 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		98 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		94 %		80-120 %		"						
Duplicate (23K0479-DUP1)			Prepared: 11/13/23 08:31 Analyzed: 11/13/23 20:17									
QC Source Sample: Non-SDG (A3K1230-04)												
Benzene	49.0	5.00	10.0	ug/L	50	---	62.5	---	---	24	30%	
Toluene	37.0	25.0	50.0	ug/L	50	---	38.0	---	---	3	30%	
Ethylbenzene	663	12.5	25.0	ug/L	50	---	680	---	---	3	30%	
Xylenes, total	5100	37.5	75.0	ug/L	50	---	5200	---	---	2	30%	
Naphthalene	464	125	250	ug/L	50	---	471	---	---	1	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 110 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		99 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		96 %		80-120 %		"						
Matrix Spike (23K0479-MS1)			Prepared: 11/13/23 08:31 Analyzed: 11/13/23 16:54									

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Project: **Redland**

Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A3K1209 - 11 22 23 1607

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23K0479 - EPA 5030C						Water						
Matrix Spike (23K0479-MS1)			Prepared: 11/13/23 08:31		Analyzed: 11/13/23 16:54							
QC Source Sample: Non-SDG (A3K1229-02)												
EPA 8260D												
Benzene	23.8	0.200	0.200	ug/L	1	20.0	ND	119	79-120%	---	---	
Toluene	21.9	0.500	1.00	ug/L	1	20.0	ND	110	80-121%	---	---	
Ethylbenzene	22.5	0.500	0.500	ug/L	1	20.0	ND	113	79-121%	---	---	
Xylenes, total	67.1	1.50	1.50	ug/L	1	60.0	ND	112	79-121%	---	---	
Naphthalene	19.3	2.50	5.00	ug/L	1	20.0	ND	97	61-128%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 107 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		96 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		93 %		80-120 %		"						

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QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23K0500 - EPA 5035A						Soil						
Blank (23K0500-BLK1)			Prepared: 11/13/23 07:58 Analyzed: 11/13/23 14:07									
5035A/8260D												
Benzene	ND	5.00	10.0	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	12.5	25.0	ug/kg wet	50	---	---	---	---	---	---	
Xylenes, total	ND	37.5	75.0	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	100	200	ug/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 96 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		96 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		104 %		79-120 %		"						
LCS (23K0500-BS1)			Prepared: 11/13/23 07:58 Analyzed: 11/13/23 13:15									
5035A/8260D												
Benzene	939	5.00	10.0	ug/kg wet	50	1000	---	94	80-120%	---	---	
Toluene	942	25.0	50.0	ug/kg wet	50	1000	---	94	80-120%	---	---	
Ethylbenzene	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Xylenes, total	2960	37.5	75.0	ug/kg wet	50	3000	---	99	80-120%	---	---	
Naphthalene	812	100	200	ug/kg wet	50	1000	---	81	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 96 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		94 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		104 %		79-120 %		"						
Duplicate (23K0500-DUP1)			Prepared: 11/10/23 09:25 Analyzed: 11/13/23 14:58									
QC Source Sample: Non-SDG (A3K1226-01)												
Benzene	ND	4.78	9.56	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	23.9	47.8	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	12.0	23.9	ug/kg dry	50	---	ND	---	---	---	30%	
Xylenes, total	ND	35.9	71.7	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	95.6	191	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 96 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		94 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		105 %		79-120 %		"						
Duplicate (23K0500-DUP2)			Prepared: 11/09/23 07:25 Analyzed: 11/13/23 19:42									

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3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3K1209 - 11 22 23 1607**

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23K0500 - EPA 5035A						Soil						
Duplicate (23K0500-DUP2)			Prepared: 11/09/23 07:25 Analyzed: 11/13/23 19:42									
QC Source Sample: Non-SDG (A3K1149-01)												
Benzene	ND	5.77	11.5	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	28.9	57.7	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	14.4	28.9	ug/kg dry	50	---	ND	---	---	---	30%	
Xylenes, total	ND	43.3	86.6	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	115	231	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 98 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		94 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		105 %		79-120 %		"						
Matrix Spike (23K0500-MS1)			Prepared: 11/10/23 11:47 Analyzed: 11/13/23 23:34									
QC Source Sample: RS-TP2-SS-11.7 (A3K1209-03)												
5035A/8260D												
Benzene	1720	8.66	17.3	ug/kg dry	50	1730	ND	99	77-121%	---	---	
Toluene	1740	43.3	86.6	ug/kg dry	50	1730	ND	100	77-121%	---	---	
Ethylbenzene	1970	21.6	43.3	ug/kg dry	50	1730	ND	114	76-122%	---	---	
Xylenes, total	5350	64.9	130	ug/kg dry	50	5200	ND	103	78-124%	---	---	
Naphthalene	1300	173	346	ug/kg dry	50	1730	ND	75	62-129%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 94 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		93 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		99 %		79-120 %		"						

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Philip Nerenberg, Lab Director

**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Maul Foster & Alongi, INC.**3140 NE Broadway Street
Portland, OR 97232Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3K1209 - 11 22 23 1607****QUALITY CONTROL (QC) SAMPLE RESULTS****Percent Dry Weight**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23K0486 - Total Solids (Dry Weight) - 2022							Soil					
Duplicate (23K0486-DUP1)			Prepared: 11/13/23 09:52		Analyzed: 11/14/23 06:47							
QC Source Sample: Non-SDG (A3K1202-01)												
% Solids	78.0	1.00	1.00	%	1	---	76.9	---	---	1	10%	
Duplicate (23K0486-DUP2)			Prepared: 11/13/23 09:52		Analyzed: 11/14/23 06:47							
QC Source Sample: Non-SDG (A3K1202-02)												
% Solids	72.6	1.00	1.00	%	1	---	69.2	---	---	5	10%	
Duplicate (23K0486-DUP3)			Prepared: 11/13/23 09:52		Analyzed: 11/14/23 06:47							
QC Source Sample: Non-SDG (A3K1202-03)												
% Solids	71.4	1.00	1.00	%	1	---	70.4	---	---	1	10%	
Duplicate (23K0486-DUP4)			Prepared: 11/13/23 09:52		Analyzed: 11/14/23 06:47							
QC Source Sample: Non-SDG (A3K1202-04)												
% Solids	64.6	1.00	1.00	%	1	---	63.9	---	---	1	10%	
Duplicate (23K0486-DUP5)			Prepared: 11/13/23 09:52		Analyzed: 11/14/23 06:47							
QC Source Sample: Non-SDG (A3K1202-05)												
% Solids	71.7	1.00	1.00	%	1	---	71.7	---	---	0.05	10%	
Duplicate (23K0486-DUP6)			Prepared: 11/13/23 09:52		Analyzed: 11/14/23 06:47							
QC Source Sample: Non-SDG (A3K1202-06)												
% Solids	70.5	1.00	1.00	%	1	---	70.7	---	---	0.2	10%	
Duplicate (23K0486-DUP7)			Prepared: 11/13/23 09:52		Analyzed: 11/14/23 06:47							
QC Source Sample: Non-SDG (A3K1202-07)												
% Solids	71.8	1.00	1.00	%	1	---	72.3	---	---	0.7	10%	
Duplicate (23K0486-DUP8)			Prepared: 11/13/23 09:52		Analyzed: 11/14/23 06:47							
QC Source Sample: Non-SDG (A3K1202-08)												
% Solids	70.1	1.00	1.00	%	1	---	70.6	---	---	0.7	10%	

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Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

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Portland, OR 97232

Project: **Redland**

Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A3K1209 - 11 22 23 1607

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23K0486 - Total Solids (Dry Weight) - 2022							Soil					
Duplicate (23K0486-DUP9)			Prepared: 11/13/23 18:43 Analyzed: 11/14/23 06:47									
QC Source Sample: Non-SDG (A3K1255-01)												
% Solids	89.9	1.00	1.00	%	1	---	88.3	---	---	2	10%	
Duplicate (23K0486-DUPA)			Prepared: 11/13/23 18:43 Analyzed: 11/14/23 06:47									
QC Source Sample: Non-SDG (A3K1268-02)												
% Solids	75.8	1.00	1.00	%	1	---	76.9	---	---	2	10%	

