

# **Phase II Environmental Site Assessment**

**7696 Eleventh Street and Agate Road**

**White City, Oregon 97503**

**Map and Taxlot 361W19A TL 2203 and TL 2204**

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**ALPINE ENVIRONMENTAL CONSULTANTS, LLC**

## EXECUTIVE SUMMARY

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Alpine Environmental Consultants, LLC (AEC) conducted a Phase II Environmental Site Assessment (ESA) at the property located to the northeast of the Eleventh Street and Antelope Road intersection in White City, Oregon and consisting of two tax lots (TLs) identified as Map and Taxlot 361W19A TL 2203 and TL 2204 (the Subject Property). The Subject Property's TLs 2203 and 2204 occupy approximately 2.16 acres and 4.81 acres, respectively, of undeveloped grassy land. The Phase II ESA was conducted on behalf of LuxeLocker.

A Phase I ESA was initiated at the Subject Property in early May 2023. While the Phase I ESA was still under development, review of initial documentation for the Subject Property indicated three potential Recognized Environmental Conditions (RECs). These included the following: (1) the historical use of the Subject Property (as a log pond, log and/or lumber storage, and an automobile salvage yard); (2) the southeastern historical drycleaner, located potentially upgradient of the Subject Property, and the lack of environmental investigations documentation; and (3) the surrounding current and former industrial properties, including wood products facilities, an auto repair facility, and an auto wrecking facility. Based on these findings, AEC recommended a Phase II ESA be conducted at the Subject Property prior to its potential purchase to evaluate potential adverse environmental impacts that could involve environmental liability and to ensure future workers at the Subject Property are not exposed to unacceptable health risks.

AEC conducted the Phase II ESA in June 2023. The Phase II ESA subsurface investigation conducted at the Subject Property included the collection of soil, groundwater, and soil gas samples. Five soil samples were collected from four soil borings (four from a depth of 0.0 to 3.0 feet below ground surface [bgs] and one from a depth of 9.5 to 10.0 feet bgs), two groundwater samples were collected from two temporary wells, and 13 soil gas samples were collected using soil gas probes. The soil samples were labeled as B1-0-3 through B4-0-3 and B3-9.5-10. The groundwater samples were labeled as B2-GW and B5-GW. The soil gas samples were labeled as SG1 through SG12 and DUP (a duplicate of sample SG4).

The soil and groundwater samples were submitted the one or more of the following analyses:

- Total petroleum hydrocarbons in the diesel (TPH-d) and oil ranges (TPH-o) by Method NWTPH-Dx.
- Total petroleum hydrocarbons in the gasoline range (TPH-g) by Method NWTPH-Gx.
- Polycyclic aromatic hydrocarbons (PAHs) by U.S. Environmental Protection Agency (USEPA) Method 8270E with Selective Ion Monitoring (SIM).
- Volatile organic compounds (VOCs) by USEPA Method 8260D.
- Chlorinated phenolic compounds by USEPA Method 8270E.
- Polychlorinated biphenyls (PCBs) by USEPA Method 8082A.
- Chlorinated dioxins and dibenzofurans by USEPA Method 1613B.



- Total metals by USEPA Method 6020A with inductively coupled plasma-mass spectrometer (ICP-MS), which included arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. The groundwater samples were analyzed for these same metals in both the total and the dissolved forms.

The soil gas samples were submitted for the following analyses:

- Helium and methane by USEPA Method D1946.
- VOCs by USEPA Method TO-15.

Based on an evaluation of the analytical results for the soil samples, groundwater samples, and soil gas samples collected at the Subject Property, the following exceedances of Oregon Department of Environmental Quality (DEQ) screening levels were reported:

- **Dioxins/furans:**

- The concentrations of dioxins/furans in all five soil samples exceeded the generic risk-based concentrations (RBCs) for occupational receptors for the *ingestion, dermal contact, and inhalation* exposure pathway and for the *leaching to groundwater* exposure pathway, as well as the Clean Fill Value;
- In addition, the concentration of dioxins/furans in four soil samples exceeded the generic RBC for construction workers for the *ingestion, dermal contact, and inhalation* exposure pathway; and
- The concentrations of dioxins/furans in both groundwater samples exceeded the generic RBC for the occupational receptors for the *ingestion and inhalation from tapwater* exposure pathway.
- The concentration of dioxins/furans in one soil sample (i.e. B1-0-3) exceeded DEQ's Hot Spot concentration, which could be a potentially complicating factor should this soil need to be exported from the Site and/or if DEQ becomes involved with the Subject Property.

- **Metals:**

- The concentrations of arsenic in all five soil samples exceeded the generic RBC for occupational receptors for the *ingestion, dermal contact, and inhalation exposure pathway*; nevertheless, all reported concentrations were below the naturally occurring background concentration of arsenic in the Cascade Range region of Oregon, which includes the Medford area and the Subject Property;
- The concentrations of total and dissolved arsenic reported in the analyzed groundwater sample B2-GW exceeded the generic RBC for occupational receptors for the *ingestion and inhalation from tapwater exposure pathway*; nevertheless, all reported arsenic concentrations were below the USEPA and Oregon Health Authority (OHA) Maximum Contaminant Level (MCL); and
- Overall, the results of the filtered groundwater analyses reported fewer dissolved metals than total metals; the reported concentrations of the dissolved metals were



also lower than the total metals concentrations; these results indicated the total metals analytical results were biased high and likely associated with the turbidity that was observed during groundwater sampling activities from the temporary wells.

While generic RBCs for occupational receptors or construction workers were exceeded for the aforementioned constituents and exposure pathways, potential risks to human health associated with these constituents and exposure pathways can be managed, mitigated, and/or eliminated from further concern, as follows:

- The reported concentrations of arsenic in soil at the Subject Property are below the naturally occurring background concentration of arsenic in the Cascade Range region of Oregon, which includes the White City area and the Subject Property. Therefore, the *soil ingestion, dermal contact, and inhalation exposure pathway* for arsenic is not considered to be an unacceptable risk at the Subject Property and arsenic in soil is eliminated from further concern.
- For dioxins/furans in soil, the *ingestion, dermal contact, and inhalation exposure pathway* for occupational receptors can be managed via some combination of institutional and/or engineering controls implemented at the Subject Property. Institutional and/or engineering control options to protect occupational receptors include but are not limited to the following: paving; removal of shallow soil and/or covering with a 3-foot layer of clean compacted fill material; additional investigations to delineate dioxins/furans concentrations in shallow soil; developing an asphalt cap maintenance plan; developing a Contaminated Media Management Plan (CMMP); and/or applying a deed notice (e.g. to ensure the asphalt cap is maintained). LuxeLocker could pursue these institutional and/or engineering controls with or without DEQ involvement and approval.
- For dioxins/furans in soil the *ingestion, dermal contact, and inhalation exposure pathway* for construction workers can be managed with proper communication to future construction workers requiring they wear appropriate personal protective equipment (PPE) and follow proper decontamination procedures subsequent to working in order to avoid exposure and health risks. The procedures documenting proper communication, appropriate PPE, and proper decontamination could be documented in a CMMP with or without DEQ approval.
- For dioxins/furans in soil, and arsenic and dioxins/furans in groundwater, the *ingestion and inhalation from tapwater exposure pathway* and the *leaching to groundwater exposure pathway* for occupational receptors can be eliminated from further concern due to the fact that no water supply wells exist or are known to exist at the Subject Property or proximal to the Subject Property. Furthermore, the Subject Property is planned to be serviced with municipal water by the Medford Water Commission and it is reasonable and likely to assume that the Subject Property and adjacent properties will continue to utilize municipal water in the future. Accordingly, it is highly unlikely that residual contamination in soil and groundwater would generate any unacceptable health risks to occupational receptors at the Subject Property via the *ingestion and*



*inhalation from tapwater exposure pathway* and the *leaching to groundwater exposure pathway*. To completely eliminate the potential risks these constituents might pose to occupational receptors at the Subject Property, a deed notice could be developed and applied that prohibits the installation of wells to supply water to occupational receptors at the Subject Property.

- The soil gas results reported no VOCs and no methane concentrations above the generic applicable RBCs for the *volatilization to indoor air* exposure pathway in the 13 soil gas samples analyzed. Therefore, the *volatilization to indoor air exposure pathway* is not considered to be at risk at the Subject Property and is eliminated from further concern.

Based on these findings, AEC concludes the following:

- (1) The presence of several contaminants in soil and groundwater at the Subject Property indicates the historical use of the Subject Property (as a lumber mill, particularly occupied by a log pond and potentially used for log and/or lumber storage, and an automobile salvage yard) and/or the current and historical use of the surrounding industrial properties (including a drycleaner, wood products facilities, an auto repair facility, and an auto wrecking facility) impacted the Subject Property's subsurface. While these impacts constitute RECs, the residual contamination can be managed appropriately during future redevelopment to minimize or eliminate unacceptable risks to occupational receptors and construction workers.
- (2) The presence of total arsenic in soil and total and dissolved arsenic in groundwater at the Subject Property is likely related to naturally occurring conditions at the Subject Property and not related to historical operations at the Subject Property or on adjacent properties. In addition, the presence of dissolved arsenic in groundwater at concentrations lower than the total arsenic concentrations in groundwater indicates the total arsenic analytical results were biased high and likely associated with turbidity that was observed during groundwater sampling activities from the temporary wells.
- (3) The soil at the Subject Property does not qualify as Clean Fill and should not be exported off-site unless properly managed. For example, this soil could be hauled to a quarry under a DEQ-approved Solid Waste Letter of Authorization (SWLA) or, if only a relatively small volume of soil needs to be removed, it could be cost-effectively disposed of at the local Subtitle D municipal waste landfill (i.e. Dry Creek Landfill).
- (4) The presence of dioxins/furans in the upper 3 feet of soil can be managed via some combination of institutional and/or engineering controls, which include but are not limited to the following: paving; removal of shallow soil and/or covering with a 3-foot layer of clean compacted fill material; additional investigations to delineate dioxins/furans concentrations in shallow soil; developing an asphalt cap maintenance plan; developing a CMMP; and/or applying a deed notice (e.g. to ensure the asphalt cap is maintained) with or without DEQ approval.
- (5) The Subject Property owner is not required to but could coordinate with DEQ after purchase to obtain a conditional No Further Action (NFA) letter, which likely involve



development and approval by DEQ of a CMMP, asphalt cap maintenance plan, and potentially a deed restriction prohibiting the use of Subject Property groundwater.

- (6) A deed notice could be developed and applied to the Subject Property that prohibits the installation of wells to supply water to occupational receptors in order to address the presence of dioxins/furans in soil and dioxins/furans and arsenic in groundwater.
- (7) To manage potential risks to construction workers associated with dioxins/furans in soil, a Health and Safety Plan (HASP) and CMMP should be prepared and implemented at the Subject Property, and this could be done with or without DEQ involvement.



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## LIST OF ACRONYMS AND ABBREVIATIONS

AEC	Alpine Environmental Consultants, LLC
bgs	below ground surface
CMMP	Contaminated Media Management Plan
DEQ	Department of Environmental Quality
DL	detection limit
ESA	Environmental Site Assessment
FSDS	Field Sampling Data Sheet
HASP	health and safety plan
ICP-MS	inductively coupled plasma mass spectrometry
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goals
mg/kg	milligrams per kilogram
ml/min	milliliter per minute
MRL	method reporting limit
NFA	No Further Action
OSWER	Office of Solid Waste and Emergency Response
OHA	Oregon Health Authority
PAHs	polycyclic aromatic hydrocarbons
PCBs	polychlorinated biphenyls
pg/g	pictograms per gram
pg/L	pictograms per liter
PID	photoionization detector
PPE	Personal protective equipment
ppm	parts per million
PVC	polyvinyl chloride
REC	recognized environmental condition
RBC	risk-based concentration
SIM	Selective Ion Monitoring
TEQ	Toxicity Equivalent Quotient
TPH	total petroleum hydrocarbon
TPH-d	total petroleum hydrocarbon in diesel-range
TPH-g	total petroleum hydrocarbon in gasoline-range
TPH-o	total petroleum hydrocarbon in oil-range
TL	tax lot
µg/L	micrograms per liter
µg/m <sup>3</sup>	micrograms per cubic meter
USEPA	United States Environmental Protection Agency
VOCs	volatile organic compounds
WRD	Water Resources Department



# 1 INTRODUCTION

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On behalf of LuxeLocker, Alpine Environmental Consultants, LLC (AEC) has prepared this report to present the findings of the Phase II Environmental Site Assessment (ESA) conducted at the property located to the northeast of the Eleventh Street and Antelope Road intersection in White City, Oregon and consisting of two tax lots (TLs) identified as Map and Taxlot 361W19A TL 2203 and TL 2204 (the Subject Property). The Phase II ESA involved subsurface soil, groundwater, and soil gas sampling.

## 1.1 Subject Property Description

The Subject Property is located in Township 36 South, Range 1 West, Section 18 and occupies TL 2203 and TL 2204 identified as Map and Taxlot 361W19A TL 2203 and TL 2204 . TL 2203 and TL 2204 occupy approximately 2.16 acres and 4.81 acres, respectively. The address of TL 2203 is 7696 Eleventh Street and the address of TL 2204 is Agate Road, both TLs located in White City, Oregon. The Subject Property is zoned as general industrial and currently consists of undeveloped grassy land. Six structures are planned to be developed at the Subject Property for commercial/industrial use. The surrounding properties are zoned as light and general industrial, and consist of several industrial and commercial facilities, undeveloped grassy land, and public roads. The Subject Property location and proposed building footprints are illustrated on **Figure 1** and **Figure 2**.

The elevation at the Subject Property is approximately 1312 feet. The Subject Property is generally flat but slopes slightly to the south and west. The adjacent properties to the Subject Property have a general topographic gradient towards the south, north, and west. Based on general topography at and in the vicinity of the Subject Property, the groundwater flow direction at the Subject Property and its vicinity is estimated to be towards the southwest towards Whetstone Creek, and/or towards the northwest towards the Military Slough and/or towards the Rogue River.

## 1.2 Subject Property Background

AEC initiated a Phase I ESA in May 2023. A review of initial documentation for the Subject Property indicated the following three potential Recognized Environmental Conditions (RECs):

1. Based on a review of historical aerial photographs for the Subject Property, all or portions of the Subject Property were historically used for the following purposes: a log pond, log and/or lumber storage, and an automobile salvage yard.
2. Based on personal knowledge of the White City area, a property currently occupied by Realty Roofing is located southeast of the Subject Property. This property was historically occupied by a drycleaner and initial research has not identified any previous



environmental investigation work having been completed at this property, which is presumably hydraulically upgradient of the Subject Property.

3. The Subject Property is surrounded by other industrial properties including wood products facilities and an auto repair facility.

Based on the identified potential RECs and the planned property development, a Phase II ESA was recommended to determine if the identified potential RECs adversely impacted the subsurface at the Subject Property or if these RECs could be eliminated from further concern. In addition to characterizing potential environmental impacts related to methane and volatile organic compounds (VOCs) in shallow soil, the Phase II ESA included an investigation for potential contamination in soil, shallow groundwater, and soil gas that could adversely impact human receptors at LuxeLocker's proposed storage facility and generate unacceptable environmental liability. The scope of work pursued under this Phase II ESA is described in a proposal to the Galli Group dated May 18, 2023.

The objectives of the Phase II ESA include the following:

- To collect a technically appropriate dataset representative of current conditions to determine if residual contamination in shallow soil, shallow soil gas, and shallow groundwater at the Subject Property associated with historical uses of the Subject Property and adjacent properties could generate unacceptable risks to human receptors (i.e. occupational receptors and construction workers) at the Subject Property or if these concerns can be eliminated from further consideration.
- To collect a technically appropriate dataset to evaluate off-site soil export options that are protective of human health and minimize long-term liability.
- Should the dataset suggest one or more constituents in various media pose potential risks to human receptors, the data collected during the Phase II can be used to better constrain uncertainties associated with adverse environmental impacts on future development plans. If warranted, the data collected during the Phase II might be valuable in developing remedial actions and/or mitigation options.

The Phase II ESA investigation process is presented in **Section 3**.



## 2 PHASE II ESA INVESTIGATION

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The Phase II ESA was conducted in June 2023 and included subsurface investigations, specifically soil, groundwater, and soil gas sampling. A summary of the field methods and observations is presented in **Section 2.1** through **Section 2.4**. The analytical results of the soil, groundwater, and soil gas samples and their interpretation are included in **Section 3**. Conclusions and recommendations are presented in **Section 4**. The boring and test pit logs are included in **Appendix 1** and photographic documentation is included in **Appendix 2**. The complete laboratory results are included in **Appendix 3** and soil gas field sampling data sheets (FSDSs) are included in **Appendix 4**. The location of the Subject Property is shown on **Figure 1** and the sampling locations are shown on **Figure 2**. The analytical results of the soil samples are summarized in **Table 1** through **Table 7**. The analytical results of the groundwater samples are summarized in **Table 8** through **Table 14**. The analytical results of the soil gas samples are summarized in **Table 15** and **Table 16**.

### 2.1 Utility Clearance

Prior to any subsurface disturbances, the underground infrastructure of pipes, mains, and utility lines were located at the Subject Property. AEC contacted the Utility Notification Center in order to locate and trace any potential public underground utilities

### 2.2 Soil Investigation

#### 2.2.1 Push-Probe Drilling

##### 2.2.1.1 Push-Probe Soil Sampling

On June 1, 2023, AEC supervised the advancement of five boreholes (identified as B1 through B5) at the Subject Property. The soil borings were advanced by BB&A Environmental, Inc. (BB&A) of Coburg, Oregon using a track-mounted geoprobe. Soil samples, lithologic characterization, and field screening were logged every 5 feet, or more frequently at changes in lithology or visual contamination, by Mr. Toby Shallcross, Project Geologist of AEC and verified by Mr. Jonathan Williams (Oregon Registered Geologist) of AEC. Field screening for the presence of VOCs in soil was conducted during drilling activities using an RKI GX-6000 photoionization detector (PID). The lithology of the soil, visual observations, PID readings, and depth of the collected samples are included on the boring logs, located in **Appendix 1**. Note that the driller ran out of acrylic liners for the probe rods and no soil was recovered from borehole B5, hence no boring log was prepared at this location.

The five boreholes were advanced to a depth of approximately 20.0 feet bgs in the following locations:



- Borehole B1 was advanced in the central area of TL 2203;
- Borehole B2 was advanced in the southwestern area of TL 2204;
- Borehole B3 was advanced in the northwestern area of TL 2204;
- Borehole B4 was advanced in the northeastern area of TL 2204; and
- Borehole B5 was advanced in the southeastern corner of TL 2203.

These locations were selected based on the historical use of the Subject Property, the planned development at the Subject Property, and the assumed groundwater flow direction at the Subject Property and its vicinity. The locations of these soil borings are shown on **Figure 2** and the photographic documentation is included in **Appendix 2**.

The general lithology at the Subject Property consisted of the following: 0.5 to 6.0 feet of silty sandy gravel; approximately 0.5 to 17.0 feet of fill, consisting predominantly of wood and organic material with some sand and gravel; and underlain by a mixture of silt, sand, and gravel to the drilled depth of 20 feet bgs. An increase in moisture content was visually identified in borehole B2 at 17.0 to 20.0 feet bgs and in borehole B4 at 17.5 to 20.0 feet bgs. All PID readings in the soil encountered within the borings were 0.0 parts per million (ppm).

One soil sample was obtained from a depth of 0.0 to 3.0 feet bgs from each of the boreholes B1 through B4. These samples were identified as B1-0-3 through B4-0-3. A second sample was obtained from borehole B3 from a depth of 9.5 to 10.0 feet bgs, in the interval predominated by wood and organic fill material. As mentioned earlier, no soil was retrieved from borehole B5 and thus, no soil sample was obtained from this location. Boring B5 was pursued in an effort to obtain another groundwater sample since three of the first four earlier borings were dry when drilled.

Each soil sample was placed into laboratory supplied containers. Soil samples collected for the analyses of total petroleum hydrocarbons in the gasoline range (TPH-g) and VOCs were collected directly from the push-probe rods' acrylic liners using disposable soil syringes (e.g. Terra Core Kit) in accordance with the USEPA Method 5035 and DEQ Guidance, and USEPA Method 8260D, and placed directly into laboratory-supplied containers. These soil samples were not homogenized in order to minimize volatilization of VOCs. The remaining soil sample volume was placed in a new disposable plastic bag and homogenized. Larger sized material (i.e., gravel greater than approximately ¼ to ½ inch in diameter) was removed by hand. The soil samples were then transferred to appropriate laboratory-supplied containers.

Following completion of sampling at each boring, the borehole was abandoned using bentonite chips. Before and between the drilling of each boring and at the completion of the project, down-hole drilling equipment was decontaminated using a self-contained pressure washing unit provided by the driller. No re-usable equipment was used in the field for sample collection besides the drill rods and drill shoe, which were decontaminated under AEC supervision between borings and sampling.



All of the soil cuttings not collected for laboratory analyses and the water generated from sampling or cleansing and decontaminating the drilling equipment was placed in a labeled 55-gallon drums. After receipt of the analytical results, the contents of the drum were disposed of appropriately.

## 2.2.2 Soil Laboratory Analyses

The soil samples were placed in iced coolers and submitted to Apex Laboratories (Apex) of Tigard, Oregon, or Ceres Analytical Laboratory, Inc. (Ceres) of El Dorado Hills, California, under standard chain-of-custody protocol. The analyses conducted on each soil sample included the following:

- TPHs in the diesel-range (TPH-d) and the oil-range (TPH-o) by Method NWTPH-Dx with silica gel cleanup;
- TPH-g by DEQ Method NWTPH-Gx;
- Polycyclic aromatic hydrocarbons (PAHs) by USEPA Method 8270E SIM;
- VOCs by USEPA Method 8260D;
- Chlorinated phenolic compounds by USEPA Method 8270E;
- Polychlorinated biphenyls (PCBs) by USEPA Method 8082A;
- Chlorinated dioxins and dibenzofurans, referred to in this report as dioxins and furans, by USEPA Method 1613B;
- Total metals by USEPA Method 6020B. The analyses included eight metals, specifically arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver.

Copies of the final analytical laboratory report for the Subject Property analytical soil results are included in **Appendix 3**. The analytical results for soil samples are summarized in **Table 1** through **Table 7**. The TPHs results are presented in **Table 1**, the PAHs in **Table 2**, the VOCs in **Table 3**, the chlorinated phenolic compounds in **Table 4**, PCBs in **Table 5**, dioxins and furans in **Table 6**, and the metals in **Table 7**. In addition to presenting the analytical results, **Table 1** through **Table 7** also identify relevant DEQ generic risk-based concentrations (RBCs) for soil. The generic RBCs identified in these tables are consistent with the future planned commercial or industrial use and zoning and assume occupational receptors and construction and excavation workers will be present on the Subject Property.

## 2.3 Groundwater Investigation

### 2.3.1 Push-Probe Drilling and Groundwater Sampling

On June 1, 2023, subsequent to the advancement of boreholes B1 through B5, a temporary well was installed in each boring. The temporary wells were constructed of 0.75-inch diameter polyvinyl chloride (PVC) casing with two 5-foot sections of PVC 0.020-inch slotted screen set on the bottoms of the wells.



Upon the installation of the PVC casing and screen, two of the boreholes had some minor slough. The final depths of the screens in each temporary well were from approximately 10.0 to 20.0 feet bgs in temporary wells B1, B4, and B5 and from approximately 8.0 to 18.0 feet bgs in temporary wells B2 and B3. Temporary wells B1, B3, B4, and B5 were dry immediately after drilling.

On June 2, 2023, prior to well sampling, AEC measured the depths to groundwater in each temporary well. Temporary wells B1, B3, and B4 continued to be dry. The depth to water in temporary well B2 was 13.5 feet bgs and in temporary well B5 was 19.5 feet bgs.

AEC collected groundwater samples from temporary wells B2 and B5 using a peristaltic pump and disposable polyethylene tubing. The intakes of the tubing were placed at the approximate midpoint of the water column. Approximately 2 gallons of water were removed from temporary well B2 prior to sample collection. The groundwater was very turbid at the beginning of purging and cleared significantly by the end of purging. The yield of groundwater from temporary well B5 was very low and the temporary well was pumped dry after purging only approximately 0.25 gallons. Because the yield of temporary well B5 was very low, not enough water could be collected to run all of the anticipated laboratory analyses.

The groundwater samples were collected and contained in appropriately preserved, laboratory prepared sample bottles and labeled with unique sample identifications (i.e. B2-GW and B5-GW). The water samples were analyzed for both total and dissolved metals, and thus, the water designated for dissolved metals analyses was filtered in the field using disposable single-use 0.45-micron filters.

At the conclusion of groundwater sampling, the PVC temporary well casings were removed and the boreholes were backfilled (plugged) with 3/8-inch diameter hydrated bentonite chips consistent with relevant Oregon Water Resources Department (WRD) well decommissioning rules.

### **2.3.2 Groundwater Laboratory Analyses**

The groundwater samples were placed in iced coolers and submitted to Apex using standard AEC chain-of-custody protocols. The groundwater samples were submitted for one or more of the following analyses:

- TPH-d and TPH-o by Method NWTPH-Dx;
- TPH-g by Method NWTPH-Gx;
- PAHs by USEPA Method 8270E with SIM;
- VOCs by EPA Method 8260D;
- Chlorinated phenolic compounds by USEPA Method 8270E;
- PCBs by USEPA Method 8082A;
- Chlorinated dioxins and dibenzofurans by USEPA Method 1613B; and



- Total and dissolved metals by USEPA Method 6020B using ICP-MS (the metals included arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver).

The groundwater sample B2-GW was analyzed for all these constituents and the groundwater sample B5-GW was analyzed for TPH-d, TPH-o, TPH-g, VOCs, and dioxins and furans.

A trip blank prepared by the analytical laboratory was shipped with the sample containers from the lab. The trip blank was kept with all of the other sample containers throughout the field work and returned to the laboratory for VOCs analyses.

A copy of the final analytical laboratory report for the Subject Property analytical groundwater results is included in **Appendix 3**. The analytical results for soil samples are summarized in **Table 8** through **Table 14**. The TPHs results are presented in **Table 8**, the PAHs in **Table 9**, the VOCs in **Table 10**, the chlorinated phenolic compounds in **Table 11**, the PCBs in **Table 12**, the dioxins and furans in **Table 13**, and total and dissolved metals in **Table 14**. **Table 8** through **Table 14** also identify relevant DEQ generic RBCs for groundwater. The generic RBCs identified in these tables are consistent with the future industrial and commercial land use and zoning and assume occupational receptors and construction and excavation workers will be present on the Subject Property. The concentrations of metals in groundwater were also compared to the United States Environmental Protection Agency (USEPA) and Oregon Health Authority (OHA) Maximum Contaminant Level (MCL).

## 2.4 Soil Gas Investigation

### 2.4.1 Soil Gas Sampling

On June 7 through 9, 2023 13 soil gas samples, identified as SG1 through SG12, and a duplicate sample of sample SG4 identified as DUP, were collected at the Subject Property. The shallow soil gas samples were collected from the vadose zone from the upper 30 to 36 inches of soil at the Subject Property. Two soil gas samples were collected in connection with each of the five buildings planned to be developed at the Subject Property. At proposed Building 1 through 4, the soil gas samples were collected within the design footprints. At proposed Buildings 5 and 6, the soil gas samples were collected just north of the design footprints.

The 12 soil gas sample locations were collected under current grade conditions and analytical results are representative of current conditions. Soil gas conditions after cut and fill activities have been completed and after building foundations and pavement have been installed may generate different soil gas conditions in the future and there may be value to supplemental soil gas monitoring after Subject Property development has been completed to verify post-development conditions will not present any potential risks to human receptors. At each of the 12 shallow soil gas sampling locations a decontaminated stainless steel soil gas drive point was advanced to a depth of approximately 30 to 36 inches bgs, sealed, and allowed to equilibrate for a minimum of 2 hours prior to purging.

Prior to sampling, polyethylene tubing was connected to each drive point and the drive point was purged of a minimum of three drive point casing volumes with an air plunger with a



volume of 40 milliliters. Calibrated flow controller serial numbers, Summa™ canister serial numbers and purge volumes were recorded on Soil Gas FSDSs. Copies of the Soil Gas FSDSs are provided as **Appendix 4**. The locations of the soil gas samples are shown on **Figure 2** and the photographic documentation is included in **Appendix 2**.

Following purging, a laboratory provided 1-liter Summa™ canister was connected to the drive point utilizing disposable polyethylene tubing for sample collection. Helium gas was used to evaluate for leakage within the shallow soil gas sampling system. Prior to sample collection the Summa™ canister was shrouded within a sealed 44-gallon plastic bag. At each location, the sealed shroud was filled with helium and allowed to sit a minimum of 5 minutes prior to sampling to allow the concentration of helium within the shroud to equilibrate to its vapor pressure. The helium concentration within the shroud were monitored with a Nuair® ProHe™ helium detector and recorded on the Soil Gas FSDSs.

All soil gas sampling was completed consistent with AECs *Soil Gas Sampling Standard Operating Procedure* (SOP), which incorporates the protocols outlined in the June 2015 EPA Office of Solid Waste and Emergency Response (OSWER) *Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air* (USEPA, 2015), which incorporates by reference the quantitative leak testing protocols presented in the California Environmental Protection Agency (CalEPA) Department of Toxic Substances Control (DTSC) *Advisory – Active Soil Gas Investigations* (DTSC, 2015).

#### **2.4.2 Soil Gas Laboratory Analyses**

The soil gas samples were collected with laboratory provided 1-liter Summa™ canisters, and were delivered to Eurofins of Garden Grove, California under standard chain-of-custody protocol, for the following analyses:

- Helium by USEPA Method D1946;
- Methane by USEPA Method D1946; and
- VOCs by USEPA Method TO-15.

Copies of the final analytical laboratory reports for the Subject Property soil gas analytical results are included in **Appendix 3**. The Helium and methane results are presented in **Table 15** and the VOCs results in **Table 16**. These tables also identify relevant DEQ generic RBCs for the *volatilization to indoor air pathway* for occupational receptors. These generic RBCs are consistent with the industrial land use and zoning and assume occupational receptors and construction and excavation workers will be present on the Subject Property.



## 3 DATA EVALUATION

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### 3.1 Soil

The soil samples analytical results are included in **Appendix 3** and summarized in **Table 1** through **Table 7**. The analytical results reported several constituents at concentrations that exceed the laboratory method reporting limits (MRLs) in several soil samples. These constituents were further compared to relevant generic RBCs, including the following exposure pathways and receptors: *ingestion, dermal contact, and inhalation exposure pathway* for occupational receptors, construction workers, and excavation workers; *volatilization to outdoor air exposure pathway* for occupational receptors; and *leaching to groundwater exposure pathway* for occupational receptors. The reported data are summarized in the following paragraphs.

#### 3.1.1 Total Petroleum Hydrocarbons

The laboratory results reported TPH-o at concentrations above the laboratory MRLs in several soil samples but below any applicable generic RBCs. The TPHs MRLs were below the relevant generic RBCs. The TPHs soil results are summarized in **Table 1**.

#### 3.1.2 Polycyclic Aromatic Hydrocarbons

The laboratory results reported phenanthrene in one soil sample at a concentration above the laboratory MRL but below any generic applicable RBCs. The PAHs MRLs were below relevant generic RBCs. The PAHs soil results are summarized in **Table 2**.

#### 3.1.3 Volatile Organic Compounds

The laboratory results reported no VOCs at concentrations above the laboratory MRLs. Several VOCs MRLs exceeded the relevant generic RBCs, specifically the occupational RBCs for the *leaching to groundwater exposure pathway*. The VOCs soil results are summarized in **Table 3**.

#### 3.1.4 Chlorinated phenolic compounds

The laboratory results reported no chlorinated phenolic compounds at concentrations above the laboratory MRLs in any soil samples. The Pentachlorophenol (PCP) MRLs in four samples exceeded the relevant generic RBCs, specifically the occupational RBCs for the *leaching to groundwater exposure pathway*. The chlorinated phenolic compounds soil results are summarized in **Table 4**.



### 3.1.5 Polychlorinated Biphenyls

The laboratory results reported several PCBs at concentrations above the laboratory MRLs in one soil sample but below any applicable generic RBCs. The PCBs MRLs were below relevant generic RBCs. The PCBs soil results are summarized in **Table 5**.

### 3.1.6 Chlorinated Dioxins and Dibenzofurans

The laboratory results reported several congeners of dioxins/furans at concentrations that exceed the laboratory detection limits (DLs) in several soil samples. There are no soil generic RBCs for individual dioxin/furan congeners, but DEQ has established RBCs for 2,3,7,8-TCDD equivalents. To compare the analytical results of dioxins to DEQ's RBCs for 2,3,7,8-TCDD equivalents, Ceres calculated the 2,3,7,8-TCDD Toxicity Equivalent Quotients (TEQs).

The reported dioxins/furans concentrations ranged from 79.6 picograms per gram (pg/g) to 4,640 pg/g. These calculated dioxins/furans TEQ concentrations exceeded several generic applicable RBCs. These exceedances included the following:

- ***Ingestion, dermal contact, and inhalation exposure pathway - occupational receptors.***

The reported dioxins/furans concentrations in all five soil samples exceeded the generic RBC for the *ingestion, dermal contact, and inhalation exposure pathway* for occupational receptors of 16 pg/g.

The occupational RBCs for *ingestion, dermal contact, and inhalation exposure pathway* apply to the upper 3 feet of soils. Therefore, the reported dioxins/furans in borehole B3 at a depth of 9.5 to 10.0 feet bgs can be eliminated from further concern regarding this *exposure pathway*. Furthermore, the *ingestion, dermal contact, and inhalation exposure pathway* for occupational receptors for the dioxins/furans reported in shallow soil samples B1-0-3 through B4-0-3 can be managed via some combination of institutional and/or engineering controls implemented at the Subject Property. Institutional and/or engineering control options to protect occupational receptors include but are not limited to the following: paving; removal of shallow soil and/or covering with a 3-foot layer of clean compacted fill material; additional investigations to delineate dioxins/furans concentrations in shallow soil; developing an asphalt cap maintenance plan; developing a Contaminated Media Management Plan (CMMP); and/or applying a deed notice (e.g. to ensure the asphalt cap is maintained). The Subject Property owner is not required to but could coordinate with DEQ at the time of redevelopment to reduce or eliminate potential environmental liability and to obtain a conditional No Further Action (NFA) letter.

- ***Ingestion, dermal contact, and inhalation exposure pathway - construction workers.***

The reported dioxins/furans concentrations in soil samples B1-0-3, B2-0-3, B3-9.5-10, and B4-0-3 exceeded the generic RBC for the *ingestion, dermal contact, and inhalation exposure pathway* for construction workers of 170 pg/g.



The generic construction workers RBC for dioxins/furans under the *soil ingestion, dermal contact, and inhalation exposure pathway* assumes construction workers could be exposed over 1 year to dioxins/furans during construction activities involving the disturbance of impacted soils. However, it is unlikely construction workers would be working at the Subject Property continuously for 1 year. Furthermore, this risk could be easily mitigated with proper communication to future construction workers requiring they wear appropriate personal protective equipment (PPE) and follow proper decontamination procedures subsequent to working in order to avoid exposure and health risks. The procedures documenting proper communication, appropriate PPE, and proper decontamination could be documented in a CMMP with or without DEQ approval.

- ***Leaching to groundwater exposure pathway - occupational receptors.***

The reported dioxins/furans concentrations in all five soil samples exceeded the generic RBC for the *leaching to groundwater exposure pathway* for occupational receptors of 31 pg/g.

The generic occupational RBC for *leaching to groundwater exposure pathway* conservatively assumes that a water supply well is being used at the Subject Property or proximal to the Subject Property, and that contaminants could be leached from the shallow soil, impact groundwater, and that occupational receptors could subsequently be exposed to those contaminants in drinking water. However, the Subject Property and adjacent properties are planned to be serviced or are serviced with municipal water by the Medford Water. It is reasonable and likely that the Subject Property and adjacent properties will utilize or continue to utilize municipal water in the future; therefore, given the municipal water use and the absence of wells, it is highly unlikely that the dioxins/furans in shallow soil at the Subject Property will pose an unacceptable risk to occupational receptors at the Subject Property. Nevertheless, given the dioxins/furans are also present in groundwater samples throughout the Subject Property and to completely eliminate the potential risk that dioxins/furans leaching to groundwater might pose to occupational receptors at the Subject Property, a deed notice could be developed and applied that prohibits the installation of wells to supply water to occupational receptors at the Subject Property.

- **Dioxins Hot Spot Concentrations**

The concentration of dioxins/furans in one soil sample (i.e. B1-0-3) exceeded DEQ's Hot Spot concentration, which is 1,600 pg/g. This single exceedance of a Hot Spot concentrations could be a potentially complicating factor should this soil need to be exported from the Site and/or if DEQ becomes involved with the Subject Property. Hot Spot definitions and applications are included in DEQ's *Guidance for Identification of Hot Spots* dated April 23, 1998 (DEQ, 1998).

The dioxins/furans soil results are summarized in **Table 6**.



### 3.1.7 Total Metals

The analytical results reported arsenic, barium, chromium, and lead at concentrations that exceeded the laboratory MRLs in all soil samples. Only arsenic was reported at concentrations that exceeded the generic RBCs for occupational use. All of the reported arsenic concentrations, which ranged from 1.93 mg/kg to 4.31 mg/kg, exceeded the generic RBC for the *ingestion, dermal contact, and inhalation exposure pathway* for occupational receptors of 1.9 mg/kg. However, these concentrations were below the naturally occurring background concentration of arsenic of 19 mg/kg in the Cascade Range region of Oregon, which includes the White City area and the Subject Property. Therefore, arsenic in shallow soil at the Subject Property is considered to be naturally occurring and it is eliminated from further concern. The background concentrations used for comparison are derived from DEQ's Technical Report entitled *Development of Oregon Background Metals Concentrations in Soil* (DEQ, 2013). The remaining metals MRLs were below the relevant generic RBCs. The total metals soil results are summarized in **Table 7**.

### 3.1.8 Clean Fill Determination

Based on the soil analytical results, which are presented in **Table 1** through **Table 7**, the soil at the Subject Property (at least in the investigated depth intervals of 0.0 to 3.0 feet bgs and 9.5 to 10.0 feet bgs) does not qualify as Clean Fill. Soil should not be exported off-site (unless analytically proven to qualify as clean fill), though the soil can be reused on-site as fill. In addition, it should be noted that, per the *Clean Fill Determinations* Internal Management Directive (DEQ, 2019), any soil with petroleum-like staining or a petroleum-like odor does not qualify as Clean Fill and should not be exported from the Subject Property.

## 3.2 Groundwater

The laboratory analytical results of the groundwater samples, included in **Appendix 3** and summarized in **Table 8** through **Table 14**, reported several constituents at concentrations that exceed the laboratory MRLs in several groundwater samples. These constituents were further compared to the generic applicable RBCs, including the following exposure pathways and receptors: *ingestion and inhalation from tapwater exposure pathway* for occupational receptors; *volatilization to outdoor air exposure pathway* for occupational receptors; *volatilization to indoor air exposure pathway* for occupational receptors; and *groundwater in excavation exposure pathway* for construction and excavation workers. The reported data are summarized in the following paragraphs.

### 3.2.1 Total Petroleum Hydrocarbons

The laboratory results reported no TPHs at concentrations above the laboratory MRLs in the analyzed groundwater samples B2-GW and B5-GW. All TPHs MRLs were below the relevant generic RBCs. The TPHs groundwater results are summarized in **Table 8**.



### 3.2.2 Polycyclic Aromatic Hydrocarbons

The laboratory results reported no PAHs at concentrations above the laboratory MRLs in the analyzed groundwater sample B2-GW. All PAHs MRLs were below the relevant generic RBCs. The PAHs groundwater results are summarized in **Table 9**.

### 3.2.3 Volatile Organic Compounds

The laboratory results reported no VOCs at concentrations above the laboratory MRLs in the analyzed groundwater samples B2-GW and B5-GW, as well as in the trip blank, with the following exceptions. Acetone, benzene, and trichloroethene were reported at concentrations above the MRLs in groundwater sample B5-GW, but at concentrations below any generic RBCs. Several VOCs MRLs exceeded the relevant generic RBCs, specifically the occupational RBCs for the *ingestion and inhalation from tapwater exposure pathway*. The VOCs groundwater results are summarized in **Table 10**.

### 3.2.4 Chlorinated Phenolic Compounds

The laboratory results reported no chlorinated phenolic compounds at concentrations above the laboratory MRLs in the analyzed groundwater sample B2-GW. The MRL for pentachlorophenol (PCP) exceeded the relevant generic occupational RBC for the *ingestion and inhalation from tapwater exposure pathway*. The chlorinated phenolic results are summarized in **Table 11**.

### 3.2.5 Polychlorinated Biphenyls

The laboratory results reported no PCBs at concentrations above the laboratory MRLs in the analyzed groundwater sample B2-GW. All PCBs MRLs exceeded the relevant generic RBCs, specifically the RBCs for the *ingestion and inhalation from tapwater exposure pathway* for occupational receptors. The PCBs groundwater results are summarized in **Table 12**.

### 3.2.6 Chlorinated Dioxins and Dibenzofurans

The laboratory results reported several congeners of dioxins/furans at concentrations above the laboratory DLs in the analyzed groundwater samples B2-GW and B5-GW. There are no groundwater generic RBCs for individual dioxin/furan congeners but DEQ has established RBCs for 2,3,7,8-TCDD equivalents. To compare the groundwater analytical results of dioxins/furans to DEQ's RBCs for 2,3,7,8-TCDD equivalents, Ceres calculated the 2,3,7,8-TCDD TEQs. The calculated dioxins/furans TEQs was 128 picograms per liter (pg/L) in groundwater sample B2-GW and 32.9 pg/L in groundwater sample B5-GW. These calculated dioxins/furans TEQ concentrations in groundwater exceeded the occupational RBC for the *ingestion, dermal contact, and inhalation exposure pathway* of 0.42 pg/L.

The *ingestion and inhalation from tapwater exposure pathway* is applicable when a water supply well is being used at the Subject Property or proximal to the Subject Property. However, the Subject Property and adjacent properties are planned to be serviced or are serviced with municipal water by the Medford Water Commission. Furthermore, a review of the WRD well



records does not indicate the Subject Property or adjacent properties have any water supply wells. It is reasonable and likely that the Subject Property and adjacent properties will utilize or will continue to utilize municipal water in the future; therefore, given the municipal water use and the absence of wells, it is highly unlikely that dioxins/furans in shallow groundwater at the Subject Property will pose an unacceptable risk to occupational receptors at the Subject Property. To completely eliminate the potential risks that dioxins/furans in groundwater might pose to occupational receptors at the Subject Property, a deed notice could be developed and applied that prohibits the installation of wells to supply water to occupational receptors at the Subject Property.

The dioxins/furans results are summarized in **Table 13**.

### **3.2.7 Total Metals**

The results of the total metals analyses reported arsenic, barium, chromium, and lead at concentrations that exceed the laboratory MRLs in the analyzed groundwater sample B2-GW. Only arsenic was reported at a concentration (7.43 micrograms per liter [ $\mu\text{g/L}$ ]) that exceeded the relevant generic RBCs, specifically the *ingestion and inhalation from tapwater exposure pathway* for occupational receptors of 0.31  $\mu\text{g/L}$ . The remaining total metals MRLs were below relevant generic RBCs. The total metals groundwater results are summarized in **Table 14**.

The reported concentrations of total metals in groundwater at the Subject Property were also compared to the USEPA MCLs or Treatment Technique. USEPA MCLs and Treatment Technique are referenced from the National Primary Drinking Water Regulations (for arsenic, barium, cadmium, total chromium, lead, mercury, and selenium) and the National Secondary Drinking Water Regulations (for silver). The MCL, as defined by USEPA, is the highest level of a contaminant that is allowed in drinking water. The MCLs are set as close to Maximum Contaminant Level Goals (MCLGs) as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards. The MCLG is the level of a contaminant in drinking water below which there is no known or expected risk to health. The MCLGs allow for a margin of safety and are non-enforceable public health goals. The Treatment Technique is a required process intended to reduce the level of a contaminant in drinking water. Lead is regulated by a Treatment Technique that requires water system providers to control the corrosiveness of their water.