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

Apex Laboratories

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Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3K1209 - 11 22 23 1607**

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3510C (Fuels/Acid Ext.)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23K0645							
A3K1209-04	Water	NWTPH-Dx	11/10/23 12:30	11/16/23 06:05	870mL/5mL	1000mL/5mL	1.15

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23K0648							
A3K1209-01	Soil	NWTPH-Dx	11/10/23 10:47	11/16/23 06:41	10.38g/5mL	10g/5mL	0.96
A3K1209-02	Soil	NWTPH-Dx	11/10/23 11:43	11/16/23 06:41	10.42g/5mL	10g/5mL	0.96
A3K1209-03	Soil	NWTPH-Dx	11/10/23 11:47	11/16/23 06:41	10.26g/5mL	10g/5mL	0.98

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

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23K0479							
A3K1209-04	Water	NWTPH-Gx (MS)	11/10/23 12:30	11/13/23 08:31	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23K0500							
A3K1209-01	Soil	NWTPH-Gx (MS)	11/10/23 10:47	11/10/23 10:47	4.9g/5mL	5g/5mL	1.02
A3K1209-02	Soil	NWTPH-Gx (MS)	11/10/23 11:43	11/10/23 11:43	6.19g/5mL	5g/5mL	0.81
A3K1209-03	Soil	NWTPH-Gx (MS)	11/10/23 11:47	11/10/23 11:47	6.41g/5mL	5g/5mL	0.78

BTEX+N Compounds by EPA 8260D

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23K0479							
A3K1209-04	Water	EPA 8260D	11/10/23 12:30	11/13/23 08:31	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23K0500							
A3K1209-01	Soil	5035A/8260D	11/10/23 10:47	11/10/23 10:47	4.9g/5mL	5g/5mL	1.02
A3K1209-02	Soil	5035A/8260D	11/10/23 11:43	11/10/23 11:43	6.19g/5mL	5g/5mL	0.81

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**ANALYTICAL REPORT****Apex Laboratories, LLC**

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Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3K1209 - 11 22 23 1607****SAMPLE PREPARATION INFORMATION****BTEX+N Compounds by EPA 8260D****Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A3K1209-03	Soil	5035A/8260D	11/10/23 11:47	11/10/23 11:47	6.41g/5mL	5g/5mL	0.78

Conventional Microbiology Parameters**Prep: Method Prep: Aq**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23K0454</u>							
A3K1209-05	Water	SM 9223 B	11/10/23 13:41	11/10/23 16:02	100mL/100mL	100mL/100mL	1.00

Percent Dry Weight**Prep: Total Solids (Dry Weight) - 2022**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23K0486</u>							
A3K1209-01	Soil	EPA 8000D	11/10/23 10:47	11/13/23 09:52			NA
A3K1209-02	Soil	EPA 8000D	11/10/23 11:43	11/13/23 09:52			NA
A3K1209-03	Soil	EPA 8000D	11/10/23 11:47	11/13/23 09:52			NA

Apex Laboratories

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Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A3K1209 - 11 22 23 1607

QUALIFIER DEFINITIONS

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

Apex Laboratories

- 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.
- F-13** The chromatographic pattern does not resemble the fuel standard used for quantitation
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- S-01** Surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.

Apex Laboratories

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Project Number: **0106.37.001**

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Report ID:

A3K1209 - 11 22 23 1607

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

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

Detection Limits: Limit of Detection (LOD)

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

Reporting Limits: Limit of Quantitation (LOQ)

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

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.

The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

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

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

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

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).

Apex Laboratories

Philip Nerenberg, Lab Director

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Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A3K1209 - 11 22 23 1607

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).

-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-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

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

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Project: **Redland**

Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A3K1209 - 11 22 23 1607

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

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

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503-718-2323

ORELAP ID: OR100062

Maul Foster & Alongi, INC.

3140 NE Broadway Street

Portland, OR 97232

Project: **Redland**Project Number: **0106.37.001**Project Manager: **David Weatherby****Report ID:****A3K1209 - 11 22 23 1607****APEXLABS COOLER RECEIPT FORM**Client: MFA Element WO#: A3 K1209Project/Project #: Redland Stone 0106.37.001**Delivery Info:**Date/time received: 11/10/23 @ 15:06 By: APWDelivered by: Apex Client ☒ ESS FedEx UPS Radio Morgan SDS Evergreen Other**Cooler Inspection** Date/time inspected: 11/10/23 @ 15:06 By: APWChain of Custody included? Yes ☒ NoSigned/dated by client? Yes ☒ No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>8.5</u>						
Custody seals? (Y/N)	<u>N</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition (In/Out):	<u>In</u>						

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: 11.10.23 @ 1513 By: DJRAll samples intact? Yes ☒ No Comments:Bottle labels/COCs agree? Yes ☒ No ☒ Comments: AS-TP2-SS-11.5: 1/2 vials
container times reads 11:47.COC/container discrepancies form initiated? Yes No ☒Containers/volumes received appropriate for analysis? Yes ☒ No Comments:Do VOA vials have visible headspace? Yes No ☒ NAComments 3/3 sedWater samples: pH checked: Yes ☒ No NA pH appropriate? Yes ☒ No NA pH ID: A23E172

Comments:

Additional information:

Labeled by:

DJR

Witness:

AKM

Cooler Inspected by:

DJR

Form Y-003 R-01

Apex Laboratories

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Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

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

Friday, April 12, 2024

David Weatherby
Maul Foster & Alongi, INC.
3140 NE Broadway Street
Portland, OR 97232

RE: A4D1094 - Redland - 0106.37.001

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 A4D1094, which was received by the laboratory on 4/10/2024 at 10:03:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@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	
<u>Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.</u>	
(See Cooler Receipt Form for details)	
Default Cooler	5.3 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

Philip Nerenberg

Philip Nerenberg, Lab Director

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Maul Foster & Alongi, INC.

3140 NE Broadway Street
Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A4D1094 - 04 12 24 0947

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RG-GW-001	A4D1094-01	Water	04/10/24 08:33	04/10/24 10:03
DB-GW-001	A4D1094-02	Water	04/10/24 08:39	04/10/24 10:03
RD-GW-001	A4D1094-03	Water	04/10/24 08:50	04/10/24 10:03
VL-GW-001	A4D1094-04	Water	04/10/24 08:54	04/10/24 10:03

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Project: **Redland**

Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A4D1094 - 04 12 24 0947

ANALYTICAL SAMPLE RESULTS

Conventional Microbiology Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RG-GW-001 (A4D1094-01) 								
Matrix: Water								
Batch: 24D0410								
E. coli	ND	---	1.00	MPN/100 mL	1	04/11/24 12:22	SM 9223 B	
DB-GW-001 (A4D1094-02) 								
Matrix: Water								
Batch: 24D0410								
E. coli	ND	---	1.00	MPN/100 mL	1	04/11/24 12:22	SM 9223 B	
RD-GW-001 (A4D1094-03) 								
Matrix: Water								
Batch: 24D0410								
E. coli	ND	---	1.00	MPN/100 mL	1	04/11/24 12:22	SM 9223 B	
VL-GW-001 (A4D1094-04) 								
Matrix: Water								
Batch: 24D0410								
E. coli	4.10	---	1.00	MPN/100 mL	1	04/11/24 12:22	SM 9223 B	

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Project: **Redland**

Project Number: **0106.37.001**

Project Manager: **David Weatherby**

Report ID:

A4D1094 - 04 12 24 0947

SAMPLE PREPARATION INFORMATION

Conventional Microbiology Parameters

Prep: Method Prep: Aq

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 24D0410</u>							
A4D1094-01	Water	SM 9223 B	04/10/24 08:33	04/10/24 12:09	100mL/100mL	100mL/100mL	1.00
A4D1094-02	Water	SM 9223 B	04/10/24 08:39	04/10/24 12:09	100mL/100mL	100mL/100mL	1.00
A4D1094-03	Water	SM 9223 B	04/10/24 08:50	04/10/24 12:09	100mL/100mL	100mL/100mL	1.00
A4D1094-04	Water	SM 9223 B	04/10/24 08:54	04/10/24 12:09	100mL/100mL	100mL/100mL	1.00

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

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

Maul Foster & Alongi, INC.

3140 NE Broadway Street
Portland, OR 97232

Project: Redland

Project Number: 0106.37.001

Project Manager: David Weatherby

Report ID:

A4D1094 - 04 12 24 0947

QUALIFIER DEFINITIONS

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

There are No Qualifiers on Sample or QC Data for this report

Apex Laboratories

Philip Nerenberg, Lab Director

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

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

Detection Limits: Limit of Detection (LOD)

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

Reporting Limits: Limit of Quantitation (LOQ)

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

Reporting Conventions:

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

"dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")

See Percent Solids section for details of dry weight analysis.

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

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

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).

Apex Laboratories

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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 $\frac{1}{2}$ the Reporting Limit (RL).

-For Blank hits falling between $\frac{1}{2}$ 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.

Benzo(a)fluoranthene Isomer Reporting:

Due to coelution on the analytical column, the Benzo(b)fluoranthene results represent the concentration of both Benzo(b)fluoranthene and Benzo(j) fluoranthene. Calibration is based on the response of Benzo(b)fluoranthene, and the results represent the combined Benzo(b+j)fluoranthene(s).

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Philip Nerenberg, Lab Director



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Report ID:

A4D1094 - 04 12 24 0947

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

Secondary Accreditations

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

Subcontract Laboratory Accreditations

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

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

Field Testing Parameters

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

Apex Laboratories

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Report ID:

A4D1094 - 04 12 24 0947

APEX LABS COOLER RECEIPT FORM

Client: MFA Element WO#: A4 D1044

Project/Project #: Redland Garage / 0106.37-001

Delivery Info:

Date/time received: 4/10/24 @ 1003 By: KMS

Delivered by: Apex Client ☒ ESS ☐ FedEx ☐ UPS ☐ Radio ☐ Morgan ☐ SDS ☐ Evergreen ☐ Other ☐

From USDA Regulated Origin? Yes ☐ No ☒

Cooler Inspection Date/time inspected: 4/10/24 @ 1003 By: KMS

Chain of Custody included? Yes ☒ No ☐

Signed/dated by client? Yes ☒ No ☐

Contains USDA Reg. Soils? Yes ☐ No ☒ Unsure (email RegSoils) ☐

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	5.3						
Custody seals? (Y/N)	N						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	Y						
Ice type: (Gel/Real/Other)	Real						
Condition (In/Out):	In						

Cooler out of temp? (Y/N) Possible reason why: ☒ No

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

Out of temperature samples form initiated? Yes ☒ No

Sample Inspection: Date/time inspected: 4/10/24 @ 1003 By: KMS

All samples intact? Yes ☒ No ☐ Comments:

Bottle labels/COCs agree? Yes ☒ No ☐ Comments:

COC/container discrepancies form initiated? Yes ☐ No ☒

Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments:

Do VOA vials have visible headspace? Yes ☐ No ☐ NA ☒

Comments:

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

Comments:

Labeled by:

Witness: WAB

Cooler Inspected by:

Form Y-003 R-02

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ANALYTICAL REPORT

Apex Laboratories, LLC

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

Friday, April 25, 2025

Andrew S. Blake, R.G., L.G.

Succeed Environmental Consulting

6028 NE 49th Ave.

Portland, OR 97218

RE: A5D1429 - Redland - Redland-2

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 A5D1429, which was received by the laboratory on 4/14/2025 at 3:01:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@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 5.6 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

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



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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Succeed Environmental Consulting

6028 NE 49th Ave.

Portland, OR 97218

Project: **Redland**

Project Number: **Redland-2**

Project Manager: **Andrew S. Blake, R.G., L.G.**

Report ID:

A5D1429 - 04 25 25 1457

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TP-2 (8.0-10.0)	A5D1429-01	Soil	04/13/25 08:15	04/14/25 15:01
TP-3 (8.0-10.0)	A5D1429-02	Soil	04/13/25 08:30	04/14/25 15:01
TP-4 (8.0-10.0)	A5D1429-03	Soil	04/13/25 08:45	04/14/25 15:01
TP-5 (8.0-10.0)	A5D1429-04	Soil	04/13/25 09:15	04/14/25 15:01
TP-1	A5D1429-05	Water	04/13/25 10:00	04/14/25 15:01

Apex Laboratories

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**ANALYTICAL REPORT****Apex Laboratories, LLC**

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503-718-2323

ORELAP ID: OR100062

Succeed Environmental Consulting

6028 NE 49th Ave.

Portland, OR 97218

Project: **Redland**Project Number: **Redland-2**Project Manager: **Andrew S. Blake, R.G., L.G.****Report ID:****A5D1429 - 04 25 25 1457****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
TP-2 (8.0-10.0) (A5D1429-01)				Matrix: Soil		Batch: 25D0748		
Diesel	ND	---	24.9	mg/kg dry	1	04/21/25 08:14	NWTPH-Dx	
Oil	ND	---	49.8	mg/kg dry	1	04/21/25 08:14	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 79 %		Limits: 50-150 %	1	04/21/25 08:14	NWTPH-Dx	
TP-3 (8.0-10.0) (A5D1429-02)				Matrix: Soil		Batch: 25D0748		CONT
Diesel	ND	---	25.4	mg/kg dry	1	04/21/25 08:35	NWTPH-Dx	
Oil	ND	---	50.7	mg/kg dry	1	04/21/25 08:35	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 76 %		Limits: 50-150 %	1	04/21/25 08:35	NWTPH-Dx	
TP-4 (8.0-10.0) (A5D1429-03)				Matrix: Soil		Batch: 25D0748		CONT
Diesel	ND	---	24.4	mg/kg dry	1	04/21/25 08:56	NWTPH-Dx	
Oil	ND	---	48.9	mg/kg dry	1	04/21/25 08:56	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 74 %		Limits: 50-150 %	1	04/21/25 08:56	NWTPH-Dx	
TP-5 (8.0-10.0) (A5D1429-04)				Matrix: Soil		Batch: 25D0748		
Diesel	ND	---	23.2	mg/kg dry	1	04/21/25 09:18	NWTPH-Dx	
Oil	ND	---	46.4	mg/kg dry	1	04/21/25 09:18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 71 %		Limits: 50-150 %	1	04/21/25 09:18	NWTPH-Dx	
TP-1 (A5D1429-05)				Matrix: Water		Batch: 25D1007		
Diesel	0.340	---	0.196	mg/L	1	04/24/25 21:19	NWTPH-Dx	
Oil	ND	---	0.392	mg/L	1	04/24/25 21:19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 90 %		Limits: 50-150 %	1	04/24/25 21:19	NWTPH-Dx	

Apex Laboratories

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062Succeed Environmental Consulting6028 NE 49th Ave.
Portland, OR 97218Project: RedlandProject Number: Redland-2Project Manager: Andrew S. Blake, R.G., L.G.Report ID:

A5D1429 - 04 25 25 1457

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
TP-2 (8.0-10.0) (A5D1429-01)		Matrix: Soil		Batch: 25D0652				
Gasoline Range Organics	ND	---	9.97	mg/kg dry	50	04/16/25 18:03	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	106 %	Limits: 50-150 %	1	04/16/25 18:03	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			108 %	50-150 %	1	04/16/25 18:03	NWTPH-Gx (MS)	
TP-3 (8.0-10.0) (A5D1429-02)		Matrix: Soil		Batch: 25D0652				
Gasoline Range Organics	ND	---	11.4	mg/kg dry	50	04/16/25 18:30	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	103 %	Limits: 50-150 %	1	04/16/25 18:30	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			109 %	50-150 %	1	04/16/25 18:30	NWTPH-Gx (MS)	
TP-4 (8.0-10.0) (A5D1429-03)		Matrix: Soil		Batch: 25D0652				
Gasoline Range Organics	ND	---	10.2	mg/kg dry	50	04/16/25 18:58	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	102 %	Limits: 50-150 %	1	04/16/25 18:58	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			109 %	50-150 %	1	04/16/25 18:58	NWTPH-Gx (MS)	
TP-5 (8.0-10.0) (A5D1429-04)		Matrix: Soil		Batch: 25D0652				
Gasoline Range Organics	ND	---	8.00	mg/kg dry	50	04/16/25 19:25	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	102 %	Limits: 50-150 %	1	04/16/25 19:25	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			110 %	50-150 %	1	04/16/25 19:25	NWTPH-Gx (MS)	
TP-1 (A5D1429-05RE1)		Matrix: Water		Batch: 25D0703				CONT
Gasoline Range Organics	ND	---	0.100	mg/L	1	04/17/25 17:35	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	90 %	Limits: 50-150 %	1	04/17/25 17:35	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			104 %	50-150 %	1	04/17/25 17:35	NWTPH-Gx (MS)	