All reported metals concentrations were below their relevant USEPA MCLs and Treatment Technique. The USEPA MCL for arsenic is 10  $\mu\text{g/L}$  (note that the Oregon Health Authority [OHA] MCL for arsenic in drinking water is also 10  $\mu\text{g/L}$ , as described in OHA 333-061-0030). The reported concentration of arsenic of 7.43  $\mu\text{g/L}$  was below the USEPA MCL.

### **3.2.8 Dissolved Metals**

The groundwater sample B2-GW submitted for dissolved metals analyses was filtered in the field using a 0.45-micron filter and the suspended solids were removed from the sample. The reported concentrations of the dissolved metals were lower than the total metals concentrations. These results indicated the total metals analytical results were biased high and



likely associated with the turbidity that was observed during groundwater sampling activities from the temporary wells.

The concentrations of dissolved arsenic (1.1 µg/L) exceeded the generic applicable RBCs for the *ingestion and inhalation from tapwater exposure pathway* for occupational receptors of 0.31 µg/L in groundwater sample B2-GW. The dissolved metals groundwater results are summarized in **Table 14**.

As mentioned in Section 3.2.8, the reported concentrations of dissolved metals in groundwater at the Subject Property were also compared to the USEPA MCLs and Treatment Techniques. All reported dissolved metals concentrations were below their respective USEPA MCLs or Treatment Technique concentrations. The USEPA MCL and OHA MCL for arsenic is 10 µg/L. The reported concentration of arsenic was well below the USEPA MCL.

### 3.3 Soil Gas

The laboratory analytical results of the soil gas samples, included in **Appendix 3** and summarized in **Table 15** and **Table 16**, reported several constituents at concentrations that exceed the laboratory MRLs in several soil gas samples. These constituents were further compared to the generic applicable RBCs for the occupational *volatilization to indoor air exposure pathway*. The reported data are summarized in the following paragraphs.

#### 3.3.1 Helium

Helium was reported above the laboratory MRL of 41,000 micrograms per cubic meter (µg/m<sup>3</sup>) in five of the 13 soil gas samples. Based on the helium concentrations injected into the containment around the sampling apparatus and measured in the shrouds at each location, the helium leakage was calculated to be between 0.075 percent and 4.26 percent. These calculated leak percentages were all less than 5%, indicating no substantial leaks were present in the soil gas sampling train and the data are considered acceptable (DTSC, 2015). The helium soil gas results are summarized in **Table 15**.

#### 3.3.2 Methane

Methane was not reported above the laboratory MRL of 0.5 percent by volume in any soil gas samples. There are no generic RBCs for methane in soil gas. However, methane concentrations below approximately 1.25 percent by volume are considered representative of naturally occurring background concentrations. Concentrations higher than approximately 1.25 percent by volume generate concerns regarding the potential for explosive conditions in overlying buildings. Since no methane was reported in any of the soil gas samples above the MRL of 0.5 percent by volume, the soil gas results indicate the decomposition of woody debris in soil at the Subject Property does not pose a risk to buildings constructed at the Subject Property. The methane soil gas results are summarized in **Table 15**.



### 3.3.3 Volatile Organic Compounds

The laboratory results reported several VOCs at concentrations that exceeded the laboratory MRLs in the analyzed soil gas samples. However, the reported concentrations were below the DEQ's generic RBCs for *volatilization to indoor air exposure pathway* for occupational receptors. All VOCs MRLs were below their generic applicable RBCs. The VOCs soil gas results are summarized in **Table 16**.



## 4 CONCLUSIONS AND RECOMMENDATIONS

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The Phase II ESA subsurface investigation conducted at the Subject Property included the collection of soil, groundwater, and soil gas samples. Five soil samples were collected from four boreholes, two groundwater samples were collected from two temporary wells, and 13 soil gas samples were collected from soil gas probes.

The soil and groundwater samples were submitted for one or more of the following analyses:

- TPH-d and TPH-o by DEQ Method NWTPH-Dx.
- TPH-g by DEQ Method NWTPH-Gx.
- PAHs by USEPA Method 8270E with SIM.
- VOCs by USEPA Method 8260D.
- Chlorinated phenolic compounds by USEPA Method 8270E.
- PCBs by USEPA Method 8082A.
- Chlorinated dioxins and dibenzofurans by USEPA Method 1613B.
- Total metals by USEPA Method 6020A with ICP-MS, which included arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. The groundwater samples were also analyzed for these same metals in the dissolved form.

The soil gas samples were submitted for one or more of the following analyses:

- Helium by USEPA Method D1946.
- Methane by USEPA Method D1946.
- VOCs by USEPA Method TO-15.

Based on an evaluation of the analytical results for the soil samples, groundwater samples, and soil gas samples collected at the Subject Property, the following exceedances of DEQ screening levels were reported:

- **Dioxins/furans:**
  - The concentrations of dioxins/furans in all five soil samples exceeded the generic RBCs for occupational receptors for the *ingestion, dermal contact, and inhalation exposure pathway* and for the *leaching to groundwater exposure pathway*, as well as the Clean Fill Value;



- In addition, the concentration of dioxins/furans in four soil samples exceeded the generic RBC for construction workers for the *ingestion, dermal contact, and inhalation* exposure pathway; and
  - The concentrations of dioxins/furans in both groundwater samples exceeded the generic RBC for the occupational receptors for the *ingestion and inhalation from tapwater exposure pathway*.
  - The concentration of dioxins/furans in one soil sample (i.e. B1-0-3) exceeded DEQ's Hot Spot concentration, which could be a potentially complicating factor should this soil need to be exported from the Site and/or if DEQ becomes involved with the Subject Property.
- **Metals:**
    - The concentrations of arsenic in all five soil samples exceeded the generic RBC for occupational receptors for the *ingestion, dermal contact, and inhalation exposure pathway*; nevertheless, all reported concentrations were below the naturally occurring background concentration of arsenic in the Cascade Range region of Oregon, which includes the Medford area and the Subject Property;
    - The concentrations of total and dissolved arsenic reported in the analyzed groundwater sample B2-GW exceeded the generic RBC for occupational receptors for the *ingestion and inhalation from tapwater exposure pathway*; nevertheless, all reported arsenic concentrations were below the USEPA and OHA MCL; and
    - Overall, the results of the filtered groundwater analyses reported fewer dissolved metals than total metals; the reported concentrations of the dissolved metals were also lower than the total metals concentrations; these results indicated the total metals analytical results were biased high and likely associated with the turbidity that was observed during groundwater sampling activities from the temporary wells.

While generic RBCs for occupational receptors or construction workers were exceeded for the aforementioned constituents and exposure pathways, potential risks to human health associated with these constituents and exposure pathways can be managed, mitigated, and/or eliminated from further concern, as follows:

- The reported concentrations of arsenic in soil at the Subject Property are below the naturally occurring background concentration of arsenic in the Cascade Range region of Oregon, which includes the White City area and the Subject Property. Therefore, the *soil ingestion, dermal contact, and inhalation exposure pathway* for arsenic is not considered to be an unacceptable risk at the Subject Property and arsenic in soil is eliminated from further concern.
- For dioxins/furans in soil, the *ingestion, dermal contact, and inhalation exposure pathway* for occupational receptors can be managed via some combination of institutional and/or engineering controls implemented at the Subject Property. Institutional and/or engineering control options to protect occupational receptors include but are not limited to the following: paving; removal of shallow soil and/or covering with a 3-foot layer of clean compacted fill material; additional investigations to delineate dioxins/furans concentrations in shallow soil; developing an asphalt cap



maintenance plan; developing a CMMP; and/or applying a deed notice (e.g. to ensure the asphalt cap is maintained). LuxeLocker could pursue these institutional and/or engineering controls with or without DEQ involvement and approval.

- For dioxins/furans in soil the *ingestion, dermal contact, and inhalation* exposure pathway for construction workers can be managed with proper communication to future construction workers requiring they wear appropriate PPE and follow proper decontamination procedures subsequent to working in order to avoid exposure and health risks. The procedures documenting proper communication, appropriate PPE, and proper decontamination could be documented in a CMMP with or without DEQ approval.
- For dioxins/furans in soil, and arsenic and dioxins/furans in groundwater, the *ingestion and inhalation from tapwater exposure pathway* and the *leaching to groundwater exposure pathway* for occupational receptors can be eliminated from further concern due to the fact that no water supply wells exist or are known to exist at the Subject Property or proximal to the Subject Property. Furthermore, the Subject Property is planned to be serviced with municipal water by the Medford Water Commission and it is reasonable and likely to assume that the Subject Property and adjacent properties will continue to utilize municipal water in the future. Accordingly, it is highly unlikely that residual contamination in soil and groundwater would generate any unacceptable health risks to occupational receptors at the Subject Property via the *ingestion and inhalation from tapwater* exposure pathway and the *leaching to groundwater* exposure pathway. To completely eliminate the potential risks these constituents might pose to occupational receptors at the Subject Property, a deed notice could be developed and applied that prohibits the installation of wells to supply water to occupational receptors at the Subject Property.
- The soil gas results reported no VOCs and no methane concentrations above the generic applicable RBCs for the *volatilization to indoor air* exposure pathway in the 13 soil gas samples analyzed. Therefore, the *volatilization to indoor air* exposure pathway is not considered to be at risk at the Subject Property and is eliminated from further concern.

Based on these findings, AEC concludes the following:

- (1) The presence of several contaminants in soil and groundwater at the Subject Property indicates the historical use of the Subject Property (as a lumber mill, particularly occupied by a log pond and potentially used for log and/or lumber storage, and an automobile salvage yard) and/or the current and historical use of the surrounding industrial properties (including a drycleaner, wood products facilities, an auto repair facility, and an auto wrecking facility) impacted the Subject Property's subsurface. While these impacts constitute RECs, the residual contamination can be managed appropriately during future redevelopment to minimize or eliminate unacceptable risks to occupational receptors and construction workers.
- (2) The presence of total arsenic in soil and total and dissolved arsenic in groundwater at the Subject Property is likely related to naturally occurring conditions at the Subject Property and not related to historical operations at the Subject Property or on adjacent properties. In addition, the presence of dissolved arsenic in groundwater at



concentrations lower than the total arsenic concentrations in groundwater indicates the total arsenic analytical results were biased high and likely associated with turbidity that was observed during groundwater sampling activities from the temporary wells.

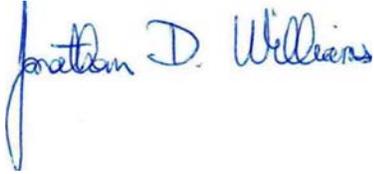
- (3) The soil at the Subject Property does not qualify as Clean Fill and should not be exported off-site unless properly managed. For example, this soil could be hauled to a quarry under a DEQ-approved SWLA or, if only a relatively small volume of soil needs to be removed, it could be cost-effectively disposed of at the local Subtitle D municipal waste landfill (i.e. Dry Creek Landfill).
- (4) The presence of dioxins/furans in the upper 3 feet of soil can be managed via some combination of institutional and/or engineering controls, which include but are not limited to the following: paving; removal of shallow soil and/or covering with a 3-foot layer of clean compacted fill material; additional investigations to delineate dioxins/furans concentrations in shallow soil; developing an asphalt cap maintenance plan; developing a CMMP; and/or applying a deed notice (e.g. to ensure the asphalt cap is maintained) with or without DEQ approval.
- (5) The Subject Property owner is not required to but could coordinate with DEQ after purchase to obtain a conditional NFA letter, which likely involve development and approval by DEQ of a CMMP, asphalt cap maintenance plan, and potentially a deed restriction prohibiting the use of Subject Property groundwater.
- (6) A deed notice could be developed and applied to the Subject Property that prohibits the installation of wells to supply water to occupational receptors in order to address the presence of dioxins/furans in soil and dioxins/furans and arsenic in groundwater.
- (7) To manage potential risks to construction workers associated with dioxins/furans in soil, a HASP and CMMP should be prepared and implemented at the Subject Property, and this could be done with or without DEQ involvement.



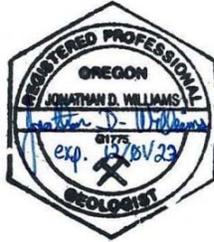
Please feel free to contact Jonathan Williams at 541-944-4685 or [jwilliams@alpine-env-llc.com](mailto:jwilliams@alpine-env-llc.com) if you have any questions about this Phase II ESA report.

Sincerely,

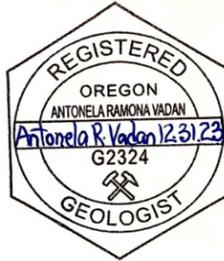
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Jonathan D. Williams, R.G.  
Senior Hydrogeologist



Antonela Vadan, R.G.  
Project Geologist



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## 6 LIMITATIONS

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The purpose of an environmental assessment is to reasonably evaluate the potential for or actual impact of past practices on a given site area. In performing an environmental assessment, it is understood that a balance must be struck between a reasonable inquiry into the environmental issues and an exhaustive analysis of each conceivable issue of potential concern. This environmental assessment contains professional opinions as to the environmental issues of concern and/or additional actions, which may be addressed to the property. In rendering its professional opinion, we warrant that services provided hereunder were performed, within the limits described, consistent with current generally accepted environmental consulting principles and practices. No other warranty, express or implied, is made. The following paragraphs discuss the assumptions and parameters under which such an opinion is rendered.

No investigation is thorough enough to exclude the presence of hazardous materials at a given site. If hazardous conditions have not been identified during the assessment, such a finding should not therefore be construed as a guarantee of the absence of such materials on the site, but rather as the result of the services performed within the scope, limitations, and cost of the work performed.

Any opinions or recommendations presented apply to site conditions existing when services were performed. We are unable to report on or accurately predict events that may change the site conditions after the described services are performed, whether occurring naturally or caused by external forces. We assume no responsibility for conditions we were not authorized to investigate, or conditions not generally recognized as environmentally unacceptable when services were performed.

Environmental conditions may exist at the site that cannot be identified by visual observation. Where the scope of services was limited to observations made during site reconnaissance, interviews, review of readily available reports and literature or any combination, any conclusions or recommendations or both are necessarily based in part on information supplied by others, the accuracy or sufficiency of which we may not have independently reviewed.

Where subsurface work was performed, our professional opinions are based in part on interpretation of data from discrete sampling locations that may not represent actual conditions at unsampled locations.

Except where there is express concern of our client, or where specific environmental contaminants have been previously reported by others, naturally occurring toxic substances, potential environmental contaminants inside buildings, or contaminant concentrations that are not of current environmental concern may not be reflected in this document.



We are not responsible for any potential impact of changes in applicable environmental standards, practices, or regulations following performance of services, on the conclusions or recommendations, or both, of the study.

Services hereunder were performed consistent with our agreement and understanding with, and solely for the use of, our client. Opinions and recommendations are intended for the client, purpose, site, location, time frame, and project parameters indicated. We are not responsible for subsequent separation, detachment, or partial use of this document. Any reliance on this report by a third party shall be at such party's sole risk.



## 7 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

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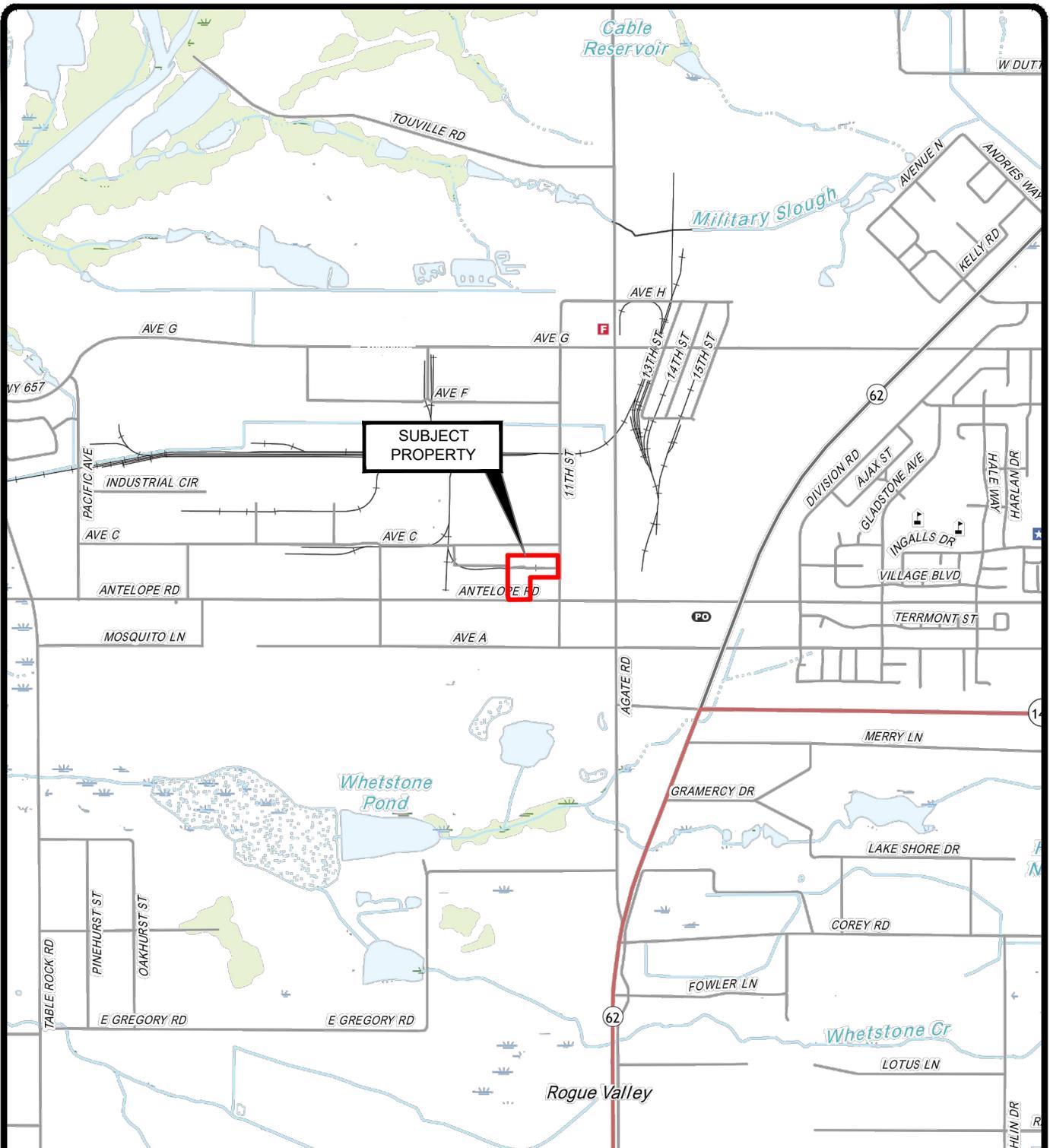
Mr. Jonathan Williams received a Bachelor of Science degree in Geology, with honors, from Duke University in 1987. He has over 31 years experience working with geologic and environmental reports, including Phase I ESAs. Mr. Williams has been a Registered Geologist in the State of Oregon since 1996, and has 40-hour HAZWOPER training.

Ms. Antonela Vadan holds a Bachelor of Arts and Science in Earth and Environmental Sciences from the University of Illinois at Chicago. She has over 21 years of experience in both the private and public sector. Ms. Vadan has conducted multiple Phase I ESAs. Additional project activities have included risk assessments, remedial investigations/feasibility studies, soil and groundwater investigations, and indoor air quality investigations. Ms. Vadan is a Registered Geologist in the States of Oregon and Washington and has 40-hour HAZWOPER training.

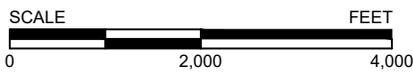


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## FIGURES

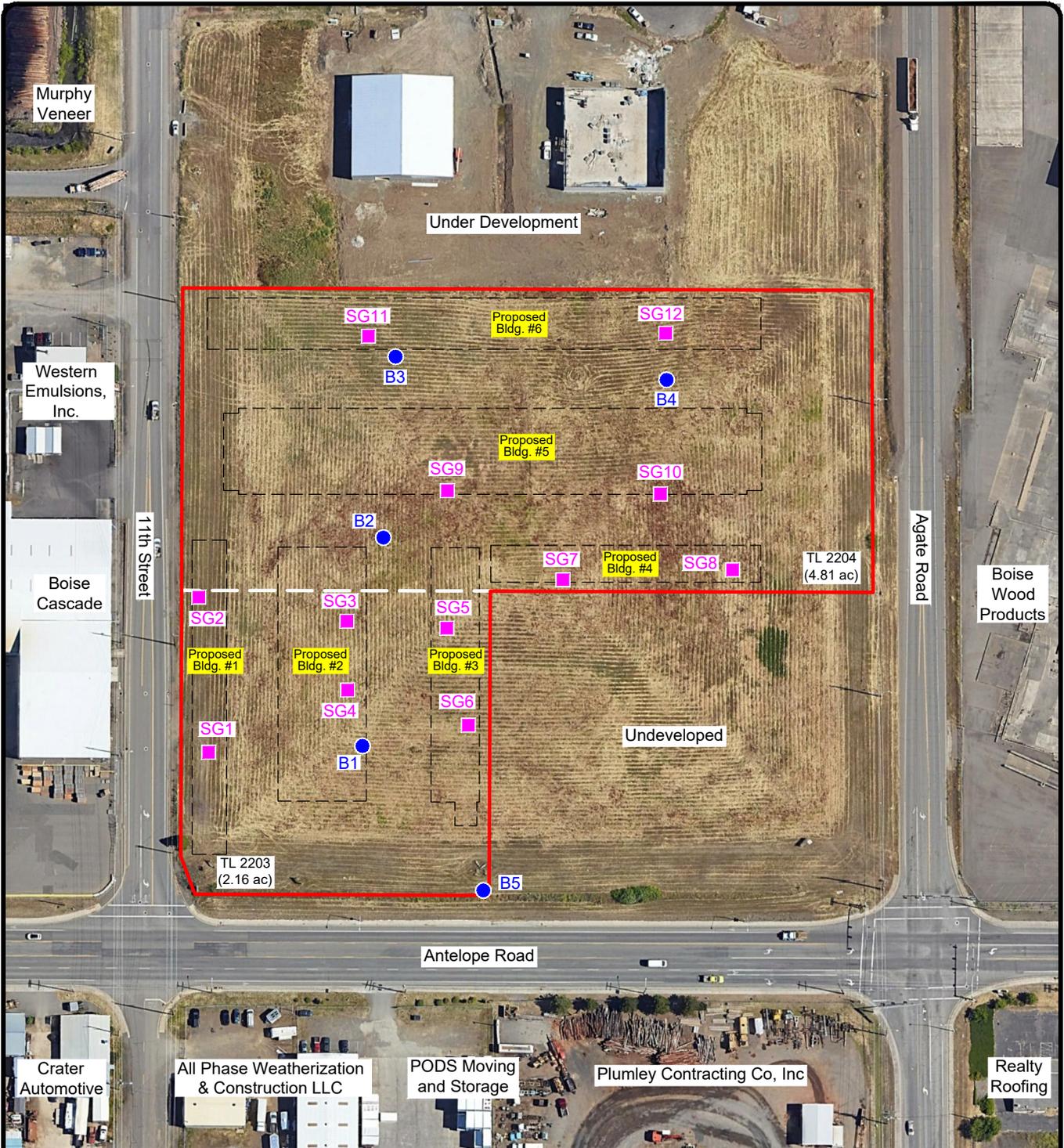


SOURCE: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE  
SAMS VALLEY AND EAGLE POINT, OREGON (2020)



ALPINE ENVIRONMENTAL CONSULTANTS, LLC  
DATE: 7/6/23 DRAWN BY: SRM

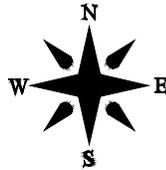
Figure 1  
General Location Map  
Phase I/II Environmental Site Assessment  
7696 11th Street  
White City, Oregon



SOURCE: GOOGLE EARTH (2022)

**LEGEND**

- B1 ● Soil Boring Location (6/2023)
- SG1 ■ Soil Gas Sample Location (6/2023)
- Proposed Building
- Approximate Subject Property Boundary



ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 7/6/23	DRAWN BY: SRM
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Figure 2  
 Sample Location Map  
 Phase I/II Environmental Site Assessment  
 7696 11th Street  
 White City, Oregon

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## TABLES

**Table 1. Soil Samples Analytical Results - Total Petroleum Hydrocarbons (TPHs)  
Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Soil (a)					DEQ Clean Fill Values (e)	Push-Probe Sampling				
	Ingestion, Dermal Contact and Inhalation (b)			Volatilization to Outdoor Air (c)	Leaching to Groundwater (d)		B1-0-3	B2-0-3	B3-0-3	B3-9.5-10	B4-0-3
	OCC.	C. W.	E. W.	OCC.	OCC.		Southwest Area	West-central Area	Northwest Area	Northwest Area	Northeast Area
							0.0-3.0 ft bgs	0.0-3.0 ft bgs	0.0-3.0 ft bgs	9.5-10.0 ft bgs	0.0-3.0 ft bgs
							06/01/23	06/01/23	06/01/23	06/01/23	06/01/23
<b>TPHs (mg/kg)</b>											
<b>DEQ Method NWTPH-Dx with Silica Gel Cleanup &amp; NWTPH-Gx</b>											
Diesel-range	14,000	4,600	>Max	>Max	>Max	1,100	27.5U	22.3U	22.2U	24.6U	21.1U
Oil-range	14,000	4,600	>Max	>Max	>Max	1,100	<b>105 F-03</b>	<b>90.1 F-03</b>	<b>46.7 F-03</b>	<b>364 F-03</b>	<b>282</b>
Gasoline-range	20,000	9,700	>Max	69,000	130	31	12.0U	8.65U	6.41U	8.39U	4.77U

See notes on next page.

**Table 1. Soil Samples Analytical Results - Total Petroleum Hydrocarbons (TPHs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

**Notes:**

Analytical data in bold font indicates that the value exceeds the laboratory's method reporting limit.

**Data Qualifiers:**

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.

U - The analyte was analyzed for, but was not detected above the analytical laboratory's limit of quantitation.

**Footnotes:**

(a) Risk-Based Concentrations are referenced from the July 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime someone is likely to come into contact with contaminated soil. For the occupational scenario, exposure to contaminated soils should be considered for all contaminants found in the top three feet of soil.

(c) This pathway is applicable whenever vadose zone soils are contaminated with volatile compounds.

(d) This pathway is applicable whenever vadose zone contamination is found overlying an aquifer that is currently used or is reasonably likely to be used in the future for drinking water.

(e) Clean Fill Values are referenced from the DEQ's Clean Fill Determinations guidance document dated February 2019.

**Symbols/Acronyms:**

bgs - below ground surface

>Csat - The soil RBC exceeds the limit of three-phase equilibrium partitioning. Soil concentrations in excess of this value indicate free product might be present.

C. W. - construction worker receptors

DEQ - Department of Environmental Quality

E. W. - excavation worker receptors

ft - feet

>Max - The constituent RBC for this pathway is greater than 1,000,000 mg/Kg or 1,000,000 mg/L. Therefore, these substances are not expected to pose risks in the scenario shown.

mg/kg - milligrams per kilogram

OCC. - occupational receptors

RBC - risk-based concentration

UST - underground storage tank

**Table 2. Soil Samples Analytical Results - Polycyclic Aromatic Hydrocarbons (PAHs)  
Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Soil (a)					DEQ Clean Fill Values (e)	Push-Probe Sampling				
	Ingestion, Dermal Contact and Inhalation (b)			Volatilization to Outdoor Air (c)	Leaching to Groundwater (d)		B1-0-3	B2-0-3	B3-0-3	B3-9.5-10	B4-0-3
	OCC.	C. W.	E. W.	OCC.	OCC.		Southwest Area	West-central Area	Northwest Area	Northwest Area	Northeast Area
	0.0-3.0 ft bgs	0.0-3.0 ft bgs	0.0-3.0 ft bgs	0.0-3.0 ft bgs	0.0-3.0 ft bgs		06/01/23	06/01/23	06/01/23	06/01/23	06/01/23
<b>PAHs (mg/kg) USEPA Method 8270E SIM</b>											
Acenaphthene	70,000	21,000	590,000	>Max	>Csat	0.25	0.0395U	0.0193U, R-04	0.0121U, R-04	0.0677U, R-04	0.0585U, R-04
Acenaphthylene	NE	NE	NE	NE	NE	120	0.0395U	0.0193U, R-04	0.0121U, R-04	0.0677U, R-04	0.0585U, R-04
Anthracene	350,000	110,000	>Max	>Max	>Csat	6.8	0.0395U	0.0193U, R-04	0.0121U, R-04	0.0677U, R-04	0.0585U, R-04
Benz(a)anthracene	21	170	4,800	>Csat	>Csat	0.73	0.0395U	0.0193U, R-04	0.0121U, R-04	0.0677U, R-04	0.0585U, R-04
Benzo(a)pyrene	2.1	17	490	NV	>Csat	0.11	0.0591U	0.0289U, R-04	0.0181U, R-04	0.101U, R-04	0.0877U, R-04
Benzo(b)fluoranthene	21	170	4,900	NV	>Csat	1.1	0.0591U	0.0289U, R-04	0.0181U, R-04	0.101U, R-04	0.0877U, R-04
Benzo(j+k)fluoranthenes	210	1,700	49,000	NV	>Csat	11	0.0591U	0.0289U, R-04	0.0181U, R-04	0.101U, R-04	0.0877U, R-04
Benzo(g,h,i)perylene	NE	NE	NE	NE	NE	25	0.0395U	0.0193U, R-04	0.0121U, R-04	0.0677U, R-04	0.0585U, R-04
Chrysene	2,100	17,000	490,000	NV	>Csat	3.1	0.0395U	0.0193U, R-04	0.0121U, R-04	0.0677U, R-04	0.0585U, R-04
Dibenz(a,h)anthracene	2.1	17	490	NV	>Csat	0.11	0.0395U	0.0193U, R-04	0.0121U, R-04	0.0677U, R-04	0.0585U, R-04
Fluoranthene	30,000	10,000	280,000	NV	>Csat	10	0.0395U	0.0193U, R-04	0.0121U, R-04	0.0677U, R-04	0.0585U, R-04
Fluorene	47,000	14,000	390,000	>Max	>Csat	3.7	0.0395U	0.0193U, R-04	0.0121U, R-04	0.0677U, R-04	0.0585U, R-04
Indeno(1,2,3-cd)pyrene	21	170	4,900	NV	>Csat	1.1	0.0395U	0.0193U, R-04	0.0121U, R-04	0.0677U, R-04	0.0585U, R-04
Naphthalene	23	580	16,000	83	0.34	0.077	0.0788U	0.0193U, R-04	0.0121U, R-04	0.0677U, R-04	0.0585U, R-04
Phenanthrene	NE	NE	NE	NE	NE	5.5	<b>0.0409</b>	0.0193U, R-04	0.0121U, R-04	0.0677U, R-04	0.0585U, R-04
Pyrene	23,000	7,500	210,000	>Csat	>Csat	10	0.0395U	0.0193U, R-04	0.0121U, R-04	0.0677U, R-04	0.0585U, R-04

See notes on next page.

**Table 2. Soil Samples Analytical Results - Polycyclic Aromatic Hydrocarbons (PAHs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

**Notes:**

Analytical data in bold font indicates that the value exceeds the laboratory's method reporting limit.

**Data Qualifiers:**

R-04 - Reporting levels elevated due to preparation and/or analytical dilution necessary for analysis.

U - The analyte was analyzed for, but was not detected above the analytical laboratory method reporting limit.

**Footnotes:**

(a) Risk-Based Concentrations are referenced from the July 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime someone is likely to come into contact with contaminated soil. For the occupational scenario, exposure to contaminated soils should be considered for all contaminants found in the top three feet of soil.

(c) This pathway is applicable whenever vadose zone soils are contaminated with volatile compounds.

(d) This pathway is applicable whenever vadose zone contamination is found overlying an aquifer that is currently used or is reasonably likely to be used in the future for drinking water.

(e) Clean Fill Values are referenced from the DEQ's Clean Fill Determinations guidance document dated February 2019.

**Symbols/Acronyms:**

bgs - below ground surface

>C<sub>sat</sub> - The soil RBC exceeds the limit of three-phase equilibrium partitioning. Soil concentrations in excess of this value indicate free product might be present.

C. W. - construction worker receptors

DEQ - Department of Environmental Quality

E. W. - excavation worker receptors

ft - feet

>Max - The constituent RBC for this pathway is greater than 1,000,000 mg/Kg or 1,000,000 mg/L. Therefore, these substances are not expected to pose risks in the scenario shown.

mg/kg - milligrams per kilogram

OCC. - occupational receptors

NE - No RBC levels are established for this chemical.

RBC - risk-based concentration

USEPA - United States Environmental Protection Agency

**Table 3. Soil Samples Analytical Results - Volatile Organic Compounds (VOCs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Soil (a)					DEQ Clean Fill Values (e)	Push-Probe Sampling				
	Ingestion, Dermal Contact and Inhalation (b)			Volatilization to Outdoor Air (c)	Leaching to Groundwater (d)		B1-0-3	B2-0-3	B3-0-3	B3-9.5-10	B4-0-3
	OCC.	C. W.	E. W.				Southwest Area	West-central Area	Northwest Area	Northwest Area	Northeast Area
				0.0-3.0 ft bgs	0.0-3.0 ft bgs		0.0-3.0 ft bgs	9.5-10.0 ft bgs	0.0-3.0 ft bgs		
						06/01/23	06/01/23	06/01/23	06/01/23	06/01/23	
<b>VOCs (mg/kg)</b>											
<b>USEPA Method 8260D</b>											
Acetone	NE	NE	NE	NE	NE	1.2	2.40U	1.73U	1.28U	1.68U	0.953U
Acrylonitrile	4.0	40	1,100	5.8	0.0017	0.00036	0.240U	0.173U	0.128U	0.168U	0.0953U
Benzene	37	380	11,000	50	0.10	0.023	0.0240U	0.0173U	0.0128U	0.0168U	0.00953U
Bromobenzene	NE	NE	NE	NE	NE	2.5	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U
Bromochloromethane	NE	NE	NE	NE	NE	1.3	0.120U	0.0865U	0.0641U	0.0839U	0.0477U
Bromodichloromethane	15	230	6,300	11	0.0088	0.002	0.120U	0.0865U	0.0641U	0.0839U	0.0477U
Bromoform	260	2,700	74,000	360	0.22	0.046	0.240U	0.173U	0.128U	0.168U	0.0953U
Bromomethane	750	370	10,000	700	0.40	0.083	1.20U	0.865U	0.641U	0.839U	0.477U
2-Butanone (MEK)	NE	NE	NE	NE	NE	72	1.20U	0.865U	0.641U	0.839U	0.477U
n-Butylbenzene	NE	NE	NE	NE	NE	190	0.120U	0.0865U	0.0641U	0.0839U	0.0477U
sec-Butylbenzene	NE	NE	NE	NE	NE	350	0.120U	0.0865U	0.0641U	0.0839U	0.0477U
tert-Butylbenzene	NE	NE	NE	NE	NE	96	0.120U	0.0865U	0.0641U	0.0839U	0.0477U
Carbon disulfide	NE	NE	NE	NE	NE	0.81	1.20U	0.865U	0.641U	0.839U	0.477U
Carbon tetrachloride	34	320	8,900	65	0.058	0.013	0.120U	0.0865U	0.0641U	0.0839U	0.0477U
Chlorobenzene	8,700	4,700	130,000	>Csat	27	2.4	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U
Chloroethane (ethyl chloride)	>Max	>Max	>Max	>Max	1,300	310	1.20U	0.865U	0.641U	0.839U	0.477U
Chloroform	26	410	11,000	17	0.015	0.0034	0.120U	0.0865U	0.0641U	0.0839U	0.0477U
Chloromethane	25,000	25,000	700,000	>Csat	9.1	2.2	0.601U	0.433U	0.321U	0.420U	0.238U
2-Chlorotoluene	NE	NE	NE	NE	NE	14	0.120U	0.0865U	0.0641U	0.0839U	0.0477U
4-Chlorotoluene	NE	NE	NE	NE	NE	14	0.120U	0.0865U	0.0641U	0.0839U	0.0477U
Dibromochloromethane	17	210	5,800	14	0.011	0.0024	0.240U	0.173U	0.128U	0.168U	0.0953U
1,2-Dibromo-3-chloropropane	NE	NE	NE	NE	NE	0.0000084	0.601U	0.433U	0.321U	0.420U	0.238U
1,2-dibromoethane (EDB)	0.73	9.0	250	0.65	0.00056	0.00012	0.120U	0.0865U	0.0641U	0.0839U	0.0477U
Dibromomethane	NE	NE	NE	NE	NE	0.13	0.120U	0.0865U	0.0641U	0.0839U	0.0477U
1,2-Dichlorobenzene	36,000	20,000	560,000	>Csat	160	0.92	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U
1,3-Dichlorobenzene	NE	NE	NE	NE	NE	0.74	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U
1,4-Dichlorobenzene	64	1,300	36,000	36	0.25	0.057	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U
Dichlorodifluoromethane	NE	NE	NE	NE	NE	18	0.240U	0.173U	0.128U	0.168U	0.0953U
1,1-Dichloroethane	260	3,200	89,000	240	0.20	0.04	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U
1,2-dichloroethane (EDC)	16	200	5,600	15	0.013	0.0028	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U
1,1-Dichloroethene	29,000	13,000	370,000	>Csat	32	6.7	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U
cis-1,2-Dichloroethene	2,300	710	20,000	>Max	4.5	0.63	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U
trans-1,2-Dichloroethene	23,000	7,100	200,000	>Max	51	7	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U
1,2-Dichloropropane	NE	NE	NE	NE	NE	0.017	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U
1,3-Dichloropropane	NE	NE	NE	NE	NE	7.8	0.120U	0.0865U	0.0641U	0.0839U	0.0477U

**Table 3. Soil Samples Analytical Results - Volatile Organic Compounds (VOCs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Soil (a)						DEQ Clean Fill Values (e)	Push-Probe Sampling				
	Ingestion, Dermal Contact and Inhalation (b)			Volatilization to Outdoor Air (c)	Leaching to Groundwater (d)	B1-0-3		B2-0-3	B3-0-3	B3-9.5-10	B4-0-3	
	OCC.	C. W.	E. W.	OCC.	OCC.	Southwest Area		West-central Area	Northwest Area	Northwest Area	Northeast Area	
						0.0-3.0 ft bgs		0.0-3.0 ft bgs	0.0-3.0 ft bgs	9.5-10.0 ft bgs	0.0-3.0 ft bgs	
						06/01/23	06/01/23	06/01/23	06/01/23	06/01/23		
<b>VOCs (mg/kg)</b>												
<b>USEPA Method 8260D</b>												
2,2-Dichloropropane	NE	NE	NE	NE	NE	NE	0.120U	0.0865U	0.0641U	0.0839U	0.0477U	
1,1-Dichloropropene	NE	NE	NE	NE	NE	NE	0.120U	0.0865U	0.0641U	0.0839U	0.0477U	
cis-1,3-Dichloropropene	NE	NE	NE	NE	NE	NE	0.120U	0.0865U	0.0641U	0.0839U	0.0477U	
trans-1,3-Dichloropropene	NE	NE	NE	NE	NE	NE	0.120U	0.0865U	0.0641U	0.0839U	0.0477U	
Ethylbenzene	110	1,700	49,000	85	0.94	0.22	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U	
Hexachlorobutadiene	NE	NE	NE	NE	NE	0.016	0.240U	0.173U	0.128U	0.168U	0.0953U	
2-Hexanone	NE	NE	NE	NE	NE	0.36	1.20U	0.865U	0.641U	0.839U	0.477U	
iso-Propylbenzene (cumene)	7,000	27,000	750,000	>Csat	>Csat	96	0.120U	0.0865U	0.0641U	0.0839U	0.0477U	
4-Isopropyltoluene	NE	NE	NE	NE	NE	NE	0.120U	0.0865U	0.0641U	0.0839U	0.0477U	
Methylene chloride	NE	NE	NE	NE	NE	9.7	1.20U	0.865U	0.641U	0.839U	0.477U	
4-Methyl-2-pentanone (MIBK)	NE	NE	NE	NE	NE	0.11	1.20U	0.865U	0.641U	0.839U	0.477U	
methyl t-butyl ether (MTBE)	730	12,000	320,000	810	0.50	NE	0.120U	0.0865U	0.0641U	0.0839U	0.0477U	
Naphthalene	25	580	16,000	15	0.37	0.077	0.240U	0.173U	0.128U	0.168U	0.0953U	
n-Propylbenzene	NE	NE	NE	NE	NE	NE	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U	
Styrene	16,000	56,000	>Max	>Csat	640	1.2	0.120U	0.0865U	0.0641U	0.0839U	0.0477U	
1,1,1,2-Tetrachloroethane	NE	NE	NE	NE	NE	0.013	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U	
1,1,2,2-Tetrachloroethane	NE	NE	NE	NE	NE	0.0018	0.120U	0.0865U	0.0641U	0.0839U	0.0477U	
Tetrachloroethene (PCE)	540	10,000	280,000	>Csat	1.9	0.18	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U	
Toluene	12,000	28,000	770,000	>Csat	340	23	0.120U	0.0865U	0.0641U	0.0839U	0.0477U	
1,2,3-Trichlorobenzene	NE	NE	NE	NE	NE	1.3	0.601U	0.433U	0.321U	0.420U	0.238U	
1,2,4-Trichlorobenzene	NE	NE	NE	NE	NE	0.2	0.601U	0.433U	0.321U	0.420U	0.238U	
1,1,1-Trichloroethane	110,000	470,000	>Max	>Csat	710	190	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U	
1,1,2-Trichloroethane	6.3	320	8,900	6.7	0.029	0.006	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U	
Trichloroethene (TCE)	17.0	470	13,000	33	0.053	0.013	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U	
Trichlorofluoromethane	15,000	69,000	>Max	>Csat	230	52	0.240U	0.173U	0.128U	0.168U	0.0953U	
1,2,3-Trichloropropane	NE	NE	NE	NE	NE	0.000019	0.120U	0.0865U	0.0641U	0.0839U	0.0477U	
1,2,4-Trimethylbenzene	860	2,900	81,000	>Csat	43	10	0.120U	0.0865U	0.0641U	0.0839U	0.0477U	
1,3,5-Trimethylbenzene	860	2,900	81,000	>Csat	45	11	0.120U	0.0865U	0.0641U	0.0839U	0.0477U	
Vinyl chloride	0.80	34	950	6.5	0.0014	0.00057	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U	
m,p-Xylene	NE	NE	NE	NE	NE	11	0.120U	0.0865U	0.0641U	0.0839U	0.0477U	
o-Xylene	NE	NE	NE	NE	NE	1	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U	
Xylenes	2,900	20,000	560,000	>Csat	87	1.4	0.0601U	0.0433U	0.0321U	0.0420U	0.0238U	

See notes on next page.

**Table 3. Soil Samples Analytical Results - Volatile Organic Compounds (VOCs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

**Notes:**

Analytical data in bold font indicates that the value exceeds the laboratory's method reporting limit.

Analytical data highlighted in blue indicates the value exceeded the Clean Fill Value.

**Data Qualifiers:**

U - The analyte was analyzed for, but was not detected above the analytical laboratory method reporting limit.

**Footnotes:**

(a) Risk-Based Concentrations are referenced from the July 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime someone is likely to come into contact with contaminated soil. For the occupational scenario, exposure to contaminated soils should be considered for all

(c) This pathway is applicable whenever vadose zone soils are contaminated with volatile compounds.

(d) This pathway is applicable whenever vadose zone contamination is found overlying an aquifer that is currently used or is reasonably likely to be used in the future for drinking water.

(e) Clean Fill Values are referenced from the DEQ's Clean Fill Determinations guidance document dated February 2019.

**Symbols/Acronyms:**

bgs - below ground surface

>Csat - The soil RBC exceeds the limit of three-phase equilibrium partitioning. Soil concentrations in excess of this value indicate free product might be present.

C. W. - construction worker receptors

DEQ - Department of Environmental Quality

E. W. - excavation worker receptors

ft - feet

>Max - The constituent RBC for this pathway is greater than 1,000,000 mg/Kg or 1,000,000 mg/L. Therefore, these substances are not expected to pose risks in the scenario shown.

mg/kg - milligrams per kilogram

OCC. - occupational receptors

NE - No RBC levels are established for this chemical.

RBC - risk-based concentration

USEPA - United States Environmental Protection Agency

**Table 4. Soil Samples Analytical Results - Chlorinated Phenolic Compounds**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Soil (a)					DEQ Clean Fill Values (e)	Push-Probe Sampling							
	Ingestion, Dermal Contact and Inhalation (b)			Volatilization to Outdoor Air (c)	Leaching to Groundwater (d)		B1-0-3	B2-0-3	B3-0-3	B3-9.5-10	B4-0-3			
	OCC.	C. W.	E. W.	OCC.	OCC.		Southwest Area	West-central Area	Northwest Area	Northwest Area	Northeast Area			
							0.0-3.0 ft bgs	0.0-3.0 ft bgs	0.0-3.0 ft bgs	9.5-10.0 ft bgs	0.0-3.0 ft bgs			
										06/01/23	06/01/23	06/01/23	06/01/23	06/01/23
<b>Chlorinated Phenolic Compounds (mg/kg)</b>														
<b>USEPA 8270E</b>														
Pentachlorophenol (PCP)	4.0	34	960	NV	0.17	0.066	0.395U	0.193U, R-94	0.121U, R-04	0.677U, R-05	0.585U, R-04			
2,3,4,6- & 2,3,4,5-tetrachlorophenol(s)	NE	NE	NE	NE	NE	11 (f)	0.197U	0.0961U, R-04	0.0603U, R-04	0.337U, R-04	0.291U, R-04			
2,3,5,6-Tetrachlorophenol	NE	NE	NE	NE	NE	NE	0.197U	0.0961U, R-04	0.0603U, R-04	0.337U, R-04	0.291U, R-04			
2,4,5-Trichlorophenol	NE	NE	NE	NE	NE	4	0.197U	0.0961U, R-04	0.0603U, R-04	0.337U, R-04	0.291U, R-04			
2,4,6-Trichlorophenol	210	270	7,400	NV	8.9	2.4	0.197U	0.0961U, R-04	0.0603U, R-04	0.337U, R-04	0.291U, R-04			

See notes on next page.

**Table 4. Soil Samples Analytical Results - Chlorinated Phenolic Compounds**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

**Notes:**

The laboratory method reporting limits that exceed one or more RBCs are indicated with bold blue font.

**Data Qualifiers:**

R-04 - Reporting levels elevated due to preparation and/or analytical dilution necessary for analysis.

U - The analyte was analyzed for, but was not detected above the analytical laboratory method reporting limit.

**Footnotes:**

(a) Risk-Based Concentrations are referenced from the July 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime someone is likely to come into contact with contaminated soil. For the occupational scenario, exposure to contaminated soils should be considered for all contaminants found in the top three feet of soil.

(c) This pathway is applicable whenever vadose zone soils are contaminated with volatile compounds.

(d) This pathway is applicable whenever vadose zone contamination is found overlying an aquifer that is currently used or is reasonably likely to be used in the future for drinking water.

(e) Clean Fill Values are referenced from the DEQ's Clean Fill Determinations guidance document dated February 2019.

(f) Clean Fill Value is for 2,3,4,6-Tetrachlorophenol.

**Symbols/Acronyms:**

bgs - below ground surface

>C<sub>sat</sub> - The soil RBC exceeds the limit of three-phase equilibrium partitioning. Soil concentrations in excess of this value indicate free product might be present.

C. W. - construction worker receptors

DEQ - Department of Environmental Quality

E. W. - excavation worker receptors

ft - feet

>Max - The constituent RBC for this pathway is greater than 1,000,000 mg/Kg or 1,000,000 mg/L. Therefore, these substances are not expected to pose risks in the scenario s

mg/kg - milligrams per kilogram

OCC. - occupational receptors

NE - No RBC levels are established for this chemical.

RBC - risk-based concentration

USEPA - United States Environmental Protection Agency

**Table 5. Soil Samples Analytical Results - Polychlorinated Biphenyls (PCBs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Soil (a)					DEQ Clean Fill Values (e)	Push-Probe Sampling				
	Ingestion, Dermal Contact and Inhalation (b)			Volatilization to Outdoor Air (c)	Leaching to Groundwater (d)		B1-0-3	B2-0-3	B3-0-3	B3-9.5-10	B4-0-3
	OCC.	C. W.	E. W.	OCC.	OCC.		Southwest Area	West-central Area	Northwest Area	Northwest Area	Northeast Area
	0.0-3.0 ft bgs			0.0-3.0 ft bgs			0.0-3.0 ft bgs		9.5-10.0 ft bgs		0.0-3.0 ft bgs
							06/01/23		06/01/23		
<b>PCBs (mg/kg)</b>											
<b>USEPA Method 8082A</b>											
Aroclor 1016	0.59 (f)	4.9 (f)	140 (f)	>Csat (f)	1.1 (f)	1.1	0.0139U, C-07	0.0121U, C-07	0.0112U, C-07	00129U, C-07	0.0106U, C-07
Aroclor 1221	0.59 (f)	4.9 (f)	140 (f)	>Csat (f)	1.1 (f)	0.0048	0.0139U, C-07	0.0121U, C-07	0.0112U, C-07	00129U, C-07	0.0106U, C-07
Aroclor 1232	0.59 (f)	4.9 (f)	140 (f)	>Csat (f)	1.1 (f)	0.0048	0.0139U, C-07, R-02	0.0121U, C-07	0.0112U, C-07	00129U, C-07	0.0106U, C-07
Aroclor 1242	0.59 (f)	4.9 (f)	140 (f)	>Csat (f)	1.1 (f)	0.041	0.0139U, C-07	<b>0.0155 C-07, P-12</b>	0.0112U, C-07	00129U, C-07	0.0106U, C-07
Aroclor 1248	0.59 (f)	4.9 (f)	140 (f)	>Csat (f)	1.1 (f)	0.0073	0.0139U, C-07	0.0121U, C-07	0.0112U, C-07	00129U, C-07	0.0106U, C-07
Aroclor 1254	0.59 (f)	4.9 (f)	140 (f)	>Csat (f)	1.1 (f)	0.041	0.0139U, C-07, R-02	0.0132U, C-07, R-02	0.0112U, C-07	00129U, C-07	0.0106U, C-07
Aroclor 1260	0.59 (f)	4.9 (f)	140 (f)	>Csat (f)	1.1 (f)	0.24	0.0139U, C-07, R-02	<b>0.0168 C-07, P-12</b>	0.0112U, C-07	00129U, C-07	0.0106U, C-07

See notes on next page.

**Table 5. Soil Samples Analytical Results - Polychlorinated Biphenyls (PCBs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

**Notes:**

Analytical data in bold font indicates that the value exceeds the laboratory's method reporting limit.

**Data Qualifiers:**

C-07 - Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.

P-12 - Result estimated due to the presence of multiple PCB Aroclors and/or PCB congeners not defined as Aroclors

R-02 - The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.

U - The analyte was analyzed for, but was not detected above the analytical laboratory's method reporting limit.

**Footnotes:**

(a) Risk-Based Concentrations are referenced from the July 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime someone is likely to come into contact with contaminated soil. For the occupational scenario, exposure to contaminated soils should be considered for all contaminants found in the top three feet of soil.

(c) This pathway is applicable whenever vadose zone soils are contaminated with volatile compounds.

(d) This pathway is applicable whenever vadose zone contamination is found overlying an aquifer that is currently used or is reasonably likely to be used in the future for drinking water.

(e) Clean Fill Values are referenced from the DEQ's Clean Fill Determinations guidance document dated February 2019.

(f) RBCs are for total of PCBs Aroclors.

**Symbols/Acronyms:**

bgs - below ground surface

>Csat - The soil RBC exceeds the limit of three-phase equilibrium partitioning. Soil concentrations in excess of this value indicate free product might be present.

C. W. - construction worker receptors

DEQ - Department of Environmental Quality

E. W. - excavation worker receptors

ft - feet

>Max - The constituent RBC for this pathway is greater than 1,000,000 mg/Kg or 1,000,000 mg/L. Therefore, these substances are not expected to pose risks in the scenario shown.

mg/kg - milligrams per kilogram

OCC. - occupational receptors

NE - No RBC levels are established for this chemical.

RBC - risk-based concentration

USEPA - United States Environmental Protection Agency

**Table 6. Soil Samples Analytical Results - Chlorinated Dioxins and Dibenzofurans**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Soil (a)					DEQ Clean Fill Values (e)		Push-Probe Sampling				
	Ingestion, Dermal Contact and Inhalation (b)			Volatilization to Outdoor Air (c)	Leaching to Groundwater (d)			B1-0-3	B2-0-3	B3-0-3	B3-9.5-10	B4-0-3
	OCC.	C. W.	E. W.	OCC.	OCC.			Southwest Area	West-central Area	Northwest Area	Northwest Area	Northeast Area
	0.0-3.0 ft bgs			0.0-3.0 ft bgs				0.0-3.0 ft bgs	0.0-3.0 ft bgs	9.5-10.0 ft bgs	0.0-3.0 ft bgs	
<b>USEPA 1613B</b>												
DEQ RBCs for 2,3,7,8-TCDD Equivalents	16	170	4,800	130,000	31	0.29	TEQ (pg/g) (f)	4,640	501	79.6	301	264

**Table 6. Soil Samples Analytical Results - Chlorinated Dioxins and Dibenzofurans**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

**Notes:**

Analytical data in bold font indicates that the value exceeds the laboratory's method reporting limit.

Analytical data highlighted in both yellow and blue indicates the value exceeded one or more generic RBCs and the Clean Fill Value.

**Data Qualifiers:**

**Footnotes:**

(a) Risk-Based Concentrations are referenced from the July 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime someone is likely to come into contact with contaminated soil. For the occupational scenario, exposure to contaminated soils should be considered for all contaminants found in the top three feet of soil.

(c) This pathway is applicable whenever vadose zone soils are contaminated with volatile compounds.

(d) This pathway is applicable whenever vadose zone contamination is found overlying an aquifer that is currently used or is reasonably likely to be used in the future.

(e) Clean Fill Values are referenced from the DEQ's Clean Fill Determinations guidance document dated February 2019.

(f) To compare soil analytical results of dioxins to DEQ's RBCs, the laboratory calculated 2,3,7,8-TCDD Toxicity Equivalent Quotient (TEQ) concentration. The TEQ was obtained by multiplying the individual congener results by a Toxicity Equivalency Factor (TEF) and summing them to derive a TEQ value for each sample. This method was developed by USEPA in 1987 and revised in 2007 (40 CFR Parts 9 and 372, Dioxin and Dioxin-Like Compounds; Toxic Equivalency Information; Community Right-To-Know Toxic Chemical Release Reporting). The TEFs are based on the USEPA report: Recommended Toxicity Equivalence Factors for Human Health Risk Assessments of 2,3,7,8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds, published in December 2010. The TEF values used were published by World Health Organization (WHO) in The 2005 WHO Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006). The TEQ was calculated assuming all congeners were present at 1.0 times their quantitation limit. The non-detected compounds are not included in the Total TEQ calculation.

**Symbols/Acronyms:**

bgs - below ground surface

C. W. - construction worker receptors

DEQ - Department of Environmental Quality

E. W. - excavation worker receptors

ft - feet

NA - Sample was not analyzed for this analyte

ng/kg - nanograms per kilogram

OCC. - occupational receptors

RBC - risk-based concentration

TEF - Toxicity Equivalent Factor

TEQ - Toxicity Equivalent Quotient

USEPA - United States Environmental Protection Agency

**Table 7. Soil Samples Analytical Results - Total Metals**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Soil (a)					DEQ's Clean fill screening levels for Cascade Range and background metals in Soil (e), (f)	Push-Probe Sampling							
	Ingestion, Dermal Contact and Inhalation (b)			Volatilization to Outdoor Air (c)	Leaching to Groundwater (d)		B1-0-3	B2-0-3	B3-0-3	B3-9.5-10	B4-0-3			
	OCC.	C. W.	E. W.	OCC.	OCC.		Southwest Area	West-central Area	Northwest Area	Northwest Area	Northeast Area			
	0.0-3.0 ft bgs	0.0-3.0 ft bgs	0.0-3.0 ft bgs	9.5-10.0 ft bgs	0.0-3.0 ft bgs		06/01/23	06/01/23	06/01/23	06/01/23	06/01/23			
<b>Total Metals (mg/kg)</b>														
<b>USEPA 6020B (ICPMS)</b>														
Arsenic	1.9	15	420	NV	*	19	<b>4.31</b>	<b>3.04</b>	<b>3.15</b>	<b>1.93</b>	<b>3.66</b>			
Barium	220,000	69,000	>Max	NV	*	630	<b>252</b>	<b>137</b>	<b>183</b>	<b>94.4</b>	<b>167</b>			
Cadmium	1,100	350	9,700	NV	*	0.54	0.308U	0.251U	0.252U	0.257U	0.216U			
Chromium (III)	>Max	530,000	>Max	NV	*	200	<b>35.3</b>	<b>11.3</b>	<b>18.4</b>	<b>9.21</b>	<b>20.8</b>			
Lead	800	800	800	NV	30	34	<b>14.8</b>	<b>4.94</b>	<b>5.93</b>	<b>3.52</b>	<b>9.52</b>			
Mercury	350	110	2,900	NV	*	0.24	0.123U	0.100U	0.101U	0.103U	0.0865U			
Selenium	NE	NE	NE	NE	NE	0.52	1.54U	1.25U	1.26U	1.28U	1.08U			
Silver	5,800	1,800	49,000	NV	*	0.17	0.308U	0.251U	0.252U	0.257U	0.216U			

See notes on next page.

**Table 7. Soil Samples Analytical Results - Total Metals**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

**Notes:**

Analytical data in bold font indicates that the value exceeds the laboratory's method reporting limit.

Analytical data highlighted in yellow indicates the value exceeded a generic RBC.

\* - Leaching to groundwater RBCs are not provided for inorganic chemicals. If this pathway is of concern, then site-specific leaching tests must be performed.

**Data Qualifiers:**

U - The analyte was analyzed for, but was not detected above the analytical laboratory's method reporting limit.

**Footnotes:**

(a) Risk-Based Concentrations are referenced from the July 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime someone is likely to come into contact with contaminated soil. For the occupational scenario, exposure to contaminated soils should be considered for all contaminants found in the top three feet of soil.

(c) This pathway is applicable whenever vadose zone soils are contaminated with volatile compounds.

(d) This pathway is applicable whenever vadose zone contamination is found overlying an aquifer that is currently used or is reasonably likely to be used in the future for drinking water.

(e) DEQ's Background Concentrations in Soil are referenced from the DEQ's Development of Oregon Background Metals Concentrations in Soil technical report dated March 2013. The background concentrations included in this table are 95% Upper Prediction Limit (UPL) for the Cascade Range region of Oregon, which includes the White City area and the Subject Property.

(f) Clean Fill Values are referenced from the DEQ's Clean Fill Determinations guidance document dated February 2019.

**Symbols/Acronyms:**

bgs - below ground surface

C. W. - construction worker receptors

DEQ - Department of Environmental Quality

E. W. - excavation worker receptors

ft - feet

>Max - The constituent RBC for this pathway is greater than 1,000,000 mg/Kg or 1,000,000 mg/L. Therefore, these substances are not expected to pose risks in the scenario shown.

mg/kg - milligrams per kilogram

NE - No RBC levels are established for this chemical.

NV - The chemical is considered "nonvolatile" for the purposes of the exposure calculations.

OCC. - occupational receptors

RBC - risk-based concentration

USEPA - United States Environmental Protection Agency

**Table 8. Groundwater Samples Analytical Results - Total Petroleum Hydrocarbons (TPHs)  
Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Groundwater (a)				Temporary Wells Groundwater Samples	
	Ingestion and Inhalation from Tapwater (b)	Volatilization to Outdoor Air (c)	Volatilization to Indoor Air (d)	Groundwater in Excavation (e)	B2-GW	B5-GW
	OCC.	OCC.	OCC.	C. & E. W.	West-central Area	
					06/02/23	06/02/23
<b>TPHs (µg/L)</b>						
<b>DEQ Method NWTPH-Dx &amp; NWTPH-Gx</b>						
Diesel-range	430	>S	1,700	>S	84.2U, PRES	100U
Oil-range	430	>S	1,700	>S	168U, PRES	200U
Gasoline-range	450	>S	520	14,000	100U	100U

See notes on next page.

**Table 8. Groundwater Samples Analytical Results - Total Petroleum Hydrocarbons (TPHs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

**Notes:**

**Data Qualifiers:**

PRES - Incomplete field preservation. Additional preservative was added to adjust the pH within the appropriate range for this analysis.

U - The analyte was analyzed for, but was not detected above the analytical laboratory method reporting limit.

**Footnotes:**

(a) Risk-Based Concentrations are referenced from the July 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime groundwater contamination is found in an aquifer that is currently used or is reasonably likely to be used for drinking water.

(c) This pathway is applicable whenever the groundwater is contaminated with volatile compounds.

(d) This pathway is applicable whenever volatile compounds in groundwater are located beneath or within 10 feet of a commercial building, or beneath or within 50 feet of a residential building, or may be in such a location in the future.

(e) This pathway is applicable in cases where construction or excavation workers may come into contact with contaminated groundwater in a semi-enclosed space such as an excavation.

**Symbols/Acronyms:**

bgs - below ground surface

C. & E. W. - construction and excavation workers receptors

DEQ - Department of Environmental Quality

ft - feet

OCC. - occupational receptors

µg/L - micrograms per liter

RBC - risk-based concentration

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

**Table 9. Groundwater Samples Analytical Results - Polycyclic Aromatic Hydrocarbons (PAHs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Groundwater (a)				Temporary Wells Groundwater Samples	
	Ingestion and Inhalation from Tapwater (b)	Volatilization to Outdoor Air (c)	Volatilization to Indoor Air (d)	Groundwater in Excavation (e)	B2-GW	B5-GW
	OCC.	OCC.	OCC.	C. & E. W.	West-central Area	
					06/02/23	06/02/23
<b>PAHs (µg/L)</b>						
<b>USEPA Method 8270E SIM</b>						
Acenaphthene	2,500	>S	NITI	>S	0.0784U	NA
Acenaphthylene	NE	NE	NE	NE	0.0784U	NA
Anthracene	>S	>S	NITI	>S	0.0784U	NA
Benz(a)anthracene	0.38	>S	2,300	>S	0.0784U	NA
Benzo(a)pyrene	0.47	NV	NV	>S	0.118U	NA
Benzo(b)fluoranthene	>S	NV	NV	>S	0.118U	NA
Benzo(k)fluoranthene	NE	NE	NV	NE	0.118U	NA
Benzo(g,h,i)perylene	>S	NV	NE	>S	0.0784U	NA
Chrysene	>S	NV	NV	>S	0.0784U	NA
Dibenz(a,h)anthracene	NE	NE	NV	NE	0.0784U	NA
Fluoranthene	0.47	NV	NITI, NV	>S	0.0784U	NA
Fluorene	NE	NE	NITI	NE	0.0784U	NA
Indeno(1,2,3-cd)pyrene	>S	NV	NV	>S	0.0784U	NA
1-Methylnaphthalene	1,300	>S	NITI	>S	0.157U	NA
2-Methylnaphthalene	>S	NV	NITI	>S	0.157U	NA
Naphthalene	NE	NE	50	NE	0.157U	NA
Phenanthrene	NE	NE	NE	NE	0.0784U	NA
Pyrene	0.72	16,000	NITI	500	0.0784U	NA

See notes on next page.

**Table 9. Groundwater Samples Analytical Results - Polycyclic Aromatic Hydrocarbons (PAHs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

**Notes:**

**Data Qualifiers:**

U - The analyte was analyzed for, but was not detected above the analytical laboratory method reporting limit.

**Footnotes:**

(a) Risk-Based Concentrations are referenced from the July 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime groundwater contamination is found in an aquifer that is currently used or is reasonably likely to be used for drinking water.

(c) This pathway is applicable whenever the groundwater is contaminated with volatile compounds.

(d) This pathway is applicable whenever volatile compounds in groundwater are located beneath or within 10 feet of a commercial building, or beneath or within 50 feet of a residential building, or may be in such a location in the future.

(e) This pathway is applicable in cases where construction or excavation workers may come into contact with contaminated groundwater in a semi-enclosed space such as an excavation.

**Symbols/Acronyms:**

bgs - below ground surface

C. & E. W. - construction and excavation workers receptors

DEQ - Department of Environmental Quality

ft - feet

NA - Sample was not analyzed for this analyte

NE - No RBC levels are established for this chemical.

NITI - No inhalation toxicity information.

NV - not volatile

OCC. - occupational receptors

µg/L - micrograms per liter

RBC - risk-based concentration

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

USEPA - United States Environmental Protection Agency

**Table 10. Groundwater Samples Analytical Results - Volatile Organic Compounds (VOCs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Groundwater (a)				Temporary Wells Groundwater Samples		Trip Blank
	Ingestion and Inhalation from Tapwater (b)	Volatilization to Outdoor Air (c)	Volatilization to Indoor Air (d)	Groundwater in Excavation (e)	B2-GW	B5-GW	
	OCC.	OCC.	OCC.	C. & E. W.	West-central Area		
					06/02/23	06/02/23	6/5/2023
<b>VOCs (µg/L)</b>							
<b>USEPA Method 8260D</b>							
Acetone	NE	NE	NITI	NE	20.0U	<b>35.3</b>	20.0U
Acrylonitrile	0.25	9800	58	250	<b>2.00U</b>	<b>2.00U</b>	<b>2.00U</b>
Benzene	2.1	14,000	12	1,800	0.200U	<b>0.210</b>	0.200U
Bromobenzene	NE	NE	6,300	NE	0.500U	0.500U	0.500U
Bromochloromethane	NE	NE	5,000	NE	1.00U	1.00U	1.00U
Bromodichloromethane	0.60	6,000	6.9	450	<b>1.00U</b>	<b>1.00U</b>	<b>1.00U</b>
Bromoform	16	550,000	1,100	14,000	1.00U	1.00U	1.00U
Bromomethane	36	130,000	110	1,200	5.00U	5.00U	5.00U
2-Butanone (MEK)	NE	NE	17,000,000	NE	10.0U	10.0U	10.0U
n-Butylbenzene	NE	NE	NITI	NE	1.00U	1.00U	1.00U
sec-Butylbenzene	NE	NE	NITI	NE	1.00U	1.00U	1.00U
tert-Butylbenzene	NE	NE	NITI	NE	1.00U	1.00U	1.00U
Carbon disulfide	NE	NE	8,200	NE	10.0U	10.0U	10.0U
Carbon tetrachloride	2.1	7,700	3.1	1,800	1.00U	1.00U	1.00U
Chlorobenzene	350	>S	3,400	10,000	0.500U	0.500U	0.500U
Chloroethane (ethyl chloride)	88,000	>S	57,000	2,400,000	5.00U	5.00U	5.00U
Chloroform	0.98	6,300	5.9	720	<b>1.00U</b>	<b>1.00U</b>	<b>1.00U</b>
Chloromethane	790	1,800,000	1,500	22,000	5.00U	5.00U	5.00U
2-Chlorotoluene	NE	NE	NITI	NE	1.00U	1.00U	1.00U
4-Chlorotoluene	NE	NE	NITI	NE	1.00U	1.00U	1.00U
Chlorodibromomethane	NE	NE	NITI	NE	1.00U	1.00U	1.00U
1,2-Dibromo-3-chloropropane	0.77	17,000	0.81	610	<b>5.00U</b>	<b>5.00U</b>	<b>5.00U</b>
1,2-dibromoethane (EDB)	0.034	790	1.5	27	<b>0.500U</b>	<b>0.500U</b>	<b>0.500U</b>
Dibromoethane	NE	NE	NE	NE	1.00U	1.00U	1.00U
1,2-Dichlorobenzene	1,400	>S	25,000	37,000	0.500U	0.500U	0.500U
1,3-Dichlorobenzene	NE	NE	NITI	NE	0.500U	0.500U	0.500U
1,4-Dichlorobenzene	2.1	21,000	25	1,500	0.500U	0.500U	0.500U
Dichlorodifluoromethane	NE	NE	41	NE	1.00U	1.00U	1.00U
1,1-Dichloroethane	13	68,000	55	10,000	0.400U	0.400U	0.400U
1,2-dichloroethane (EDC)	0.78	9,000	18	630	0.400U	0.400U	0.400U
1,1-Dichloroethene	1,400	2,400,000	1,300	44,000	0.400U	0.400U	0.400U
cis-1,2-Dichloroethene	260	>S	1,800	18,000	0.400U	<b>12.7</b>	0.400U
trans-1,2-Dichloroethene	2,600	>S	750	180,000	0.400U	0.400U	0.400U
1,2-Dichloropropane	NE	NE	52	NE	0.500U	0.500U	0.500U
1,3-Dichloropropane	NE	NE	NITI	NE	1.00U	1.00U	1.00U

**Table 10. Groundwater Samples Analytical Results - Volatile Organic Compounds (VOCs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Groundwater (a)				Temporary Wells Groundwater Samples		Trip Blank
	Ingestion and Inhalation from Tapwater (b)	Volatilization to Outdoor Air (c)	Volatilization to Indoor Air (d)	Groundwater in Excavation (e)	B2-GW	B5-GW	
	OCC.	OCC.	OCC.	C. & E. W.	West-central Area		
					06/02/23	06/02/23	6/5/2023
<b>VOCs (µg/L)</b>							
<b>USEPA Method 8260D</b>							
2,2-Dichloropropane	NE	NE	NE	NE	1.00U	1.00U	1.00U
1,1-Dichloropropene	NE	NE	NE	NE	1.00U	1.00U	1.00U
cis-1,3-Dichloropropene	NE	NE	40	NE	1.00U	1.00U	1.00U
trans-1,3-Dichloropropene	NE	NE	NE	NE	1.00U	1.00U	1.00U
Ethylbenzene	6.4	43,000	31	4,500	0.500U	0.500U	0.500U
Hexachlorobutadiene	NE	NE	3.3	NE	5.00U	5.00U	5.00U
2-Hexanone	NE	NE	72,000	NE	10.0U	10.0U	10.0U
iso-Propylbenzene (cumene)	2,000	>S	9,100	51,000	1.00U	1.00U	1.00U
4-Isopropyltoluene	NE	NE	NE	NE	1.00U	1.00U	1.00U
Methylene chloride	NE	NE	15,000	NE	10.0U	10.0U	10.0U
4-Methyl-2-pentanone (MiBK)	NE	NE	4,600,000	NE	10.0U	10.0U	10.0U
methyl t-butyl ether (MTBE)	68	1,500,000	3,200	63,000	1.00U	1.00U	1.00U
Naphthalene	0.72	16,000	50	500	4.00U	4.00U	4.00U
n-Propylbenzene	NE	NE	22,000	NE	0.500U	0.500U	0.500U
Styrene	5,700	>S	84,000	170,000	1.00U	1.00U	1.00U
1,1,1,2-Tetrachloroethane	NE	NE	36	NE	0.400U	0.400U	0.400U
1,1,2,2-Tetrachloroethane	NE	NE	30	NE	0.500U	0.500U	0.500U
Tetrachloroethene (PCE)	48	>S	130	34,000	0.400U	0.400U	0.400U
Toluene	6,300	>S	150,000	220,000	1.00U	1.00U	1.00U
1,2,3-Trichlorobenzene	NE	NE	NITI	NE	2.00U	2.00U	2.00U
1,2,4-Trichlorobenzene	NE	NE	380	NE	2.00U	2.00U	2.00U
1,1,1-Trichloroethane	37,000	>S	53,000	1,100,000	0.400U	0.400U	0.400U
1,1,2-Trichloroethane	1.3	21,000	44	1,000	0.500U	0.500U	0.500U
Trichloroethene (TCE)	3.3	20,000	13	3,000	0.400U	1.48	0.400U
Trichlorofluoromethane	5,200	>S	NITI	160,000	2.00U	2.00U	2.00U
1,2,3-Trichloropropane	NE	NE	200	NE	1.00U	1.00U	1.00U
1,2,4-Trimethylbenzene	250	>S	2,400	6,300	1.00U	1.00U	1.00U
1,3,5-Trimethylbenzene	280	>S	1,700	7,500	1.00U	1.00U	1.00U
Vinyl chloride	0.49	5,900	3.3	960	0.400U	0.400U	0.400U
m,p-Xylene	NE	NE	3,000	NE	1.00U	1.00U	1.00U
o-Xylene	NE	NE	4,300	NE	0.500U	0.500U	0.500U
Xylenes	830	>S	3,300	23,000	0.500U	0.500U	0.500U

See notes on next page.

**Table 10. Groundwater Samples Analytical Results - Volatile Organic Compounds (VOCs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

**Notes:**

Analytical data in bold font indicates that the value exceeds the laboratory's method reporting limit.

The laboratory method reporting limits that exceed one or more RBCs are indicated with bold blue font.

**Data Qualifiers:**

M-02 - Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.

U - The analyte was analyzed for, but was not detected above the analytical laboratory method reporting limit.

**Footnotes:**

(a) Risk-Based Concentrations are referenced from the July 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime groundwater contamination is found in an aquifer that is currently used or is reasonably likely to be used for drinking water.

(c) This pathway is applicable whenever the groundwater is contaminated with volatile compounds.

(d) This pathway is applicable whenever volatile compounds in groundwater are located beneath or within 10 feet of a commercial building, or beneath or within 50 feet of a residential building, or may be in such a location in the future.

(e) This pathway is applicable in cases where construction or excavation workers may come into contact with contaminated groundwater in a semi-enclosed space such as an excavation.

**Symbols/Acronyms:**

bgs - below ground surface

C. & E. W. - construction and excavation workers receptors

DEQ - Department of Environmental Quality

ft - feet

NE - No RBC levels are established for this chemical.

NITI - No inhalation toxicity information.

µg/L - micrograms per liter

OCC. - occupational receptors

RBC - risk-based concentration

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

USEPA - United States Environmental Protection Agency

**Table 11. Groundwater Samples Analytical Results - Chlorinated Phenolic Compounds**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Groundwater (a)				Temporary Wells Groundwater Samples	
	Ingestion and Inhalation from Tapwater (b)	Volatilization to Outdoor Air (c)	Volatilization to Indoor Air (d)	Groundwater in Excavation (e)	B2-GW	B5-GW
	OCC.	OCC.	OCC.	C. & E. W.	West-central Area	
					06/02/23	06/02/23
<b>Chlorinated Phenolic Compounds (µg/L)</b>						
<b>USEPA 8270E</b>						
Pentachlorophenol (PCP)	0.12	NV	NV	53	0.784U, R-04	NA
2,3,4,6-Tetrachlorophenol	NE	NE	NITI, NV	NE	0.392U, R-04	NA
2,3,5,6-Tetrachlorophenol	NE	NE	NE	NE	0.392U, R-04	NA
2,4,5-Trichlorophenol	NE	NE	NITI, NV	NE	0.392U, R-04	NA
2,4,6-Trichlorophenol	16	NV	NV	1,700	0.392U, R-04	NA

See notes on next page.

**Table 11. Groundwater Samples Analytical Results - Chlorinated Phenolic Compounds**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

**Notes:**

The laboratory method reporting limits that exceed one or more RBCs are indicated with bold blue font.

**Data Qualifiers:**

R-04 - Reporting levels elevated due to preparation and/or analytical dilution necessary for analysis.

U - The analyte was analyzed for, but was not detected above the analytical laboratory method reporting limit.

**Footnotes:**

(a) Risk-Based Concentrations are referenced from the July 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime groundwater contamination is found in an aquifer that is currently used or is reasonably likely to be used for drinking water.

(c) This pathway is applicable whenever the groundwater is contaminated with volatile compounds.

(d) This pathway is applicable whenever volatile compounds in groundwater are located beneath or within 10 feet of a commercial building, or beneath or within 50 feet of a residential building, or may be in such a location in the future.

(e) This pathway is applicable in cases where construction or excavation workers may come into contact with contaminated groundwater in a semi-enclosed space such as an excavation.

**Symbols/Acronyms:**

bgs - below ground surface

C. & E. W. - construction and excavation workers receptors

DEQ - Department of Environmental Quality

ft - feet

NA - Sample was not analyzed for this analyte

NE - No RBC levels are established for this chemical.

NITI - No inhalation toxicity information.

NV - not volatile

µg/L - micrograms per liter

OCC. - occupational receptors

RBC - risk-based concentration

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

USEPA - United States Environmental Protection Agency

**Table 12. Groundwater Samples Analytical Results - Polychlorinated Biphenyls (PCBs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Groundwater (a)				Temporary Wells Groundwater Samples	
	Ingestion and Inhalation from Tapwater (b)	Volatilization to Outdoor Air (c)	Volatilization to Indoor Air (d)	Groundwater in Excavation (e)	B2-GW	B5-GW
	OCC.	OCC.	OCC.	C. & E.W.	West-central Area	
					06/10/23	06/10/23
<b>Polychlorinated Biphenyls (PCBs) (µg/L)</b>						
<b>USEPA Method 8082A</b>						
Aroclor 1016	0.028 (f)	>S (f)	75	30 (f)	0.104U, C-07	NA
Aroclor 1221	0.028 (f)	>S (f)	2.3	30 (f)	0.104U, C-07	NA
Aroclor 1232	0.028 (f)	>S (f)	0.71	30 (f)	0.104U, C-07	NA
Aroclor 1242	0.028 (f)	>S (f)	5.8	30 (f)	0.104U, C-07	NA
Aroclor 1248	0.028 (f)	>S (f)	1.2	30 (f)	0.104U, C-07	NA
Aroclor 1254	0.028 (f)	>S (f)	7.2	30 (f)	0.104U, C-07	NA
Aroclor 1260	0.028 (f)	>S (f)	1.6	30 (f)	0.104U, C-07	NA

See notes on next page.

**Table 12. Groundwater Samples Analytical Results - Polychlorinated Biphenyls (PCBs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

**Notes:**

Analytical data in bold font indicates that the value exceeds the laboratory method reporting limit.

The laboratory method reporting limits that exceed one or more RBCs are indicated with bold blue font.

**Data Qualifiers:**

C-07 - Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.

U - The analyte was analyzed for, but was not detected above the analytical laboratory method reporting limit.

**Footnotes:**

(a) Risk-Based Concentrations are referenced from the July 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime groundwater contamination is found in an aquifer that is currently used or is reasonably likely to be used for drinking water.

(c) This pathway is applicable whenever the groundwater is contaminated with volatile compounds.

(d) This pathway is applicable whenever volatile compounds in groundwater are located beneath or within 10 feet of a commercial building, or beneath or within 50 feet of a residential building, or may be in such a location in the future.

(e) This pathway is applicable in cases where construction or excavation workers may come into contact with contaminated groundwater in a semi-enclosed space such as an excavation.

(f) RBCs are for total of PCBs Aroclors.

**Symbols/Acronyms:**

bgs - below ground surface

C. & E. W. - construction and excavation workers receptors

DEQ - Department of Environmental Quality

ft - feet

NA - Sample was not analyzed for this analyte

NE - No RBC levels are established for this chemical.

µg/L - micrograms per liter

OCC. - occupational receptors

RBC - risk-based concentration

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

USEPA - United States Environmental Protection Agency

**Table 13. Groundwater Samples Analytical Results - Chlorinated Dioxins and Dibenzofurans**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Groundwater (a)				TEQ (pg/L) (f)	Temporary Wells Groundwater Samples	
	Ingestion and Inhalation from Tapwater (b)	Volatilization to Outdoor Air (c)	Volatilization to Indoor Air (d)	Groundwater in Excavation (e)		B2-GW	B5-GW
	OCC.	OCC.	OCC.	C & .E.W.		West-central Area	
						06/10/23	06/10/23
<b>Chlorinated Dioxins and Dibenzofurans (pg/L)</b>							
<b>USEPA 1613B</b>							
DEQ RBCs for 2,3,7,8-TCDD Equivalents	0.42	110,000	160	450		<b>128</b>	<b>32.9</b>

See notes on next page.

**Table 13. Groundwater Samples Analytical Results - Chlorinated Dioxins and Dibenzofurans**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

**Notes:**

Analytical data in bold font indicates that the value exceeds the laboratory's estimated detection limit.

The laboratory estimated detection limits that exceed one or more RBCs are indicated with blue font.

**Data Qualifiers:**

**Footnotes:**

(a) Risk-Based Concentrations are referenced from the July 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime groundwater contamination is found in an aquifer that is currently used or is reasonably likely to be used for drinking water.

(c) This pathway is applicable whenever the groundwater is contaminated with volatile compounds.

(d) This pathway is applicable whenever volatile compounds in groundwater are located beneath or within 10 feet of a commercial building, or beneath or within 50 feet of a residential building, or may be in such a location in the future.

(e) This pathway is applicable in cases where construction or excavation workers may come into contact with contaminated groundwater in a semi-enclosed space such as an excavation.

(f) To compare soil analytical results of dioxins to DEQ's RBCs, the laboratory provided 2,3,7,8-TCDD toxicity equivalent concentration (TEQ). The TEQ was obtained by multiplying the individual congener results by a Toxicity Equivalency Factor (TEF) and summing them to derive a TEQ value for each sample. This method was developed by USEPA in 1987 and revised in 2007 (40 CFR Parts 9 and 372, Dioxin and Dioxin-Like Compounds; Toxic Equivalency Information; Community Right-To-Know Toxic Chemical Release Reporting). The TEF values used were published by World Health Organization (WHO) in The 2005 WHO Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006). The TEQ was calculated assuming all congeners were present at 1.0 times their quantitation limit. The non-detected compounds are not included in the Total TEQ calculation.

**Symbols/Acronyms:**

bgs - below ground surface

C. & E. W. - construction and excavation workers receptors

DEQ - Department of Environmental Quality

ft - feet

pg/L - picograms per liter

OCC. - occupational receptors

RBC - risk-based concentration

TEF - Toxicity Equivalent Factor

TEQ - Toxicity Equivalent Quotient

USEPA - United States Environmental Protection Agency

**Table 14. Groundwater Samples Analytical Results - Total Metals**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Groundwater (a)				USEPA MCL (f)(g) or as noted	Temporary Wells Groundwater Samples	
	Ingestion and Inhalation from Tapwater (b)	Volatilization to Outdoor Air (c)	Volatilization to Indoor Air (d)	Groundwater in Excavation (e)		B2-GW	B5-GW
	OCC.	OCC.	OCC.	C. & E. W.		West-central Area	
						06/02/23	06/02/23
<b>Total Metals (µg/L)</b>							
<b>USEPA Method 6020B (ICPMS)</b>							
Arsenic	0.31	NV	NV	6,300	10	<b>7.43</b>	NA
Barium	33,000	NV	NV	>S	2,000	<b>769</b>	NA
Cadmium	160	NV	NV	130,000	5	1.00U	NA
Chromium (III)	250,000	NV	NV	>S	100	<b>67</b>	NA
Lead	15	NV	NV	>S	15 (h)(i)	<b>8.49</b>	NA
Mercury	49	NV	NV	>S	2	0.400U	NA
Selenium	NE	NE	NV	NE	50	5.00U	NA
Silver	820	NV	NV	1,100,000	100	1.00U	NA
<b>Dissolved Metals (µg/L)</b>							
<b>USEPA Method 6020B (ICPMS)</b>							
Arsenic	0.31	NV	NV	6,300	10	<b>1.1</b>	NA
Barium	33,000	NV	NV	>S	2,000	<b>464</b>	NA
Cadmium	160	NV	NV	130,000	5	0.200U	NA
Chromium (III)	250,000	NV	NV	>S	100	<b>3.49</b>	NA
Lead	15	NV	NV	>S	15 (i)	<b>0.434</b>	NA
Mercury	49	NV	NV	>S	2	0.0800U	NA
Selenium	NE	NE	NV	NE	50	1.00U	NA
Silver	820	NV	NV	1,100,000	100	0.200U	NA

See notes on next page.

**Table 14. Groundwater Samples Analytical Results - Total Metals**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

**Notes:**

Analytical data in bold font indicates that the value exceeds the laboratory's method reporting limit.

Analytical data highlighted in yellow indicates the value exceeded a generic RBC.

**Data Qualifiers:**

U - The analyte was analyzed for, but was not detected above the analytical laboratory method reporting limit.

**Footnotes:**

(a) Risk-Based Concentrations are referenced from the July 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime groundwater contamination is found in an aquifer that is currently used or is reasonably likely to be used for drinking water.

(c) This pathway is applicable whenever the groundwater is contaminated with volatile compounds.

(d) This pathway is applicable whenever volatile compounds in groundwater are located beneath or within 10 feet of a commercial building, or beneath or within 50 feet of a residential building, or may be in such a location in the future.

(e) This pathway is applicable in cases where construction or excavation workers may come into contact with contaminated groundwater in a semi-enclosed space such as an excavation.

(f) USEPA MCLs are referenced from the National Primary Drinking Water Regulations for arsenic, barium, cadmium, chromium (total), lead, mercury, and selenium and the National Secondary Drinking Water Regulations for silver.

(g) MCL is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards. (MCLG is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.)

(h) Lead is regulated by a TT that requires systems to control the corrosiveness of their water. If more than 10 percent of tap water samples exceed the action level, water systems must take additional steps. For lead, the action level is 15 µg/L.

(i) TT is a required process intended to reduce the level of a contaminant in drinking water.

**Symbols/Acronyms:**

bgs - below ground surface

C. & E. W. - construction and excavation workers receptors

DEQ - Department of Environmental Quality

ft - feet

MCL - maximum contaminant level

NA - Sample was not analyzed for this analyte

NE - No RBC levels are established for this chemical.

NV - The chemical is considered "nonvolatile" for the purposes of the exposure calculations.

µg/L - micrograms per liter

OCC. - occupational receptors

RBC - risk-based concentration

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

USEPA - United States Environmental Protection Agency

**Table 15. Soil Gas Samples Analytical Results - Helium and Methane**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ Action Level	Soil Gas Samples													
		SG1	SG2	SG3	SG4	DUP	SG5	SG6	SG7	SG8	SG9	SG10	SG11	SG12	
		Southern portion of Proposed Building #1	Northern portion of Proposed Building #1	Northern portion of Proposed Building #2	Southern portion of Proposed Building #2	Southern portion of Proposed Building #2	Northern portion of Proposed Building #3	Southern portion of Proposed Building #3	Western portion of Proposed Building #4	Eastern portion of Proposed Building #4	West-Central portion of Proposed Building #5	Eastern portion of Proposed Building #5	Western portion of Proposed Building #6	Eastern portion of Proposed Building #6	
		06/08/23	06/08/23	06/09/23	06/09/23	06/09/23	06/09/23	06/09/23	06/09/23	06/08/23	06/08/23	06/08/23	06/08/23	6/7/2023	
<b>Helium in soil gas samples (µg/m<sup>3</sup>)</b>															
<b>USEPA Method Method D1946</b>															
Helium	Not Applicable	41,000U	<b>480,000</b>	41,000U	41,000U	41,000U	41,000U	41,000U	41,000U	41,000U	<b>190,000</b>	<b>49,000</b>	<b>100,000</b>	<b>3,200,000</b>	
<b>Helium in sample train containment (percent)</b>															
Helium	Not Applicable	51	43	49	45	43	40	47	50	50	44	40	45	46	
<b>Helium leakage (percent)</b>															
Helium	5 percent (a)	NA	0.67	NA	NA	NA	NA	NA	NA	NA	0.27	0.075	0.14	4.26	
<b>Methane (percent by volume)</b>															
<b>USEPA Method D1946 - Fixed Gases in Air</b>															
Methane	1.25 percent (b)	0.50U	0.50U	0.50U	0.50U	0.50U	0.50U	0.50U							

See notes on next page.

**Table 15. Soil Gas Samples Analytical Results - Helium and Methane**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

**Notes:**

Analytical data in bold font indicates that the value exceeds the laboratory method reporting limit.

**Data Qualifiers:**

U - The analyte was analyzed for, but was not detected above the analytical laboratory method reporting limit.

**Footnotes:**

(a) Per ASTM F2391-05 Standard Test Method for Measuring Package and Seal Integrity Using Helium as the Tracer Gas.