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Succeed Environmental Consulting

6028 NE 49th Ave.

Portland, OR 97218

Project: RedlandProject Number: Redland-2Project Manager: Andrew S. Blake, R.G., L.G.Report ID:

A5D1429 - 04 25 25 1457

ANALYTICAL SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
TP-2 (8.0-10.0) (A5D1429-01)		Matrix: Soil			Batch: 25D0652			
Benzene	ND	---	19.9	ug/kg dry	50	04/16/25 18:03	5035A/8260D	
Toluene	ND	---	99.7	ug/kg dry	50	04/16/25 18:03	5035A/8260D	
Ethylbenzene	ND	---	49.9	ug/kg dry	50	04/16/25 18:03	5035A/8260D	
Xylenes, total	ND	---	150	ug/kg dry	50	04/16/25 18:03	5035A/8260D	
Naphthalene	ND	---	199	ug/kg dry	50	04/16/25 18:03	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>105 %</i>	<i>Limits:</i>	<i>80-120 %</i>	<i>1</i>	<i>04/16/25 18:03</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>		<i>80-120 %</i>	<i>1</i>	<i>04/16/25 18:03</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>			<i>95 %</i>		<i>79-120 %</i>	<i>1</i>	<i>04/16/25 18:03</i>	<i>5035A/8260D</i>
TP-3 (8.0-10.0) (A5D1429-02)		Matrix: Soil			Batch: 25D0652			
Benzene	ND	---	22.7	ug/kg dry	50	04/16/25 18:30	5035A/8260D	
Toluene	ND	---	114	ug/kg dry	50	04/16/25 18:30	5035A/8260D	
Ethylbenzene	ND	---	56.8	ug/kg dry	50	04/16/25 18:30	5035A/8260D	
Xylenes, total	ND	---	170	ug/kg dry	50	04/16/25 18:30	5035A/8260D	
Naphthalene	ND	---	227	ug/kg dry	50	04/16/25 18:30	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>106 %</i>	<i>Limits:</i>	<i>80-120 %</i>	<i>1</i>	<i>04/16/25 18:30</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>		<i>80-120 %</i>	<i>1</i>	<i>04/16/25 18:30</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>			<i>93 %</i>		<i>79-120 %</i>	<i>1</i>	<i>04/16/25 18:30</i>	<i>5035A/8260D</i>
TP-4 (8.0-10.0) (A5D1429-03)		Matrix: Soil			Batch: 25D0652			
Benzene	ND	---	20.5	ug/kg dry	50	04/16/25 18:58	5035A/8260D	
Toluene	ND	---	102	ug/kg dry	50	04/16/25 18:58	5035A/8260D	
Ethylbenzene	ND	---	51.2	ug/kg dry	50	04/16/25 18:58	5035A/8260D	
Xylenes, total	ND	---	154	ug/kg dry	50	04/16/25 18:58	5035A/8260D	
Naphthalene	ND	---	205	ug/kg dry	50	04/16/25 18:58	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>106 %</i>	<i>Limits:</i>	<i>80-120 %</i>	<i>1</i>	<i>04/16/25 18:58</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>		<i>80-120 %</i>	<i>1</i>	<i>04/16/25 18:58</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>			<i>95 %</i>		<i>79-120 %</i>	<i>1</i>	<i>04/16/25 18:58</i>	<i>5035A/8260D</i>
TP-5 (8.0-10.0) (A5D1429-04)		Matrix: Soil			Batch: 25D0652			
Benzene	ND	---	16.0	ug/kg dry	50	04/16/25 19:25	5035A/8260D	
Toluene	ND	---	80.0	ug/kg dry	50	04/16/25 19:25	5035A/8260D	
Ethylbenzene	ND	---	40.0	ug/kg dry	50	04/16/25 19:25	5035A/8260D	
Xylenes, total	ND	---	120	ug/kg dry	50	04/16/25 19:25	5035A/8260D	

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ANALYTICAL REPORT

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062Succeed Environmental Consulting6028 NE 49th Ave.
Portland, OR 97218Project: RedlandProject Number: Redland-2Project Manager: Andrew S. Blake, R.G., L.G.Report ID:

A5D1429 - 04 25 25 1457

ANALYTICAL SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
TP-5 (8.0-10.0) (A5D1429-04)		Matrix: Soil			Batch: 25D0652			
Naphthalene	ND	---	160	ug/kg dry	50	04/16/25 19:25	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	106 %	Limits:	80-120 %	1	04/16/25 19:25	5035A/8260D
Toluene-d8 (Surr)			101 %		80-120 %	1	04/16/25 19:25	5035A/8260D
4-Bromofluorobenzene (Surr)			95 %		79-120 %	1	04/16/25 19:25	5035A/8260D
TP-1 (A5D1429-05RE1)		Matrix: Water			Batch: 25D0703			CONT
Benzene	ND	---	0.200	ug/L	1	04/17/25 17:35	EPA 8260D	
Toluene	ND	---	1.00	ug/L	1	04/17/25 17:35	EPA 8260D	
Ethylbenzene	ND	---	0.500	ug/L	1	04/17/25 17:35	EPA 8260D	
Xylenes, total	ND	---	1.50	ug/L	1	04/17/25 17:35	EPA 8260D	
Naphthalene	ND	---	5.00	ug/L	1	04/17/25 17:35	EPA 8260D	Q-54
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	104 %	Limits:	80-120 %	1	04/17/25 17:35	EPA 8260D
Toluene-d8 (Surr)			105 %		80-120 %	1	04/17/25 17:35	EPA 8260D
4-Bromofluorobenzene (Surr)			99 %		80-120 %	1	04/17/25 17:35	EPA 8260D

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Project: Redland

Project Number: Redland-2

Project Manager: Andrew S. Blake, R.G., L.G.

Report ID:

A5D1429 - 04 25 25 1457

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
TP-2 (8.0-10.0) (A5D1429-01)				Matrix: Soil		Batch: 25D0609		
% Solids	72.0	---	1.00	%	1	04/16/25 05:28	EPA 8000D	
TP-3 (8.0-10.0) (A5D1429-02)				Matrix: Soil		Batch: 25D0609		CONT
% Solids	71.2	---	1.00	%	1	04/16/25 05:28	EPA 8000D	
TP-4 (8.0-10.0) (A5D1429-03)				Matrix: Soil		Batch: 25D0609		CONT
% Solids	72.3	---	1.00	%	1	04/16/25 05:28	EPA 8000D	
TP-5 (8.0-10.0) (A5D1429-04)				Matrix: Soil		Batch: 25D0609		
% Solids	74.4	---	1.00	%	1	04/16/25 05:28	EPA 8000D	

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Project: RedlandProject Number: Redland-2Project Manager: Andrew S. Blake, R.G., L.G.Report ID:

A5D1429 - 04 25 25 1457

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 25D0748 - EPA 3546 (Fuels)						Soil							
Blank (25D0748-BLK1)			Prepared: 04/18/25 06:00		Analyzed: 04/18/25 07:46								
NWTPH-Dx													
Diesel	ND	---	20.0	mg/kg wet	1	---	---	---	---	---	---		
Oil	ND	---	40.0	mg/kg wet	1	---	---	---	---	---	---		
Surr: o-Terphenyl (Surr)		Recovery: 90 %		Limits: 50-150 %		Dilution: 1x							
LCS (25D0748-BS1)			Prepared: 04/18/25 06:00		Analyzed: 04/18/25 08:06								
NWTPH-Dx													
Diesel	101	---	20.0	mg/kg wet	1	125	---	80	38-132%	---	---		
Surr: o-Terphenyl (Surr)		Recovery: 81 %		Limits: 50-150 %		Dilution: 1x							
Duplicate (25D0748-DUP1)			Prepared: 04/18/25 06:00		Analyzed: 04/18/25 08:50								
QC Source Sample: Non-SDG (A5D1571-01)													
Diesel	16700	---	211	mg/kg dry	10	---	18400	---	---	10	30%		
Oil	ND	---	421	mg/kg dry	10	---	ND	---	---	---	30%		
Surr: o-Terphenyl (Surr)		Recovery: 106 %		Limits: 50-150 %		Dilution: 10x							S-05
Duplicate (25D0748-DUP2)			Prepared: 04/18/25 07:12		Analyzed: 04/21/25 08:32								CONT
QC Source Sample: Non-SDG (A5D1562-05)													
Diesel	ND	---	20.9	mg/kg dry	1	---	ND	---	---	---	30%		
Oil	ND	---	41.8	mg/kg dry	1	---	31.6	---	---	***	30%		
Surr: o-Terphenyl (Surr)		Recovery: 81 %		Limits: 50-150 %		Dilution: 1x							
Batch 25D1007 - EPA 3510C (Fuels/Acid Ext.)						Water							
Blank (25D1007-BLK1)			Prepared: 04/24/25 11:15		Analyzed: 04/24/25 20:18								
NWTPH-Dx													
Diesel	ND	---	0.0800	mg/L	1	---	---	---	---	---	---		
Oil	ND	---	0.160	mg/L	1	---	---	---	---	---	---		
Surr: o-Terphenyl (Surr)		Recovery: 106 %		Limits: 50-150 %		Dilution: 1x							
LCS (25D1007-BS1)			Prepared: 04/24/25 11:15		Analyzed: 04/24/25 20:38								
NWTPH-Dx													
Diesel	0.410	---	0.0800	mg/L	1	0.500	---	82	36-132%	---	---		

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Project Number: Redland-2

Project Manager: Andrew S. Blake, R.G., L.G.

Report ID:

A5D1429 - 04 25 25 1457

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 25D1007 - EPA 3510C (Fuels/Acid Ext.)						Water						
LCS (25D1007-BS1)						Prepared: 04/24/25 11:15 Analyzed: 04/24/25 20:38						
Surr: o-Terphenyl (Surr)						Recovery: 110 % Limits: 50-150 % Dilution: 1x						
LCS Dup (25D1007-BSD1)						Prepared: 04/24/25 11:15 Analyzed: 04/24/25 20:58						
NWTPH-Dx						Q-19						
Diesel	0.391	---	0.0800	mg/L	1	0.500	---	78	36-132%	5	30%	
Surr: o-Terphenyl (Surr)						Recovery: 108 % Limits: 50-150 % Dilution: 1x						

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A5D1429 - 04 25 25 1457

QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25D0652 - EPA 5035A						Soil						
Blank (25D0652-BLK1)			Prepared: 04/16/25 09:00		Analyzed: 04/16/25 12:07							
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	5.00	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 99 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		106 %		50-150 %		"						
LCS (25D0652-BS2)			Prepared: 04/16/25 09:00		Analyzed: 04/16/25 11:40							
NWTPH-Gx (MS)												
Gasoline Range Organics	25.5	---	5.00	mg/kg wet	50	25.0	---	102	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 102 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		105 %		50-150 %		"						
Duplicate (25D0652-DUP1)			Prepared: 04/07/25 16:01		Analyzed: 04/16/25 21:14							
QC Source Sample: Non-SDG (A5D1449-01)												
Gasoline Range Organics	6190	---	20.5	mg/kg dry	200	---	6540	---	---	6	30%	E
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 110 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		107 %		50-150 %		"						

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A5D1429 - 04 25 25 1457

QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25D0680 - EPA 5030C						Water						
Blank (25D0680-BLK1)			Prepared: 04/16/25 14:00		Analyzed: 04/16/25 14:43							
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 94 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		105 %		50-150 %		"						
LCS (25D0680-BS2)			Prepared: 04/16/25 14:00		Analyzed: 04/16/25 14:20							
NWTPH-Gx (MS)												
Gasoline Range Organics	0.502	---	0.100	mg/L	1	0.500	---	100	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 96 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		102 %		50-150 %		"						
Duplicate (25D0680-DUP1)			Prepared: 04/16/25 14:00		Analyzed: 04/16/25 20:44							
QC Source Sample: Non-SDG (A5D1463-02)												
Gasoline Range Organics	31.4	---	1.00	mg/L	10	---	32.3	---	---	3	30%	E
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 99 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		97 %		50-150 %		"						

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A5D1429 - 04 25 25 1457

QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25D0703 - EPA 5030C						Water						
Blank (25D0703-BLK1)			Prepared: 04/17/25 11:31 Analyzed: 04/17/25 11:31									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 93 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		107 %		50-150 %		"						
LCS (25D0703-BS2)			Prepared: 04/17/25 10:00 Analyzed: 04/17/25 10:23									
NWTPH-Gx (MS)												
Gasoline Range Organics	0.555	---	0.100	mg/L	1	0.500	---	111	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 94 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		101 %		50-150 %		"						
Duplicate (25D0703-DUP1)			Prepared: 04/17/25 11:31 Analyzed: 04/17/25 13:04									
QC Source Sample: Non-SDG (A5D1525-16)												
Gasoline Range Organics	ND	---	1.00	mg/L	10	---	0.862	---	---	***	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 86 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		101 %		50-150 %		"						
Duplicate (25D0703-DUP2)			Prepared: 04/17/25 11:31 Analyzed: 04/17/25 20:33									
QC Source Sample: Non-SDG (A5D1486-10RE1)												
Gasoline Range Organics	2.92	---	1.00	mg/L	10	---	2.79	---	---	5	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 82 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		96 %		50-150 %		"						

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Project: RedlandProject Number: Redland-2Project Manager: Andrew S. Blake, R.G., L.G.Report ID:

A5D1429 - 04 25 25 1457

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	Limits	RPD	RPD Limit	Notes
Batch 25D0652 - EPA 5035A						Soil						
Blank (25D0652-BLK1)			Prepared: 04/16/25 09:00 Analyzed: 04/16/25 12:07									
<u>5035A/8260D</u>												
Benzene	ND	---	10.0	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
Xylenes, total	ND	---	75.0	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	100	ug/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 104 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		96 %		79-120 %		"						
LCS (25D0652-BS1)			Prepared: 04/16/25 09:00 Analyzed: 04/16/25 10:45									
<u>5035A/8260D</u>												
Benzene	1060	---	10.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Toluene	1000	---	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Ethylbenzene	1030	---	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Xylenes, total	2970	---	75.0	ug/kg wet	50	3000	---	99	80-120%	---	---	
Naphthalene	814	---	100	ug/kg wet	50	1000	---	81	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 103 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		91 %		79-120 %		"						
Duplicate (25D0652-DUP1)			Prepared: 04/07/25 16:01 Analyzed: 04/16/25 21:14									
<u>QC Source Sample: Non-SDG (A5D1449-01)</u>												
Benzene	ND	---	40.9	ug/kg dry	200	---	ND	---	---	---	30%	
Toluene	7250	---	205	ug/kg dry	200	---	6980	---	---	4	30%	
Ethylbenzene	50500	---	102	ug/kg dry	200	---	49200	---	---	3	30%	E
Xylenes, total	320000	---	307	ug/kg dry	200	---	319000	---	---	0.3	30%	E
Naphthalene	60500	---	409	ug/kg dry	200	---	58900	---	---	3	30%	E
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 103 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		79-120 %		"						
Matrix Spike (25D0652-MS1)			Prepared: 04/13/25 09:15 Analyzed: 04/16/25 19:52									