(b) Per DEQ's OAR 340-122-0040, Hazardous Substance Remedial Action Rules.

**Symbols/Acronyms:**

DEQ - Department of Environmental Quality

NA - Sample was not analyzed for this analyte

OCC. - occupational receptors

RBC - risk-based concentration

USEPA - United States Environmental Protection Agency

$\mu\text{g}/\text{m}^3$  - micrograms per cubic meter

**Table 16. Air Quality Samples Analytical Results - Volatile Organic Compounds (VOCs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Soil Vapor (a)	Soil Gas Samples						
	Volatilization to Indoor Air (b)	SG1	SG2	SG3	SG4	DUP	SG5	SG6
		Southern portion of Proposed Building #1	Northern portion of Proposed Building #1	Northern portion of Proposed Building #2	Southern portion of Proposed Building #2	Southern portion of Proposed Building #2	Northern portion of Proposed Building #3	Southern portion of Proposed Building #3
OCC.	06/08/23	06/08/23	06/09/23	06/09/23	06/09/23	06/09/23	06/09/23	
<b>Volatile Organic Compounds (µg/m<sup>3</sup>)</b>								
<b>USEPA Method TO-15</b>								
Acetone	NITI	NA	<b>540</b>	NA	NA	NA	<b>22</b>	<b>5,300</b>
Benzene	52	NA	<b>11</b>	NA	NA	NA	1.6U	<b>20U</b>
Bromodichloromethane	11	NA	<b>8.4U</b>	NA	NA	NA	<b>3.4U</b>	<b>42U</b>
Bromoform	370	NA	<b>13U</b>	NA	NA	NA	5.2U	<b>65U</b>
Bromomethane	730	NA	4.9U	NA	NA	NA	1.9U	<b>24U</b>
2-Butanone (MEK)	730,000	NA	<b>28</b>	NA	NA	NA	4.4U	<b>110</b>
n-Butylbenzene	NITI	NA	21U	NA	NA	NA	8.2U	100U
sec-Butylbenzene	NITI	NA	21U	NA	NA	NA	8.2U	100U
tert-Butylbenzene	NITI	NA	21U	NA	NA	NA	8.2U	100U
Carbon disulfide	100,000	NA	16U	NA	NA	NA	6.2U	78U
Carbon tetrachloride	68	NA	7.9U	NA	NA	NA	3.1U	39U
Chlorobenzene	7,300	NA	5.8U	NA	NA	NA	2.3U	29U
Chloroethane (ethyl chloride)	580,000	NA	3.3U	NA	NA	NA	1.3U	16U
Chloroform	18	NA	<b>6.1U</b>	NA	NA	NA	<b>2.4U</b>	<b>31U</b>
Chloromethane	13,000	NA	2.6U	NA	NA	NA	<b>1.0</b>	13U
Dibromochloromethane	NITI	NA	<b>11U</b>	NA	NA	NA	<b>4.3U</b>	<b>53U</b>
Dichlorotetrafluoroethane	NE	NA	35U	NA	NA	NA	14U	170U
1,1-Difluoroethane	5,800,000	NA	34U	NA	NA	NA	14U	170U
1,2-Dibromo-3-chloropropane	0.068	NA	12U	NA	NA	NA	4.8U	60U
1,2-dibromoethane (EDB)	0.68	NA	<b>9.6U</b>	NA	NA	NA	<b>3.8U</b>	<b>48U</b>
1,2-Dichlorobenzene	29,000	NA	7.5U	NA	NA	NA	3.0U	38U
1,3-Dichlorobenzene	NITI	NA	7.5U	NA	NA	NA	3.0U	38U
1,4-Dichlorobenzene	37	NA	7.5U	NA	NA	NA	<b>3.0U</b>	<b>38U</b>
Dichlorodifluoromethane	15,000	NA	6.2U	NA	NA	NA	<b>2.7</b>	31U
1,1-Dichloroethane	260	NA	5.1U	NA	NA	NA	2.0U	<b>25U</b>
1,2-dichloroethane (EDC)	16	NA	<b>5.1U</b>	NA	NA	NA	<b>2.0U</b>	<b>25U</b>
1,1-Dichloroethene	29,000	NA	5.0U	NA	NA	NA	2.0U	25U
cis-1,2-Dichloroethene	5,800	NA	5.0U	NA	NA	NA	2.0U	25U
trans-1,2-Dichloroethene	5,800	NA	5.0U	NA	NA	NA	2.0U	25U
1,2-Dichloropropane	110	NA	<b>5.8U</b>	NA	NA	NA	2.3U	<b>29U</b>
cis-1,3-Dichloropropene	100	NA	5.7U	NA	NA	NA	2.3U	28U
trans-1,3-Dichloropropene	NE	NA	11U	NA	NA	NA	4.5U	57U
Ethylbenzene	160	NA	<b>7.5</b>	NA	NA	NA	2.2U	<b>27U</b>
Hexachlorobutadiene	19	NA	<b>40U</b>	NA	NA	NA	<b>16U</b>	<b>200U</b>

**Table 16. Air Quality Samples Analytical Results - Volatile Organic Compounds (VOCs)  
Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for soil vapor (a)  Volatilization to Indoor Air (b)  OCC.	Soil Gas Samples						
		SG1	SG2	SG3	SG4	DUP	SG5	SG6
		Southern portion of Proposed Building #1	Northern portion of Proposed Building #1	Northern portion of Proposed Building #2	Southern portion of Proposed Building #2	Southern portion of Proposed Building #2	Northern portion of Proposed Building #3	Southern portion of Proposed Building #3
<b>Volatile Organic Compounds (<math>\mu\text{g}/\text{m}^3</math>) USEPA Method TO-15</b>		06/08/23	06/08/23	06/09/23	06/09/23	06/09/23	06/09/23	06/09/23
2-Hexanone	4,400	NA	15U	NA	NA	NA	6.1U	77U
Isopropanol	29,000	NA	31U	NA	NA	NA	12U	150U
Methylene chloride	41,000	NA	11U	NA	NA	NA	4.3U	54U
4-Methyl-2-pentanone (MIBK)	440,000	NA	15U	NA	NA	NA	6.1U	77U
methyl t-butyl ether (MTBE)	1,600	NA	18U	NA	NA	NA	7.2U	90U
Styrene	150,000	NA	16U	NA	NA	NA	6.4U	80U
1,1,1,2-Tetrachloroethane	7.1	NA	17U	NA	NA	NA	6.9U	86U
Tetrachloroethene (PCE)	1,600	NA	8.5U	NA	NA	NA	3.4U	42U
Toluene	730,000	NA	21	NA	NA	NA	1.9U	34
1,2,4-Trichlorobenzene	290	NA	37U	NA	NA	NA	15U	190U
1,1,1-Trichloroethane	730,000	NA	6.8U	NA	NA	NA	2.7U	34U
1,1,2-Trichloroethane	26	NA	6.8U	NA	NA	NA	2.7U	34U
Trichloroethene (TCE)	100	NA	6.7U	NA	NA	NA	2.7U	34U
Trichlorofluoromethane (Freon 11)	NITI	NA	14U	NA	NA	NA	5.6U	70U
1,2,4-Trimethylbenzene	8,800	NA	18U	NA	NA	NA	7.4U	92U
1,3,5-Trimethylbenzene	8,800	NA	6.1U	NA	NA	NA	2.5U	31U
Vinyl Acetate	29,000	NA	18U	NA	NA	NA	7.0U	88U
Vinyl chloride	93	NA	3.2U	NA	NA	NA	1.3U	16U
o-Xylene	15,000	NA	12	NA	NA	NA	2.2U	27U
m,p-Xylene	15,000	NA	25	NA	NA	NA	8.7U	110U

See notes on next page.

**Table 16. Air Quality Samples Analytical Results - Volatile Organic Compounds (VOCs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for Soil Vapor (a)	Soil Gas Samples					
		SG7	SG8	SG9	SG10	SG11	SG12
	Volatilization to Indoor Air (b)	Western portion of Proposed Building #4	Eastern portion of Proposed Building #4	West-Central portion of Proposed Building #5	Eastern portion of Proposed Building #5	Western portion of Proposed Building #6	Eastern portion of Proposed Building #6
OCC.	06/09/23	06/08/23	06/08/23	06/08/23	06/08/23	06/08/23	6/7/2023
<b>Volatile Organic Compounds (µg/m<sup>3</sup>)</b>							
<b>USEPA Method TO-15</b>							
Acetone	NITI	5,200	4,200	NA	NA	2,700	NA
Benzene	52	20U	20U	NA	NA	20U	NA
Bromodichloromethane	11	42U	42U	NA	NA	42U	NA
Bromoform	370	65U	65U	NA	NA	65U	NA
Bromomethane	730	24U	24U	NA	NA	24U	NA
2-Butanone (MEK)	730,000	150	77	NA	NA	55U	NA
n-Butylbenzene	NITI	100U	100U	NA	NA	100U	NA
sec-Butylbenzene	NITI	100U	100U	NA	NA	100U	NA
tert-Butylbenzene	NITI	100U	100U	NA	NA	100U	NA
Carbon disulfide	100,000	78U	78U	NA	NA	78U	NA
Carbon tetrachloride	68	39U	39U	NA	NA	39U	NA
Chlorobenzene	7,300	29U	29U	NA	NA	29U	NA
Chloroethane (ethyl chloride)	580,000	16U	16U	NA	NA	16U	NA
Chloroform	18	31U	31U	NA	NA	31U	NA
Chloromethane	13,000	13U	13U	NA	NA	13U*+	NA
Dibromochloromethane	NITI	53U	53U	NA	NA	53U	NA
Dichlorotetrafluoroethane	NE	170U	170U	NA	NA	170U	NA
1,1-Difluoroethane	5,800,000	170U	170U	NA	NA	170U	NA
1,2-Dibromo-3-chloropropane	0.068	60U	60U	NA	NA	60U	NA
1,2-dibromoethane (EDB)	0.68	48U	48U	NA	NA	48U	NA
1,2-Dichlorobenzene	29,000	38U	38U	NA	NA	38U	NA
1,3-Dichlorobenzene	NITI	38U	38U	NA	NA	38U	NA
1,4-Dichlorobenzene	37	38U	38U	NA	NA	38U	NA
Dichlorodifluoromethane	15,000	31U	31U	NA	NA	31U	NA
1,1-Dichloroethane	260	25U	25U	NA	NA	25U	NA
1,2-dichloroethane (EDC)	16	25U	25U	NA	NA	25U	NA
1,1-Dichloroethene	29,000	25U	25U	NA	NA	25U	NA
cis-1,2-Dichloroethene	5,800	25U	25U	NA	NA	25U	NA
trans-1,2-Dichloroethene	5,800	25U	25U	NA	NA	25U	NA
1,2-Dichloropropane	110	29U	29U	NA	NA	29U	NA
cis-1,3-Dichloropropene	100	28U	28U	NA	NA	28U	NA
trans-1,3-Dichloropropene	NE	57U	57U	NA	NA	57U	NA
Ethylbenzene	160	27U	27U	NA	NA	27U	NA
Hexachlorobutadiene	19	200U	200U	NA	NA	200U	NA

**Table 16. Air Quality Samples Analytical Results - Volatile Organic Compounds (VOCs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

Parameter	DEQ RBCs for soil vapor (a)	Soil Gas Samples					
		SG7	SG8	SG9	SG10	SG11	SG12
	Volatilization to Indoor Air (b)	Western portion of Proposed Building #4	Eastern portion of Proposed Building #4	West-Central portion of Proposed Building #5	Eastern portion of Proposed Building #5	Western portion of Proposed Building #6	Eastern portion of Proposed Building #6
OCC.		06/09/23	06/08/23	06/08/23	06/08/23	06/08/23	6/7/2023
<b>Volatile Organic Compounds (µg/m<sup>3</sup>)</b>							
<b>USEPA Method TO-15</b>							
2-Hexanone	4,400	77U	77U	NA	NA	77U	NA
Isopropanol	29,000	150U	150U	NA	NA	150U	NA
Methylene chloride	41,000	54U	54U	NA	NA	54U	NA
4-Methyl-2-pentanone (MiBK)	440,000	77U	77U	NA	NA	77U	NA
methyl t-butyl ether (MTBE)	1,600	90U	90U	NA	NA	90U	NA
Styrene	150,000	80U	80U	NA	NA	80U	NA
1,1,1,2-Tetrachloroethane	7.1	86U	86U	NA	NA	86U	NA
Tetrachloroethene (PCE)	1,600	42U	42U	NA	NA	42U	NA
Toluene	730,000	51	44	NA	NA	34	NA
1,2,4-Trichlorobenzene	290	190U	190U	NA	NA	190U	NA
1,1,1-Trichloroethane	730,000	34U	34U	NA	NA	34U	NA
1,1,2-Trichloroethane	26	34U	34U	NA	NA	34U	NA
Trichloroethene (TCE)	100	34U	34U	NA	NA	34U	NA
Trichlorofluoromethane (Freon 11)	NITI	70U	70U	NA	NA	70U	NA
1,2,4-Trimethylbenzene	8,800	92U	92U	NA	NA	92U	NA
1,3,5-Trimethylbenzene	8,800	31U	31U	NA	NA	31U	NA
Vinyl Acetate	29,000	88U	88U	NA	NA	88U	NA
Vinyl chloride	93	16U	16U	NA	NA	16U	NA
o-Xylene	15,000	27U	27U	NA	NA	27U	NA
m,p-Xylene	15,000	110U	110U	NA	NA	110U	NA

See notes on next page.

**Table 16. Soil Gas Samples Analytical Results - Volatile Organic Compounds (VOCs)**  
**Phase II Environmental Site Assessment - 7696 11th St. (361W19A TL 2203) and Agate Rd. (361W19A TL 2204), White City, Oregon**

**Notes:**

Analytical data in bold font indicates that the value exceeds the laboratory method reporting limit.

**Data Qualifiers:**

U - The analyte was analyzed for, but was not detected above the analytical laboratory method reporting limit.

**Footnotes:**

(a) Risk-Based Concentrations are referenced from the July 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable whenever volatile compounds are located beneath or within 10 feet of a commercial building, or beneath or within 50 feet of a residential building, or may be in such a location in the future.

**Symbols/Acronyms:**

DEQ - Department of Environmental Quality

NA - Sample was not analyzed for this analyte.

NE - No RBC levels are established for this chemical.

NITI - No inhalation toxicity information.

OCC. - occupational receptors

RBC - risk-based concentration

USEPA - United States Environmental Protection Agency

$\mu\text{g}/\text{m}^3$  - micrograms per cubic meter

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## **APPENDIX 1**

Boring and Test Pit Logs



# LOG OF BORING: B1

(Page 1 of 1)

LuxeLocker  
7696 11th Street  
White City, Oregon

Date Started : 6/1/23  
Date Completed : 6/1/23  
Boring Diameter : 2.25-inch  
Total Depth : 20.0 ft bgs  
Drilling Method : Direct-Push Geoprobe

Drilled By : BB&A  
Sampling Method : Grab  
Reference Elev. : Ground Surface  
Logged By : Toby Shallcross  
Checked By : Jonathan Williams

Depth in Feet	Water Level	Sample I.D.	PID (ppm)	Recovery (%)	USCS	GRAPHIC	Water Level Information	Soil Boring Location:
							Dry	See Figure 2
DESCRIPTION								
0					GM		0.0-0.5 ft bgs - Silty Sandy GRAVEL: Brown; 50-60% fine to coarse angular gravel; 20-30% non-plastic fines; 20-30% fine to coarse sand; dry.	
1		B1-0-3	0.0	30	GM		0.5-7.0 ft bgs - FILL: Dark brown to black; 60-70% wood and organics; 10-20% non-plastic to low-plastic fines; 10-20% fine to coarse sand; some gravel; dry to moist.	
2								
3				25	ML		7.0-20.0 ft bgs - Sandy Gravelly SILT: Gray to light brown; 50-60% non-plastic to low-plastic fines; 20-30% fine to coarse sand; 20-30% fine to coarse angular gravel; dry to moist.	
4								
5				100	ML			
6			0.0					
7				100	ML			
8			0.0					
9				100	ML			
10								
11				100	ML			
12								
13				100	ML			
14								
15				100	ML			
16								
17				100	ML			
18								
19				100	ML			
20								
Boring Terminated at 20.0 ft bgs.								

ft bgs = feet below ground surface  
ppm = parts per million  
DTB = depth to bottom  
DTW = depth to water  
PID = photoionization detector

Notes: Temporary well: 0.75-inch PVC, screened at 10.0-20.0 ft bgs. Well was dry.



# LOG OF BORING: B2

(Page 1 of 1)

LuxeLocker  
7696 11th Street  
White City, Oregon

Date Started : 6/1/23  
Date Completed : 6/1/23  
Boring Diameter : 2.25-inch  
Total Depth : 20.0 ft bgs  
Drilling Method : Direct-Push Geoprobe

Drilled By : BB&A  
Sampling Method : Grab  
Reference Elev. : Ground Surface  
Logged By : Toby Shallcross  
Checked By : Jonathan Williams

Water Level Information:  
▼ 13.5 ft bgs

Soil Boring Location:  
See Figure 2

Depth in Feet	Water Level	Sample I.D.	PID (ppm)	Recovery (%)	USCS	GRAPHIC	DESCRIPTION
0							
1		B2-0-3	0.0	30	GM		0.0-6.0 ft bgs - Silty Sandy GRAVEL: Brown to gray; 50-60% fine to coarse angular gravel; 20-30% non-plastic fines; 20-30% fine to coarse sand; dry.
2							
3				25	ML		6.0-7.0 ft bgs - Sandy Gravelly SILT: Brown; 50-60% low-plastic fines; 20-30% fine to coarse sand; 20-30% fine to coarse angular gravel; moist.
4							
5				100	ML		7.0-11.0 ft bgs - FILL: Dark brown to black; 60-70% wood and organics; 10-20% non-plastic to low-plastic fines; 10-20% fine to coarse sand; some gravel; moist.
6							
7			0.0	100	ML		11.0-17.0 ft bgs - Sandy Gravelly SILT: Gray to brown; 50-60% low-plastic fines; 20-30% fine to coarse sand; 20-30% fine to coarse angular gravel; moist.
8							
9				100	SM		17.0-20.0 ft bgs - Silty SAND: Light brown to gray; 60-70% fine to medium sand; 30-40% non-plastic to low plastic fines; some gravel; moist to wet.
10							
11			0.0				19.0 ft bgs - Moisture increase to wet.
12							
13	▼						
14		B2-GW					
15							
16							
17							
18							
19							
20							

Boring Terminated at 20.0 ft bgs.

ft bgs = feet below ground surface  
ppm = parts per million  
DTB = depth to bottom  
DTW = depth to water  
PID = photoionization detector

Notes: Temporary well: 0.75-inch PVC, screened at 8.0-18.0 ft bgs. Approximately 2.0 gallons of water purged prior to sampling. Water was slightly turbid at time of sampling after purging.



# LOG OF BORING: B3

(Page 1 of 1)

LuxeLocker  
7696 11th Street  
White City, Oregon

Date Started : 6/1/23  
Date Completed : 6/1/23  
Boring Diameter : 2.25-inch  
Total Depth : 20.0 ft bgs  
Drilling Method : Direct-Push Geoprobe

Drilled By : BB&A  
Sampling Method : Grab  
Reference Elev. : Ground Surface  
Logged By : Toby Shallcross  
Checked By : Jonathan Williams

Depth in Feet	Water Level	Sample I.D.	PID (ppm)	Recovery (%)	USCS	GRAPHIC	Water Level Information	Soil Boring Location:
							Dry	See Figure 2
DESCRIPTION								
0		B3-0-3	0.0	20	GM		0.0-3.0 ft bgs - Silty Sandy GRAVEL: Brown to grey; 50-60% fine to coarse angular gravel; 20-30% non-plastic fines; 20-30% fine to coarse sand; dry.	
1								
2				30				
3								
4				100	ML		11.0-15.0 ft bgs - Silty Sandy GRAVEL: Brown to grey; 60-70% fine to coarse angular gravel; 10-20% non-plastic to low-plastic fines; 10-20% fine to coarse sand; dry to moist.	
5								
6				100	ML		15.0-18.0 ft bgs - Sandy Gravelly SILT: Gray to brown; 50-60% low-plastic fines; 20-30% fine to coarse sand; 20-30% fine to coarse angular gravel; moist.	
7								
8				100	CL		18.0-20.0 ft bgs - Sandy Gravelly CLAY: Gray to brown; 60-70% medium-plastic fines; 10-20% fine to coarse sand; 10-20% fine to coarse angular gravel; moist.	
9								
10		B3-9.5-10	0.0					
11								
12			0.0					
13								
14								
15								
16								
17								
18			0.0					
19								
20							Boring Terminated at 20.0 ft bgs.	

ft bgs = feet below ground surface  
ppm = parts per million  
DTB = depth to bottom  
DTW = depth to water  
PID = photoionization detector

Notes: Temporary well: 0.75-inch PVC, screened at 8.0-18.0 ft bgs. Well was dry.



# LOG OF BORING: B4

(Page 1 of 1)

LuxeLocker  
7696 11th Street  
White City, Oregon

Date Started : 6/1/23  
Date Completed : 6/1/23  
Boring Diameter : 2.25-inch  
Total Depth : 20.0 ft bgs  
Drilling Method : Direct-Push Geoprobe

Drilled By : BB&A  
Sampling Method : Grab  
Reference Elev. : Ground Surface  
Logged By : Toby Shallcross  
Checked By : Jonathan Williams

Depth in Feet	Water Level	Sample I.D.	PID (ppm)	Recovery (%)	USCS	GRAPHIC	Water Level Information	Soil Boring Location:
							Dry	See Figure 2
DESCRIPTION								
0								
1		B4-0-3	0.0	60	GM		0.0-3.0 ft bgs - Silty Sandy GRAVEL: Brown to gray; 50-60% fine to coarse angular gravel; 20-30% non-plastic fines; 20-30% fine to coarse sand; dry.	
2								
3							3.0-17.5 ft bgs - FILL: Dark brown to black; 60-70% wood and organics; 10-20% non-plastic to low-plastic fines; 10-20% fine to coarse sand; some gravel; moist.	
4								
5								
6								
7				70				
8			0.0					
9								
10								
11								
12								
13			0.0	90				
14								
15								
16								
17								
18			0.0	100	CL		17.5-20.0 ft bgs - Sandy Gravelly CLAY: Gray to brown; 50-60% medium-plastic fines; 20-30% fine to coarse sand; 20-30% fine to coarse subangular to subrounded gravel; moist to wet.	
19								
20							Boring Terminated at 20.0 ft bgs.	

ft bgs = feet below ground surface  
ppm = parts per million  
DTB = depth to bottom  
DTW = depth to water  
PID = photoionization detector

Notes: Temporary well: 0.75-inch PVC, screened at 10.0-20.0 ft bgs. Well was dry.

---

## **APPENDIX 2**

Subject Property Photographs



1. B4 drilling location.



4. B3 core, 0-15 feet.



2. B4 core, 0-10 feet.



5. B3 core, 10-20 feet.



3. B4 core, 10-20 feet.



6. B2 core, 0-5 feet.



7. B2 core, 5-10 feet.



10. B1 core, 5-20 feet.



8. B2 core, 10-15 feet.



11. B1 core, 5-20 feet.



9. B2 core, 15-20 feet.



12. SG12.



13. SG2.



16. SG11.



14. SG2.



17. SG9.



15. SG2.



18. SG10.



19. SG8.



20. SG1.



21. Canisters, post soil gas sampling.

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## **APPENDIX 3**

Complete Soil and Groundwater Laboratory Results



ANALYTICAL REPORT

Apex Laboratories, LLC

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

Thursday, July 6, 2023

Jonathan Williams  
Alpine Environmental Consultants  
12210 Antioch Road  
White City, OR 97503

RE: A3F0812 - 11th Street - AEC2023-14

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 A3F0812, which was received by the laboratory on 6/6/2023 at 10:34:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [dthomas@apex-labs.com](mailto:dthomas@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

(See Cooler Receipt Form for details)

Default Cooler      4.4      degC

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

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

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Apex Laboratories

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---

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL REPORT FOR SAMPLES**

**SAMPLE INFORMATION**

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B1-0-3	A3F0812-01	Soil	06/01/23 12:00	06/06/23 10:34
B2-0-3	A3F0812-02	Soil	06/01/23 10:55	06/06/23 10:34
B3-0-3	A3F0812-03	Soil	06/01/23 10:15	06/06/23 10:34
B4-0-3	A3F0812-04	Soil	06/01/23 09:35	06/06/23 10:34
B2-GW	A3F0812-05	Water	06/02/23 10:00	06/06/23 10:34
B5-GW	A3F0812-06	Water	06/02/23 11:30	06/06/23 10:34
B3-9.5-10	A3F0812-07	Soil	06/01/23 10:20	06/06/23 10:34
TB	A3F0812-08	Water	06/05/23 14:00	06/06/23 10:34

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503-718-2323  
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<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Diesel and/or Oil Hydrocarbons by NWTPH-Dx with Silica Gel Column Cleanup**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B1-0-3 (A3F0812-01)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0578</b>		
Diesel	ND	---	27.5	mg/kg dry	1	06/16/23 18:29	NWTPH-Dx/SGC	
<b>Oil</b>	<b>105</b>	---	54.9	mg/kg dry	1	06/16/23 18:29	NWTPH-Dx/SGC	<b>F-03</b>
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 83 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>06/16/23 18:29</i>	<i>NWTPH-Dx/SGC</i>	
<b>B2-0-3 (A3F0812-02)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0578</b>		
Diesel	ND	---	22.3	mg/kg dry	1	06/16/23 19:14	NWTPH-Dx/SGC	
<b>Oil</b>	<b>90.1</b>	---	44.5	mg/kg dry	1	06/16/23 19:14	NWTPH-Dx/SGC	<b>F-03</b>
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 81 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>06/16/23 19:14</i>	<i>NWTPH-Dx/SGC</i>	
<b>B3-0-3 (A3F0812-03)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0578</b>		
Diesel	ND	---	22.2	mg/kg dry	1	06/16/23 19:36	NWTPH-Dx/SGC	
<b>Oil</b>	<b>46.7</b>	---	44.5	mg/kg dry	1	06/16/23 19:36	NWTPH-Dx/SGC	<b>F-03</b>
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 82 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>06/16/23 19:36</i>	<i>NWTPH-Dx/SGC</i>	
<b>B4-0-3 (A3F0812-04)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0578</b>		
Diesel	ND	---	21.1	mg/kg dry	1	06/16/23 20:20	NWTPH-Dx/SGC	
<b>Oil</b>	<b>282</b>	---	42.3	mg/kg dry	1	06/16/23 20:20	NWTPH-Dx/SGC	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 84 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>06/16/23 20:20</i>	<i>NWTPH-Dx/SGC</i>	
<b>B2-GW (A3F0812-05)</b>				<b>Matrix: Water</b>		<b>Batch: 23F0557</b>		<b>PRES</b>
Diesel	ND	---	84.2	ug/L	1	06/15/23 20:19	NWTPH-Dx/SGC	
Oil	ND	---	168	ug/L	1	06/15/23 20:19	NWTPH-Dx/SGC	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 81 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>06/15/23 20:19</i>	<i>NWTPH-Dx/SGC</i>	
<b>B5-GW (A3F0812-06)</b>				<b>Matrix: Water</b>		<b>Batch: 23F0557</b>		
Diesel	ND	---	100	ug/L	1	06/15/23 20:40	NWTPH-Dx/SGC	
Oil	ND	---	200	ug/L	1	06/15/23 20:40	NWTPH-Dx/SGC	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 73 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>06/15/23 20:40</i>	<i>NWTPH-Dx/SGC</i>	
<b>B3-9.5-10 (A3F0812-07)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0578</b>		
Diesel	ND	---	24.6	mg/kg dry	1	06/16/23 19:57	NWTPH-Dx/SGC	
<b>Oil</b>	<b>364</b>	---	49.1	mg/kg dry	1	06/16/23 19:57	NWTPH-Dx/SGC	<b>F-03</b>
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 85 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>06/16/23 19:57</i>	<i>NWTPH-Dx/SGC</i>	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**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
			<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>			
Gasoline Range Organics	ND	---	12.0	mg/kg dry	50	06/07/23 17:34	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 107 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>06/07/23 17:34</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>103 %</i>	<i>50-150 %</i>	<i>1</i>	<i>06/07/23 17:34</i>	<i>NWTPH-Gx (MS)</i>	
			<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>			
Gasoline Range Organics	ND	---	8.65	mg/kg dry	50	06/07/23 18:25	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 105 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>06/07/23 18:25</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>103 %</i>	<i>50-150 %</i>	<i>1</i>	<i>06/07/23 18:25</i>	<i>NWTPH-Gx (MS)</i>	
			<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>			
Gasoline Range Organics	ND	---	6.41	mg/kg dry	50	06/07/23 18:50	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 106 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>06/07/23 18:50</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>103 %</i>	<i>50-150 %</i>	<i>1</i>	<i>06/07/23 18:50</i>	<i>NWTPH-Gx (MS)</i>	
			<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>			
Gasoline Range Organics	ND	---	4.77	mg/kg dry	50	06/07/23 19:16	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 104 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>06/07/23 19:16</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>103 %</i>	<i>50-150 %</i>	<i>1</i>	<i>06/07/23 19:16</i>	<i>NWTPH-Gx (MS)</i>	
			<b>Matrix: Water</b>		<b>Batch: 23F0159</b>			
Gasoline Range Organics	ND	---	100	ug/L	1	06/06/23 16:04	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 99 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>06/06/23 16:04</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>111 %</i>	<i>50-150 %</i>	<i>1</i>	<i>06/06/23 16:04</i>	<i>NWTPH-Gx (MS)</i>	
			<b>Matrix: Water</b>		<b>Batch: 23F0159</b>			
Gasoline Range Organics	ND	---	100	ug/L	1	06/06/23 16:26	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 95 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>06/06/23 16:26</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>109 %</i>	<i>50-150 %</i>	<i>1</i>	<i>06/06/23 16:26</i>	<i>NWTPH-Gx (MS)</i>	
			<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>			
Gasoline Range Organics	ND	---	8.39	mg/kg dry	50	06/07/23 19:41	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 105 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>06/07/23 19:41</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>103 %</i>	<i>50-150 %</i>	<i>1</i>	<i>06/07/23 19:41</i>	<i>NWTPH-Gx (MS)</i>	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
---	---	---

**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B1-0-3 (A3F0812-01)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>		
Acetone	ND	---	2.40	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Acrylonitrile	ND	---	0.240	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Benzene	ND	---	0.0240	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Bromobenzene	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Bromochloromethane	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Bromodichloromethane	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Bromoform	ND	---	0.240	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Bromomethane	ND	---	1.20	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
2-Butanone (MEK)	ND	---	1.20	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
n-Butylbenzene	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
sec-Butylbenzene	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
tert-Butylbenzene	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Carbon disulfide	ND	---	1.20	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Carbon tetrachloride	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Chlorobenzene	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Chloroethane	ND	---	1.20	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Chloroform	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Chloromethane	ND	---	0.601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
2-Chlorotoluene	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
4-Chlorotoluene	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Dibromochloromethane	ND	---	0.240	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	0.601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Dibromomethane	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,2-Dichlorobenzene	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,3-Dichlorobenzene	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,4-Dichlorobenzene	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Dichlorodifluoromethane	ND	---	0.240	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,1-Dichloroethane	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,1-Dichloroethene	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	

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ANALYTICAL REPORT

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B1-0-3 (A3F0812-01)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>		
1,2-Dichloropropane	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,3-Dichloropropane	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
2,2-Dichloropropane	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,1-Dichloropropene	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Ethylbenzene	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Hexachlorobutadiene	ND	---	0.240	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
2-Hexanone	ND	---	1.20	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Isopropylbenzene	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
4-Isopropyltoluene	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Methylene chloride	ND	---	1.20	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	1.20	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Naphthalene	ND	---	0.240	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
n-Propylbenzene	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Styrene	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,1,1,2,2-Tetrachloroethane	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Toluene	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	0.601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	0.601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,1,1-Trichloroethane	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,1,2-Trichloroethane	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Trichloroethene (TCE)	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Trichlorofluoromethane	ND	---	0.240	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,2,3-Trichloropropane	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
Vinyl chloride	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
m,p-Xylene	ND	---	0.120	mg/kg dry	50	06/07/23 17:34	5035A/8260D	
o-Xylene	ND	---	0.0601	mg/kg dry	50	06/07/23 17:34	5035A/8260D	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B1-0-3 (A3F0812-01)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 97 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>06/07/23 17:34</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>80-120 %</i>	<i>1</i>	<i>06/07/23 17:34</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>79-120 %</i>	<i>1</i>	<i>06/07/23 17:34</i>	<i>5035A/8260D</i>	
<b>B2-0-3 (A3F0812-02)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>		
Acetone	ND	---	1.73	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Acrylonitrile	ND	---	0.173	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Benzene	ND	---	0.0173	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Bromobenzene	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Bromochloromethane	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Bromodichloromethane	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Bromoform	ND	---	0.173	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Bromomethane	ND	---	0.865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
2-Butanone (MEK)	ND	---	0.865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
n-Butylbenzene	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
sec-Butylbenzene	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
tert-Butylbenzene	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Carbon disulfide	ND	---	0.865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Carbon tetrachloride	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Chlorobenzene	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Chloroethane	ND	---	0.865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Chloroform	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Chloromethane	ND	---	0.433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
2-Chlorotoluene	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
4-Chlorotoluene	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Dibromochloromethane	ND	---	0.173	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	0.433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Dibromomethane	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,2-Dichlorobenzene	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,3-Dichlorobenzene	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,4-Dichlorobenzene	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Dichlorodifluoromethane	ND	---	0.173	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,1-Dichloroethane	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B2-0-3 (A3F0812-02)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>		
1,2-Dichloroethane (EDC)	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,1-Dichloroethene	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,2-Dichloropropane	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,3-Dichloropropane	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
2,2-Dichloropropane	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,1-Dichloropropene	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Ethylbenzene	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Hexachlorobutadiene	ND	---	0.173	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
2-Hexanone	ND	---	0.865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Isopropylbenzene	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
4-Isopropyltoluene	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Methylene chloride	ND	---	0.865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	0.865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Naphthalene	ND	---	0.173	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
n-Propylbenzene	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Styrene	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Toluene	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	0.433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	0.433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,1,1-Trichloroethane	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,1,2-Trichloroethane	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Trichloroethene (TCE)	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Trichlorofluoromethane	ND	---	0.173	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,2,3-Trichloropropane	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B2-0-3 (A3F0812-02)</b>			<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>			
1,3,5-Trimethylbenzene	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
Vinyl chloride	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
m,p-Xylene	ND	---	0.0865	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
o-Xylene	ND	---	0.0433	mg/kg dry	50	06/07/23 18:25	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 96 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>06/07/23 18:25</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>80-120 %</i>	<i>1</i>	<i>06/07/23 18:25</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>99 %</i>	<i>79-120 %</i>	<i>1</i>	<i>06/07/23 18:25</i>	<i>5035A/8260D</i>	
<b>B3-0-3 (A3F0812-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>			
Acetone	ND	---	1.28	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Acrylonitrile	ND	---	0.128	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Benzene	ND	---	0.0128	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Bromobenzene	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Bromochloromethane	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Bromodichloromethane	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Bromoform	ND	---	0.128	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Bromomethane	ND	---	0.641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
2-Butanone (MEK)	ND	---	0.641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
n-Butylbenzene	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
sec-Butylbenzene	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
tert-Butylbenzene	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Carbon disulfide	ND	---	0.641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Carbon tetrachloride	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Chlorobenzene	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Chloroethane	ND	---	0.641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Chloroform	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Chloromethane	ND	---	0.321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
2-Chlorotoluene	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
4-Chlorotoluene	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Dibromochloromethane	ND	---	0.128	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	0.321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Dibromomethane	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B3-0-3 (A3F0812-03)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>		
1,2-Dichlorobenzene	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,3-Dichlorobenzene	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,4-Dichlorobenzene	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Dichlorodifluoromethane	ND	---	0.128	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,1-Dichloroethane	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,1-Dichloroethene	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,2-Dichloropropane	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,3-Dichloropropane	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
2,2-Dichloropropane	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,1-Dichloropropene	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Ethylbenzene	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Hexachlorobutadiene	ND	---	0.128	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
2-Hexanone	ND	---	0.641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Isopropylbenzene	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
4-Isopropyltoluene	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Methylene chloride	ND	---	0.641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	---	0.641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Naphthalene	ND	---	0.128	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
n-Propylbenzene	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Styrene	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Toluene	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	0.321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	0.321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,1,1-Trichloroethane	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B3-0-3 (A3F0812-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>			
1,1,2-Trichloroethane	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Trichloroethene (TCE)	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Trichlorofluoromethane	ND	---	0.128	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,2,3-Trichloropropane	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
Vinyl chloride	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
m,p-Xylene	ND	---	0.0641	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
o-Xylene	ND	---	0.0321	mg/kg dry	50	06/07/23 18:50	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 97 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>06/07/23 18:50</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>80-120 %</i>	<i>1</i>	<i>06/07/23 18:50</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>99 %</i>	<i>79-120 %</i>	<i>1</i>	<i>06/07/23 18:50</i>	<i>5035A/8260D</i>	
<b>B4-0-3 (A3F0812-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>			
Acetone	ND	---	0.953	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Acrylonitrile	ND	---	0.0953	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Benzene	ND	---	0.00953	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Bromobenzene	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Bromochloromethane	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Bromodichloromethane	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Bromoform	ND	---	0.0953	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Bromomethane	ND	---	0.477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
2-Butanone (MEK)	ND	---	0.477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
n-Butylbenzene	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
sec-Butylbenzene	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
tert-Butylbenzene	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Carbon disulfide	ND	---	0.477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Carbon tetrachloride	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Chlorobenzene	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Chloroethane	ND	---	0.477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Chloroform	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Chloromethane	ND	---	0.238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
2-Chlorotoluene	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B4-0-3 (A3F0812-04)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>		
4-Chlorotoluene	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Dibromochloromethane	ND	---	0.0953	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	0.238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Dibromomethane	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,2-Dichlorobenzene	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,3-Dichlorobenzene	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,4-Dichlorobenzene	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Dichlorodifluoromethane	ND	---	0.0953	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,1-Dichloroethane	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,1-Dichloroethene	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,2-Dichloropropane	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,3-Dichloropropane	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
2,2-Dichloropropane	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,1-Dichloropropene	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Ethylbenzene	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Hexachlorobutadiene	ND	---	0.0953	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
2-Hexanone	ND	---	0.477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Isopropylbenzene	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
4-Isopropyltoluene	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Methylene chloride	ND	---	0.477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	---	0.477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Naphthalene	ND	---	0.0953	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
n-Propylbenzene	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Styrene	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B4-0-3 (A3F0812-04)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>		
Tetrachloroethene (PCE)	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Toluene	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	0.238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	0.238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,1,1-Trichloroethane	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,1,2-Trichloroethane	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Trichloroethene (TCE)	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Trichlorofluoromethane	ND	---	0.0953	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,2,3-Trichloropropane	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
Vinyl chloride	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
m,p-Xylene	ND	---	0.0477	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
o-Xylene	ND	---	0.0238	mg/kg dry	50	06/07/23 19:16	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 96 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>06/07/23 19:16</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>	<i>80-120 %</i>	<i>1</i>	<i>06/07/23 19:16</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>99 %</i>	<i>79-120 %</i>	<i>1</i>	<i>06/07/23 19:16</i>	<i>5035A/8260D</i>	

<b>B2-GW (A3F0812-05)</b>				<b>Matrix: Water</b>		<b>Batch: 23F0159</b>		
Acetone	ND	---	20.0	ug/L	1	06/06/23 16:04	EPA 8260D	
Acrylonitrile	ND	---	2.00	ug/L	1	06/06/23 16:04	EPA 8260D	
Benzene	ND	---	0.200	ug/L	1	06/06/23 16:04	EPA 8260D	
Bromobenzene	ND	---	0.500	ug/L	1	06/06/23 16:04	EPA 8260D	
Bromochloromethane	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
Bromodichloromethane	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
Bromoform	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
Bromomethane	ND	---	5.00	ug/L	1	06/06/23 16:04	EPA 8260D	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	06/06/23 16:04	EPA 8260D	
n-Butylbenzene	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
sec-Butylbenzene	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
tert-Butylbenzene	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
Carbon disulfide	ND	---	10.0	ug/L	1	06/06/23 16:04	EPA 8260D	
Carbon tetrachloride	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B2-GW (A3F0812-05)</b>			<b>Matrix: Water</b>			<b>Batch: 23F0159</b>		
Chlorobenzene	ND	---	0.500	ug/L	1	06/06/23 16:04	EPA 8260D	
Chloroethane	ND	---	5.00	ug/L	1	06/06/23 16:04	EPA 8260D	
Chloroform	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
Chloromethane	ND	---	5.00	ug/L	1	06/06/23 16:04	EPA 8260D	
2-Chlorotoluene	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
4-Chlorotoluene	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
Dibromochloromethane	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	06/06/23 16:04	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	06/06/23 16:04	EPA 8260D	
Dibromomethane	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	06/06/23 16:04	EPA 8260D	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	06/06/23 16:04	EPA 8260D	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	06/06/23 16:04	EPA 8260D	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	06/06/23 16:04	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	06/06/23 16:04	EPA 8260D	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	06/06/23 16:04	EPA 8260D	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	06/06/23 16:04	EPA 8260D	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	06/06/23 16:04	EPA 8260D	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	06/06/23 16:04	EPA 8260D	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
Ethylbenzene	ND	---	0.500	ug/L	1	06/06/23 16:04	EPA 8260D	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	06/06/23 16:04	EPA 8260D	
2-Hexanone	ND	---	10.0	ug/L	1	06/06/23 16:04	EPA 8260D	
Isopropylbenzene	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
Methylene chloride	ND	---	10.0	ug/L	1	06/06/23 16:04	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	10.0	ug/L	1	06/06/23 16:04	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B2-GW (A3F0812-05)</b>			<b>Matrix: Water</b>			<b>Batch: 23F0159</b>		
Naphthalene	ND	---	2.00	ug/L	1	06/06/23 16:04	EPA 8260D	
n-Propylbenzene	ND	---	0.500	ug/L	1	06/06/23 16:04	EPA 8260D	
Styrene	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	06/06/23 16:04	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	06/06/23 16:04	EPA 8260D	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	06/06/23 16:04	EPA 8260D	
Toluene	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	06/06/23 16:04	EPA 8260D	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	06/06/23 16:04	EPA 8260D	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	06/06/23 16:04	EPA 8260D	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	06/06/23 16:04	EPA 8260D	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	06/06/23 16:04	EPA 8260D	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	06/06/23 16:04	EPA 8260D	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
Vinyl chloride	ND	---	0.400	ug/L	1	06/06/23 16:04	EPA 8260D	
m,p-Xylene	ND	---	1.00	ug/L	1	06/06/23 16:04	EPA 8260D	
o-Xylene	ND	---	0.500	ug/L	1	06/06/23 16:04	EPA 8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>06/06/23 16:04</i>	<i>EPA 8260D</i>	
<i>Toluene-d8 (Surr)</i>			<i>103 %</i>	<i>80-120 %</i>	<i>1</i>	<i>06/06/23 16:04</i>	<i>EPA 8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>80-120 %</i>	<i>1</i>	<i>06/06/23 16:04</i>	<i>EPA 8260D</i>	