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Project: **Redland**Project Number: **Redland-2**Project Manager: **Andrew S. Blake, R.G., L.G.****Report ID:****A5D1429 - 04 25 25 1457****QUALITY CONTROL (QC) SAMPLE RESULTS****BTEX+N Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25D0652 - EPA 5035A						Soil						
Matrix Spike (25D0652-MS1)			Prepared: 04/13/25 09:15 Analyzed: 04/16/25 19:52									
QC Source Sample: TP-5 (8.0-10.0) (A5D1429-04)												
5035A/8260D												
Benzene	1840	---	16.0	ug/kg dry	50	1600	ND	115	77-121%	---	---	
Toluene	1710	---	80.0	ug/kg dry	50	1600	ND	107	77-121%	---	---	
Ethylbenzene	1760	---	40.0	ug/kg dry	50	1600	ND	110	76-122%	---	---	
Xylenes, total	5130	---	120	ug/kg dry	50	4800	ND	107	78-124%	---	---	
Naphthalene	1270	---	160	ug/kg dry	50	1600	ND	79	62-129%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 103 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		90 %		79-120 %		"						

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A5D1429 - 04 25 25 1457

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25D0680 - EPA 5030C												
Water												
Blank (25D0680-BLK1)												
Prepared: 04/16/25 14:00 Analyzed: 04/16/25 14:43												
EPA 8260D												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Xylenes, total	ND	---	1.50	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)												
Recovery: 106 % Limits: 80-120 % Dilution: 1x												
Toluene-d8 (Surr)												
104 % 80-120 % "												
4-Bromofluorobenzene (Surr)												
99 % 80-120 % "												
LCS (25D0680-BS1)												
Prepared: 04/16/25 13:00 Analyzed: 04/16/25 13:57												
EPA 8260D												
Benzene	20.2	---	0.200	ug/L	1	20.0	---	101	80-120%	---	---	
Toluene	19.7	---	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
Ethylbenzene	21.0	---	0.500	ug/L	1	20.0	---	105	80-120%	---	---	
Xylenes, total	62.3	---	1.50	ug/L	1	60.0	---	104	80-120%	---	---	
Naphthalene	14.1	---	5.00	ug/L	1	20.0	---	71	80-120%	---	---	Q-55
Surr: 1,4-Difluorobenzene (Surr)												
Recovery: 102 % Limits: 80-120 % Dilution: 1x												
Toluene-d8 (Surr)												
98 % 80-120 % "												
4-Bromofluorobenzene (Surr)												
94 % 80-120 % "												
Duplicate (25D0680-DUP1)												
Prepared: 04/16/25 14:00 Analyzed: 04/16/25 20:44												
QC Source Sample: Non-SDG (A5D1463-02)												
Benzene	202	---	2.00	ug/L	10	---	193	---	---	5	30%	
Toluene	50.0	---	10.0	ug/L	10	---	47.5	---	---	5	30%	
Ethylbenzene	365	---	5.00	ug/L	10	---	354	---	---	3	30%	
Xylenes, total	165	---	15.0	ug/L	10	---	151	---	---	9	30%	
Naphthalene	4400	---	50.0	ug/L	10	---	4490	---	---	2	30%	E, Q-54a
Surr: 1,4-Difluorobenzene (Surr)												
Recovery: 98 % Limits: 80-120 % Dilution: 1x												
Toluene-d8 (Surr)												
103 % 80-120 % "												
4-Bromofluorobenzene (Surr)												
94 % 80-120 % "												
Matrix Spike (25D0680-MS1)												
Prepared: 04/16/25 14:00 Analyzed: 04/16/25 21:07												

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Philip Nerenberg, Lab Director

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503-718-2323
ORELAP ID: OR100062

Succeed Environmental Consulting

6028 NE 49th Ave.
Portland, OR 97218

Project: **Redland**

Project Number: **Redland-2**

Project Manager: **Andrew S. Blake, R.G., L.G.**

Report ID:

A5D1429 - 04 25 25 1457

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25D0680 - EPA 5030C						Water						
Matrix Spike (25D0680-MS1)			Prepared: 04/16/25 14:00 Analyzed: 04/16/25 21:07									
QC Source Sample: Non-SDG (A5D1499-01)												
EPA 8260D												
Benzene	22.1	---	0.200	ug/L	1	20.0	ND	111	79-120%	---	---	Q-54a
Toluene	21.4	---	1.00	ug/L	1	20.0	ND	107	80-121%	---	---	
Ethylbenzene	22.5	---	0.500	ug/L	1	20.0	ND	112	79-121%	---	---	
Xylenes, total	67.6	---	1.50	ug/L	1	60.0	ND	113	79-121%	---	---	
Naphthalene	20.4	---	5.00	ug/L	1	20.0	ND	102	61-128%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 102 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		98 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		95 %		80-120 %		"						

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A5D1429 - 04 25 25 1457

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25D0703 - EPA 5030C												
Water												
Blank (25D0703-BLK1)												
Prepared: 04/17/25 11:31 Analyzed: 04/17/25 11:31												
EPA 8260D												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	Q-54
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Xylenes, total	ND	---	1.50	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 107 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		104 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		101 %		80-120 %		"						
LCS (25D0703-BS1)												
Prepared: 04/17/25 10:00 Analyzed: 04/17/25 10:45												
EPA 8260D												
Benzene	20.1	---	0.200	ug/L	1	20.0	---	101	80-120%	---	---	Q-54
Toluene	19.7	---	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
Ethylbenzene	20.7	---	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
Xylenes, total	62.0	---	1.50	ug/L	1	60.0	---	103	80-120%	---	---	
Naphthalene	13.7	---	5.00	ug/L	1	20.0	---	68	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 101 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		98 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		94 %		80-120 %		"						
Duplicate (25D0703-DUP1)												
Prepared: 04/17/25 11:31 Analyzed: 04/17/25 13:04												
QC Source Sample: Non-SDG (A5D1525-16)												
Benzene	5.00	---	2.00	ug/L	10	---	5.10	---	---	2	30%	Q-54
Toluene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
Xylenes, total	ND	---	15.0	ug/L	10	---	ND	---	---	---	30%	
Naphthalene	ND	---	50.0	ug/L	10	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 102 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		106 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		101 %		80-120 %		"						
Duplicate (25D0703-DUP2)												
Prepared: 04/17/25 11:31 Analyzed: 04/17/25 20:33												

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Philip Nerenberg, Lab Director

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503-718-2323
ORELAP ID: OR100062Succeed Environmental Consulting6028 NE 49th Ave.
Portland, OR 97218Project: RedlandProject Number: Redland-2Project Manager: Andrew S. Blake, R.G., L.G.Report ID:

A5D1429 - 04 25 25 1457

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX+N Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 25D0703 - EPA 5030C						Water							
Duplicate (25D0703-DUP2)			Prepared: 04/17/25 11:31 Analyzed: 04/17/25 20:33										
QC Source Sample: Non-SDG (A5D1486-10RE1)													
Benzene	341	---	2.00	ug/L	10	---	318	---	---	7	30%	Q-54	
Toluene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%		
Ethylbenzene	49.1	---	5.00	ug/L	10	---	46.7	---	---	5	30%		
Xylenes, total	ND	---	15.0	ug/L	10	---	ND	---	---	---	30%		
Naphthalene	ND	---	50.0	ug/L	10	---	ND	---	---	---	30%		
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 97 %		Limits: 80-120 %		Dilution: 1x							
Toluene-d8 (Surr)		105 %		80-120 %		"							
4-Bromofluorobenzene (Surr)		101 %		80-120 %		"							
Matrix Spike (25D0703-MS1)			Prepared: 04/17/25 11:31 Analyzed: 04/17/25 16:50										V-01
QC Source Sample: Non-SDG (A5D1546-01)													
EPA 8260D													
Benzene	21.4	---	0.200	ug/L	1	20.0	ND	107	79-120%	---	---	Q-54	
Toluene	20.8	---	1.00	ug/L	1	20.0	ND	104	80-121%	---	---		
Ethylbenzene	22.1	---	0.500	ug/L	1	20.0	ND	110	79-121%	---	---		
Xylenes, total	65.7	---	1.50	ug/L	1	60.0	ND	110	79-121%	---	---		
Naphthalene	13.7	---	5.00	ug/L	1	20.0	ND	69	61-128%	---	---		
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 102 %		Limits: 80-120 %		Dilution: 1x							
Toluene-d8 (Surr)		98 %		80-120 %		"							
4-Bromofluorobenzene (Surr)		93 %		80-120 %		"							

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Philip Nerenberg, Lab Director

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Portland, OR 97218Project: RedlandProject Number: Redland-2Project Manager: Andrew S. Blake, R.G., L.G.Report ID:

A5D1429 - 04 25 25 1457

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25D0609 - Dry Weight Prep (EPA 8000D)							Soil					
Duplicate (25D0609-DUP1)			Prepared: 04/15/25 10:25 Analyzed: 04/16/25 05:28									
<u>QC Source Sample: Non-SDG (A5D1424-01)</u>												
% Solids	89.8	---	1.00	%	1	---	90.5	---	---	0.8	10%	
Duplicate (25D0609-DUP2)			Prepared: 04/15/25 10:25 Analyzed: 04/16/25 05:28									
<u>QC Source Sample: TP-2 (8.0-10.0) (A5D1429-01)</u>												
<u>EPA 8000D</u>												
% Solids	74.6	---	1.00	%	1	---	72.0	---	---	4	10%	
Duplicate (25D0609-DUP3)			Prepared: 04/15/25 10:25 Analyzed: 04/16/25 05:28									
<u>QC Source Sample: Non-SDG (A5D1439-01)</u>												
% Solids	91.8	---	1.00	%	1	---	91.5	---	---	0.3	10%	
Duplicate (25D0609-DUP4)			Prepared: 04/15/25 10:25 Analyzed: 04/16/25 05:28									
<u>QC Source Sample: Non-SDG (A5D1211-06)</u>												
% Solids	83.8	---	1.00	%	1	---	86.5	---	---	3	10%	
Duplicate (25D0609-DUP5)			Prepared: 04/15/25 18:45 Analyzed: 04/16/25 05:28									
<u>QC Source Sample: Non-SDG (A5D1471-01)</u>												
% Solids	88.8	---	1.00	%	1	---	88.6	---	---	0.2	10%	
Duplicate (25D0609-DUP6)			Prepared: 04/15/25 18:45 Analyzed: 04/16/25 05:28									
<u>QC Source Sample: Non-SDG (A5D1474-01)</u>												
% Solids	79.8	---	1.00	%	1	---	79.9	---	---	0.1	10%	

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

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Philip Nerenberg, Lab Director

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503-718-2323
ORELAP ID: OR100062**Succeed Environmental Consulting**6028 NE 49th Ave.
Portland, OR 97218Project: **Redland**Project Number: **Redland-2**Project Manager: **Andrew S. Blake, R.G., L.G.****Report ID:****A5D1429 - 04 25 25 1457****SAMPLE PREPARATION INFORMATION****Diesel and/or Oil Hydrocarbons by NWTPH-Dx****Prep: EPA 3510C (Fuels/Acid Ext.)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 25D1007							
A5D1429-05	Water	NWTPH-Dx	04/13/25 10:00	04/24/25 11:15	1020mL/5mL	1000mL/5mL	0.98

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 25D0748							
A5D1429-01	Soil	NWTPH-Dx	04/13/25 08:15	04/18/25 07:12	11.17g/5mL	10g/5mL	0.90
A5D1429-02	Soil	NWTPH-Dx	04/13/25 08:30	04/18/25 07:12	11.08g/5mL	10g/5mL	0.90
A5D1429-03	Soil	NWTPH-Dx	04/13/25 08:45	04/18/25 07:12	11.32g/5mL	10g/5mL	0.88
A5D1429-04	Soil	NWTPH-Dx	04/13/25 09:15	04/18/25 07:12	11.6g/5mL	10g/5mL	0.86

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

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 25D0703							
A5D1429-05RE1	Water	NWTPH-Gx (MS)	04/13/25 10:00	04/17/25 11:34	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 25D0652							
A5D1429-01	Soil	NWTPH-Gx (MS)	04/13/25 08:15	04/13/25 08:15	4.33g/5mL	5g/5mL	1.15
A5D1429-02	Soil	NWTPH-Gx (MS)	04/13/25 08:30	04/13/25 08:30	3.76g/5mL	5g/5mL	1.33
A5D1429-03	Soil	NWTPH-Gx (MS)	04/13/25 08:45	04/13/25 08:45	4.15g/5mL	5g/5mL	1.20
A5D1429-04	Soil	NWTPH-Gx (MS)	04/13/25 09:15	04/13/25 09:15	5.36g/5mL	5g/5mL	0.93

BTEX+N Compounds by EPA 8260D**Prep: EPA 5030C**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 25D0703							
A5D1429-05RE1	Water	EPA 8260D	04/13/25 10:00	04/17/25 11:34	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 25D0652							

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503-718-2323

ORELAP ID: OR100062

Succeed Environmental Consulting

6028 NE 49th Ave.

Portland, OR 97218

Project: **Redland**Project Number: **Redland-2**Project Manager: **Andrew S. Blake, R.G., L.G.****Report ID:****A5D1429 - 04 25 25 1457****SAMPLE PREPARATION INFORMATION****BTEX+N Compounds by EPA 8260D****Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A5D1429-01	Soil	5035A/8260D	04/13/25 08:15	04/13/25 08:15	4.33g/5mL	5g/5mL	1.15
A5D1429-02	Soil	5035A/8260D	04/13/25 08:30	04/13/25 08:30	3.76g/5mL	5g/5mL	1.33
A5D1429-03	Soil	5035A/8260D	04/13/25 08:45	04/13/25 08:45	4.15g/5mL	5g/5mL	1.20
A5D1429-04	Soil	5035A/8260D	04/13/25 09:15	04/13/25 09:15	5.36g/5mL	5g/5mL	0.93

Percent Dry Weight**Prep: Dry Weight Prep (EPA 8000D)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 25D0609</u>							
A5D1429-01	Soil	EPA 8000D	04/13/25 08:15	04/15/25 10:25	1g	1g	1.00
A5D1429-02	Soil	EPA 8000D	04/13/25 08:30	04/15/25 10:25	1g	1g	1.00
A5D1429-03	Soil	EPA 8000D	04/13/25 08:45	04/15/25 10:25	1g	1g	1.00
A5D1429-04	Soil	EPA 8000D	04/13/25 09:15	04/15/25 10:25	1g	1g	1.00

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Report ID:

A5D1429 - 04 25 25 1457

QUALIFIER DEFINITIONS

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

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- 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.
- E** Estimated Value. The result is above the calibration range of the instrument.
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -12%. 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 -9%. 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.
- S-05** Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
- V-01** Sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

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Report ID:

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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 and Detection Limits: Default Limits

Default Reporting and Detection Limits are based on 100% dry weight with the minimum dilution for the analysis. Reporting and Detection Limits are raised due to moisture content, additional dilutions required for analysis, matrix interferences and in other cases, as necessary.

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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Philip Nerenberg, Lab Director



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Project: **Redland**

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Project Manager: **Andrew S. Blake, R.G., L.G.**

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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 $\frac{1}{2}$ 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

Philip Nerenberg, Lab 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.



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Succeed Environmental Consulting

6028 NE 49th Ave.

Portland, OR 97218

Project: **Redland**

Project Number: **Redland-2**

Project Manager: **Andrew S. Blake, R.G., L.G.**

Report ID:

A5D1429 - 04 25 25 1457

Decanted Samples:

Soils/Sediments:

Unless TCLP analysis is required or there is notification otherwise for a specific project, all Soil and Sediments containing excess water are decanted prior to analysis in order to provide the most representative sample for analysis.

Water Samples:

Water samples containing solids and sediment may need to be decanted in order to eliminate these particulates from the water extractions. In the case of organics extractions, a solvent rinse of the container will not be performed.