<b>B5-GW (A3F0812-06)</b>			<b>Matrix: Water</b>			<b>Batch: 23F0159</b>		
Acetone	<b>35.3</b>	---	20.0	ug/L	1	06/06/23 16:26	EPA 8260D	
Acrylonitrile	ND	---	2.00	ug/L	1	06/06/23 16:26	EPA 8260D	
<b>Benzene</b>	<b>0.210</b>	---	0.200	ug/L	1	06/06/23 16:26	EPA 8260D	
Bromobenzene	ND	---	0.500	ug/L	1	06/06/23 16:26	EPA 8260D	
Bromochloromethane	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
Bromodichloromethane	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
Bromoform	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
Bromomethane	ND	---	5.00	ug/L	1	06/06/23 16:26	EPA 8260D	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	06/06/23 16:26	EPA 8260D	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B5-GW (A3F0812-06)</b>			<b>Matrix: Water</b>			<b>Batch: 23F0159</b>		
n-Butylbenzene	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
sec-Butylbenzene	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
tert-Butylbenzene	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
Carbon disulfide	ND	---	10.0	ug/L	1	06/06/23 16:26	EPA 8260D	
Carbon tetrachloride	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
Chlorobenzene	ND	---	0.500	ug/L	1	06/06/23 16:26	EPA 8260D	
Chloroethane	ND	---	5.00	ug/L	1	06/06/23 16:26	EPA 8260D	
Chloroform	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
Chloromethane	ND	---	5.00	ug/L	1	06/06/23 16:26	EPA 8260D	
2-Chlorotoluene	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
4-Chlorotoluene	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
Dibromochloromethane	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	06/06/23 16:26	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	06/06/23 16:26	EPA 8260D	
Dibromomethane	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	06/06/23 16:26	EPA 8260D	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	06/06/23 16:26	EPA 8260D	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	06/06/23 16:26	EPA 8260D	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	06/06/23 16:26	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	06/06/23 16:26	EPA 8260D	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	06/06/23 16:26	EPA 8260D	
<b>cis-1,2-Dichloroethene</b>	<b>12.7</b>	---	0.400	ug/L	1	06/06/23 16:26	EPA 8260D	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	06/06/23 16:26	EPA 8260D	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	06/06/23 16:26	EPA 8260D	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
Ethylbenzene	ND	---	0.500	ug/L	1	06/06/23 16:26	EPA 8260D	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	06/06/23 16:26	EPA 8260D	
2-Hexanone	ND	---	10.0	ug/L	1	06/06/23 16:26	EPA 8260D	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B5-GW (A3F0812-06)</b>			<b>Matrix: Water</b>			<b>Batch: 23F0159</b>		
Isopropylbenzene	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
Methylene chloride	ND	---	10.0	ug/L	1	06/06/23 16:26	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	10.0	ug/L	1	06/06/23 16:26	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
Naphthalene	ND	---	2.00	ug/L	1	06/06/23 16:26	EPA 8260D	
n-Propylbenzene	ND	---	0.500	ug/L	1	06/06/23 16:26	EPA 8260D	
Styrene	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	06/06/23 16:26	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	06/06/23 16:26	EPA 8260D	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	06/06/23 16:26	EPA 8260D	
Toluene	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	06/06/23 16:26	EPA 8260D	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	06/06/23 16:26	EPA 8260D	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	06/06/23 16:26	EPA 8260D	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	06/06/23 16:26	EPA 8260D	
<b>Trichloroethene (TCE)</b>	<b>1.48</b>	---	0.400	ug/L	1	06/06/23 16:26	EPA 8260D	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	06/06/23 16:26	EPA 8260D	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
Vinyl chloride	ND	---	0.400	ug/L	1	06/06/23 16:26	EPA 8260D	
m,p-Xylene	ND	---	1.00	ug/L	1	06/06/23 16:26	EPA 8260D	
o-Xylene	ND	---	0.500	ug/L	1	06/06/23 16:26	EPA 8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 99 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>06/06/23 16:26</i>	<i>EPA 8260D</i>	
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>	<i>80-120 %</i>	<i>1</i>	<i>06/06/23 16:26</i>	<i>EPA 8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>102 %</i>	<i>80-120 %</i>	<i>1</i>	<i>06/06/23 16:26</i>	<i>EPA 8260D</i>	

<b>B3-9.5-10 (A3F0812-07)</b>			<b>Matrix: Soil</b>			<b>Batch: 23F0213</b>		
Acetone	ND	---	1.68	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Acrylonitrile	ND	---	0.168	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Benzene	ND	---	0.0168	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Bromobenzene	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B3-9.5-10 (A3F0812-07)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>		
Bromochloromethane	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Bromodichloromethane	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Bromoform	ND	---	0.168	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Bromomethane	ND	---	0.839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
2-Butanone (MEK)	ND	---	0.839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
n-Butylbenzene	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
sec-Butylbenzene	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
tert-Butylbenzene	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Carbon disulfide	ND	---	0.839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Carbon tetrachloride	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Chlorobenzene	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Chloroethane	ND	---	0.839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Chloroform	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Chloromethane	ND	---	0.420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
2-Chlorotoluene	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
4-Chlorotoluene	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Dibromochloromethane	ND	---	0.168	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	0.420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Dibromomethane	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,2-Dichlorobenzene	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,3-Dichlorobenzene	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,4-Dichlorobenzene	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Dichlorodifluoromethane	ND	---	0.168	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,1-Dichloroethane	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,1-Dichloroethene	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,2-Dichloropropane	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,3-Dichloropropane	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
2,2-Dichloropropane	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,1-Dichloropropene	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B3-9.5-10 (A3F0812-07)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0213</b>		
cis-1,3-Dichloropropene	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Ethylbenzene	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Hexachlorobutadiene	ND	---	0.168	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
2-Hexanone	ND	---	0.839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Isopropylbenzene	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
4-Isopropyltoluene	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Methylene chloride	ND	---	0.839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	---	0.839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Naphthalene	ND	---	0.168	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
n-Propylbenzene	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Styrene	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Toluene	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	0.420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	0.420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,1,1-Trichloroethane	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,1,2-Trichloroethane	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Trichloroethene (TCE)	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Trichlorofluoromethane	ND	---	0.168	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,2,3-Trichloropropane	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
Vinyl chloride	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
m,p-Xylene	ND	---	0.0839	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
o-Xylene	ND	---	0.0420	mg/kg dry	50	06/07/23 19:41	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 96 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>06/07/23 19:41</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>80-120 %</i>	<i>1</i>	<i>06/07/23 19:41</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>79-120 %</i>	<i>1</i>	<i>06/07/23 19:41</i>	<i>5035A/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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>TB (A3F0812-08)</b>				<b>Matrix: Water</b>		<b>Batch: 23F0159</b>		<b>CONT</b>
Acetone	ND	---	20.0	ug/L	1	06/06/23 14:33	EPA 8260D	
Acrylonitrile	ND	---	2.00	ug/L	1	06/06/23 14:33	EPA 8260D	
Benzene	ND	---	0.200	ug/L	1	06/06/23 14:33	EPA 8260D	
Bromobenzene	ND	---	0.500	ug/L	1	06/06/23 14:33	EPA 8260D	
Bromochloromethane	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
Bromodichloromethane	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
Bromoform	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
Bromomethane	ND	---	5.00	ug/L	1	06/06/23 14:33	EPA 8260D	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	06/06/23 14:33	EPA 8260D	
n-Butylbenzene	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
sec-Butylbenzene	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
tert-Butylbenzene	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
Carbon disulfide	ND	---	10.0	ug/L	1	06/06/23 14:33	EPA 8260D	
Carbon tetrachloride	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
Chlorobenzene	ND	---	0.500	ug/L	1	06/06/23 14:33	EPA 8260D	
Chloroethane	ND	---	5.00	ug/L	1	06/06/23 14:33	EPA 8260D	
Chloroform	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
Chloromethane	ND	---	5.00	ug/L	1	06/06/23 14:33	EPA 8260D	
2-Chlorotoluene	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
4-Chlorotoluene	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
Dibromochloromethane	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	06/06/23 14:33	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	06/06/23 14:33	EPA 8260D	
Dibromomethane	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	06/06/23 14:33	EPA 8260D	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	06/06/23 14:33	EPA 8260D	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	06/06/23 14:33	EPA 8260D	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	06/06/23 14:33	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	06/06/23 14:33	EPA 8260D	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	06/06/23 14:33	EPA 8260D	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	06/06/23 14:33	EPA 8260D	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	06/06/23 14:33	EPA 8260D	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>TB (A3F0812-08)</b>				<b>Matrix: Water</b>		<b>Batch: 23F0159</b>		<b>CONT</b>
1,2-Dichloropropane	ND	---	0.500	ug/L	1	06/06/23 14:33	EPA 8260D	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
Ethylbenzene	ND	---	0.500	ug/L	1	06/06/23 14:33	EPA 8260D	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	06/06/23 14:33	EPA 8260D	
2-Hexanone	ND	---	10.0	ug/L	1	06/06/23 14:33	EPA 8260D	
Isopropylbenzene	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
Methylene chloride	ND	---	10.0	ug/L	1	06/06/23 14:33	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	10.0	ug/L	1	06/06/23 14:33	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
Naphthalene	ND	---	2.00	ug/L	1	06/06/23 14:33	EPA 8260D	
n-Propylbenzene	ND	---	0.500	ug/L	1	06/06/23 14:33	EPA 8260D	
Styrene	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	06/06/23 14:33	EPA 8260D	
1,1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	06/06/23 14:33	EPA 8260D	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	06/06/23 14:33	EPA 8260D	
Toluene	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	06/06/23 14:33	EPA 8260D	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	06/06/23 14:33	EPA 8260D	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	06/06/23 14:33	EPA 8260D	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	06/06/23 14:33	EPA 8260D	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	06/06/23 14:33	EPA 8260D	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	06/06/23 14:33	EPA 8260D	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
Vinyl chloride	ND	---	0.400	ug/L	1	06/06/23 14:33	EPA 8260D	
m,p-Xylene	ND	---	1.00	ug/L	1	06/06/23 14:33	EPA 8260D	
o-Xylene	ND	---	0.500	ug/L	1	06/06/23 14:33	EPA 8260D	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>TB (A3F0812-08)</b>				<b>Matrix: Water</b>		<b>Batch: 23F0159</b>		<b>CONT</b>
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>06/06/23 14:33</i>	<i>EPA 8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>	<i>1</i>	<i>06/06/23 14:33</i>	<i>EPA 8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>105 %</i>		<i>80-120 %</i>	<i>1</i>	<i>06/06/23 14:33</i>	<i>EPA 8260D</i>	

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Darwin Thomas, Business Development Director



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<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Polychlorinated Biphenyls by EPA 8082A**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B1-0-3 (A3F0812-01)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0591</b>		<b>C-07</b>
Aroclor 1016	ND	---	0.0139	mg/kg dry	1	06/19/23 08:41	EPA 8082A	
Aroclor 1221	ND	---	0.0139	mg/kg dry	1	06/19/23 08:41	EPA 8082A	
Aroclor 1232	ND	---	0.0183	mg/kg dry	1	06/19/23 08:41	EPA 8082A	R-02
Aroclor 1242	ND	---	0.0139	mg/kg dry	1	06/19/23 08:41	EPA 8082A	
Aroclor 1248	ND	---	0.0139	mg/kg dry	1	06/19/23 08:41	EPA 8082A	
Aroclor 1254	ND	---	0.0275	mg/kg dry	1	06/19/23 08:41	EPA 8082A	R-02
Aroclor 1260	ND	---	0.0254	mg/kg dry	1	06/19/23 08:41	EPA 8082A	R-02
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 67 %</i>		<i>Limits: 60-125 %</i>		<i>1</i>	<i>06/19/23 08:41</i>	<i>EPA 8082A</i>
<b>B2-0-3 (A3F0812-02)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0591</b>		<b>C-07</b>
Aroclor 1016	ND	---	0.0121	mg/kg dry	1	06/19/23 09:16	EPA 8082A	
Aroclor 1221	ND	---	0.0121	mg/kg dry	1	06/19/23 09:16	EPA 8082A	
Aroclor 1232	ND	---	0.0121	mg/kg dry	1	06/19/23 09:16	EPA 8082A	
<b>Aroclor 1242</b>	<b>0.0155</b>	---	0.0121	mg/kg dry	1	06/19/23 09:16	EPA 8082A	<b>P-12</b>
Aroclor 1248	ND	---	0.0121	mg/kg dry	1	06/19/23 09:16	EPA 8082A	
Aroclor 1254	ND	---	0.0132	mg/kg dry	1	06/19/23 09:16	EPA 8082A	R-02
<b>Aroclor 1260</b>	<b>0.0168</b>	---	0.0121	mg/kg dry	1	06/19/23 09:16	EPA 8082A	<b>P-12</b>
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 85 %</i>		<i>Limits: 60-125 %</i>		<i>1</i>	<i>06/19/23 09:16</i>	<i>EPA 8082A</i>
<b>B3-0-3 (A3F0812-03)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0591</b>		<b>C-07</b>
Aroclor 1016	ND	---	0.0112	mg/kg dry	1	06/19/23 09:52	EPA 8082A	
Aroclor 1221	ND	---	0.0112	mg/kg dry	1	06/19/23 09:52	EPA 8082A	
Aroclor 1232	ND	---	0.0112	mg/kg dry	1	06/19/23 09:52	EPA 8082A	
Aroclor 1242	ND	---	0.0112	mg/kg dry	1	06/19/23 09:52	EPA 8082A	
Aroclor 1248	ND	---	0.0112	mg/kg dry	1	06/19/23 09:52	EPA 8082A	
Aroclor 1254	ND	---	0.0112	mg/kg dry	1	06/19/23 09:52	EPA 8082A	
Aroclor 1260	ND	---	0.0112	mg/kg dry	1	06/19/23 09:52	EPA 8082A	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 60-125 %</i>		<i>1</i>	<i>06/19/23 09:52</i>	<i>EPA 8082A</i>
<b>B4-0-3 (A3F0812-04)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0591</b>		<b>C-07</b>
Aroclor 1016	ND	---	0.0106	mg/kg dry	1	06/19/23 10:27	EPA 8082A	
Aroclor 1221	ND	---	0.0106	mg/kg dry	1	06/19/23 10:27	EPA 8082A	
Aroclor 1232	ND	---	0.0106	mg/kg dry	1	06/19/23 10:27	EPA 8082A	

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ORELAP ID: OR100062

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Polychlorinated Biphenyls by EPA 8082A**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B4-0-3 (A3F0812-04)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0591</b>		<b>C-07</b>
Aroclor 1242	ND	---	0.0106	mg/kg dry	1	06/19/23 10:27	EPA 8082A	
Aroclor 1248	ND	---	0.0106	mg/kg dry	1	06/19/23 10:27	EPA 8082A	
Aroclor 1254	ND	---	0.0106	mg/kg dry	1	06/19/23 10:27	EPA 8082A	
Aroclor 1260	ND	---	0.0106	mg/kg dry	1	06/19/23 10:27	EPA 8082A	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>			<i>Recovery: 98 %</i>	<i>Limits: 60-125 %</i>	<i>1</i>	<i>06/19/23 10:27</i>	<i>EPA 8082A</i>	
<b>B2-GW (A3F0812-05)</b>				<b>Matrix: Water</b>		<b>Batch: 23F0585</b>		<b>C-07</b>
Aroclor 1016	ND	---	0.104	ug/L	1	06/19/23 09:34	EPA 8082A	
Aroclor 1221	ND	---	0.104	ug/L	1	06/19/23 09:34	EPA 8082A	
Aroclor 1232	ND	---	0.104	ug/L	1	06/19/23 09:34	EPA 8082A	
Aroclor 1242	ND	---	0.104	ug/L	1	06/19/23 09:34	EPA 8082A	
Aroclor 1248	ND	---	0.104	ug/L	1	06/19/23 09:34	EPA 8082A	
Aroclor 1254	ND	---	0.104	ug/L	1	06/19/23 09:34	EPA 8082A	
Aroclor 1260	ND	---	0.104	ug/L	1	06/19/23 09:34	EPA 8082A	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>			<i>Recovery: 63 %</i>	<i>Limits: 40-135 %</i>	<i>1</i>	<i>06/19/23 09:34</i>	<i>EPA 8082A</i>	
<b>B3-9.5-10 (A3F0812-07)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0591</b>		<b>C-07</b>
Aroclor 1016	ND	---	0.0129	mg/kg dry	1	06/19/23 11:03	EPA 8082A	
Aroclor 1221	ND	---	0.0129	mg/kg dry	1	06/19/23 11:03	EPA 8082A	
Aroclor 1232	ND	---	0.0129	mg/kg dry	1	06/19/23 11:03	EPA 8082A	
Aroclor 1242	ND	---	0.0129	mg/kg dry	1	06/19/23 11:03	EPA 8082A	
Aroclor 1248	ND	---	0.0129	mg/kg dry	1	06/19/23 11:03	EPA 8082A	
Aroclor 1254	ND	---	0.0129	mg/kg dry	1	06/19/23 11:03	EPA 8082A	
<b>Aroclor 1260</b>	<b>0.0616</b>	---	0.0129	mg/kg dry	1	06/19/23 11:03	EPA 8082A	<b>P-09</b>
<i>Surrogate: Decachlorobiphenyl (Surr)</i>			<i>Recovery: 79 %</i>	<i>Limits: 60-125 %</i>	<i>1</i>	<i>06/19/23 11:03</i>	<i>EPA 8082A</i>	

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<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Selected Semivolatile Organic Compounds by EPA 8270E**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
<b>B1-0-3 (A3F0812-01RE1)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0325</b>			
Acenaphthene	ND	---	0.0395	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
Acenaphthylene	ND	---	0.0395	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
Anthracene	ND	---	0.0395	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
Benz(a)anthracene	ND	---	0.0395	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
Benzo(a)pyrene	ND	---	0.0591	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
Benzo(b)fluoranthene	ND	---	0.0591	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
Benzo(j+k)fluoranthene(s)	ND	---	0.0591	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
Benzo(g,h,i)perylene	ND	---	0.0395	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
Chrysene	ND	---	0.0395	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
Dibenz(a,h)anthracene	ND	---	0.0395	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
Fluoranthene	ND	---	0.0395	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
Fluorene	ND	---	0.0395	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
Indeno(1,2,3-cd)pyrene	ND	---	0.0395	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
Naphthalene	ND	---	0.0788	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
<b>Phenanthrene</b>	<b>0.0409</b>	---	0.0395	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
Pyrene	ND	---	0.0395	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
Pentachlorophenol (PCP)	ND	---	0.395	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
2,3,4,6-Tetrachlorophenol	ND	---	0.197	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
2,3,5,6-Tetrachlorophenol	ND	---	0.197	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
2,4,5-Trichlorophenol	ND	---	0.197	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
2,4,6-Trichlorophenol	ND	---	0.197	mg/kg dry	10	06/13/23 00:14	EPA 8270E		
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>		<i>Recovery:</i>		<i>81 %</i>	<i>Limits:</i>	<i>37-122 %</i>	<i>10</i>	<i>06/13/23 00:14</i>	<i>EPA 8270E</i>
<i>2-Fluorobiphenyl (Surr)</i>				<i>81 %</i>	<i>44-120 %</i>	<i>10</i>	<i>06/13/23 00:14</i>	<i>EPA 8270E</i>	
<i>Phenol-d6 (Surr)</i>				<i>71 %</i>	<i>33-122 %</i>	<i>10</i>	<i>06/13/23 00:14</i>	<i>EPA 8270E</i>	
<i>p-Terphenyl-d14 (Surr)</i>				<i>95 %</i>	<i>54-127 %</i>	<i>10</i>	<i>06/13/23 00:14</i>	<i>EPA 8270E</i>	
<i>2-Fluorophenol (Surr)</i>				<i>73 %</i>	<i>35-120 %</i>	<i>10</i>	<i>06/13/23 00:14</i>	<i>EPA 8270E</i>	
<i>2,4,6-Tribromophenol (Surr)</i>				<i>99 %</i>	<i>39-132 %</i>	<i>10</i>	<i>06/13/23 00:14</i>	<i>EPA 8270E</i>	

<b>B2-0-3 (A3F0812-02RE1)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0325</b>		<b>R-04</b>
Acenaphthene	ND	---	0.0193	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
Acenaphthylene	ND	---	0.0193	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
Anthracene	ND	---	0.0193	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
Benz(a)anthracene	ND	---	0.0193	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
Benzo(a)pyrene	ND	---	0.0289	mg/kg dry	4	06/13/23 00:50	EPA 8270E	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Selected Semivolatile Organic Compounds by EPA 8270E**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B2-0-3 (A3F0812-02RE1)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0325</b>		<b>R-04</b>
Benzo(b)fluoranthene	ND	---	0.0289	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
Benzo(j+k)fluoranthene(s)	ND	---	0.0289	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
Benzo(g,h,i)perylene	ND	---	0.0193	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
Chrysene	ND	---	0.0193	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
Dibenz(a,h)anthracene	ND	---	0.0193	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
Fluoranthene	ND	---	0.0193	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
Fluorene	ND	---	0.0193	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
Indeno(1,2,3-cd)pyrene	ND	---	0.0193	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
Naphthalene	ND	---	0.0385	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
Phenanthrene	ND	---	0.0193	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
Pyrene	ND	---	0.0193	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
Pentachlorophenol (PCP)	ND	---	0.193	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
2,3,4,6-Tetrachlorophenol	ND	---	0.0961	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
2,3,5,6-Tetrachlorophenol	ND	---	0.0961	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
2,4,5-Trichlorophenol	ND	---	0.0961	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
2,4,6-Trichlorophenol	ND	---	0.0961	mg/kg dry	4	06/13/23 00:50	EPA 8270E	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 95 %</i>		<i>Limits: 37-122 %</i>	<i>4</i>	<i>06/13/23 00:50</i>	<i>EPA 8270E</i>	
<i>2-Fluorobiphenyl (Surr)</i>		<i>93 %</i>		<i>44-120 %</i>	<i>4</i>	<i>06/13/23 00:50</i>	<i>EPA 8270E</i>	
<i>Phenol-d6 (Surr)</i>		<i>93 %</i>		<i>33-122 %</i>	<i>4</i>	<i>06/13/23 00:50</i>	<i>EPA 8270E</i>	
<i>p-Terphenyl-d14 (Surr)</i>		<i>114 %</i>		<i>54-127 %</i>	<i>4</i>	<i>06/13/23 00:50</i>	<i>EPA 8270E</i>	
<i>2-Fluorophenol (Surr)</i>		<i>88 %</i>		<i>35-120 %</i>	<i>4</i>	<i>06/13/23 00:50</i>	<i>EPA 8270E</i>	
<i>2,4,6-Tribromophenol (Surr)</i>		<i>111 %</i>		<i>39-132 %</i>	<i>4</i>	<i>06/13/23 00:50</i>	<i>EPA 8270E</i>	
<b>B3-0-3 (A3F0812-03RE1)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0325</b>		<b>R-04</b>
Acenaphthene	ND	---	0.0121	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
Acenaphthylene	ND	---	0.0121	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
Anthracene	ND	---	0.0121	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
Benz(a)anthracene	ND	---	0.0121	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
Benzo(a)pyrene	ND	---	0.0181	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
Benzo(b)fluoranthene	ND	---	0.0181	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
Benzo(j+k)fluoranthene(s)	ND	---	0.0181	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
Benzo(g,h,i)perylene	ND	---	0.0121	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
Chrysene	ND	---	0.0121	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
Dibenz(a,h)anthracene	ND	---	0.0121	mg/kg dry	4	06/13/23 01:25	EPA 8270E	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Selected Semivolatile Organic Compounds by EPA 8270E**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B3-0-3 (A3F0812-03RE1)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0325</b>		<b>R-04</b>
Fluoranthene	ND	---	0.0121	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
Fluorene	ND	---	0.0121	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
Indeno(1,2,3-cd)pyrene	ND	---	0.0121	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
Naphthalene	ND	---	0.0242	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
Phenanthrene	ND	---	0.0121	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
Pyrene	ND	---	0.0121	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
Pentachlorophenol (PCP)	ND	---	0.121	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
2,3,4,6-Tetrachlorophenol	ND	---	0.0603	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
2,3,5,6-Tetrachlorophenol	ND	---	0.0603	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
2,4,5-Trichlorophenol	ND	---	0.0603	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
2,4,6-Trichlorophenol	ND	---	0.0603	mg/kg dry	4	06/13/23 01:25	EPA 8270E	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 96 %</i>		<i>Limits: 37-122 %</i>	4	06/13/23 01:25	EPA 8270E	
<i>2-Fluorobiphenyl (Surr)</i>		<i>91 %</i>		<i>44-120 %</i>	4	06/13/23 01:25	EPA 8270E	
<i>Phenol-d6 (Surr)</i>		<i>88 %</i>		<i>33-122 %</i>	4	06/13/23 01:25	EPA 8270E	
<i>p-Terphenyl-d14 (Surr)</i>		<i>106 %</i>		<i>54-127 %</i>	4	06/13/23 01:25	EPA 8270E	
<i>2-Fluorophenol (Surr)</i>		<i>85 %</i>		<i>35-120 %</i>	4	06/13/23 01:25	EPA 8270E	
<i>2,4,6-Tribromophenol (Surr)</i>		<i>101 %</i>		<i>39-132 %</i>	4	06/13/23 01:25	EPA 8270E	
<b>B4-0-3 (A3F0812-04RE1)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0325</b>		<b>R-04</b>
Acenaphthene	ND	---	0.0585	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
Acenaphthylene	ND	---	0.0585	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
Anthracene	ND	---	0.0585	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
Benz(a)anthracene	ND	---	0.0585	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
Benzo(a)pyrene	ND	---	0.0877	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
Benzo(b)fluoranthene	ND	---	0.0877	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
Benzo(j+k)fluoranthene(s)	ND	---	0.0877	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
Benzo(g,h,i)perylene	ND	---	0.0585	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
Chrysene	ND	---	0.0585	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
Dibenz(a,h)anthracene	ND	---	0.0585	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
Fluoranthene	ND	---	0.0585	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
Fluorene	ND	---	0.0585	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
Indeno(1,2,3-cd)pyrene	ND	---	0.0585	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
Naphthalene	ND	---	0.117	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
Phenanthrene	ND	---	0.0585	mg/kg dry	20	06/13/23 02:01	EPA 8270E	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Selected Semivolatile Organic Compounds by EPA 8270E**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B4-0-3 (A3F0812-04RE1)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0325</b>		<b>R-04</b>
Pyrene	ND	---	0.0585	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
Pentachlorophenol (PCP)	ND	---	0.585	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
2,3,4,6-Tetrachlorophenol	ND	---	0.291	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
2,3,5,6-Tetrachlorophenol	ND	---	0.291	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
2,4,5-Trichlorophenol	ND	---	0.291	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
2,4,6-Trichlorophenol	ND	---	0.291	mg/kg dry	20	06/13/23 02:01	EPA 8270E	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 71 %</i>		<i>Limits: 37-122 %</i>	20	06/13/23 02:01	EPA 8270E	
<i>2-Fluorobiphenyl (Surr)</i>		<i>70 %</i>		<i>44-120 %</i>	20	06/13/23 02:01	EPA 8270E	
<i>Phenol-d6 (Surr)</i>		<i>64 %</i>		<i>33-122 %</i>	20	06/13/23 02:01	EPA 8270E	
<i>p-Terphenyl-d14 (Surr)</i>		<i>87 %</i>		<i>54-127 %</i>	20	06/13/23 02:01	EPA 8270E	
<i>2-Fluorophenol (Surr)</i>		<i>65 %</i>		<i>35-120 %</i>	20	06/13/23 02:01	EPA 8270E	
<i>2,4,6-Tribromophenol (Surr)</i>		<i>95 %</i>		<i>39-132 %</i>	20	06/13/23 02:01	EPA 8270E	
<b>B2-GW (A3F0812-05RE1)</b>				<b>Matrix: Water</b>		<b>Batch: 23F0233</b>		<b>R-04</b>
Acenaphthene	ND	---	0.0784	ug/L	4	06/08/23 20:25	EPA 8270E	
Acenaphthylene	ND	---	0.0784	ug/L	4	06/08/23 20:25	EPA 8270E	
Anthracene	ND	---	0.0784	ug/L	4	06/08/23 20:25	EPA 8270E	
Benz(a)anthracene	ND	---	0.0784	ug/L	4	06/08/23 20:25	EPA 8270E	
Benzo(a)pyrene	ND	---	0.118	ug/L	4	06/08/23 20:25	EPA 8270E	
Benzo(b)fluoranthene	ND	---	0.118	ug/L	4	06/08/23 20:25	EPA 8270E	
Benzo(k)fluoranthene	ND	---	0.118	ug/L	4	06/08/23 20:25	EPA 8270E	
Benzo(g,h,i)perylene	ND	---	0.0784	ug/L	4	06/08/23 20:25	EPA 8270E	
Chrysene	ND	---	0.0784	ug/L	4	06/08/23 20:25	EPA 8270E	
Dibenz(a,h)anthracene	ND	---	0.0784	ug/L	4	06/08/23 20:25	EPA 8270E	
Fluoranthene	ND	---	0.0784	ug/L	4	06/08/23 20:25	EPA 8270E	
Fluorene	ND	---	0.0784	ug/L	4	06/08/23 20:25	EPA 8270E	
Indeno(1,2,3-cd)pyrene	ND	---	0.0784	ug/L	4	06/08/23 20:25	EPA 8270E	
1-Methylnaphthalene	ND	---	0.157	ug/L	4	06/08/23 20:25	EPA 8270E	
2-Methylnaphthalene	ND	---	0.157	ug/L	4	06/08/23 20:25	EPA 8270E	
Naphthalene	ND	---	0.157	ug/L	4	06/08/23 20:25	EPA 8270E	
Phenanthrene	ND	---	0.0784	ug/L	4	06/08/23 20:25	EPA 8270E	
Pyrene	ND	---	0.0784	ug/L	4	06/08/23 20:25	EPA 8270E	
Pentachlorophenol (PCP)	ND	---	0.784	ug/L	4	06/08/23 20:25	EPA 8270E	
2,3,4,6-Tetrachlorophenol	ND	---	0.392	ug/L	4	06/08/23 20:25	EPA 8270E	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**ANALYTICAL SAMPLE RESULTS**

**Selected Semivolatile Organic Compounds by EPA 8270E**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B2-GW (A3F0812-05RE1)</b>			<b>Matrix: Water</b>		<b>Batch: 23F0233</b>		<b>R-04</b>	
2,3,5,6-Tetrachlorophenol	ND	---	0.392	ug/L	4	06/08/23 20:25	EPA 8270E	
2,4,5-Trichlorophenol	ND	---	0.392	ug/L	4	06/08/23 20:25	EPA 8270E	
2,4,6-Trichlorophenol	ND	---	0.392	ug/L	4	06/08/23 20:25	EPA 8270E	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 92 %</i>		<i>Limits: 44-120 %</i>	<i>4</i>	<i>06/08/23 20:25</i>	<i>EPA 8270E</i>	
<i>2-Fluorobiphenyl (Surr)</i>		<i>75 %</i>		<i>44-120 %</i>	<i>4</i>	<i>06/08/23 20:25</i>	<i>EPA 8270E</i>	
<i>Phenol-d6 (Surr)</i>		<i>31 %</i>		<i>10-133 %</i>	<i>4</i>	<i>06/08/23 20:25</i>	<i>EPA 8270E</i>	
<i>p-Terphenyl-d14 (Surr)</i>		<i>73 %</i>		<i>50-134 %</i>	<i>4</i>	<i>06/08/23 20:25</i>	<i>EPA 8270E</i>	
<i>2-Fluorophenol (Surr)</i>		<i>49 %</i>		<i>19-120 %</i>	<i>4</i>	<i>06/08/23 20:25</i>	<i>EPA 8270E</i>	
<i>2,4,6-Tribromophenol (Surr)</i>		<i>114 %</i>		<i>43-140 %</i>	<i>4</i>	<i>06/08/23 20:25</i>	<i>EPA 8270E</i>	
<b>B3-9.5-10 (A3F0812-07RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 23F0325</b>		<b>R-04</b>	
Acenaphthene	ND	---	0.0677	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
Acenaphthylene	ND	---	0.0677	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
Anthracene	ND	---	0.0677	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
Benz(a)anthracene	ND	---	0.0677	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
Benzo(a)pyrene	ND	---	0.101	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
Benzo(b)fluoranthene	ND	---	0.101	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
Benzo(j+k)fluoranthene(s)	ND	---	0.101	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
Benzo(g,h,i)perylene	ND	---	0.0677	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
Chrysene	ND	---	0.0677	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
Dibenz(a,h)anthracene	ND	---	0.0677	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
Fluoranthene	ND	---	0.0677	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
Fluorene	ND	---	0.0677	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
Indeno(1,2,3-cd)pyrene	ND	---	0.0677	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
Naphthalene	ND	---	0.135	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
Phenanthrene	ND	---	0.0677	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
Pyrene	ND	---	0.0677	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
Pentachlorophenol (PCP)	ND	---	0.677	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
2,3,4,6-Tetrachlorophenol	ND	---	0.337	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
2,3,5,6-Tetrachlorophenol	ND	---	0.337	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
2,4,5-Trichlorophenol	ND	---	0.337	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
2,4,6-Trichlorophenol	ND	---	0.337	mg/kg dry	20	06/13/23 02:37	EPA 8270E	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 56 %</i>		<i>Limits: 37-122 %</i>	<i>20</i>	<i>06/13/23 02:37</i>	<i>EPA 8270E</i>	
<i>2-Fluorobiphenyl (Surr)</i>		<i>56 %</i>		<i>44-120 %</i>	<i>20</i>	<i>06/13/23 02:37</i>	<i>EPA 8270E</i>	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<p><b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503</p>	<p>Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b></p>	<p style="text-align: right;"><b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b></p>
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**ANALYTICAL SAMPLE RESULTS**

**Selected Semivolatile Organic Compounds by EPA 8270E**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B3-9.5-10 (A3F0812-07RE1)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0325</b>		<b>R-04</b>
<i>Phenol-d6 (Surr)</i>			54 %	33-122 %	20	06/13/23 02:37	EPA 8270E	
<i>p-Terphenyl-d14 (Surr)</i>			69 %	54-127 %	20	06/13/23 02:37	EPA 8270E	
<i>2-Fluorophenol (Surr)</i>			58 %	35-120 %	20	06/13/23 02:37	EPA 8270E	
<i>2,4,6-Tribromophenol (Surr)</i>			85 %	39-132 %	20	06/13/23 02:37	EPA 8270E	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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ORELAP ID: OR100062

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
---	---	---

**ANALYTICAL SAMPLE RESULTS**

**Total Metals by EPA 6020B (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
<b>B1-0-3 (A3F0812-01)</b>				<b>Matrix: Soil</b>					
Batch: 23F0478									
Arsenic	4.31	---	1.54	mg/kg dry	10	06/14/23 15:40	EPA 6020B		
Barium	252	---	1.54	mg/kg dry	10	06/14/23 15:40	EPA 6020B		
Cadmium	ND	---	0.308	mg/kg dry	10	06/14/23 15:40	EPA 6020B		
Chromium	35.3	---	1.54	mg/kg dry	10	06/14/23 15:40	EPA 6020B		
Lead	14.8	---	0.308	mg/kg dry	10	06/14/23 15:40	EPA 6020B		
Mercury	ND	---	0.123	mg/kg dry	10	06/14/23 15:40	EPA 6020B		
Selenium	ND	---	1.54	mg/kg dry	10	06/14/23 15:40	EPA 6020B		
Silver	ND	---	0.308	mg/kg dry	10	06/14/23 15:40	EPA 6020B		
<b>B2-0-3 (A3F0812-02)</b>				<b>Matrix: Soil</b>					
Batch: 23F0478									
Arsenic	3.04	---	1.25	mg/kg dry	10	06/14/23 15:45	EPA 6020B		
Barium	137	---	1.25	mg/kg dry	10	06/14/23 15:45	EPA 6020B		
Cadmium	ND	---	0.251	mg/kg dry	10	06/14/23 15:45	EPA 6020B		
Chromium	11.3	---	1.25	mg/kg dry	10	06/14/23 15:45	EPA 6020B		
Lead	4.94	---	0.251	mg/kg dry	10	06/14/23 15:45	EPA 6020B		
Mercury	ND	---	0.100	mg/kg dry	10	06/14/23 15:45	EPA 6020B		
Selenium	ND	---	1.25	mg/kg dry	10	06/14/23 15:45	EPA 6020B		
Silver	ND	---	0.251	mg/kg dry	10	06/14/23 15:45	EPA 6020B		
<b>B3-0-3 (A3F0812-03)</b>				<b>Matrix: Soil</b>					
Batch: 23F0478									
Arsenic	3.15	---	1.26	mg/kg dry	10	06/14/23 15:50	EPA 6020B		
Barium	183	---	1.26	mg/kg dry	10	06/14/23 15:50	EPA 6020B		
Cadmium	ND	---	0.252	mg/kg dry	10	06/14/23 15:50	EPA 6020B		
Chromium	18.4	---	1.26	mg/kg dry	10	06/14/23 15:50	EPA 6020B		
Lead	5.93	---	0.252	mg/kg dry	10	06/14/23 15:50	EPA 6020B		
Mercury	ND	---	0.101	mg/kg dry	10	06/14/23 15:50	EPA 6020B		
Selenium	ND	---	1.26	mg/kg dry	10	06/14/23 15:50	EPA 6020B		
Silver	ND	---	0.252	mg/kg dry	10	06/14/23 15:50	EPA 6020B		
<b>B4-0-3 (A3F0812-04)</b>				<b>Matrix: Soil</b>					
Batch: 23F0478									

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---	---	---

**ANALYTICAL SAMPLE RESULTS**

**Total Metals by EPA 6020B (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B4-0-3 (A3F0812-04)</b>				<b>Matrix: Soil</b>				
Arsenic	3.66	---	1.08	mg/kg dry	10	06/14/23 15:55	EPA 6020B	
Barium	167	---	1.08	mg/kg dry	10	06/14/23 15:55	EPA 6020B	
Cadmium	ND	---	0.216	mg/kg dry	10	06/14/23 15:55	EPA 6020B	
Chromium	20.8	---	1.08	mg/kg dry	10	06/14/23 15:55	EPA 6020B	
Lead	9.52	---	0.216	mg/kg dry	10	06/14/23 15:55	EPA 6020B	
Mercury	ND	---	0.0865	mg/kg dry	10	06/14/23 15:55	EPA 6020B	
Selenium	ND	---	1.08	mg/kg dry	10	06/14/23 15:55	EPA 6020B	
Silver	ND	---	0.216	mg/kg dry	10	06/14/23 15:55	EPA 6020B	
<b>B2-GW (A3F0812-05)</b>				<b>Matrix: Water</b>				
Batch: 23F0228								
Arsenic	7.43	---	5.00	ug/L	5	06/07/23 21:25	EPA 6020B	
Barium	769	---	10.0	ug/L	5	06/07/23 21:25	EPA 6020B	
Cadmium	ND	---	1.00	ug/L	5	06/07/23 21:25	EPA 6020B	R-04
Chromium	67.0	---	10.0	ug/L	5	06/07/23 21:25	EPA 6020B	
Lead	8.49	---	1.00	ug/L	5	06/07/23 21:25	EPA 6020B	
Selenium	ND	---	5.00	ug/L	5	06/07/23 21:25	EPA 6020B	R-04
<b>B2-GW (A3F0812-05RE1)</b>				<b>Matrix: Water</b>				
Batch: 23F0228								
Mercury	ND	---	0.400	ug/L	5	06/08/23 17:02	EPA 6020B	R-04
Silver	ND	---	1.00	ug/L	5	06/08/23 17:02	EPA 6020B	R-04
<b>B3-9.5-10 (A3F0812-07)</b>				<b>Matrix: Soil</b>				
Batch: 23F0478								
Arsenic	1.93	---	1.28	mg/kg dry	10	06/14/23 16:00	EPA 6020B	
Barium	94.4	---	1.28	mg/kg dry	10	06/14/23 16:00	EPA 6020B	
Cadmium	ND	---	0.257	mg/kg dry	10	06/14/23 16:00	EPA 6020B	
Chromium	9.21	---	1.28	mg/kg dry	10	06/14/23 16:00	EPA 6020B	
Lead	3.52	---	0.257	mg/kg dry	10	06/14/23 16:00	EPA 6020B	
Mercury	ND	---	0.103	mg/kg dry	10	06/14/23 16:00	EPA 6020B	
Selenium	ND	---	1.28	mg/kg dry	10	06/14/23 16:00	EPA 6020B	
Silver	ND	---	0.257	mg/kg dry	10	06/14/23 16:00	EPA 6020B	

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**ANALYTICAL SAMPLE RESULTS**

**Dissolved Metals by EPA 6020B (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>B2-GW (A3F0812-05)</b>				<b>Matrix: Water</b>				
Batch: 23F0411								
<b>Arsenic</b>	<b>1.10</b>	---	1.00	ug/L	1	06/13/23 02:12	EPA 6020B (Diss)	
<b>Barium</b>	<b>464</b>	---	1.00	ug/L	1	06/13/23 02:12	EPA 6020B (Diss)	
Cadmium	ND	---	0.200	ug/L	1	06/13/23 02:12	EPA 6020B (Diss)	
<b>Chromium</b>	<b>3.49</b>	---	2.00	ug/L	1	06/13/23 02:12	EPA 6020B (Diss)	
<b>Lead</b>	<b>0.434</b>	---	0.200	ug/L	1	06/13/23 02:12	EPA 6020B (Diss)	
Mercury	ND	---	0.0800	ug/L	1	06/13/23 02:12	EPA 6020B (Diss)	
Selenium	ND	---	1.00	ug/L	1	06/13/23 02:12	EPA 6020B (Diss)	
Silver	ND	---	0.200	ug/L	1	06/13/23 02:12	EPA 6020B (Diss)	

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**ANALYTICAL SAMPLE RESULTS**

Percent Dry Weight									
Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
<b>B1-0-3 (A3F0812-01)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0189</b>			
% Solids	67.6	---	1.00	%	1	06/07/23 06:26	EPA 8000D		
<b>B2-0-3 (A3F0812-02)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0189</b>			
% Solids	82.1	---	1.00	%	1	06/07/23 06:26	EPA 8000D		
<b>B3-0-3 (A3F0812-03)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0189</b>			
% Solids	87.6	---	1.00	%	1	06/07/23 06:26	EPA 8000D		
<b>B4-0-3 (A3F0812-04)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0189</b>			
% Solids	91.1	---	1.00	%	1	06/07/23 06:26	EPA 8000D		
<b>B3-9.5-10 (A3F0812-07)</b>				<b>Matrix: Soil</b>		<b>Batch: 23F0189</b>			
% Solids	76.8	---	1.00	%	1	06/07/23 06:26	EPA 8000D		

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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Diesel and/or Oil Hydrocarbons by NWTPH-Dx with Silica Gel Column Cleanup**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0557 - EPA 3510C (Fuels/Acid Ext.) w/Silica Gel Column</b>						<b>Water</b>						
<b>Blank (23F0557-BLK1)</b>			Prepared: 06/15/23 11:36 Analyzed: 06/15/23 19:17									
<u>NWTPH-Dx/SGC</u>												
Diesel	ND	---	80.0	ug/L	1	---	---	---	---	---	---	
Oil	ND	---	160	ug/L	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 79 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<b>LCS (23F0557-BS1)</b>			Prepared: 06/15/23 11:36 Analyzed: 06/15/23 19:38									
<u>NWTPH-Dx/SGC</u>												
Diesel	307	---	80.0	ug/L	1	500	---	61	36-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 79 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<b>LCS Dup (23F0557-BSD1)</b>			Prepared: 06/15/23 11:36 Analyzed: 06/15/23 19:58									
<u>NWTPH-Dx/SGC</u>												
Diesel	276	---	80.0	ug/L	1	500	---	55	36-132%	11	30%	Q-19
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 70 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<b>Batch 23F0578 - EPA 3546 w/SGC (3630C)</b>						<b>Soil</b>						
<b>Blank (23F0578-BLK1)</b>			Prepared: 06/15/23 17:54 Analyzed: 06/16/23 17:46									
<u>NWTPH-Dx/SGC</u>												
Diesel	ND	---	20.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	40.0	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 91 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<b>LCS (23F0578-BS1)</b>			Prepared: 06/15/23 17:54 Analyzed: 06/16/23 18:08									
<u>NWTPH-Dx/SGC</u>												
Diesel	118	---	20.0	mg/kg wet	1	125	---	94	38-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 93 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<b>Duplicate (23F0578-DUP1)</b>			Prepared: 06/15/23 17:54 Analyzed: 06/16/23 18:51									
<u>QC Source Sample: B1-0-3 (A3F0812-01)</u>												
<u>NWTPH-Dx/SGC</u>												
Diesel	ND	---	28.3	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	<b>89.7</b>	---	56.6	mg/kg dry	1	---	105	---	---	15	30%	F-03

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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Diesel and/or Oil Hydrocarbons by NWTPH-Dx with Silica Gel Column Cleanup**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0578 - EPA 3546 w/SGC (3630C)</b>							<b>Soil</b>					
<b>Duplicate (23F0578-DUP1)</b>					Prepared: 06/15/23 17:54 Analyzed: 06/16/23 18:51							
<b>QC Source Sample: B1-0-3 (A3F0812-01)</b>												
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 84 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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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
<b>Batch 23F0159 - EPA 5030C</b>						<b>Water</b>						
<b>Blank (23F0159-BLK1)</b>						Prepared: 06/06/23 08:36 Analyzed: 06/06/23 11:08						
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	---	100	ug/L	1	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 97 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>111 %</i>		<i>50-150 %</i>		<i>"</i>						
<b>LCS (23F0159-BS2)</b>						Prepared: 06/06/23 08:36 Analyzed: 06/06/23 10:45						
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	531	---	100	ug/L	1	500	---	106	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 101 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>108 %</i>		<i>50-150 %</i>		<i>"</i>						
<b>Duplicate (23F0159-DUP1)</b>						Prepared: 06/06/23 10:55 Analyzed: 06/06/23 13:24						
<u>QC Source Sample: Non-SDG (A3F0749-01RE1)</u>												
Gasoline Range Organics	<b>62900</b>	---	10000	ug/L	100	---	67200	---	---	7	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 104 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>108 %</i>		<i>50-150 %</i>		<i>"</i>						

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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
<b>Batch 23F0213 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (23F0213-BLK1)</b>			Prepared: 06/07/23 08:38 Analyzed: 06/07/23 10:46									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	---	5.00	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 105 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>		<i>"</i>						
<b>LCS (23F0213-BS2)</b>			Prepared: 06/07/23 08:38 Analyzed: 06/07/23 10:17									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	25.4	---	5.00	mg/kg wet	50	25.0	---	102	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 100 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>103 %</i>		<i>50-150 %</i>		<i>"</i>						
<b>Duplicate (23F0213-DUP1)</b>			Prepared: 06/01/23 12:00 Analyzed: 06/07/23 17:59									
<u>QC Source Sample: B1-0-3 (A3F0812-01)</u>												
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	---	12.0	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 104 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>102 %</i>		<i>50-150 %</i>		<i>"</i>						

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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0159 - EPA 5030C</b>						<b>Water</b>						
<b>Blank (23F0159-BLK1)</b>			Prepared: 06/06/23 08:36 Analyzed: 06/06/23 11:08									
<u>EPA 8260D</u>												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
---	---	---

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0159 - EPA 5030C</b>						<b>Water</b>						
<b>Blank (23F0159-BLK1)</b>			Prepared: 06/06/23 08:36 Analyzed: 06/06/23 11:08									
1,2-Dichloropropane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	

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

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**ANALYTICAL REPORT**

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503-718-2323  
ORELAP ID: OR100062

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0159 - EPA 5030C</b>						<b>Water</b>						
<b>Blank (23F0159-BLK1)</b>						Prepared: 06/06/23 08:36 Analyzed: 06/06/23 11:08						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>106 %</i>		<i>80-120 %</i>		<i>"</i>						
<b>LCS (23F0159-BS1)</b>						Prepared: 06/06/23 08:36 Analyzed: 06/06/23 10:00						
<b>EPA 8260D</b>												
Acetone	40.4	---	20.0	ug/L	1	40.0	---	101	80-120%	---	---	
Acrylonitrile	19.5	---	2.00	ug/L	1	20.0	---	97	80-120%	---	---	
Benzene	20.0	---	0.200	ug/L	1	20.0	---	100	80-120%	---	---	
Bromobenzene	20.0	---	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
Bromochloromethane	21.9	---	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
Bromodichloromethane	22.9	---	1.00	ug/L	1	20.0	---	115	80-120%	---	---	
Bromoform	23.3	---	1.00	ug/L	1	20.0	---	117	80-120%	---	---	
Bromomethane	22.3	---	5.00	ug/L	1	20.0	---	111	80-120%	---	---	
2-Butanone (MEK)	41.3	---	10.0	ug/L	1	40.0	---	103	80-120%	---	---	
n-Butylbenzene	23.1	---	1.00	ug/L	1	20.0	---	115	80-120%	---	---	
sec-Butylbenzene	23.2	---	1.00	ug/L	1	20.0	---	116	80-120%	---	---	
tert-Butylbenzene	22.7	---	1.00	ug/L	1	20.0	---	113	80-120%	---	---	
Carbon disulfide	20.0	---	10.0	ug/L	1	20.0	---	100	80-120%	---	---	
Carbon tetrachloride	24.6	---	1.00	ug/L	1	20.0	---	<b>123</b>	<b>80-120%</b>	---	---	Q-56
Chlorobenzene	20.6	---	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
Chloroethane	22.9	---	5.00	ug/L	1	20.0	---	114	80-120%	---	---	
Chloroform	21.3	---	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
Chloromethane	18.5	---	5.00	ug/L	1	20.0	---	92	80-120%	---	---	
2-Chlorotoluene	19.8	---	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
4-Chlorotoluene	23.4	---	1.00	ug/L	1	20.0	---	117	80-120%	---	---	
Dibromochloromethane	22.4	---	1.00	ug/L	1	20.0	---	112	80-120%	---	---	
1,2-Dibromo-3-chloropropane	19.9	---	5.00	ug/L	1	20.0	---	100	80-120%	---	---	
1,2-Dibromoethane (EDB)	20.2	---	0.500	ug/L	1	20.0	---	101	80-120%	---	---	
Dibromomethane	20.3	---	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
1,2-Dichlorobenzene	21.4	---	0.500	ug/L	1	20.0	---	107	80-120%	---	---	
1,3-Dichlorobenzene	21.7	---	0.500	ug/L	1	20.0	---	108	80-120%	---	---	
1,4-Dichlorobenzene	20.8	---	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
Dichlorodifluoromethane	22.0	---	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
1,1-Dichloroethane	21.4	---	0.400	ug/L	1	20.0	---	107	80-120%	---	---	

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<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0159 - EPA 5030C</b>						<b>Water</b>						
<b>LCS (23F0159-BS1)</b>			Prepared: 06/06/23 08:36 Analyzed: 06/06/23 10:00									
1,2-Dichloroethane (EDC)	22.5	---	0.400	ug/L	1	20.0	---	112	80-120%	---	---	
1,1-Dichloroethene	22.9	---	0.400	ug/L	1	20.0	---	114	80-120%	---	---	
cis-1,2-Dichloroethene	20.8	---	0.400	ug/L	1	20.0	---	104	80-120%	---	---	
trans-1,2-Dichloroethene	20.2	---	0.400	ug/L	1	20.0	---	101	80-120%	---	---	
1,2-Dichloropropane	20.3	---	0.500	ug/L	1	20.0	---	102	80-120%	---	---	
1,3-Dichloropropane	21.4	---	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
2,2-Dichloropropane	25.0	---	1.00	ug/L	1	20.0	---	<b>125</b>	<b>80-120%</b>	---	---	Q-56
1,1-Dichloropropene	21.6	---	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
cis-1,3-Dichloropropene	22.5	---	1.00	ug/L	1	20.0	---	112	80-120%	---	---	
trans-1,3-Dichloropropene	23.6	---	1.00	ug/L	1	20.0	---	118	80-120%	---	---	
Ethylbenzene	21.9	---	0.500	ug/L	1	20.0	---	109	80-120%	---	---	
Hexachlorobutadiene	21.7	---	5.00	ug/L	1	20.0	---	109	80-120%	---	---	
2-Hexanone	36.2	---	10.0	ug/L	1	40.0	---	90	80-120%	---	---	
Isopropylbenzene	20.2	---	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
4-Isopropyltoluene	20.2	---	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
Methylene chloride	19.3	---	10.0	ug/L	1	20.0	---	97	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	42.6	---	10.0	ug/L	1	40.0	---	107	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	20.3	---	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
Naphthalene	16.7	---	2.00	ug/L	1	20.0	---	83	80-120%	---	---	
n-Propylbenzene	22.2	---	0.500	ug/L	1	20.0	---	111	80-120%	---	---	
Styrene	20.1	---	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
1,1,1,2-Tetrachloroethane	21.6	---	0.400	ug/L	1	20.0	---	108	80-120%	---	---	
1,1,2,2-Tetrachloroethane	21.2	---	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
Tetrachloroethene (PCE)	19.7	---	0.400	ug/L	1	20.0	---	99	80-120%	---	---	
Toluene	20.9	---	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
1,2,3-Trichlorobenzene	19.8	---	2.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,2,4-Trichlorobenzene	18.8	---	2.00	ug/L	1	20.0	---	94	80-120%	---	---	
1,1,1-Trichloroethane	23.7	---	0.400	ug/L	1	20.0	---	119	80-120%	---	---	
1,1,2-Trichloroethane	20.3	---	0.500	ug/L	1	20.0	---	102	80-120%	---	---	
Trichloroethene (TCE)	18.8	---	0.400	ug/L	1	20.0	---	94	80-120%	---	---	
Trichlorofluoromethane	24.9	---	2.00	ug/L	1	20.0	---	<b>125</b>	<b>80-120%</b>	---	---	Q-56
1,2,3-Trichloropropane	21.0	---	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
1,2,4-Trimethylbenzene	20.7	---	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
1,3,5-Trimethylbenzene	23.0	---	1.00	ug/L	1	20.0	---	115	80-120%	---	---	

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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0159 - EPA 5030C</b>						<b>Water</b>						
<b>LCS (23F0159-BS1)</b>			Prepared: 06/06/23 08:36 Analyzed: 06/06/23 10:00									
Vinyl chloride	20.5	---	0.400	ug/L	1	20.0	---	103	80-120%	---	---	
m,p-Xylene	47.3	---	1.00	ug/L	1	40.0	---	118	80-120%	---	---	
o-Xylene	22.3	---	0.500	ug/L	1	20.0	---	111	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 95 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>92 %</i>		<i>80-120 %</i>		<i>"</i>						

<b>Duplicate (23F0159-DUP1)</b>			Prepared: 06/06/23 10:55 Analyzed: 06/06/23 13:24									
<b>QC Source Sample: Non-SDG (A3F0749-01RE1)</b>												
Acetone	ND	---	2000	ug/L	100	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	200	ug/L	100	---	ND	---	---	---	30%	
Benzene	<b>531</b>	---	20.0	ug/L	100	---	570	---	---	7	30%	
Bromobenzene	ND	---	50.0	ug/L	100	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
Bromoform	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
Bromomethane	ND	---	500	ug/L	100	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	1000	ug/L	100	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	1000	ug/L	100	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	50.0	ug/L	100	---	ND	---	---	---	30%	
Chloroethane	ND	---	500	ug/L	100	---	ND	---	---	---	30%	
Chloroform	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
Chloromethane	ND	---	500	ug/L	100	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	500	ug/L	100	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	50.0	ug/L	100	---	ND	---	---	---	30%	
Dibromomethane	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	50.0	ug/L	100	---	ND	---	---	---	30%	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
---	---	---

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0159 - EPA 5030C</b>						<b>Water</b>						
<b>Duplicate (23F0159-DUP1)</b>			Prepared: 06/06/23 10:55 Analyzed: 06/06/23 13:24									
<b>QC Source Sample: Non-SDG (A3F0749-01RE1)</b>												
1,3-Dichlorobenzene	ND	---	50.0	ug/L	100	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	50.0	ug/L	100	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	40.0	ug/L	100	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	40.0	ug/L	100	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	40.0	ug/L	100	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	40.0	ug/L	100	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	40.0	ug/L	100	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	50.0	ug/L	100	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
Ethylbenzene	<b>799</b>	---	50.0	ug/L	100	---	838	---	---	5	30%	
Hexachlorobutadiene	ND	---	500	ug/L	100	---	ND	---	---	---	30%	
2-Hexanone	ND	---	1000	ug/L	100	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
Methylene chloride	ND	---	1000	ug/L	100	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	1000	ug/L	100	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
Naphthalene	ND	---	200	ug/L	100	---	122	---	---	***	30%	
n-Propylbenzene	<b>70.0</b>	---	50.0	ug/L	100	---	75.0	---	---	7	30%	
Styrene	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	40.0	ug/L	100	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	50.0	ug/L	100	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	40.0	ug/L	100	---	ND	---	---	---	30%	
Toluene	<b>8980</b>	---	100	ug/L	100	---	9510	---	---	6	30%	
1,2,3-Trichlorobenzene	ND	---	200	ug/L	100	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	200	ug/L	100	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	40.0	ug/L	100	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	50.0	ug/L	100	---	ND	---	---	---	30%	

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ORELAP ID: OR100062

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
---	---	---

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0159 - EPA 5030C</b>												
<b>Water</b>												
<b>Duplicate (23F0159-DUP1)</b>												
Prepared: 06/06/23 10:55 Analyzed: 06/06/23 13:24												
<b>QC Source Sample: Non-SDG (A3F0749-01RE1)</b>												
Trichloroethene (TCE)	ND	---	40.0	ug/L	100	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	200	ug/L	100	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	100	ug/L	100	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	<b>452</b>	---	100	ug/L	100	---	480	---	---	6	30%	
1,3,5-Trimethylbenzene	<b>133</b>	---	100	ug/L	100	---	157	---	---	17	30%	
Vinyl chloride	ND	---	40.0	ug/L	100	---	ND	---	---	---	30%	
m,p-Xylene	<b>3590</b>	---	100	ug/L	100	---	3820	---	---	6	30%	
o-Xylene	<b>1690</b>	---	50.0	ug/L	100	---	1750	---	---	4	30%	
Surr: 1,4-Difluorobenzene (Surr) Recovery: 98 % Limits: 80-120 % Dilution: 1x												
Toluene-d8 (Surr) 102 % 80-120 % "												
4-Bromofluorobenzene (Surr) 102 % 80-120 % "												

<b>Matrix Spike (23F0159-MS1)</b>												
Prepared: 06/06/23 10:55 Analyzed: 06/06/23 13:47												
<b>QC Source Sample: Non-SDG (A3F0749-01RE1)</b>												
<b>EPA 8260D</b>												
Acetone	3990	---	2000	ug/L	100	4000	ND	100	39-160%	---	---	
Acrylonitrile	2180	---	200	ug/L	100	2000	ND	109	63-135%	---	---	
Benzene	2810	---	20.0	ug/L	100	2000	570	112	79-120%	---	---	
Bromobenzene	1990	---	50.0	ug/L	100	2000	ND	99	80-120%	---	---	
Bromochloromethane	2280	---	100	ug/L	100	2000	ND	114	78-123%	---	---	
Bromodichloromethane	2380	---	100	ug/L	100	2000	ND	119	79-125%	---	---	
Bromoform	2270	---	100	ug/L	100	2000	ND	113	66-130%	---	---	
Bromomethane	2420	---	500	ug/L	100	2000	ND	121	53-141%	---	---	
2-Butanone (MEK)	4200	---	1000	ug/L	100	4000	ND	105	56-143%	---	---	
n-Butylbenzene	2490	---	100	ug/L	100	2000	ND	124	75-128%	---	---	
sec-Butylbenzene	2460	---	100	ug/L	100	2000	ND	123	77-126%	---	---	
tert-Butylbenzene	2320	---	100	ug/L	100	2000	ND	116	78-124%	---	---	
Carbon disulfide	2260	---	1000	ug/L	100	2000	ND	113	64-133%	---	---	
Carbon tetrachloride	2490	---	100	ug/L	100	2000	ND	124	72-136%	---	---	Q-54
Chlorobenzene	2130	---	50.0	ug/L	100	2000	ND	106	80-120%	---	---	
Chloroethane	2450	---	500	ug/L	100	2000	ND	122	60-138%	---	---	
Chloroform	2180	---	100	ug/L	100	2000	ND	109	79-124%	---	---	
Chloromethane	2120	---	500	ug/L	100	2000	ND	106	50-139%	---	---	

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<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
---	---	---

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0159 - EPA 5030C</b>						<b>Water</b>						
<b>Matrix Spike (23F0159-MS1)</b>						Prepared: 06/06/23 10:55 Analyzed: 06/06/23 13:47						
<b>QC Source Sample: Non-SDG (A3F0749-01RE1)</b>												
2-Chlorotoluene	2110	---	100	ug/L	100	2000	ND	105	79-122%	---	---	
4-Chlorotoluene	2370	---	100	ug/L	100	2000	ND	118	78-122%	---	---	
Dibromochloromethane	2180	---	100	ug/L	100	2000	ND	109	74-126%	---	---	
1,2-Dibromo-3-chloropropane	1840	---	500	ug/L	100	2000	ND	92	62-128%	---	---	
1,2-Dibromoethane (EDB)	2020	---	50.0	ug/L	100	2000	ND	101	77-121%	---	---	
Dibromomethane	2180	---	100	ug/L	100	2000	ND	109	79-123%	---	---	
1,2-Dichlorobenzene	2200	---	50.0	ug/L	100	2000	ND	110	80-120%	---	---	
1,3-Dichlorobenzene	2190	---	50.0	ug/L	100	2000	ND	110	80-120%	---	---	
1,4-Dichlorobenzene	2070	---	50.0	ug/L	100	2000	ND	104	79-120%	---	---	
Dichlorodifluoromethane	2300	---	100	ug/L	100	2000	ND	115	32-152%	---	---	
1,1-Dichloroethane	2330	---	40.0	ug/L	100	2000	ND	117	77-125%	---	---	
1,2-Dichloroethane (EDC)	2220	---	40.0	ug/L	100	2000	ND	111	73-128%	---	---	
1,1-Dichloroethene	2420	---	40.0	ug/L	100	2000	ND	121	71-131%	---	---	
cis-1,2-Dichloroethene	2260	---	40.0	ug/L	100	2000	ND	113	78-123%	---	---	
trans-1,2-Dichloroethene	2220	---	40.0	ug/L	100	2000	ND	111	75-124%	---	---	
1,2-Dichloropropane	2190	---	50.0	ug/L	100	2000	ND	110	78-122%	---	---	
1,3-Dichloropropane	2190	---	100	ug/L	100	2000	ND	109	80-120%	---	---	
2,2-Dichloropropane	2430	---	100	ug/L	100	2000	ND	121	60-139%	---	---	Q-54a
1,1-Dichloropropene	2370	---	100	ug/L	100	2000	ND	118	79-125%	---	---	
cis-1,3-Dichloropropene	2160	---	100	ug/L	100	2000	ND	108	75-124%	---	---	
trans-1,3-Dichloropropene	2350	---	100	ug/L	100	2000	ND	118	73-127%	---	---	
Ethylbenzene	3160	---	50.0	ug/L	100	2000	838	116	79-121%	---	---	
Hexachlorobutadiene	2170	---	500	ug/L	100	2000	ND	108	66-134%	---	---	
2-Hexanone	3640	---	1000	ug/L	100	4000	ND	91	57-139%	---	---	
Isopropylbenzene	2130	---	100	ug/L	100	2000	ND	106	72-131%	---	---	
4-Isopropyltoluene	2150	---	100	ug/L	100	2000	ND	108	77-127%	---	---	
Methylene chloride	2020	---	1000	ug/L	100	2000	ND	101	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	4460	---	1000	ug/L	100	4000	ND	111	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	2170	---	100	ug/L	100	2000	ND	109	71-124%	---	---	
Naphthalene	2000	---	200	ug/L	100	2000	122	94	61-128%	---	---	
n-Propylbenzene	2390	---	50.0	ug/L	100	2000	75.0	116	76-126%	---	---	
Styrene	2110	---	100	ug/L	100	2000	ND	106	78-123%	---	---	
1,1,1,2-Tetrachloroethane	2110	---	40.0	ug/L	100	2000	ND	106	78-124%	---	---	

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<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
---	---	---

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0159 - EPA 5030C</b>						<b>Water</b>						
<b>Matrix Spike (23F0159-MS1)</b>			Prepared: 06/06/23 10:55 Analyzed: 06/06/23 13:47									
<b>QC Source Sample: Non-SDG (A3F0749-01RE1)</b>												
1,1,2,2-Tetrachloroethane	2160	---	50.0	ug/L	100	2000	ND	108	71-121%	---	---	
Tetrachloroethene (PCE)	2070	---	40.0	ug/L	100	2000	ND	104	74-129%	---	---	
Toluene	10700	---	100	ug/L	100	2000	9510	<b>62</b>	<b>80-121%</b>	---	---	Q-03
1,2,3-Trichlorobenzene	2030	---	200	ug/L	100	2000	ND	101	69-129%	---	---	
1,2,4-Trichlorobenzene	2060	---	200	ug/L	100	2000	ND	103	69-130%	---	---	
1,1,1-Trichloroethane	2380	---	40.0	ug/L	100	2000	ND	119	74-131%	---	---	
1,1,2-Trichloroethane	2040	---	50.0	ug/L	100	2000	ND	102	80-120%	---	---	
Trichloroethene (TCE)	2060	---	40.0	ug/L	100	2000	ND	103	79-123%	---	---	
Trichlorofluoromethane	2530	---	200	ug/L	100	2000	ND	126	65-141%	---	---	Q-54a
1,2,3-Trichloropropane	2100	---	100	ug/L	100	2000	ND	105	73-122%	---	---	
1,2,4-Trimethylbenzene	2820	---	100	ug/L	100	2000	480	117	76-124%	---	---	
1,3,5-Trimethylbenzene	2540	---	100	ug/L	100	2000	157	119	75-124%	---	---	
Vinyl chloride	2300	---	40.0	ug/L	100	2000	ND	115	58-137%	---	---	
m,p-Xylene	8840	---	100	ug/L	100	4000	3820	<b>125</b>	<b>80-121%</b>	---	---	Q-03
o-Xylene	4380	---	50.0	ug/L	100	2000	1750	<b>131</b>	<b>78-122%</b>	---	---	Q-03
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>97 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>91 %</i>		<i>80-120 %</i>		<i>"</i>						

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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0213 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (23F0213-BLK1)</b>			Prepared: 06/07/23 08:38 Analyzed: 06/07/23 10:46									
<u>5035A/8260D</u>												
Acetone	ND	---	1.00	mg/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	0.0100	mg/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	---	0.250	mg/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	0.250	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	

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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0213 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (23F0213-BLK1)</b>			Prepared: 06/07/23 08:38 Analyzed: 06/07/23 10:46									
1,2-Dichloropropane	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	0.500	mg/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Styrene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	0.250	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	0.250	mg/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr)

Recovery: 97% Limits: 80-120%

Dilution: 1x

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**ANALYTICAL REPORT**

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b>	Project: <b>11th Street</b>	
12210 Antioch Road	Project Number: <b>AEC2023-14</b>	<b>Report ID:</b>
White City, OR 97503	Project Manager: <b>Jonathan Williams</b>	<b>A3F0812 - 07 06 23 0807</b>

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0213 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (23F0213-BLK1)</b>						Prepared: 06/07/23 08:38 Analyzed: 06/07/23 10:46						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						
<b>LCS (23F0213-BS1)</b>						Prepared: 06/07/23 08:38 Analyzed: 06/07/23 09:51						
<b>5035A/8260D</b>												
Acetone	1.90	---	1.00	mg/kg wet	50	2.00	---	95	80-120%	---	---	
Acrylonitrile	0.936	---	0.100	mg/kg wet	50	1.00	---	94	80-120%	---	---	
Benzene	0.933	---	0.0100	mg/kg wet	50	1.00	---	93	80-120%	---	---	
Bromobenzene	0.935	---	0.0250	mg/kg wet	50	1.00	---	94	80-120%	---	---	
Bromochloromethane	0.978	---	0.0500	mg/kg wet	50	1.00	---	98	80-120%	---	---	
Bromodichloromethane	0.903	---	0.0500	mg/kg wet	50	1.00	---	90	80-120%	---	---	
Bromoform	0.728	---	0.100	mg/kg wet	50	1.00	---	<b>73</b>	<b>80-120%</b>	---	---	Q-55
Bromomethane	1.02	---	0.500	mg/kg wet	50	1.00	---	102	80-120%	---	---	
2-Butanone (MEK)	1.87	---	0.500	mg/kg wet	50	2.00	---	94	80-120%	---	---	
n-Butylbenzene	0.985	---	0.0500	mg/kg wet	50	1.00	---	99	80-120%	---	---	
sec-Butylbenzene	0.985	---	0.0500	mg/kg wet	50	1.00	---	99	80-120%	---	---	
tert-Butylbenzene	0.997	---	0.0500	mg/kg wet	50	1.00	---	100	80-120%	---	---	
Carbon disulfide	0.894	---	0.500	mg/kg wet	50	1.00	---	89	80-120%	---	---	
Carbon tetrachloride	0.762	---	0.0500	mg/kg wet	50	1.00	---	<b>76</b>	<b>80-120%</b>	---	---	Q-55
Chlorobenzene	0.952	---	0.0250	mg/kg wet	50	1.00	---	95	80-120%	---	---	
Chloroethane	0.981	---	0.500	mg/kg wet	50	1.00	---	98	80-120%	---	---	
Chloroform	0.934	---	0.0500	mg/kg wet	50	1.00	---	93	80-120%	---	---	
Chloromethane	0.821	---	0.250	mg/kg wet	50	1.00	---	82	80-120%	---	---	
2-Chlorotoluene	0.966	---	0.0500	mg/kg wet	50	1.00	---	97	80-120%	---	---	
4-Chlorotoluene	0.960	---	0.0500	mg/kg wet	50	1.00	---	96	80-120%	---	---	
Dibromochloromethane	0.898	---	0.100	mg/kg wet	50	1.00	---	90	80-120%	---	---	
1,2-Dibromo-3-chloropropane	0.791	---	0.250	mg/kg wet	50	1.00	---	<b>79</b>	<b>80-120%</b>	---	---	Q-55
1,2-Dibromoethane (EDB)	0.950	---	0.0500	mg/kg wet	50	1.00	---	95	80-120%	---	---	
Dibromomethane	0.979	---	0.0500	mg/kg wet	50	1.00	---	98	80-120%	---	---	
1,2-Dichlorobenzene	0.969	---	0.0250	mg/kg wet	50	1.00	---	97	80-120%	---	---	
1,3-Dichlorobenzene	0.957	---	0.0250	mg/kg wet	50	1.00	---	96	80-120%	---	---	
1,4-Dichlorobenzene	0.938	---	0.0250	mg/kg wet	50	1.00	---	94	80-120%	---	---	
Dichlorodifluoromethane	0.991	---	0.100	mg/kg wet	50	1.00	---	99	80-120%	---	---	
1,1-Dichloroethane	0.955	---	0.0250	mg/kg wet	50	1.00	---	95	80-120%	---	---	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
---	---	---

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0213 - EPA 5035A</b>						<b>Soil</b>						
<b>LCS (23F0213-BS1)</b>			Prepared: 06/07/23 08:38 Analyzed: 06/07/23 09:51									
1,2-Dichloroethane (EDC)	1.04	---	0.0250	mg/kg wet	50	1.00	---	104	80-120%	---	---	
1,1-Dichloroethene	0.993	---	0.0250	mg/kg wet	50	1.00	---	99	80-120%	---	---	
cis-1,2-Dichloroethene	0.977	---	0.0250	mg/kg wet	50	1.00	---	98	80-120%	---	---	
trans-1,2-Dichloroethene	0.958	---	0.0250	mg/kg wet	50	1.00	---	96	80-120%	---	---	
1,2-Dichloropropane	0.935	---	0.0250	mg/kg wet	50	1.00	---	94	80-120%	---	---	
1,3-Dichloropropane	0.992	---	0.0500	mg/kg wet	50	1.00	---	99	80-120%	---	---	
2,2-Dichloropropane	0.842	---	0.0500	mg/kg wet	50	1.00	---	84	80-120%	---	---	
1,1-Dichloropropene	0.985	---	0.0500	mg/kg wet	50	1.00	---	98	80-120%	---	---	
cis-1,3-Dichloropropene	0.925	---	0.0500	mg/kg wet	50	1.00	---	92	80-120%	---	---	
trans-1,3-Dichloropropene	0.868	---	0.0500	mg/kg wet	50	1.00	---	87	80-120%	---	---	
Ethylbenzene	0.933	---	0.0250	mg/kg wet	50	1.00	---	93	80-120%	---	---	
Hexachlorobutadiene	0.976	---	0.100	mg/kg wet	50	1.00	---	98	80-120%	---	---	
2-Hexanone	1.86	---	0.500	mg/kg wet	50	2.00	---	93	80-120%	---	---	
Isopropylbenzene	0.976	---	0.0500	mg/kg wet	50	1.00	---	98	80-120%	---	---	
4-Isopropyltoluene	1.01	---	0.0500	mg/kg wet	50	1.00	---	101	80-120%	---	---	
Methylene chloride	0.970	---	0.500	mg/kg wet	50	1.00	---	97	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	1.96	---	0.500	mg/kg wet	50	2.00	---	98	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	0.932	---	0.0500	mg/kg wet	50	1.00	---	93	80-120%	---	---	
Naphthalene	0.988	---	0.100	mg/kg wet	50	1.00	---	99	80-120%	---	---	
n-Propylbenzene	0.978	---	0.0250	mg/kg wet	50	1.00	---	98	80-120%	---	---	
Styrene	0.952	---	0.0500	mg/kg wet	50	1.00	---	95	80-120%	---	---	
1,1,1,2-Tetrachloroethane	0.818	---	0.0250	mg/kg wet	50	1.00	---	82	80-120%	---	---	
1,1,2,2-Tetrachloroethane	0.914	---	0.0500	mg/kg wet	50	1.00	---	91	80-120%	---	---	
Tetrachloroethene (PCE)	0.998	---	0.0250	mg/kg wet	50	1.00	---	100	80-120%	---	---	
Toluene	0.923	---	0.0500	mg/kg wet	50	1.00	---	92	80-120%	---	---	
1,2,3-Trichlorobenzene	0.980	---	0.250	mg/kg wet	50	1.00	---	98	80-120%	---	---	
1,2,4-Trichlorobenzene	0.962	---	0.250	mg/kg wet	50	1.00	---	96	80-120%	---	---	
1,1,1-Trichloroethane	0.926	---	0.0250	mg/kg wet	50	1.00	---	93	80-120%	---	---	
1,1,2-Trichloroethane	0.969	---	0.0250	mg/kg wet	50	1.00	---	97	80-120%	---	---	
Trichloroethene (TCE)	0.973	---	0.0250	mg/kg wet	50	1.00	---	97	80-120%	---	---	
Trichlorofluoromethane	0.724	---	0.100	mg/kg wet	50	1.00	---	<b>72</b>	<b>80-120%</b>	---	---	Q-55
1,2,3-Trichloropropane	0.992	---	0.0500	mg/kg wet	50	1.00	---	99	80-120%	---	---	
1,2,4-Trimethylbenzene	0.954	---	0.0500	mg/kg wet	50	1.00	---	95	80-120%	---	---	
1,3,5-Trimethylbenzene	0.986	---	0.0500	mg/kg wet	50	1.00	---	99	80-120%	---	---	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
---	---	---

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0213 - EPA 5035A</b>						<b>Soil</b>						
<b>LCS (23F0213-BS1)</b>			Prepared: 06/07/23 08:38 Analyzed: 06/07/23 09:51									
Vinyl chloride	1.00	---	0.0250	mg/kg wet	50	1.00	---	100	80-120%	---	---	
m,p-Xylene	1.86	---	0.0500	mg/kg wet	50	2.00	---	93	80-120%	---	---	
o-Xylene	0.928	---	0.0250	mg/kg wet	50	1.00	---	93	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		<i>"</i>						

**Duplicate (23F0213-DUP1)** Prepared: 06/01/23 12:00 Analyzed: 06/07/23 17:59

**QC Source Sample: B1-0-3 (A3F0812-01)**

**5035A/8260D**

Acetone	ND	---	2.40	mg/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	0.240	mg/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	---	0.0240	mg/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	---	0.240	mg/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	1.20	mg/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	1.20	mg/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	1.20	mg/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	1.20	mg/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	---	0.601	mg/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	0.240	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	0.601	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

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503-718-2323  
ORELAP ID: OR100062

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
---	---	---

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0213 - EPA 5035A</b>						<b>Soil</b>						
<b>Duplicate (23F0213-DUP1)</b>			Prepared: 06/01/23 12:00 Analyzed: 06/07/23 17:59									
<b>QC Source Sample: B1-0-3 (A3F0812-01)</b>												
1,2-Dichlorobenzene	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	0.240	mg/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	0.240	mg/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	1.20	mg/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	1.20	mg/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MIBK)	ND	---	1.20	mg/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	0.240	mg/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	0.601	mg/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	0.601	mg/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	

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**Apex Laboratories, LLC**

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503-718-2323  
ORELAP ID: OR100062

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
---	---	---

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0213 - EPA 5035A</b>						<b>Soil</b>						
<b>Duplicate (23F0213-DUP1)</b>			Prepared: 06/01/23 12:00 Analyzed: 06/07/23 17:59									
<b>QC Source Sample: B1-0-3 (A3F0812-01)</b>												
1,1,2-Trichloroethane	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	0.240	mg/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	0.120	mg/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	---	0.0601	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>"</i>						

<b>Matrix Spike (23F0213-MS1)</b>						Prepared: 05/26/23 09:45 Analyzed: 06/07/23 16:17						
<b>QC Source Sample: Non-SDG (A3E1848-01)</b>												
<b>5035A/8260D</b>												
Acetone	2.94	---	1.42	mg/kg dry	50	2.84	ND	103	36-164%	---	---	
Acrylonitrile	1.33	---	0.142	mg/kg dry	50	1.42	ND	94	65-134%	---	---	
Benzene	1.40	---	0.0142	mg/kg dry	50	1.42	ND	98	77-121%	---	---	
Bromobenzene	1.39	---	0.0355	mg/kg dry	50	1.42	ND	98	78-121%	---	---	
Bromochloromethane	1.44	---	0.0711	mg/kg dry	50	1.42	ND	102	78-125%	---	---	
Bromodichloromethane	1.27	---	0.0711	mg/kg dry	50	1.42	ND	89	75-127%	---	---	
Bromoform	1.04	---	0.142	mg/kg dry	50	1.42	ND	73	67-132%	---	---	Q-54d
Bromomethane	1.61	---	0.711	mg/kg dry	50	1.42	ND	113	53-143%	---	---	
2-Butanone (MEK)	2.87	---	0.711	mg/kg dry	50	2.84	ND	101	51-148%	---	---	
n-Butylbenzene	1.59	---	0.0711	mg/kg dry	50	1.42	ND	112	70-128%	---	---	
sec-Butylbenzene	1.54	---	0.0711	mg/kg dry	50	1.42	ND	109	73-126%	---	---	
tert-Butylbenzene	1.54	---	0.0711	mg/kg dry	50	1.42	ND	108	73-125%	---	---	
Carbon disulfide	1.34	---	0.711	mg/kg dry	50	1.42	ND	94	63-132%	---	---	
Carbon tetrachloride	1.16	---	0.0711	mg/kg dry	50	1.42	ND	82	70-135%	---	---	Q-54c
Chlorobenzene	1.41	---	0.0355	mg/kg dry	50	1.42	ND	99	79-120%	---	---	
Chloroethane	1.64	---	0.711	mg/kg dry	50	1.42	ND	116	59-139%	---	---	
Chloroform	1.39	---	0.0711	mg/kg dry	50	1.42	ND	98	78-123%	---	---	

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Darwin Thomas, Business Development Director



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<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0213 - EPA 5035A</b>						<b>Soil</b>						
<b>Matrix Spike (23F0213-MS1)</b>			Prepared: 05/26/23 09:45 Analyzed: 06/07/23 16:17									
<b>QC Source Sample: Non-SDG (A3E1848-01)</b>												
Chloromethane	1.23	---	0.355	mg/kg dry	50	1.42	ND	86	50-136%	---	---	
2-Chlorotoluene	1.45	---	0.0711	mg/kg dry	50	1.42	ND	102	75-122%	---	---	
4-Chlorotoluene	1.44	---	0.0711	mg/kg dry	50	1.42	ND	102	72-124%	---	---	
Dibromochloromethane	1.28	---	0.142	mg/kg dry	50	1.42	ND	90	74-126%	---	---	
1,2-Dibromo-3-chloropropane	1.15	---	0.355	mg/kg dry	50	1.42	ND	81	61-132%	---	---	Q-54b
1,2-Dibromoethane (EDB)	1.38	---	0.0711	mg/kg dry	50	1.42	ND	97	78-122%	---	---	
Dibromomethane	1.41	---	0.0711	mg/kg dry	50	1.42	ND	99	78-125%	---	---	
1,2-Dichlorobenzene	1.43	---	0.0355	mg/kg dry	50	1.42	ND	101	78-121%	---	---	
1,3-Dichlorobenzene	1.43	---	0.0355	mg/kg dry	50	1.42	ND	101	77-121%	---	---	
1,4-Dichlorobenzene	1.38	---	0.0355	mg/kg dry	50	1.42	ND	97	75-120%	---	---	
Dichlorodifluoromethane	1.56	---	0.142	mg/kg dry	50	1.42	ND	109	29-149%	---	---	
1,1-Dichloroethane	1.42	---	0.0355	mg/kg dry	50	1.42	ND	100	76-125%	---	---	
1,2-Dichloroethane (EDC)	1.51	---	0.0355	mg/kg dry	50	1.42	ND	106	73-128%	---	---	
1,1-Dichloroethene	1.55	---	0.0355	mg/kg dry	50	1.42	ND	109	70-131%	---	---	
cis-1,2-Dichloroethene	1.45	---	0.0355	mg/kg dry	50	1.42	ND	102	77-123%	---	---	
trans-1,2-Dichloroethene	1.43	---	0.0355	mg/kg dry	50	1.42	ND	101	74-125%	---	---	
1,2-Dichloropropane	1.36	---	0.0355	mg/kg dry	50	1.42	ND	96	76-123%	---	---	
1,3-Dichloropropane	1.44	---	0.0711	mg/kg dry	50	1.42	ND	101	77-121%	---	---	
2,2-Dichloropropane	1.18	---	0.0711	mg/kg dry	50	1.42	ND	83	67-133%	---	---	
1,1-Dichloropropene	1.53	---	0.0711	mg/kg dry	50	1.42	ND	107	76-125%	---	---	
cis-1,3-Dichloropropene	1.28	---	0.0711	mg/kg dry	50	1.42	ND	90	74-126%	---	---	
trans-1,3-Dichloropropene	1.18	---	0.0711	mg/kg dry	50	1.42	ND	83	71-130%	---	---	
Ethylbenzene	1.40	---	0.0355	mg/kg dry	50	1.42	ND	99	76-122%	---	---	
Hexachlorobutadiene	1.88	---	0.142	mg/kg dry	50	1.42	ND	132	61-135%	---	---	
2-Hexanone	2.87	---	0.711	mg/kg dry	50	2.84	ND	101	53-145%	---	---	
Isopropylbenzene	1.52	---	0.0711	mg/kg dry	50	1.42	ND	107	68-134%	---	---	
4-Isopropyltoluene	1.57	---	0.0711	mg/kg dry	50	1.42	ND	110	73-127%	---	---	
Methylene chloride	1.39	---	0.711	mg/kg dry	50	1.42	ND	98	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	3.02	---	0.711	mg/kg dry	50	2.84	ND	106	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1.37	---	0.0711	mg/kg dry	50	1.42	ND	97	73-125%	---	---	
Naphthalene	1.60	---	0.142	mg/kg dry	50	1.42	ND	113	62-129%	---	---	
n-Propylbenzene	1.45	---	0.0355	mg/kg dry	50	1.42	ND	102	73-125%	---	---	
Styrene	1.49	---	0.0711	mg/kg dry	50	1.42	ND	105	76-124%	---	---	

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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0213 - EPA 5035A</b>						<b>Soil</b>						
<b>Matrix Spike (23F0213-MS1)</b>			Prepared: 05/26/23 09:45 Analyzed: 06/07/23 16:17									
<b>QC Source Sample: Non-SDG (A3E1848-01)</b>												
1,1,1,2-Tetrachloroethane	1.17	---	0.0355	mg/kg dry	50	1.42	ND	83	78-125%	---	---	
1,1,2,2-Tetrachloroethane	1.40	---	0.0711	mg/kg dry	50	1.42	ND	94	70-124%	---	---	
Tetrachloroethene (PCE)	1.46	---	0.0355	mg/kg dry	50	1.42	ND	103	73-128%	---	---	
Toluene	1.41	---	0.0711	mg/kg dry	50	1.42	0.0611	95	77-121%	---	---	
1,2,3-Trichlorobenzene	1.52	---	0.355	mg/kg dry	50	1.42	ND	107	66-130%	---	---	
1,2,4-Trichlorobenzene	1.47	---	0.355	mg/kg dry	50	1.42	ND	104	67-129%	---	---	
1,1,1-Trichloroethane	1.40	---	0.0355	mg/kg dry	50	1.42	ND	98	73-130%	---	---	
1,1,2-Trichloroethane	1.41	---	0.0355	mg/kg dry	50	1.42	ND	99	78-121%	---	---	
Trichloroethene (TCE)	1.48	---	0.0355	mg/kg dry	50	1.42	ND	104	77-123%	---	---	
Trichlorofluoromethane	7.25	---	0.142	mg/kg dry	50	1.42	ND	<b>510</b>	<b>62-140%</b>	---	---	Q-54e
1,2,3-Trichloropropane	1.41	---	0.0711	mg/kg dry	50	1.42	ND	100	73-125%	---	---	
1,2,4-Trimethylbenzene	1.42	---	0.0711	mg/kg dry	50	1.42	ND	100	75-123%	---	---	
1,3,5-Trimethylbenzene	1.46	---	0.0711	mg/kg dry	50	1.42	ND	103	73-124%	---	---	
Vinyl chloride	1.57	---	0.0355	mg/kg dry	50	1.42	ND	110	56-135%	---	---	
m,p-Xylene	2.84	---	0.0711	mg/kg dry	50	2.84	ND	100	77-124%	---	---	
o-Xylene	1.44	---	0.0355	mg/kg dry	50	1.42	ND	101	77-123%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>"</i>						

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Darwin Thomas, Business Development Director



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<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Polychlorinated Biphenyls by EPA 8082A**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0585 - EPA 3510C (Neutral pH)</b>						<b>Water</b>						
<b>Blank (23F0585-BLK1)</b>						Prepared: 06/16/23 06:59 Analyzed: 06/19/23 08:41						<b>C-07</b>
<u>EPA 8082A</u>												
Aroclor 1016	ND	---	0.100	ug/L	1	---	---	---	---	---	---	
Aroclor 1221	ND	---	0.100	ug/L	1	---	---	---	---	---	---	
Aroclor 1232	ND	---	0.100	ug/L	1	---	---	---	---	---	---	
Aroclor 1242	ND	---	0.100	ug/L	1	---	---	---	---	---	---	
Aroclor 1248	ND	---	0.100	ug/L	1	---	---	---	---	---	---	
Aroclor 1254	ND	---	0.100	ug/L	1	---	---	---	---	---	---	
Aroclor 1260	ND	---	0.100	ug/L	1	---	---	---	---	---	---	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 82 %</i>		<i>Limits: 40-135 %</i>		<i>Dilution: 1x</i>						
<b>LCS (23F0585-BS1)</b>						Prepared: 06/16/23 06:59 Analyzed: 06/19/23 08:58						<b>C-07</b>
<u>EPA 8082A</u>												
Aroclor 1016	1.77	---	0.100	ug/L	1	2.50	---	71	46-129%	---	---	
Aroclor 1260	2.12	---	0.100	ug/L	1	2.50	---	85	45-134%	---	---	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 79 %</i>		<i>Limits: 40-135 %</i>		<i>Dilution: 1x</i>						
<b>LCS Dup (23F0585-BSD1)</b>						Prepared: 06/16/23 06:59 Analyzed: 06/19/23 09:16						<b>C-07, Q-19</b>
<u>EPA 8082A</u>												
Aroclor 1016	1.75	---	0.100	ug/L	1	2.50	---	70	46-129%	1	30%	
Aroclor 1260	1.97	---	0.100	ug/L	1	2.50	---	79	45-134%	7	30%	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 75 %</i>		<i>Limits: 40-135 %</i>		<i>Dilution: 1x</i>						