Volatiles Soils (5035s)

Samples that are field preserved by 5035 for volatiles are dry weight corrected using the same dry weight correction as for normal analyses.

In the case of decanted samples, the dry weight may be performed on a decanted sample, while the aliquot for 5035 may not have been treated the same way. If this is a concern, please submit separate containers for dry weight analysis for volatiles can be provided.

All samples decanted in the laboratory are noted in this report with the DCNT qualifier indicating the sample was decanted.

Apex Laboratories

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Philip Nerenberg, Lab Director



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

Apex Laboratories

Philip Nerenberg, Lab Director

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Succeed Environmental Consulting

6028 NE 49th Ave.

Portland, OR 97218

Project: Redland

Project Number: Redland-2

Project Manager: Andrew S. Blake, R.G., L.G.

Report ID:

A5D1429 - 04 25 25 1457

APEX LABS		CHAIN OF CUSTODY		Project Name: <u>Redland-2</u>		Project #: <u>Redland-2</u>															
Company: <u>SEC</u>		Project Mgr: <u>A. Blake</u>		Phone: <u>503-718-2323</u>		Email: <u>abk@seculab.com</u>															
Address: <u>1651 NE Bowling #211, 97232</u>		Project Name: <u>Redland-2</u>		Project #: <u>Redland-2</u>		PO #															
Site Location: <u>OR</u>		State: <u>OR</u>		County: <u>Clack</u>		Lab # <u>ASD1429</u> COC 1 of 1															
SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-DC	NWTPH-DC + 8Tg+2	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, Bi, Br, Cd, Cr, Cu, Fe, Pb, Hg, Mn, Mo, Ni, K, Se, Ag, Na, TL, V, Zn	TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
TP-2 (8.0-10.0)	4/13/25	815	SS	4	X	X															
TP-3 (8.0-10.0)	4/13/25	830	SS	4	X	X															
TP-4 (8.0-10.0)	4/13/25	845	SS	4	X	X															
TP-5 (8.0-10.0)	4/13/25	915	SS	4	X	X															
TP-1	4/13/25	1000	W	5	X	X															

Standard Turn Around Time (TAT) = 10 Business Days

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

SPECIAL INSTRUCTIONS:

RECEIVED BY:		RECEIVED BY:	
Signature:	Date:	Signature:	Date:
<u>[Signature]</u>	<u>4/14/25</u>	<u>[Signature]</u>	<u>4/14/25</u>
Printed Name: <u>A. Blake</u>	Time: <u>15:01</u>	Printed Name: <u>Kristen Norely</u>	Time: <u>1501</u>
Company: <u>SEC</u>	Company: <u>Apex</u>	Company: <u>Apex</u>	Company: <u>Apex</u>

Form Y-002 R-00

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Succeed Environmental Consulting

6028 NE 49th Ave.

Portland, OR 97218

Project: **Redland**Project Number: **Redland-2**Project Manager: **Andrew S. Blake, R.G., L.G.****Report ID:****A5D1429 - 04 25 25 1457****APEX LABS COOLER RECEIPT FORM**Client: SEC Element WO#: A5D1429Project/Project #: Redland-2**Delivery Info:**Date/time received: 4/14/25 @ 1501 By: KNDelivered by: Apex ☒ Client ☒ ESS ☐ FedEx ☐ UPS ☐ Radio ☐ Morgan ☐ SDS ☐ Evergreen ☐ Other ☐From USDA Regulated Origin? Yes ☐ No ☒**Cooler Inspection** Date/time inspected: 4/14/25 @ 1501 By: KNChain of Custody included? Yes ☒ No ☐Signed/dated by client? Yes ☒ No ☐Contains USDA Reg. Soils? Yes ☐ No ☒ Unsure (email RegSoils) ☐

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>5.4</u>						
Custody seals? (Y/N)	<u>N</u>						
Received on ice? (Y/N)	<u>y</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition (In/Out):	<u>Un</u>						

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: 4/14/25 @ 1535 By: lyAll samples intact? Yes ☒ No ☐ Comments: Bottle labels/COCs agree? Yes ☒ No ☐ Comments: COC/container discrepancies form initiated? Yes ☐ No ☒Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments: Do VOA vials have visible headspace? Yes ☐ No ☒ NA ☐Comments: Water samples: pH checked: Yes ☒ No ☐ NA ☐ pH appropriate? Yes ☒ No ☐ NA ☐ pH ID: A23172Comments: Labeled by: lyWitness: DNCooler Inspected by: KN

Form Y-003 R-02

Apex Laboratories

Philip Nerenberg, Lab Director

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APPENDIX C

SOIL DISPOSAL DOCUMENTATION



Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Original
Ticket# 1697140

Customer Name BRAUER1820 LLC BRAUER1820 LLC Carrier MATTON UTILITY
Ticket Date 09/19/2023 Vehicle# 3008-PUP Volume
Payment Type Credit Account Container
Manual Ticket# Driver ERIC
Hauling Ticket# Check#
Route Billing # 0005010
State Waste Code Gen EPA ID
Manifest NA
Destination Grid
PO
Profile 141172OR (PETROLEUM CONTAMINATED SOIL)
Generator 133-BRAUER1820 LLC S REDLAND R BRAUER1820 LLC S REDLAND RD & S FISHERS MILL

	Time	Scale	Operator	Inbound	Gross	92480 lb
In	09/19/2023 08:55:53	Inbound 1	mmalone2		Tare	38640 lb
Out	09/19/2023 09:40:14	Outbound	MRAMOS14		Net	53840 lb
					Tons	26.92

Comments

Consumer Comments? We want to know. Please call.

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Cont Soil Pet-RGC-	100	26.92	Tons				CLACK-IN
2 ENERGY-Energy Surc	100		%				CLACK-IN

Total Tax
Total Ticket

Driver's Signature



Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Original
Ticket# 1697273

Customer Name BRAUER1820 LLC BRAUER1820 LLC Carrier MATTON UTILITY
Ticket Date 09/20/2023 Vehicle# 3008-PUP Volume
Payment Type Credit Account Container
Manual Ticket# Driver ERIC
Hauling Ticket# Check#
Route Billing # 0005010
State Waste Code Gen EPA ID
Manifest NA
Destination Grid
PO
Profile 141172OR (PETROLEUM CONTAMINATED SOIL)
Generator 133-BRAUER1820 LLC S REDLAND R BRAUER1820 LLC S REDLAND RD & S FISHERS MILL

	Time	Scale	Operator	Inbound	Gross	
In	09/20/2023 06:34:24	Inbound 1	mramosl4		Tare	103200 lb
Out	09/20/2023 06:34:24		mramosl4		Net	38640 lb
					Tons	64560 lb
						32.28

Comments

Consumer Comments? We want to know. Please call.

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Cont Soil Pet-RGC-	100	32.28	Tons				CLACK-IN
2 ENERGY-Energy Surc	100		%				CLACK-IN

Total Tax
Total Ticket

Driver's Signature



Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Original
Ticket# 1697365

Customer Name BRAUER1820 LLC BRAUER1820 LLC Carrier MATTON UTILITY
Ticket Date 09/20/2023 Vehicle# 3008-PUP Volume
Payment Type Credit Account Container
Manual Ticket# Driver ERIC
Hauling Ticket# Check#
Route Billing # 0005010
State Waste Code Gen EPA ID
Manifest NA
Destination Grid
PO
Profile 141172OR (PETROLEUM CONTAMINATED SOIL)
Generator 133-BRAUER1820 LLC S REDLAND R BRAUER1820 LLC S REDLAND RD & S FISHERS MILL

	Time	Scale	Operator	Inbound	Gross	
In	09/20/2023 11:05:55	Inbound 1	LGILLILA		Tare	107920 lb
Out	09/20/2023 11:05:55		LGILLILA		Net	38640 lb
					Tons	69280 lb
						34.64

Comments

Consumer Comments? We want to know. Please call.

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Cont Soil Pet-RGC-	100	34.64	Tons				CLACK-IN
2 ENERGY-Energy Surc	100		%				CLACK-IN

Total Tax
Total Ticket

Driver's Signature