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<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Polychlorinated Biphenyls by EPA 8082A**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0591 - EPA 3546</b>												
<b>Soil</b>												
<b>Blank (23F0591-BLK1)</b>												
						Prepared: 06/16/23 08:35			Analyzed: 06/16/23 18:10			C-07
<u>EPA 8082A</u>												
Aroclor 1016	ND	---	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1221	ND	---	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1232	ND	---	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1242	ND	---	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1248	ND	---	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1254	ND	---	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1260	ND	---	0.0100	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 93 %</i>		<i>Limits: 60-125 %</i>		<i>Dilution: 1x</i>						
<b>LCS (23F0591-BS1)</b>												
						Prepared: 06/16/23 08:35			Analyzed: 06/16/23 18:28			C-07
<u>EPA 8082A</u>												
Aroclor 1016	0.189	---	0.0100	mg/kg wet	1	0.250	---	75	47-134%	---	---	
Aroclor 1260	0.213	---	0.0100	mg/kg wet	1	0.250	---	85	53-140%	---	---	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 60-125 %</i>		<i>Dilution: 1x</i>						
<b>Duplicate (23F0591-DUP1)</b>												
						Prepared: 06/16/23 08:35			Analyzed: 06/16/23 19:21			C-07
<u>QC Source Sample: Non-SDG (A3F0709-01)</u>												
Aroclor 1016	ND	---	0.00994	mg/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1221	ND	---	0.00994	mg/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1232	ND	---	0.00994	mg/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1242	ND	---	0.00994	mg/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1248	ND	---	0.00994	mg/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1254	ND	---	0.00994	mg/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1260	ND	---	0.00994	mg/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 77 %</i>		<i>Limits: 60-125 %</i>		<i>Dilution: 1x</i>						
<b>Matrix Spike (23F0591-MS1)</b>												
						Prepared: 06/16/23 08:35			Analyzed: 06/16/23 21:43			C-07
<u>QC Source Sample: Non-SDG (A3F1051-01)</u>												
<u>EPA 8082A</u>												
Aroclor 1016	0.237	---	0.0130	mg/kg dry	1	0.324	ND	73	47-134%	---	---	
Aroclor 1260	0.245	---	0.0130	mg/kg dry	1	0.324	ND	76	53-140%	---	---	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 82 %</i>		<i>Limits: 60-125 %</i>		<i>Dilution: 1x</i>						

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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Polychlorinated Biphenyls by EPA 8082A**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0591 - EPA 3546</b>							<b>Soil</b>					

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ORELAP ID: OR100062

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
---	---	---

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Selected Semivolatile Organic Compounds by EPA 8270E**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0233 - EPA 3510C (Acid Extraction)</b>						<b>Water</b>						
<b>Blank (23F0233-BLK1)</b>			Prepared: 06/07/23 12:16 Analyzed: 06/07/23 19:25									
<u>EPA 8270E</u>												
Acenaphthene	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	0.0300	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	0.0300	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	0.0300	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Pentachlorophenol (PCP)	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
2,3,4,6-Tetrachlorophenol	ND	---	0.100	ug/L	1	---	---	---	---	---	---	
2,3,5,6-Tetrachlorophenol	ND	---	0.100	ug/L	1	---	---	---	---	---	---	
2,4,5-Trichlorophenol	ND	---	0.100	ug/L	1	---	---	---	---	---	---	
2,4,6-Trichlorophenol	ND	---	0.100	ug/L	1	---	---	---	---	---	---	
<i>Surr: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>2-Fluorobiphenyl (Surr)</i>		<i>73 %</i>		<i>44-120 %</i>		<i>"</i>						
<i>Phenol-d6 (Surr)</i>		<i>35 %</i>		<i>10-133 %</i>		<i>"</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>97 %</i>		<i>50-134 %</i>		<i>"</i>						
<i>2-Fluorophenol (Surr)</i>		<i>50 %</i>		<i>19-120 %</i>		<i>"</i>						
<i>2,4,6-Tribromophenol (Surr)</i>		<i>77 %</i>		<i>43-140 %</i>		<i>"</i>						

<b>LCS (23F0233-BS1)</b>			Prepared: 06/07/23 12:16 Analyzed: 06/07/23 20:00									
<u>EPA 8270E</u>												
Acenaphthene	3.26	---	0.0800	ug/L	4	4.00	---	82	47-122%	---	---	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
---	---	---

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Selected Semivolatile Organic Compounds by EPA 8270E**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0233 - EPA 3510C (Acid Extraction)</b>						<b>Water</b>						
<b>LCS (23F0233-BS1)</b>			Prepared: 06/07/23 12:16 Analyzed: 06/07/23 20:00									
Acenaphthylene	3.29	---	0.0800	ug/L	4	4.00	---	82	41-130%	---	---	
Anthracene	3.80	---	0.0800	ug/L	4	4.00	---	95	57-123%	---	---	
Benz(a)anthracene	3.83	---	0.0800	ug/L	4	4.00	---	96	58-125%	---	---	
Benzo(a)pyrene	3.52	---	0.120	ug/L	4	4.00	---	88	54-128%	---	---	
Benzo(b)fluoranthene	3.55	---	0.120	ug/L	4	4.00	---	89	53-131%	---	---	
Benzo(k)fluoranthene	3.62	---	0.120	ug/L	4	4.00	---	90	57-129%	---	---	
Benzo(g,h,i)perylene	4.11	---	0.0800	ug/L	4	4.00	---	103	50-134%	---	---	
Chrysene	3.89	---	0.0800	ug/L	4	4.00	---	97	59-123%	---	---	
Dibenz(a,h)anthracene	3.99	---	0.0800	ug/L	4	4.00	---	100	51-134%	---	---	
Fluoranthene	3.95	---	0.0800	ug/L	4	4.00	---	99	57-128%	---	---	
Fluorene	3.79	---	0.0800	ug/L	4	4.00	---	95	52-124%	---	---	
Indeno(1,2,3-cd)pyrene	3.69	---	0.0800	ug/L	4	4.00	---	92	52-134%	---	---	
1-Methylnaphthalene	2.93	---	0.160	ug/L	4	4.00	---	73	41-120%	---	---	
2-Methylnaphthalene	3.02	---	0.160	ug/L	4	4.00	---	75	40-121%	---	---	
Naphthalene	2.78	---	0.160	ug/L	4	4.00	---	69	40-121%	---	---	
Phenanthrene	3.68	---	0.0800	ug/L	4	4.00	---	92	59-120%	---	---	
Pyrene	3.95	---	0.0800	ug/L	4	4.00	---	99	57-126%	---	---	
Pentachlorophenol (PCP)	2.60	---	0.800	ug/L	4	4.00	---	65	35-138%	---	---	
2,3,4,6-Tetrachlorophenol	3.62	---	0.400	ug/L	4	4.00	---	91	50-128%	---	---	
2,3,5,6-Tetrachlorophenol	3.50	---	0.400	ug/L	4	4.00	---	88	50-121%	---	---	
2,4,5-Trichlorophenol	3.88	---	0.400	ug/L	4	4.00	---	97	53-123%	---	---	
2,4,6-Trichlorophenol	3.38	---	0.400	ug/L	4	4.00	---	84	50-125%	---	---	
<i>Surr: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 4x</i>						
<i>2-Fluorobiphenyl (Surr)</i>		<i>80 %</i>		<i>44-120 %</i>		<i>"</i>						
<i>Phenol-d6 (Surr)</i>		<i>35 %</i>		<i>10-133 %</i>		<i>"</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>100 %</i>		<i>50-134 %</i>		<i>"</i>						
<i>2-Fluorophenol (Surr)</i>		<i>51 %</i>		<i>19-120 %</i>		<i>"</i>						
<i>2,4,6-Tribromophenol (Surr)</i>		<i>97 %</i>		<i>43-140 %</i>		<i>"</i>						

<b>LCS Dup (23F0233-BSD1)</b>						Prepared: 06/07/23 12:16 Analyzed: 06/07/23 20:34						<b>Q-19</b>
<b>EPA 8270E</b>												
Acenaphthene	3.61	---	0.0800	ug/L	4	4.00	---	90	47-122%	10	30%	
Acenaphthylene	3.64	---	0.0800	ug/L	4	4.00	---	91	41-130%	10	30%	
Anthracene	3.90	---	0.0800	ug/L	4	4.00	---	97	57-123%	3	30%	

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
---	---	---

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Selected Semivolatile Organic Compounds by EPA 8270E**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0233 - EPA 3510C (Acid Extraction)</b>						<b>Water</b>						
<b>LCS Dup (23F0233-BSD1)</b>						Prepared: 06/07/23 12:16 Analyzed: 06/07/23 20:34						<b>Q-19</b>
Benz(a)anthracene	3.93	---	0.0800	ug/L	4	4.00	---	98	58-125%	3	30%	
Benzo(a)pyrene	3.57	---	0.120	ug/L	4	4.00	---	89	54-128%	2	30%	
Benzo(b)fluoranthene	3.70	---	0.120	ug/L	4	4.00	---	93	53-131%	4	30%	
Benzo(k)fluoranthene	3.67	---	0.120	ug/L	4	4.00	---	92	57-129%	2	30%	
Benzo(g,h,i)perylene	4.18	---	0.0800	ug/L	4	4.00	---	105	50-134%	2	30%	
Chrysene	4.03	---	0.0800	ug/L	4	4.00	---	101	59-123%	4	30%	
Dibenz(a,h)anthracene	4.08	---	0.0800	ug/L	4	4.00	---	102	51-134%	2	30%	
Fluoranthene	3.90	---	0.0800	ug/L	4	4.00	---	97	57-128%	1	30%	
Fluorene	3.98	---	0.0800	ug/L	4	4.00	---	100	52-124%	5	30%	
Indeno(1,2,3-cd)pyrene	3.76	---	0.0800	ug/L	4	4.00	---	94	52-134%	2	30%	
1-Methylnaphthalene	3.28	---	0.160	ug/L	4	4.00	---	82	41-120%	11	30%	
2-Methylnaphthalene	3.41	---	0.160	ug/L	4	4.00	---	85	40-121%	12	30%	
Naphthalene	3.19	---	0.160	ug/L	4	4.00	---	80	40-121%	14	30%	
Phenanthrene	3.80	---	0.0800	ug/L	4	4.00	---	95	59-120%	3	30%	
Pyrene	3.84	---	0.0800	ug/L	4	4.00	---	96	57-126%	3	30%	
Pentachlorophenol (PCP)	2.66	---	0.800	ug/L	4	4.00	---	67	35-138%	3	30%	
2,3,4,6-Tetrachlorophenol	3.75	---	0.400	ug/L	4	4.00	---	94	50-128%	3	30%	
2,3,5,6-Tetrachlorophenol	3.62	---	0.400	ug/L	4	4.00	---	90	50-121%	3	30%	
2,4,5-Trichlorophenol	4.16	---	0.400	ug/L	4	4.00	---	104	53-123%	7	30%	
2,4,6-Trichlorophenol	3.69	---	0.400	ug/L	4	4.00	---	92	50-125%	9	30%	
<i>Surr: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 105 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 4x</i>						
<i>2-Fluorobiphenyl (Surr)</i>		<i>85 %</i>		<i>44-120 %</i>		<i>"</i>						
<i>Phenol-d6 (Surr)</i>		<i>47 %</i>		<i>10-133 %</i>		<i>"</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>103 %</i>		<i>50-134 %</i>		<i>"</i>						
<i>2-Fluorophenol (Surr)</i>		<i>65 %</i>		<i>19-120 %</i>		<i>"</i>						
<i>2,4,6-Tribromophenol (Surr)</i>		<i>100 %</i>		<i>43-140 %</i>		<i>"</i>						

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

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<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Selected Semivolatile Organic Compounds by EPA 8270E**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0325 - EPA 3546</b>						<b>Soil</b>						
<b>Blank (23F0325-BLK2)</b>			Prepared: 06/09/23 08:58 Analyzed: 06/09/23 17:24									
<u>EPA 8270E</u>												
Acenaphthene	ND	---	0.00267	mg/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	0.00267	mg/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	---	0.00267	mg/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	0.00267	mg/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	0.00400	mg/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	0.00400	mg/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	0.00400	mg/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	0.00267	mg/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	---	0.00267	mg/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	0.00267	mg/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	---	0.00267	mg/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	---	0.00267	mg/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	0.00267	mg/kg wet	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	0.00533	mg/kg wet	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	0.00533	mg/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	---	0.00533	mg/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	---	0.00267	mg/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	---	0.00267	mg/kg wet	1	---	---	---	---	---	---	
Carbazole	ND	---	0.00400	mg/kg wet	1	---	---	---	---	---	---	
Dibenzofuran	ND	---	0.00267	mg/kg wet	1	---	---	---	---	---	---	
Pentachlorophenol (PCP)	ND	---	0.0267	mg/kg wet	1	---	---	---	---	---	---	
2,3,4,6-Tetrachlorophenol	ND	---	0.0133	mg/kg wet	1	---	---	---	---	---	---	
2,3,5,6-Tetrachlorophenol	ND	---	0.0133	mg/kg wet	1	---	---	---	---	---	---	
2,4,5-Trichlorophenol	ND	---	0.0133	mg/kg wet	1	---	---	---	---	---	---	
2,4,6-Trichlorophenol	ND	---	0.0133	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: Nitrobenzene-d5 (Surr)</i>			<i>Recovery: 83 %</i>			<i>Limits: 37-122 %</i>						
<i>2-Fluorobiphenyl (Surr)</i>			<i>85 %</i>			<i>44-120 %</i>						
<i>Phenol-d6 (Surr)</i>			<i>93 %</i>			<i>33-122 %</i>						
<i>p-Terphenyl-d14 (Surr)</i>			<i>95 %</i>			<i>54-127 %</i>						<i>Q-41</i>
<i>2-Fluorophenol (Surr)</i>			<i>89 %</i>			<i>35-120 %</i>						
<i>2,4,6-Tribromophenol (Surr)</i>			<i>87 %</i>			<i>39-132 %</i>						

<b>LCS (23F0325-BS2)</b>	Prepared: 06/09/23 08:58 Analyzed: 06/09/23 18:00
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ANALYTICAL REPORT

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ORELAP ID: OR100062

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Selected Semivolatile Organic Compounds by EPA 8270E**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes																								
<b>Batch 23F0325 - EPA 3546</b>						<b>Soil</b>																														
<b>LCS (23F0325-BS2)</b>			Prepared: 06/09/23 08:58 Analyzed: 06/09/23 18:00																																	
<u>EPA 8270E</u>																																				
Acenaphthene	0.500	---	0.0107	mg/kg wet	4	0.533	---	94	40-123%	---	---																									
Acenaphthylene	0.481	---	0.0107	mg/kg wet	4	0.533	---	90	32-132%	---	---																									
Anthracene	0.508	---	0.0107	mg/kg wet	4	0.533	---	95	47-123%	---	---																									
Benz(a)anthracene	0.490	---	0.0107	mg/kg wet	4	0.533	---	92	49-126%	---	---																									
Benzo(a)pyrene	0.481	---	0.0160	mg/kg wet	4	0.533	---	90	45-129%	---	---																									
Benzo(b)fluoranthene	0.463	---	0.0160	mg/kg wet	4	0.533	---	87	45-132%	---	---																									
Benzo(k)fluoranthene	0.492	---	0.0160	mg/kg wet	4	0.533	---	92	47-132%	---	---																									
Benzo(g,h,i)perylene	0.534	---	0.0107	mg/kg wet	4	0.533	---	100	43-134%	---	---																									
Chrysene	0.499	---	0.0107	mg/kg wet	4	0.533	---	94	50-124%	---	---																									
Dibenz(a,h)anthracene	0.515	---	0.0107	mg/kg wet	4	0.533	---	97	45-134%	---	---																									
Fluoranthene	0.525	---	0.0107	mg/kg wet	4	0.533	---	98	50-127%	---	---																									
Fluorene	0.511	---	0.0107	mg/kg wet	4	0.533	---	96	43-125%	---	---																									
Indeno(1,2,3-cd)pyrene	0.483	---	0.0107	mg/kg wet	4	0.533	---	91	45-133%	---	---																									
1-Methylnaphthalene	0.508	---	0.0213	mg/kg wet	4	0.533	---	95	40-120%	---	---																									
2-Methylnaphthalene	0.534	---	0.0213	mg/kg wet	4	0.533	---	100	38-122%	---	---																									
Naphthalene	0.483	---	0.0213	mg/kg wet	4	0.533	---	91	35-123%	---	---																									
Phenanthrene	0.493	---	0.0107	mg/kg wet	4	0.533	---	92	50-121%	---	---																									
Pyrene	0.516	---	0.0107	mg/kg wet	4	0.533	---	97	47-127%	---	---																									
Carbazole	0.553	---	0.0160	mg/kg wet	4	0.533	---	104	50-123%	---	---																									
Dibenzofuran	0.494	---	0.0107	mg/kg wet	4	0.533	---	93	44-120%	---	---																									
Pentachlorophenol (PCP)	0.361	---	0.107	mg/kg wet	4	0.533	---	68	25-133%	---	---																									
2,3,4,6-Tetrachlorophenol	0.484	---	0.0532	mg/kg wet	4	0.533	---	91	44-125%	---	---																									
2,3,5,6-Tetrachlorophenol	0.458	---	0.0532	mg/kg wet	4	0.533	---	86	40-120%	---	---																									
2,4,5-Trichlorophenol	0.490	---	0.0532	mg/kg wet	4	0.533	---	92	41-124%	---	---																									
2,4,6-Trichlorophenol	0.496	---	0.0532	mg/kg wet	4	0.533	---	93	39-126%	---	---																									
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><i>Surr: Nitrobenzene-d5 (Surr)</i></td> <td style="width: 20%;"><i>Recovery: 87 %</i></td> <td style="width: 20%;"><i>Limits: 37-122 %</i></td> <td style="width: 30%;"><i>Dilution: 4x</i></td> </tr> <tr> <td><i>2-Fluorobiphenyl (Surr)</i></td> <td><i>85 %</i></td> <td><i>44-120 %</i></td> <td><i>"</i></td> </tr> <tr> <td><i>Phenol-d6 (Surr)</i></td> <td><i>98 %</i></td> <td><i>33-122 %</i></td> <td><i>"</i></td> </tr> <tr> <td><i>p-Terphenyl-d14 (Surr)</i></td> <td><i>90 %</i></td> <td><i>54-127 %</i></td> <td><i>"</i></td> </tr> <tr> <td><i>2-Fluorophenol (Surr)</i></td> <td><i>91 %</i></td> <td><i>35-120 %</i></td> <td><i>"</i></td> </tr> <tr> <td><i>2,4,6-Tribromophenol (Surr)</i></td> <td><i>97 %</i></td> <td><i>39-132 %</i></td> <td><i>"</i></td> </tr> </table>													<i>Surr: Nitrobenzene-d5 (Surr)</i>	<i>Recovery: 87 %</i>	<i>Limits: 37-122 %</i>	<i>Dilution: 4x</i>	<i>2-Fluorobiphenyl (Surr)</i>	<i>85 %</i>	<i>44-120 %</i>	<i>"</i>	<i>Phenol-d6 (Surr)</i>	<i>98 %</i>	<i>33-122 %</i>	<i>"</i>	<i>p-Terphenyl-d14 (Surr)</i>	<i>90 %</i>	<i>54-127 %</i>	<i>"</i>	<i>2-Fluorophenol (Surr)</i>	<i>91 %</i>	<i>35-120 %</i>	<i>"</i>	<i>2,4,6-Tribromophenol (Surr)</i>	<i>97 %</i>	<i>39-132 %</i>	<i>"</i>
<i>Surr: Nitrobenzene-d5 (Surr)</i>	<i>Recovery: 87 %</i>	<i>Limits: 37-122 %</i>	<i>Dilution: 4x</i>																																	
<i>2-Fluorobiphenyl (Surr)</i>	<i>85 %</i>	<i>44-120 %</i>	<i>"</i>																																	
<i>Phenol-d6 (Surr)</i>	<i>98 %</i>	<i>33-122 %</i>	<i>"</i>																																	
<i>p-Terphenyl-d14 (Surr)</i>	<i>90 %</i>	<i>54-127 %</i>	<i>"</i>																																	
<i>2-Fluorophenol (Surr)</i>	<i>91 %</i>	<i>35-120 %</i>	<i>"</i>																																	
<i>2,4,6-Tribromophenol (Surr)</i>	<i>97 %</i>	<i>39-132 %</i>	<i>"</i>																																	

Q-41

<b>Duplicate (23F0325-DUP2)</b>	Prepared: 06/09/23 08:58 Analyzed: 06/10/23 02:55
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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
---	---	---

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Selected Semivolatile Organic Compounds by EPA 8270E**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0325 - EPA 3546</b>						<b>Soil</b>						
<b>Duplicate (23F0325-DUP2)</b>			Prepared: 06/09/23 08:58 Analyzed: 06/10/23 02:55									
<b>QC Source Sample: Non-SDG (A3F0731-04RE1)</b>												
Acenaphthene	ND	---	0.0285	mg/kg dry	10	---	ND	---	---	---	30%	
Acenaphthylene	ND	---	0.0285	mg/kg dry	10	---	ND	---	---	---	30%	
Anthracene	ND	---	0.0285	mg/kg dry	10	---	ND	---	---	---	30%	Q-17, Q-37
Benz(a)anthracene	<b>0.214</b>	---	0.0285	mg/kg dry	10	---	0.0316	---	---	<b>149</b>	<b>30%</b>	Q-17
Benzo(a)pyrene	<b>0.0917</b>	---	0.0427	mg/kg dry	10	---	0.0418	---	---	<b>75</b>	<b>30%</b>	Q-17
Benzo(b)fluoranthene	<b>0.145</b>	---	0.0427	mg/kg dry	10	---	0.0465	---	---	<b>103</b>	<b>30%</b>	Q-17
Benzo(k)fluoranthene	<b>0.0608</b>	---	0.0427	mg/kg dry	10	---	ND	---	---	---	<b>30%</b>	Q-17, Q-37, M-05
Benzo(g,h,i)perylene	<b>0.0448</b>	---	0.0285	mg/kg dry	10	---	0.0345	---	---	26	30%	
Chrysene	<b>0.297</b>	---	0.0285	mg/kg dry	10	---	0.0565	---	---	<b>136</b>	<b>30%</b>	Q-17
Dibenz(a,h)anthracene	ND	---	0.0285	mg/kg dry	10	---	ND	---	---	---	30%	
Fluoranthene	<b>0.569</b>	---	0.0285	mg/kg dry	10	---	0.0922	---	---	<b>144</b>	<b>30%</b>	Q-17
Fluorene	ND	---	0.0285	mg/kg dry	10	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	<b>0.0434</b>	---	0.0285	mg/kg dry	10	---	0.0288	---	---	<b>41</b>	<b>30%</b>	Q-17
1-Methylnaphthalene	ND	---	0.0569	mg/kg dry	10	---	ND	---	---	---	30%	
2-Methylnaphthalene	ND	---	0.0569	mg/kg dry	10	---	ND	---	---	---	30%	
Naphthalene	ND	---	0.0569	mg/kg dry	10	---	ND	---	---	---	30%	
Phenanthrene	<b>0.0787</b>	---	0.0285	mg/kg dry	10	---	0.0836	---	---	6	30%	
Pyrene	<b>0.494</b>	---	0.0285	mg/kg dry	10	---	0.0983	---	---	<b>134</b>	<b>30%</b>	Q-17
Carbazole	ND	---	0.0427	mg/kg dry	10	---	ND	---	---	---	30%	
Dibenzofuran	ND	---	0.0285	mg/kg dry	10	---	ND	---	---	---	30%	
Pentachlorophenol (PCP)	ND	---	0.285	mg/kg dry	10	---	ND	---	---	---	30%	
2,3,4,6-Tetrachlorophenol	ND	---	0.142	mg/kg dry	10	---	ND	---	---	---	30%	
2,3,5,6-Tetrachlorophenol	ND	---	0.142	mg/kg dry	10	---	ND	---	---	---	30%	
2,4,5-Trichlorophenol	ND	---	0.142	mg/kg dry	10	---	ND	---	---	---	30%	
2,4,6-Trichlorophenol	ND	---	0.142	mg/kg dry	10	---	ND	---	---	---	30%	
<i>Surr: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 80 %</i>		<i>Limits: 37-122 %</i>		<i>Dilution: 10x</i>						
<i>2-Fluorobiphenyl (Surr)</i>		<i>79 %</i>		<i>44-120 %</i>		<i>"</i>						
<i>Phenol-d6 (Surr)</i>		<i>86 %</i>		<i>33-122 %</i>		<i>"</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>97 %</i>		<i>54-127 %</i>		<i>"</i>						
<i>2-Fluorophenol (Surr)</i>		<i>84 %</i>		<i>35-120 %</i>		<i>"</i>						
<i>2,4,6-Tribromophenol (Surr)</i>		<i>93 %</i>		<i>39-132 %</i>		<i>"</i>						

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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ORELAP ID: OR100062

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Selected Semivolatile Organic Compounds by EPA 8270E**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0325 - EPA 3546</b>												
<b>Soil</b>												
<b>Matrix Spike (23F0325-MS2)</b>												
						Prepared: 06/09/23 08:58 Analyzed: 06/09/23 20:26						
<b>QC Source Sample: Non-SDG (A3F0866-01RE2)</b>												
<b>EPA 8270E</b>												
Acenaphthene	0.617	---	0.0131	mg/kg dry	4	0.653	ND	94	40-123%	---	---	
Acenaphthylene	0.592	---	0.0131	mg/kg dry	4	0.653	ND	91	32-132%	---	---	
Anthracene	0.635	---	0.0131	mg/kg dry	4	0.653	ND	97	47-123%	---	---	
Benz(a)anthracene	0.609	---	0.0131	mg/kg dry	4	0.653	ND	93	49-126%	---	---	
Benzo(a)pyrene	0.588	---	0.0196	mg/kg dry	4	0.653	ND	90	45-129%	---	---	
Benzo(b)fluoranthene	0.562	---	0.0196	mg/kg dry	4	0.653	ND	86	45-132%	---	---	
Benzo(k)fluoranthene	0.589	---	0.0196	mg/kg dry	4	0.653	ND	90	47-132%	---	---	
Benzo(g,h,i)perylene	0.673	---	0.0131	mg/kg dry	4	0.653	ND	103	43-134%	---	---	
Chrysene	0.627	---	0.0131	mg/kg dry	4	0.653	ND	96	50-124%	---	---	
Dibenz(a,h)anthracene	0.651	---	0.0131	mg/kg dry	4	0.653	ND	100	45-134%	---	---	
Fluoranthene	0.633	---	0.0131	mg/kg dry	4	0.653	ND	97	50-127%	---	---	
Fluorene	0.627	---	0.0131	mg/kg dry	4	0.653	ND	96	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	0.589	---	0.0131	mg/kg dry	4	0.653	ND	90	45-133%	---	---	
1-Methylnaphthalene	0.638	---	0.0261	mg/kg dry	4	0.653	ND	98	40-120%	---	---	
2-Methylnaphthalene	0.658	---	0.0261	mg/kg dry	4	0.653	ND	101	38-122%	---	---	
Naphthalene	0.598	---	0.0261	mg/kg dry	4	0.653	ND	91	35-123%	---	---	
Phenanthrene	0.617	---	0.0131	mg/kg dry	4	0.653	ND	94	50-121%	---	---	
Pyrene	0.620	---	0.0131	mg/kg dry	4	0.653	ND	95	47-127%	---	---	
Carbazole	0.625	---	0.0196	mg/kg dry	4	0.653	ND	96	50-123%	---	---	
Dibenzofuran	0.605	---	0.0131	mg/kg dry	4	0.653	ND	93	44-120%	---	---	
Pentachlorophenol (PCP)	0.474	---	0.131	mg/kg dry	4	0.653	ND	73	25-133%	---	---	
2,3,4,6-Tetrachlorophenol	0.596	---	0.0652	mg/kg dry	4	0.653	ND	91	44-125%	---	---	
2,3,5,6-Tetrachlorophenol	0.565	---	0.0652	mg/kg dry	4	0.653	ND	86	40-120%	---	---	
2,4,5-Trichlorophenol	0.616	---	0.0652	mg/kg dry	4	0.653	ND	94	41-124%	---	---	
2,4,6-Trichlorophenol	0.624	---	0.0652	mg/kg dry	4	0.653	ND	96	39-126%	---	---	
<i>Surr: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 37-122 %</i>		<i>Dilution: 4x</i>						
<i>2-Fluorobiphenyl (Surr)</i>		<i>95 %</i>		<i>44-120 %</i>		<i>"</i>						
<i>Phenol-d6 (Surr)</i>		<i>116 %</i>		<i>33-122 %</i>		<i>"</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>102 %</i>		<i>54-127 %</i>		<i>"</i>						
<i>2-Fluorophenol (Surr)</i>		<i>100 %</i>		<i>35-120 %</i>		<i>"</i>						
<i>2,4,6-Tribromophenol (Surr)</i>		<i>111 %</i>		<i>39-132 %</i>		<i>"</i>						

Q-41

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Total Metals by EPA 6020B (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0228 - EPA 3015A</b>						<b>Water</b>						
<b>Blank (23F0228-BLK1)</b>			Prepared: 06/07/23 11:25 Analyzed: 06/07/23 20:31									
<u>EPA 6020B</u>												
Arsenic	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Barium	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Chromium	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Selenium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
<b>Blank (23F0228-BLK2)</b>			Prepared: 06/07/23 11:25 Analyzed: 06/08/23 14:16									
<u>EPA 6020B</u>												
Mercury	ND	---	0.0800	ug/L	1	---	---	---	---	---	---	Q-16
Silver	ND	---	0.200	ug/L	1	---	---	---	---	---	---	Q-16
<b>LCS (23F0228-BS1)</b>			Prepared: 06/07/23 11:25 Analyzed: 06/07/23 20:36									
<u>EPA 6020B</u>												
Arsenic	56.9	---	1.00	ug/L	1	55.6	---	102	80-120%	---	---	
Barium	61.4	---	2.00	ug/L	1	55.6	---	111	80-120%	---	---	
Cadmium	57.5	---	0.200	ug/L	1	55.6	---	104	80-120%	---	---	
Chromium	58.1	---	2.00	ug/L	1	55.6	---	105	80-120%	---	---	
Lead	58.7	---	0.200	ug/L	1	55.6	---	106	80-120%	---	---	
Selenium	30.0	---	1.00	ug/L	1	27.8	---	108	80-120%	---	---	
<b>LCS (23F0228-BS2)</b>			Prepared: 06/07/23 11:25 Analyzed: 06/08/23 16:47									
<u>EPA 6020B</u>												
Mercury	1.10	---	0.0800	ug/L	1	1.11	---	99	80-120%	---	---	Q-16
Silver	28.5	---	0.200	ug/L	1	27.8	---	102	80-120%	---	---	Q-16
<b>Duplicate (23F0228-DUP1)</b>			Prepared: 06/07/23 11:25 Analyzed: 06/07/23 21:30									
<u>QC Source Sample: B2-GW (A3F0812-05)</u>												
<u>EPA 6020B</u>												
Arsenic	<b>6.95</b>	---	5.00	ug/L	5	---	7.43	---	---	7	20%	
Barium	<b>794</b>	---	10.0	ug/L	5	---	769	---	---	3	20%	
Cadmium	ND	---	1.00	ug/L	5	---	ND	---	---	---	20%	R-04

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<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
---	---	---

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Total Metals by EPA 6020B (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0228 - EPA 3015A</b>						<b>Water</b>						
<b>Duplicate (23F0228-DUP1)</b>			Prepared: 06/07/23 11:25 Analyzed: 06/07/23 21:30									
<u>QC Source Sample: B2-GW (A3F0812-05)</u>												
Chromium	69.2	---	10.0	ug/L	5	---	67.0	---	---	3	20%	
Lead	9.01	---	1.00	ug/L	5	---	8.49	---	---	6	20%	
Selenium	ND	---	5.00	ug/L	5	---	ND	---	---	---	20%	R-04
<b>Duplicate (23F0228-DUP2)</b>			Prepared: 06/07/23 11:25 Analyzed: 06/08/23 17:07									
<u>QC Source Sample: B2-GW (A3F0812-05RE1)</u>												
<u>EPA 6020B</u>												
Mercury	ND	---	0.400	ug/L	5	---	ND	---	---	---	20%	Q-16, R-04
Silver	ND	---	1.00	ug/L	5	---	ND	---	---	---	20%	Q-16, R-04
<b>Matrix Spike (23F0228-MS1)</b>			Prepared: 06/07/23 11:25 Analyzed: 06/07/23 21:35									
<u>QC Source Sample: B2-GW (A3F0812-05)</u>												
<u>EPA 6020B</u>												
Arsenic	64.0	---	5.00	ug/L	5	55.6	7.43	102	75-125%	---	---	
Barium	847	---	10.0	ug/L	5	55.6	769	141	75-125%	---	---	Q-65
Cadmium	60.7	---	1.00	ug/L	5	55.6	ND	109	75-125%	---	---	
Chromium	129	---	10.0	ug/L	5	55.6	67.0	112	75-125%	---	---	
Lead	65.8	---	1.00	ug/L	5	55.6	8.49	103	75-125%	---	---	
Selenium	29.8	---	5.00	ug/L	5	27.8	ND	107	75-125%	---	---	
<b>Matrix Spike (23F0228-MS2)</b>			Prepared: 06/07/23 11:25 Analyzed: 06/08/23 17:12									
<u>QC Source Sample: B2-GW (A3F0812-05RE1)</u>												
<u>EPA 6020B</u>												
Mercury	1.17	---	0.400	ug/L	5	1.11	ND	105	75-125%	---	---	Q-16
Silver	29.1	---	1.00	ug/L	5	27.8	ND	105	75-125%	---	---	Q-16

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<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
---	---	---

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Total Metals by EPA 6020B (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0478 - EPA 3051A</b>												
<b>Soil</b>												
<b>Blank (23F0478-BLK1)</b>												
						Prepared: 06/14/23 06:50 Analyzed: 06/14/23 15:04						
<u>EPA 6020B</u>												
Arsenic	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	---	0.0800	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
<b>LCS (23F0478-BS1)</b>												
						Prepared: 06/14/23 06:50 Analyzed: 06/14/23 15:09						
<u>EPA 6020B</u>												
Arsenic	45.6	---	1.00	mg/kg wet	10	50.0	---	91	80-120%	---	---	
Barium	49.1	---	1.00	mg/kg wet	10	50.0	---	98	80-120%	---	---	
Cadmium	45.0	---	0.200	mg/kg wet	10	50.0	---	90	80-120%	---	---	
Chromium	44.2	---	1.00	mg/kg wet	10	50.0	---	88	80-120%	---	---	
Lead	51.9	---	0.200	mg/kg wet	10	50.0	---	104	80-120%	---	---	
Mercury	0.973	---	0.0800	mg/kg wet	10	1.00	---	97	80-120%	---	---	
Selenium	23.1	---	1.00	mg/kg wet	10	25.0	---	92	80-120%	---	---	
Silver	23.2	---	0.200	mg/kg wet	10	25.0	---	93	80-120%	---	---	
<b>Duplicate (23F0478-DUP1)</b>												
						Prepared: 06/14/23 06:50 Analyzed: 06/14/23 15:30						
<u>QC Source Sample: Non-SDG (A3F0709-01)</u>												
Arsenic	<b>1.58</b>	---	1.09	mg/kg dry	10	---	0.931	---	---	<b>52</b>	<b>20%</b>	Q-05
Barium	<b>110</b>	---	1.09	mg/kg dry	10	---	61.2	---	---	<b>57</b>	<b>20%</b>	Q-04, Q-39
Cadmium	ND	---	0.217	mg/kg dry	10	---	0.123	---	---	<b>***</b>	<b>20%</b>	
Chromium	<b>6.31</b>	---	1.09	mg/kg dry	10	---	4.70	---	---	<b>29</b>	<b>20%</b>	Q-04, Q-39
Lead	<b>62.9</b>	---	0.217	mg/kg dry	10	---	18.6	---	---	<b>108</b>	<b>20%</b>	Q-04, Q-39
Mercury	ND	---	0.0870	mg/kg dry	10	---	ND	---	---	---	<b>20%</b>	
Selenium	ND	---	1.09	mg/kg dry	10	---	ND	---	---	---	20%	
Silver	ND	---	0.217	mg/kg dry	10	---	ND	---	---	---	20%	
<b>Matrix Spike (23F0478-MS1)</b>												
						Prepared: 06/14/23 06:50 Analyzed: 06/14/23 15:35						

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ANALYTICAL REPORT

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ORELAP ID: OR100062

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Total Metals by EPA 6020B (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0478 - EPA 3051A</b>						<b>Soil</b>						
<b>Matrix Spike (23F0478-MS1)</b>						Prepared: 06/14/23 06:50 Analyzed: 06/14/23 15:35						
<b>QC Source Sample: Non-SDG (A3F0709-01)</b>												
<b>EPA 6020B</b>												
Arsenic	49.1	---	1.04	mg/kg dry	10	52.1	0.931	93	75-125%	---	---	
Barium	153	---	1.04	mg/kg dry	10	52.1	61.2	<b>176</b>	<b>75-125%</b>	---	---	Q-04
Cadmium	47.9	---	0.208	mg/kg dry	10	52.1	0.123	92	75-125%	---	---	
Chromium	52.4	---	1.04	mg/kg dry	10	52.1	4.70	92	75-125%	---	---	
Lead	83.7	---	0.208	mg/kg dry	10	52.1	18.6	125	75-125%	---	---	
Mercury	1.03	---	0.0833	mg/kg dry	10	1.04	ND	99	75-125%	---	---	
Selenium	23.9	---	1.04	mg/kg dry	10	26.0	ND	92	75-125%	---	---	
Silver	24.2	---	0.208	mg/kg dry	10	26.0	ND	93	75-125%	---	---	

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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Dissolved Metals by EPA 6020B (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0411 - Matrix Matched Direct Inject</b>						<b>Water</b>						
<b>Blank (23F0411-BLK1)</b>						Prepared: 06/12/23 13:30 Analyzed: 06/13/23 01:11						
<u>EPA 6020B (Diss)</u>												
Arsenic	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Barium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Chromium	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Mercury	ND	---	0.0800	ug/L	1	---	---	---	---	---	---	
Selenium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
<b>LCS (23F0411-BS1)</b>						Prepared: 06/12/23 13:30 Analyzed: 06/13/23 01:16						
<u>EPA 6020B (Diss)</u>												
Arsenic	55.6	---	1.00	ug/L	1	55.6	---	100	80-120%	---	---	
Barium	58.5	---	1.00	ug/L	1	55.6	---	105	80-120%	---	---	
Cadmium	54.4	---	0.200	ug/L	1	55.6	---	98	80-120%	---	---	
Chromium	54.6	---	2.00	ug/L	1	55.6	---	98	80-120%	---	---	
Lead	59.7	---	0.200	ug/L	1	55.6	---	108	80-120%	---	---	
Mercury	1.10	---	0.0800	ug/L	1	1.11	---	99	80-120%	---	---	
Selenium	28.7	---	1.00	ug/L	1	27.8	---	103	80-120%	---	---	
Silver	27.8	---	0.200	ug/L	1	27.8	---	100	80-120%	---	---	
<b>Duplicate (23F0411-DUP1)</b>						Prepared: 06/12/23 13:30 Analyzed: 06/13/23 01:26						
<u>QC Source Sample: Non-SDG (A3F0735-06)</u>												
Arsenic	<b>5.13</b>	---	1.00	ug/L	1	---	4.99	---	---	3	20%	
Barium	<b>96.3</b>	---	1.00	ug/L	1	---	95.9	---	---	0.4	20%	
Cadmium	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	
Chromium	ND	---	2.00	ug/L	1	---	ND	---	---	---	20%	
Lead	<b>0.247</b>	---	0.200	ug/L	1	---	0.246	---	---	0.3	20%	
Mercury	ND	---	0.0800	ug/L	1	---	ND	---	---	---	20%	
Selenium	ND	---	1.00	ug/L	1	---	ND	---	---	---	20%	
Silver	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	
<b>Matrix Spike (23F0411-MS1)</b>						Prepared: 06/12/23 13:30 Analyzed: 06/13/23 01:31						

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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Dissolved Metals by EPA 6020B (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 23F0411 - Matrix Matched Direct Inject</b>						<b>Water</b>						
<b>Matrix Spike (23F0411-MS1)</b>						Prepared: 06/12/23 13:30 Analyzed: 06/13/23 01:31						
<b>QC Source Sample: Non-SDG (A3F0735-06)</b>												
<b>EPA 6020B (Diss)</b>												
Arsenic	61.3	---	1.00	ug/L	1	55.6	4.99	101	75-125%	---	---	
Barium	153	---	1.00	ug/L	1	55.6	95.9	103	75-125%	---	---	
Cadmium	55.4	---	0.200	ug/L	1	55.6	ND	100	75-125%	---	---	
Chromium	54.9	---	2.00	ug/L	1	55.6	ND	99	75-125%	---	---	
Lead	57.9	---	0.200	ug/L	1	55.6	0.246	104	75-125%	---	---	
Mercury	1.10	---	0.0800	ug/L	1	1.11	ND	99	75-125%	---	---	
Selenium	30.0	---	1.00	ug/L	1	27.8	ND	108	75-125%	---	---	
Silver	27.1	---	0.200	ug/L	1	27.8	ND	98	75-125%	---	---	

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**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
<b>Batch 23F0189 - Total Solids (Dry Weight) - 2022</b>						<b>Soil</b>						
<b>Duplicate (23F0189-DUP1)</b>			Prepared: 06/06/23 13:56 Analyzed: 06/07/23 06:26									
<u>QC Source Sample: Non-SDG (A3F0805-01)</u>												
% Solids	81.2	---	1.00	%	1	---	82.3	---	---	1	10%	
<b>Duplicate (23F0189-DUP2)</b>			Prepared: 06/06/23 13:56 Analyzed: 06/07/23 06:26									
<u>QC Source Sample: Non-SDG (A3F0805-03)</u>												
% Solids	87.6	---	1.00	%	1	---	87.4	---	---	0.2	10%	
<b>Duplicate (23F0189-DUP3)</b>			Prepared: 06/06/23 17:43 Analyzed: 06/07/23 06:26									
<u>QC Source Sample: Non-SDG (A3F0832-01)</u>												
% Solids	78.7	---	1.00	%	1	---	78.6	---	---	0.1	10%	
<b>Duplicate (23F0189-DUP4)</b>			Prepared: 06/06/23 17:43 Analyzed: 06/07/23 06:26									
<u>QC Source Sample: Non-SDG (A3F0847-04)</u>												
% Solids	93.8	---	1.00	%	1	---	93.7	---	---	0.1	10%	
<b>Duplicate (23F0189-DUP5)</b>			Prepared: 06/06/23 18:32 Analyzed: 06/07/23 06:26									
<u>QC Source Sample: Non-SDG (A3F0858-01)</u>												
% Solids	71.7	---	1.00	%	1	---	72.1	---	---	0.5	10%	
<b>Duplicate (23F0189-DUP6)</b>			Prepared: 06/06/23 18:32 Analyzed: 06/07/23 06:26									
<u>QC Source Sample: Non-SDG (A3F0858-02)</u>												
% Solids	77.6	---	1.00	%	1	---	77.7	---	---	0.1	10%	

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

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**SAMPLE PREPARATION INFORMATION**

**Diesel and/or Oil Hydrocarbons by NWTPH-Dx with Silica Gel Column Cleanup**

Prep: EPA 3510C (Fuels/Acid Ext.) w/Silica Gel Column

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23F0557</u>							
A3F0812-05	Water	NWTPH-Dx/SGC	06/02/23 10:00	06/15/23 11:36	950mL/2mL	1000mL/2mL	1.05
A3F0812-06	Water	NWTPH-Dx/SGC	06/02/23 11:30	06/15/23 11:36	800mL/2mL	1000mL/2mL	1.25

Prep: EPA 3546 w/SGC (3630C)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23F0578</u>							
A3F0812-01	Soil	NWTPH-Dx/SGC	06/01/23 12:00	06/15/23 17:54	10.78g/5mL	10g/5mL	0.93
A3F0812-02	Soil	NWTPH-Dx/SGC	06/01/23 10:55	06/15/23 17:54	10.95g/5mL	10g/5mL	0.91
A3F0812-03	Soil	NWTPH-Dx/SGC	06/01/23 10:15	06/15/23 17:54	10.26g/5mL	10g/5mL	0.98
A3F0812-04	Soil	NWTPH-Dx/SGC	06/01/23 09:35	06/15/23 17:54	10.39g/5mL	10g/5mL	0.96
A3F0812-07	Soil	NWTPH-Dx/SGC	06/01/23 10:20	06/15/23 17:54	10.6g/5mL	10g/5mL	0.94

**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: 23F0159</u>							
A3F0812-05	Water	NWTPH-Gx (MS)	06/02/23 10:00	06/06/23 10:55	5mL/5mL	5mL/5mL	1.00
A3F0812-06	Water	NWTPH-Gx (MS)	06/02/23 11:30	06/06/23 10:55	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: 23F0213</u>							
A3F0812-01	Soil	NWTPH-Gx (MS)	06/01/23 12:00	06/01/23 12:00	3.85g/5mL	5g/5mL	1.30
A3F0812-02	Soil	NWTPH-Gx (MS)	06/01/23 10:55	06/01/23 10:55	4.03g/5mL	5g/5mL	1.24
A3F0812-03	Soil	NWTPH-Gx (MS)	06/01/23 10:15	06/01/23 10:15	5g/5mL	5g/5mL	1.00
A3F0812-04	Soil	NWTPH-Gx (MS)	06/01/23 09:35	06/01/23 09:35	6.42g/5mL	5g/5mL	0.78
A3F0812-07	Soil	NWTPH-Gx (MS)	06/01/23 10:20	06/01/23 10:20	4.73g/5mL	5g/5mL	1.06

**Volatile Organic Compounds by EPA 8260D**

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23F0159</u>							
A3F0812-05	Water	EPA 8260D	06/02/23 10:00	06/06/23 10:55	5mL/5mL	5mL/5mL	1.00
A3F0812-06	Water	EPA 8260D	06/02/23 11:30	06/06/23 10:55	5mL/5mL	5mL/5mL	1.00

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**SAMPLE PREPARATION INFORMATION**

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5030C					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
A3F0812-08	Water	EPA 8260D	06/05/23 14:00	06/06/23 10:55	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<b>Batch: 23F0213</b>							
A3F0812-01	Soil	5035A/8260D	06/01/23 12:00	06/01/23 12:00	3.85g/5mL	5g/5mL	1.30
A3F0812-02	Soil	5035A/8260D	06/01/23 10:55	06/01/23 10:55	4.03g/5mL	5g/5mL	1.24
A3F0812-03	Soil	5035A/8260D	06/01/23 10:15	06/01/23 10:15	5g/5mL	5g/5mL	1.00
A3F0812-04	Soil	5035A/8260D	06/01/23 09:35	06/01/23 09:35	6.42g/5mL	5g/5mL	0.78
A3F0812-07	Soil	5035A/8260D	06/01/23 10:20	06/01/23 10:20	4.73g/5mL	5g/5mL	1.06

Polychlorinated Biphenyls by EPA 8082A

Prep: EPA 3510C (Neutral pH)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<b>Batch: 23F0585</b>							
A3F0812-05	Water	EPA 8082A	06/02/23 10:00	06/16/23 06:59	960mL/5mL	1000mL/5mL	1.04

Prep: EPA 3546					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<b>Batch: 23F0591</b>							
A3F0812-01	Soil	EPA 8082A	06/01/23 12:00	06/16/23 08:35	10.65g/5mL	10g/5mL	0.94
A3F0812-02	Soil	EPA 8082A	06/01/23 10:55	06/16/23 08:35	10.06g/5mL	10g/5mL	0.99
A3F0812-03	Soil	EPA 8082A	06/01/23 10:15	06/16/23 08:35	10.21g/5mL	10g/5mL	0.98
A3F0812-04	Soil	EPA 8082A	06/01/23 09:35	06/16/23 08:35	10.4g/5mL	10g/5mL	0.96
A3F0812-07	Soil	EPA 8082A	06/01/23 10:20	06/16/23 08:35	10.13g/5mL	10g/5mL	0.99

Selected Semivolatile Organic Compounds by EPA 8270E

Prep: EPA 3510C (Acid Extraction)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<b>Batch: 23F0233</b>							
A3F0812-05RE1	Water	EPA 8270E	06/02/23 10:00	06/07/23 12:16	1020mL/1mL	1000mL/1mL	0.98

Prep: EPA 3546					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor

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**SAMPLE PREPARATION INFORMATION**

Selected Semivolatile Organic Compounds by EPA 8270E

Prep: EPA 3546					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 23F0325</u>							
A3F0812-01RE1	Soil	EPA 8270E	06/01/23 12:00	06/09/23 08:58	15.02g/2mL	15g/2mL	1.00
A3F0812-02RE1	Soil	EPA 8270E	06/01/23 10:55	06/09/23 08:58	10.12g/2mL	15g/2mL	1.48
A3F0812-03RE1	Soil	EPA 8270E	06/01/23 10:15	06/09/23 08:58	15.11g/2mL	15g/2mL	0.99
A3F0812-04RE1	Soil	EPA 8270E	06/01/23 09:35	06/09/23 08:58	15.03g/2mL	15g/2mL	1.00
A3F0812-07RE1	Soil	EPA 8270E	06/01/23 10:20	06/09/23 08:58	15.4g/2mL	15g/2mL	0.97

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3015A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 23F0228</u>							
A3F0812-05	Water	EPA 6020B	06/02/23 10:00	06/07/23 11:25	45mL/50mL	45mL/50mL	1.00
A3F0812-05RE1	Water	EPA 6020B	06/02/23 10:00	06/07/23 11:25	45mL/50mL	45mL/50mL	1.00

Prep: EPA 3051A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 23F0478</u>							
A3F0812-01	Soil	EPA 6020B	06/01/23 12:00	06/14/23 06:50	0.481g/50mL	0.5g/50mL	1.04
A3F0812-02	Soil	EPA 6020B	06/01/23 10:55	06/14/23 06:50	0.486g/50mL	0.5g/50mL	1.03
A3F0812-03	Soil	EPA 6020B	06/01/23 10:15	06/14/23 06:50	0.453g/50mL	0.5g/50mL	1.10
A3F0812-04	Soil	EPA 6020B	06/01/23 09:35	06/14/23 06:50	0.508g/50mL	0.5g/50mL	0.98
A3F0812-07	Soil	EPA 6020B	06/01/23 10:20	06/14/23 06:50	0.507g/50mL	0.5g/50mL	0.99

Dissolved Metals by EPA 6020B (ICPMS)

Prep: Matrix Matched Direct Inject					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 23F0411</u>							
A3F0812-05	Water	EPA 6020B (Diss)	06/02/23 10:00	06/12/23 13:30	45mL/50mL	45mL/50mL	1.00

Percent Dry Weight

Prep: Total Solids (Dry Weight) - 2022					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 23F0189</u>							
A3F0812-01	Soil	EPA 8000D	06/01/23 12:00	06/06/23 13:56			NA

Apex Laboratories

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Darwin Thomas, Business Development Director



**ANALYTICAL REPORT**

**Apex Laboratories, LLC**

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

<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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**SAMPLE PREPARATION INFORMATION**

**Percent Dry Weight**

Prep: Total Solids (Dry Weight) - 2022

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A3F0812-02	Soil	EPA 8000D	06/01/23 10:55	06/06/23 13:56			NA
A3F0812-03	Soil	EPA 8000D	06/01/23 10:15	06/06/23 13:56			NA
A3F0812-04	Soil	EPA 8000D	06/01/23 09:35	06/06/23 13:56			NA
A3F0812-07	Soil	EPA 8000D	06/01/23 10:20	06/06/23 13:56			NA

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503-718-2323  
ORELAP ID: OR100062

**Alpine Environmental Consultants**

12210 Antioch Road  
White City, OR 97503

Project: **11th Street**

Project Number: **AEC2023-14**

Project Manager: **Jonathan Williams**

**Report ID:**

**A3F0812 - 07 06 23 0807**

**QUALIFIER DEFINITIONS**

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

**Apex Laboratories**

- C-07** Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.
- CONT** The Sample Container provided for this analysis was not provided by Apex Laboratories, and has not been verified as part of the Apex Quality System.
- 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.
- M-05** Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
- P-09** Due to weathering and/or the presence of an unknown mixture of PCB Congeners, the pattern does not match the standard used for calibration. Results are Estimated and based on the closest matching Aroclor.
- P-12** Result estimated due to the presence of multiple PCB Aroclors and/or PCB congeners not defined as Aroclors.
- PRES** Incomplete field preservation. Additional preservative was added to adjust the pH within the appropriate range for this analysis.
- Q-03** Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
- Q-04** Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-16** Reanalysis of an original Batch QC sample.
- Q-17** RPD between original and duplicate sample is outside of established control limits.
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- Q-37** Sample is non-homogenous. Sample results are less than the Reporting Level (MDL and/or MRL) and Duplicate results exceed this level. See QC Section of the report for Duplicate results.
- Q-39** Results for sample duplicate are significantly higher than the sample results. See duplicate results in QC section of the report.
- Q-41** Estimated Results. Recovery of Continuing Calibration Verification sample above upper control limit for this analyte. Results are likely biased high.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +3%. 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 +5%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -1%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -4%. The results are reported as Estimated Values.

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503-718-2323  
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<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <b>11th Street</b> Project Number: <b>AEC2023-14</b> Project Manager: <b>Jonathan Williams</b>	<b>Report ID:</b> <b>A3F0812 - 07 06 23 0807</b>
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- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -7%. The results are reported as Estimated Values.
- Q-54e** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -8%. The results are reported as Estimated Values.
- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- Q-65** Spike recovery is estimated due to the high analyte concentration of the source sample.
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- R-04** Reporting levels elevated due to preparation and/or analytical dilution necessary for analysis.

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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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**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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<b>Alpine Environmental Consultants</b> 12210 Antioch Road White City, OR 97503	Project: <u>11th Street</u> Project Number: <u>AEC2023-14</u> Project Manager: <u>Jonathan Williams</u>	<b>Report ID:</b> <u>A3F0812 - 07 06 23 0807</u>
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**APEX LABS COOLER RECEIPT FORM**

Client: Alpine Env Consultant Element WO#: A3F0812

Project/Project #: 11th St / AEC2023-14

**Delivery Info:**  
 Date/time received: 6-6-23 @ 10:34 By: DJS  
 Delivered by: Apex  Client  ESS  FedEx  UPS  Radio  Morgan  SDS  Evergreen  Other

**Cooler Inspection** Date/time inspected: 6-6-23 @ 10:35 By: DJS

Chain 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>4.4</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: 6/6/23 @ 11:17 By: ZAM

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  ZAM 6/6/23

Comments 3/3 for B2-GW has sed

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

Comments: \_\_\_\_\_

**Additional information:** 3992 3748 0601  
Non Apex TB

Labeled by: ZAM      Witness: DJS      Cooler Inspected by: ZAM

Form Y-003 R-00

Apex Laboratories

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Darwin Thomas, Business Development Director



**CERES Analytical Laboratory, Inc.**

4919 Windplay Dr, Suite 1, El Dorado Hills, CA 95762



June 17, 2023

Ceres ID: 16433

Alpine Environmental Consultants  
12210 Antioch Rd.  
White City, OR 97503

The following report contains the results for the five soil and 2 aqueous samples received on June 6, 2023. These samples were analyzed for tetra through octa chlorinated dioxins and dibenzofurans by EPA method 1613. Standard 2-week turn-around time was provided for this work.

Soil sample results are reported on a dry weight basis.

This work was authorized under your PO# AEC2023-14.

**Continuing Calibration Verification (CCV) Requirements**

All associated calibration verification standard(s) (CCV) met the acceptance criteria.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,

James M. Hedin  
Director of Operations/CEO  
[jhedin@ceres-lab.com](mailto:jhedin@ceres-lab.com)

## Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date &amp; Time</u>
16433-001	B1-0-3	6/6/2023	6/1/2023 12:00
16433-002	B2-0-3	6/6/2023	6/1/2023 10:55
16433-003	B3-0-3	6/6/2023	6/1/2023 10:15
16433-004	B3-9.5-10	6/6/2023	6/1/2023 10:20
16433-005	B4-0-3	6/6/2023	6/1/2023 9:35
16433-006	B2-GW	6/6/2023	6/2/2023 10:00
16433-007	B5-GW	6/6/2023	6/2/2023 11:30

## **Section II: Data Summary**



### EPA Method 1613B

<b>Quality Assurance Sample Method Blank</b>  <b>Project ID:</b> AEC2023-14	<b>QC Batch #:</b> 2887 <b>Matrix:</b> Soil <b>Sample Size:</b> 10.00 g	<b>Date Received:</b> NA <b>Date Extracted:</b> 6/8/2023 <b>Date Analyzed:</b> 6/13/2023
---	---	--

Analyte	Conc. (pg/g)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 0.364	0.172	0.500		13C-2378-TCDD	85.5	25-164	
12378-PeCDD	DL= 1.29	0.327	2.50		13C-12378-PeCDD	98.1	25-181	
123478-HxCDD	DL= 1.95	0.327	2.50		13C-123478-HxCDD	81.5	32-141	
123678-HxCDD	DL= 1.56	0.655	2.50		13C-123678-HxCDD	101	28-130	
123789-HxCDD	DL= 1.54	0.315	2.50		13C-1234678-HpCDD	85.4	23-140	
1234678-HpCDD	DL= 1.54	0.409	2.50		13C-OCDD	86.5	17-157	
OCDD	DL= 2.27	1.01	5.00		13C-2378-TCDF	81.9	24-169	
2,3,7,8-TCDF	DL= 0.257	0.0886	0.500		13C-12378-PeCDF	101	24-185	
12378-PeCDF	DL= 0.558	0.412	2.50		13C-23478-PeCDF	97.6	21-178	
23478-PeCDF	DL= 0.549	0.422	2.50		13C-123478-HxCDF	83.8	26-152	
123478-HxCDF	DL= 1.39	0.518	2.50		13C-123678-HxCDF	105	26-123	
123678-HxCDF	DL= 1.18	0.533	2.50		13C-234678-HxCDF	93.1	28-136	
234678-HxCDF	DL= 1.55	0.319	2.50		13C-123789-HxCDF	102	29-147	
123789-HxCDF	DL= 1.82	0.425	2.50		13C-1234678-HpCDF	96.1	28-143	
1234678-HpCDF	DL= 1.62	0.279	2.50		13C-1234789-HpCDF	95.4	26-138	
1234789-HpCDF	DL= 1.58	0.378	2.50					
OCDF	DL= 2.98	0.461	5.00					
<b>Totals</b>	<b>Conc. (pg/g)</b>	<b>EMPC</b>			<b>CRS</b>			
Total TCDD	DL= 0.364				37Cl4-2378-TCDD	97.1	35-197	
Total PeCDD	DL= 1.29							
Total HxCDD	DL= 1.95							DL - Signifies Non-Detect (ND<) sample specific detection limit.
Total HpCDD	DL= 1.54							EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.
Total TCDF	DL= 0.257							(a) - Lower control limit - Upper control limit
Total PeCDF	DL= 0.558							(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.
Total HxCDF	DL= 1.82							
Total HpCDF	DL= 1.62							

<b>Total Toxic Equivalency (TEQ min.) (b):</b>	0.0 pg/g
--	----------

Analyst: JMH

Reviewed by: BS



### EPA Method 1613B

<b>Quality Assurance Sample</b> <b>Ongoing Precision and Recovery</b>	<b>QC Batch #:</b> 2887 <b>Matrix:</b> Soil <b>Sample Size:</b> 10.00 g	<b>Date Received:</b> NA <b>Date Extracted:</b> 6/8/2023 <b>Date Analyzed:</b> 6/13/2023
<b>Project ID:</b> AEC2023-14		

Analyte	Conc. (ng/mL)	Limits (a)	Labeled Standards	% Rec.	Limits (a)
2,3,7,8-TCDD	9.63	6.7-15.8	13C-2378-TCDD	69.0	20-175
12378-PeCDD	44.9	35-71	13C-12378-PeCDD	69.0	21-227
123478-HxCDD	50.8	35-82	13C-123478-HxCDD	73.1	21-193
123678-HxCDD	42.7	38-67	13C-123678-HxCDD	102	25-163
123789-HxCDD	42.7	32-81	13C-1234678-HpCDD	70.6	26-166
1234678-HpCDD	52.0	35-70	13C-OCDD	72.6	13-198
OCDD	100	78-144	13C-2378-TCDF	66.3	22-152
2,3,7,8-TCDF	10.8	7.5-15.8	13C-12378-PeCDF	73.8	21-192
12378-PeCDF	43.5	40-67	13C-23478-PeCDF	66.1	13-328
23478-PeCDF	50.4	34-80	13C-123478-HxCDF	68.7	19-202
123478-HxCDF	45.9	36-67	13C-123678-HxCDF	82.6	21-159
123678-HxCDF	47.3	42-65	13C-234678-HxCDF	80.0	22-176
234678-HxCDF	45.8	35-78	13C-123789-HxCDF	75.6	17-205
123789-HxCDF	52.7	39-65	13C-1234678-HpCDF	66.7	21-158
1234678-HpCDF	54.4	41-61	13C-1234789-HpCDF	68.0	20-186
1234789-HpCDF	58.8	39-69			
OCDF	110	63-170			
			<b>CRS</b>		
			37Cl4-2378-TCDD	98.0	31-191
(a) Limits based on method acceptance criteria.					

Analyst: JMH

Reviewed by: BS



### EPA Method 1613B

<b>Client Sample ID:</b> B1-0-3		
<b>Project ID:</b> AEC2023-14	<b>Ceres Sample ID:</b> 16433-001	<b>Date Received:</b> 6/6/2023
<b>Date Collected:</b> 6/1/2023	<b>QC Batch #:</b> 2887	<b>Date Extracted:</b> 6/8/2023
<b>Time Collected:</b> 12:00 PM	<b>Matrix:</b> Soil	<b>Date Analyzed:</b> 6/13/2023
	<b>Sample Size:</b> 14.41 g	<b>% Solids:</b> 70.7

Analyte	Conc. (pg/g)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	119	0.172	0.491		13C-2378-TCDD	74.1	25-164	
12378-PeCDD	539	0.327	2.45		13C-12378-PeCDD	80.1	25-181	
123478-HxCDD	1,240	0.327	2.45		13C-123478-HxCDD	77.2	32-141	
123678-HxCDD	7,200	0.655	2.45	E	13C-123678-HxCDD	98.6	28-130	
123789-HxCDD	3,400	0.315	2.45	E	13C-1234678-HpCDD	65.3	23-140	
1234678-HpCDD	141,000	0.409	2.45	E	13C-OCDD	35.5	17-157	
OCDD	444,000	1.01	4.91	E	13C-2378-TCDF	70.6	24-169	
2,3,7,8-TCDF	181	0.0886	0.491		13C-12378-PeCDF	79.2	24-185	
12378-PeCDF	399	0.412	2.45		13C-23478-PeCDF	79.7	21-178	
23478-PeCDF	1,040	0.422	2.45		13C-123478-HxCDF	85.6	26-152	
123478-HxCDF	1,990	0.518	2.45	E	13C-123678-HxCDF	97.6	26-123	
123678-HxCDF	2,040	0.533	2.45	E	13C-234678-HxCDF	90.6	28-136	
234678-HxCDF	1,910	0.319	2.45		13C-123789-HxCDF	102	29-147	
123789-HxCDF	743	0.425	2.45		13C-1234678-HpCDF	70.1	28-143	
1234678-HpCDF	21,500	0.279	2.45	E	13C-1234789-HpCDF	93.1	26-138	
1234789-HpCDF	1,660	0.378	2.45					
OCDF	39,800	0.461	4.91	E				
<b>Totals</b>	<b>Conc. (pg/g)</b>	<b>EMPC</b>			<b>CRS</b>			
Total TCDD	8120				37CI4-2378-TCDD	124	35-197	
Total PeCDD	16,700							
Total HxCDD	69,000							DL - Signifies Non-Detect (ND<) sample specific detection limit.
Total HpCDD	235,000							EMPC - Estimated Maximum Possible Concentration due to ion abundance
Total TCDF	11,100			X				ratio failure.
Total PeCDF	23,800			X				(a) - Lower control limit - Upper control limit
Total HxCDF	45,700			X				(b) - TEQ based on (2005) World Health Organization (WHO) Toxic
Total HpCDF	65,000							Equivalent Factors.

**Total Toxic Equivalency (TEQ min.) (b):** 4640 pg/g

Analyst: JMH

Reviewed by: BS



### EPA Method 1613B

<b>Client Sample ID:</b> B2-0-3		
<b>Project ID:</b> AEC2023-14	<b>Ceres Sample ID:</b> 16433-002	<b>Date Received:</b> 6/6/2023
<b>Date Collected:</b> 6/1/2023	<b>QC Batch #:</b> 2887	<b>Date Extracted:</b> 6/8/2023
<b>Time Collected:</b> 10:55 AM	<b>Matrix:</b> Soil	<b>Date Analyzed:</b> 6/13/2023
	<b>Sample Size:</b> 12.69 g	<b>% Solids:</b> 79.9

Analyte	Conc. (pg/g)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	14.4	0.172	0.493		13C-2378-TCDD	80.5	25-164	
12378-PeCDD	64.3	0.327	2.47		13C-12378-PeCDD	85.6	25-181	
123478-HxCDD	85.4	0.327	2.47		13C-123478-HxCDD	80.2	32-141	
123678-HxCDD	652	0.655	2.47		13C-123678-HxCDD	104	28-130	
123789-HxCDD	239	0.315	2.47		13C-1234678-HpCDD	78.2	23-140	
1234678-HpCDD	17,000	0.409	2.47	E	13C-OCDD	77.1	17-157	
OCDD	113,000	1.01	4.93	E	13C-2378-TCDF	76.0	24-169	
2,3,7,8-TCDF	20.6	0.0886	0.493		13C-12378-PeCDF	86.7	24-185	
12378-PeCDF	52.8	0.412	2.47		13C-23478-PeCDF	82.1	21-178	
23478-PeCDF	135	0.422	2.47		13C-123478-HxCDF	89.3	26-152	
123478-HxCDF	203	0.518	2.47		13C-123678-HxCDF	101	26-123	
123678-HxCDF	113	0.533	2.47		13C-234678-HxCDF	93.7	28-136	
234678-HxCDF	146	0.319	2.47		13C-123789-HxCDF	98.0	29-147	
123789-HxCDF	105	0.425	2.47		13C-1234678-HpCDF	79.5	28-143	
1234678-HpCDF	1,740	0.279	2.47		13C-1234789-HpCDF	99.9	26-138	
1234789-HpCDF	136	0.378	2.47					
OCDF	2,500	0.461	4.93					
<b>Totals</b>	<b>Conc. (pg/g)</b>	<b>EMPC</b>			<b>CRS</b>			
Total TCDD	303				37Cl4-2378-TCDD	126	35-197	
Total PeCDD	895							
Total HxCDD	4,750							DL - Signifies Non-Detect (ND<) sample specific detection limit.
Total HpCDD	29,500							EMPC - Estimated Maximum Possible Concentration due to ion abundance
Total TCDF	616			X				ratio failure.
Total PeCDF	1,730			X				(a) - Lower control limit - Upper control limit
Total HxCDF	4,340							(b) - TEQ based on (2005) World Health Organization (WHO) Toxic
Total HpCDF	5,980							Equivalent Factors.

<b>Total Toxic Equivalency (TEQ min.) (b):</b>	501 pg/g
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Analyst: JMH

Reviewed by: BS



### EPA Method 1613B

<b>Client Sample ID:</b> B3-0-3		
<b>Project ID:</b> AEC2023-14	<b>Ceres Sample ID:</b> 16433-003	<b>Date Received:</b> 6/6/2023
<b>Date Collected:</b> 6/1/2023	<b>QC Batch #:</b> 2887	<b>Date Extracted:</b> 6/8/2023
<b>Time Collected:</b> 10:15 AM	<b>Matrix:</b> Soil	<b>Date Analyzed:</b> 6/16/2023
	<b>Sample Size:</b> 10.68 g	<b>% Solids:</b> 95.4

Analyte	Conc. (pg/g)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers	
2,3,7,8-TCDD	DL= 0.303	0.172	0.491		13C-2378-TCDD	97.1	25-164		
12378-PeCDD	9.04	0.327	2.45		13C-12378-PeCDD	105	25-181		
123478-HxCDD	17.0	0.327	2.45		13C-123478-HxCDD	81.3	32-141		
123678-HxCDD	98.5	0.655	2.45		13C-123678-HxCDD	91.3	28-130		
123789-HxCDD	40.7	0.315	2.45		13C-1234678-HpCDD	86.3	23-140		
1234678-HpCDD	2,930	0.409	2.45	E	13C-OCDD	83.3	17-157		
OCDD	23,500	1.01	4.91	E	13C-2378-TCDF	88.0	24-169		
2,3,7,8-TCDF	4.17	0.0886	0.491		13C-12378-PeCDF	97.9	24-185		
12378-PeCDF	8.88	0.412	2.45		13C-23478-PeCDF	96.3	21-178		
23478-PeCDF	18.6	0.422	2.45		13C-123478-HxCDF	87.4	26-152		
123478-HxCDF	33.5	0.518	2.45		13C-123678-HxCDF	91.5	26-123		
123678-HxCDF	21.4	0.533	2.45		13C-234678-HxCDF	88.0	28-136		
234678-HxCDF	22.4	0.319	2.45		13C-123789-HxCDF	101	29-147		
123789-HxCDF	14.1	0.425	2.45		13C-1234678-HpCDF	79.6	28-143		
1234678-HpCDF	284	0.279	2.45		13C-1234789-HpCDF	113	26-138		
1234789-HpCDF	17.9	0.378	2.45						
OCDF	436	0.461	4.91						
<b>Totals</b>	<b>Conc. (pg/g)</b>	<b>EMPC</b>				<b>CRS</b>			
Total TCDD	31.3					37Cl4-2378-TCDD	127	35-197	
Total PeCDD	114					DL - Signifies Non-Detect (ND<) sample specific detection limit.			
Total HxCDD	673					EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.			
Total HpCDD	4,980					(a) - Lower control limit - Upper control limit			
Total TCDF	95.2					(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.			
Total PeCDF	250								
Total HxCDF	635								
Total HpCDF	914								

<b>Total Toxic Equivalency (TEQ min.) (b):</b>	79.6 pg/g
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### EPA Method 1613B

<b>Client Sample ID:</b> B3-9.5-10		
<b>Project ID:</b> AEC2023-14	<b>Ceres Sample ID:</b> 16433-004	<b>Date Received:</b> 6/6/2023
<b>Date Collected:</b> 6/1/2023	<b>QC Batch #:</b> 2887	<b>Date Extracted:</b> 6/8/2023
<b>Time Collected:</b> 10:20 AM	<b>Matrix:</b> Soil	<b>Date Analyzed:</b> 6/16/2023
	<b>Sample Size:</b> 14.35 g	<b>% Solids:</b> 69.2

Analyte	Conc. (pg/g)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	13.4	0.172	0.504		13C-2378-TCDD	93.7	25-164	
12378-PeCDD	108	0.327	2.52		13C-12378-PeCDD	105	25-181	
123478-HxCDD	85.7	0.327	2.52		13C-123478-HxCDD	84.4	32-141	
123678-HxCDD	387	0.655	2.52		13C-123678-HxCDD	94.0	28-130	
123789-HxCDD	295	0.315	2.52		13C-1234678-HpCDD	75.9	23-140	
1234678-HpCDD	6,280	0.409	2.52	E	13C-OCDD	71.8	17-157	
OCDD	34,700	1.01	5.04	E	13C-2378-TCDF	85.2	24-169	
2,3,7,8-TCDF	4.30	0.0886	0.504		13C-12378-PeCDF	97.3	24-185	
12378-PeCDF	12.8	0.412	2.52		13C-23478-PeCDF	97.2	21-178	
23478-PeCDF	32.5	0.422	2.52		13C-123478-HxCDF	86.4	26-152	
123478-HxCDF	59.8	0.518	2.52		13C-123678-HxCDF	105	26-123	
123678-HxCDF	26.6	0.533	2.52		13C-234678-HxCDF	86.5	28-136	
234678-HxCDF	35.7	0.319	2.52		13C-123789-HxCDF	101	29-147	
123789-HxCDF	24.7	0.425	2.52		13C-1234678-HpCDF	79.0	28-143	
1234678-HpCDF	390	0.279	2.52		13C-1234789-HpCDF	92.6	26-138	
1234789-HpCDF	34.9	0.378	2.52					
OCDF	523	0.461	5.04					
<b>Totals</b>	<b>Conc. (pg/g)</b>	<b>EMPC</b>			<b>CRS</b>			
Total TCDD	188				37Cl4-2378-TCDD	132	35-197	
Total PeCDD	906							
Total HxCDD	3,920							
Total HpCDD	11,500							
Total TCDF	139			X				
Total PeCDF	396							
Total HxCDF	986							
Total HpCDF	1,260							

DL - Signifies Non-Detect (ND<) sample specific detection limit.  
 EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.  
 (a) - Lower control limit - Upper control limit  
 (b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.

**Total Toxic Equivalency (TEQ min.) (b):** 301 pg/g

Analyst: JMH

Reviewed by: BS



### EPA Method 1613B

<b>Client Sample ID:</b> B4-0-3		
<b>Project ID:</b> AEC2023-14	<b>Ceres Sample ID:</b> 16433-005	<b>Date Received:</b> 6/6/2023
<b>Date Collected:</b> 6/1/2023	<b>QC Batch #:</b> 2887	<b>Date Extracted:</b> 6/8/2023
<b>Time Collected:</b> 9:35 AM	<b>Matrix:</b> Soil	<b>Date Analyzed:</b> 6/16/2023
	<b>Sample Size:</b> 11.47 g	<b>% Solids:</b> 88.9

Analyte	Conc. (pg/g)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	6.97	0.172	0.490		13C-2378-TCDD	84.2	25-164	
12378-PeCDD	32.3	0.327	2.45		13C-12378-PeCDD	93.9	25-181	
123478-HxCDD	65.1	0.327	2.45		13C-123478-HxCDD	72.5	32-141	
123678-HxCDD	314	0.655	2.45		13C-123678-HxCDD	82.6	28-130	
123789-HxCDD	136	0.315	2.45		13C-1234678-HpCDD	66.4	23-140	
1234678-HpCDD	9,700	0.409	2.45	E	13C-OCDD	62.5	17-157	
OCDD	68,800	1.01	4.90	E	13C-2378-TCDF	76.7	24-169	
2,3,7,8-TCDF	9.47	0.0886	0.490		13C-12378-PeCDF	88.3	24-185	
12378-PeCDF	20.9	0.412	2.45		13C-23478-PeCDF	88.8	21-178	
23478-PeCDF	52.4	0.422	2.45		13C-123478-HxCDF	73.2	26-152	
123478-HxCDF	102	0.518	2.45		13C-123678-HxCDF	81.2	26-123	
123678-HxCDF	68.0	0.533	2.45		13C-234678-HxCDF	77.8	28-136	
234678-HxCDF	76.1	0.319	2.45		13C-123789-HxCDF	86.1	29-147	
123789-HxCDF	35.1	0.425	2.45		13C-1234678-HpCDF	67.9	28-143	
1234678-HpCDF	919	0.279	2.45		13C-1234789-HpCDF	86.3	26-138	
1234789-HpCDF	72.6	0.378	2.45					
OCDF	1,450	0.461	4.90					
<b>Totals</b>	<b>Conc. (pg/g)</b>	<b>EMPC</b>			<b>CRS</b>			
Total TCDD	207				37Cl4-2378-TCDD	93.1	35-197	
Total PeCDD	515							
Total HxCDD	2,580							
Total HpCDD	16,800							
Total TCDF	357			X				
Total PeCDF	932			X				
Total HxCDF	2,030							
Total HpCDF	2,870							

DL - Signifies Non-Detect (ND<) sample specific detection limit.  
 EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.  
 (a) - Lower control limit - Upper control limit  
 (b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.

**Total Toxic Equivalency (TEQ min.) (b):** 264 pg/g



### EPA Method 1613B

<b>Quality Assurance Sample Method Blank</b>	<b>QC Batch #:</b> 2888 <b>Matrix:</b> Aqueous <b>Sample Size:</b> 1.000 L	<b>Date Received:</b> NA <b>Date Extracted:</b> 6/14/2023 <b>Date Analyzed:</b> 6/17/2023
<b>Project ID:</b> AEC2023-14		

Analyte	Conc. (pg/L)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers	
2,3,7,8-TCDD	DL= 1.69	0.887	5.00		13C-2378-TCDD	88.6	25-164		
12378-PeCDD	DL= 13.9	2.56	25.0		13C-12378-PeCDD	93.7	25-181		
123478-HxCDD	DL= 16.6	3.08	25.0		13C-123478-HxCDD	78.1	32-141		
123678-HxCDD	DL= 13.9	5.29	25.0		13C-123678-HxCDD	94.8	28-130		
123789-HxCDD	DL= 13.7	13.1	25.0		13C-1234678-HpCDD	86.5	23-140		
1234678-HpCDD	DL= 13.3	5.15	25.0		13C-OCDD	71.8	17-157		
OCDD	DL= 32.7	8.50	50.0		13C-2378-TCDF	82.9	24-169		
2,3,7,8-TCDF	DL= 2.70	0.733	5.00		13C-12378-PeCDF	88.5	24-185		
12378-PeCDF	DL= 7.14	2.96	25.0		13C-23478-PeCDF	80.8	21-178		
23478-PeCDF	DL= 6.26	5.40	25.0		13C-123478-HxCDF	83.5	26-152		
123478-HxCDF	DL= 15.0	3.93	25.0		13C-123678-HxCDF	96.9	26-123		
123678-HxCDF	DL= 13.6	2.94	25.0		13C-234678-HxCDF	90.3	28-136		
234678-HxCDF	DL= 17.1	4.32	25.0		13C-123789-HxCDF	87.0	29-147		
123789-HxCDF	DL= 21.2	4.70	25.0		13C-1234678-HpCDF	89.1	28-143		
1234678-HpCDF	DL= 10.8	4.24	25.0		13C-1234789-HpCDF	95.5	26-138		
1234789-HpCDF	DL= 11.0	5.74	25.0						
OCDF	DL= 17.2	11.7	50.0						
<b>Totals</b>	<b>Conc. (pg/L)</b>	<b>EMPC</b>				<b>CRS</b>			
Total TCDD	DL= 1.69					37CI4-2378-TCDD	86.2	35-197	
Total PeCDD	DL= 13.9					DL - Signifies Non-Detect (ND<) sample specific detection limit.			
Total HxCDD	DL= 16.6					EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.			
Total HpCDD	DL= 13.3					(a) - Lower control limit - Upper control limit			
Total TCDF	DL= 2.70					(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.			
Total PeCDF	DL= 7.14								
Total HxCDF	DL= 21.2								
Total HpCDF	DL= 11.0								

<b>Total Toxic Equivalency (TEQ min.) (b):</b>	0.0 pg/L
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Analyst: JMH

Reviewed by: BS



### EPA Method 1613B

<b>Quality Assurance Sample</b> <b>Ongoing Precision and Recovery</b>	<b>QC Batch #:</b> 2888 <b>Matrix:</b> Aqueous <b>Sample Size:</b> 1.000 L	<b>Date Received:</b> NA <b>Date Extracted:</b> 6/14/2023 <b>Date Analyzed:</b> 6/17/2023
<b>Project ID:</b> AEC2023-14		

Analyte	Conc. (ng/mL)	Limits (a)	Labeled Standards	% Rec.	Limits (a)
2,3,7,8-TCDD	8.72	6.7-15.8	13C-2378-TCDD	94.0	20-175
12378-PeCDD	56.6	35-71	13C-12378-PeCDD	98.5	21-227
123478-HxCDD	53.5	35-82	13C-123478-HxCDD	80.1	21-193
123678-HxCDD	57.9	38-67	13C-123678-HxCDD	93.4	25-163
123789-HxCDD	48.3	32-81	13C-1234678-HpCDD	90.1	26-166
1234678-HpCDD	58.6	35-70	13C-OCDD	97.7	13-198
OCDD	108	78-144	13C-2378-TCDF	84.9	22-152
2,3,7,8-TCDF	9.25	7.5-15.8	13C-12378-PeCDF	89.1	21-192
12378-PeCDF	53.5	40-67	13C-23478-PeCDF	86.4	13-328
23478-PeCDF	53.3	34-80	13C-123478-HxCDF	78.0	19-202
123478-HxCDF	49.0	36-67	13C-123678-HxCDF	96.1	21-159
123678-HxCDF	48.8	42-65	13C-234678-HxCDF	78.8	22-176
234678-HxCDF	56.4	35-78	13C-123789-HxCDF	84.1	17-205
123789-HxCDF	53.8	39-65	13C-1234678-HpCDF	89.1	21-158
1234678-HpCDF	55.0	41-61	13C-1234789-HpCDF	99.9	20-186
1234789-HpCDF	58.1	39-69			
OCDF	113	63-170			
			<b>CRS</b>		
			37Cl4-2378-TCDD	113	31-191
(a) Limits based on method acceptance criteria.					

Analyst: JMH

Reviewed by: BS



### EPA Method 1613B

<b>Client Sample ID:</b> B2-GW		
<b>Project ID:</b> AEC2023-14	<b>Ceres Sample ID:</b> 16433-006	<b>Date Received:</b> 6/6/2023
<b>Date Collected:</b> 6/2/2023	<b>QC Batch #:</b> 2888	<b>Date Extracted:</b> 6/14/2023
<b>Time Collected:</b> 10:00	<b>Matrix:</b> Aqueous	<b>Date Analyzed:</b> 6/17/2023
	<b>Sample Size:</b> 0.483 L	

Analyte	Conc. (pg/L)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 4.04	0.887	10.4		13C-2378-TCDD	82.4	25-164	
12378-PeCDD	DL= 27.7	2.56	51.8		13C-12378-PeCDD	88.9	25-181	
123478-HxCDD	DL= 25.8	3.08	51.8		13C-123478-HxCDD	77.9	32-141	
123678-HxCDD	255	5.29	51.8		13C-123678-HxCDD	92.6	28-130	
123789-HxCDD	76.7	13.1	51.8		13C-1234678-HpCDD	70.2	23-140	
1234678-HpCDD	6,950	5.15	51.8		13C-OCDD	57.0	17-157	
OCDD	59,300	8.50	104		13C-2378-TCDF	78.0	24-169	
2,3,7,8-TCDF	DL= 4.19	0.733	10.4		13C-12378-PeCDF	78.9	24-185	
12378-PeCDF	DL= 22.1	2.96	51.8		13C-23478-PeCDF	92.7	21-178	
23478-PeCDF	DL= 11.3	5.40	51.8		13C-123478-HxCDF	75.4	26-152	
123478-HxCDF	DL= 12.4	3.93	51.8		13C-123678-HxCDF	90.1	26-123	
123678-HxCDF	DL= 11.9	2.94	51.8		13C-234678-HxCDF	82.7	28-136	
234678-HxCDF	DL= 14.5	4.32	51.8		13C-123789-HxCDF	92.0	29-147	
123789-HxCDF	DL= 15.2	4.70	51.8		13C-1234678-HpCDF	67.7	28-143	
1234678-HpCDF	723	4.24	51.8		13C-1234789-HpCDF	78.8	26-138	
1234789-HpCDF	DL= 18.8	5.74	51.8					
OCDF	1,050	11.7	104					
<b>Totals</b>	<b>Conc. (pg/L)</b>	<b>EMPC</b>			<b>CRS</b>			
Total TCDD	69.8				37CI4-2378-TCDD	116	35-197	
Total PeCDD	99.9							
Total HxCDD	1,670							DL - Signifies Non-Detect (ND<) sample specific detection limit.
Total HpCDD	11,600							EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.
Total TCDF	156							(a) - Lower control limit - Upper control limit
Total PeCDF	462							(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.
Total HxCDF	1,330							
Total HpCDF	2,160							

<b>Total Toxic Equivalency (TEQ min.) (b):</b>	128 pg/L
--	----------

Analyst: JMH

Reviewed by: BS



### EPA Method 1613B

<b>Client Sample ID:</b> B5-GW		
<b>Project ID:</b> AEC2023-14	<b>Ceres Sample ID:</b> 16433-007	<b>Date Received:</b> 6/6/2023
<b>Date Collected:</b> 6/2/2023	<b>QC Batch #:</b> 2888	<b>Date Extracted:</b> 6/14/2023
<b>Time Collected:</b> 11:30	<b>Matrix:</b> Aqueous	<b>Date Analyzed:</b> 6/17/2023
	<b>Sample Size:</b> 0.503 L	

Analyte	Conc. (pg/L)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 4.59	0.887	9.94		13C-2378-TCDD	83.8	25-164	
12378-PeCDD	DL= 20.2	2.56	49.7		13C-12378-PeCDD	87.8	25-181	
123478-HxCDD	DL= 26.7	3.08	49.7		13C-123478-HxCDD	78.7	32-141	
123678-HxCDD	81.5	5.29	49.7		13C-123678-HxCDD	94.9	28-130	
123789-HxCDD	DL= 22.8	13.1	49.7		13C-1234678-HpCDD	72.8	23-140	
1234678-HpCDD	1,790	5.15	49.7		13C-OCDD	57.2	17-157	
OCDD	15,900	8.50	99.4		13C-2378-TCDF	79.4	24-169	
2,3,7,8-TCDF	DL= 3.11	0.733	9.94		13C-12378-PeCDF	82.7	24-185	
12378-PeCDF	DL= 14.3	2.96	49.7		13C-23478-PeCDF	80.7	21-178	
23478-PeCDF	DL= 13.3	5.40	49.7		13C-123478-HxCDF	71.8	26-152	
123478-HxCDF	DL= 19.3	3.93	49.7		13C-123678-HxCDF	85.2	26-123	
123678-HxCDF	DL= 17.4	2.94	49.7		13C-234678-HxCDF	73.4	28-136	
234678-HxCDF	DL= 22.3	4.32	49.7		13C-123789-HxCDF	87.3	29-147	
123789-HxCDF	DL= 26.2	4.70	49.7		13C-1234678-HpCDF	66.7	28-143	
1234678-HpCDF	199	4.24	49.7		13C-1234789-HpCDF	83.8	26-138	
1234789-HpCDF	DL= 18.0	5.74	49.7					
OCDF	315	11.7	99.4					
<b>Totals</b>	<b>Conc. (pg/L)</b>	<b>EMPC</b>			<b>CRS</b>			
Total TCDD	DL= 4.59				37CI4-2378-TCDD	114	35-197	
Total PeCDD	DL= 20.2							
Total HxCDD	642							DL - Signifies Non-Detect (ND<) sample specific detection limit.
Total HpCDD	3,030							EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.
Total TCDF	DL= 3.11							(a) - Lower control limit - Upper control limit
Total PeCDF	90.8							(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.
Total HxCDF	319							
Total HpCDF	596							

<b>Total Toxic Equivalency (TEQ min.) (b):</b>	32.9 pg/L
--	-----------

Analyst: JMH

Reviewed by: BS

## **Section VI: Sample Tracking**

**Ceres Analytical Laboratory, Inc.**

4919 Windplay Dr. Suite 1  
 El Dorado Hills, CA 95762  
 Tel: (916)932-5011

**Chain of Custody**

**Please Print in Pen**

Ceres Use Only

Pg. 1 of 1

Ceres Project ID: \_\_\_\_\_

Temperature: \_\_\_\_\_ °C

*Reports and invoices will be delivered by email in .pdf format*

Client Information	Invoice Information (if different from Client Info)	Project Information
Company Name: <u>Alpine Env. Consultants</u>	Company Name: _____	Ceres Quote #: _____
Contact Name: <u>Jonathan Williams</u>	Contact Name: _____	P.O. # <u>AEC2023-14</u>
Address: <u>12210 Antioch Rd White City CA</u>	Address: _____	Project ID: _____
Ph: <u>531-944-4685</u> Fx: _____	Ph: _____ Fx: _____	TAT (business days) <u>STD</u>
Email: <u>jwilliams@alpine-env-llc</u>	Email: _____	Std 10 days; Rush TAT available please call

Matrix abbreviations:

- A: Aqueous      S: Soil      AS: Ash      DW: Drinking Water
- E: Effluent      SD: Sediment      WW: Waste Water      SO: Solid
- I: Influent      SL: Sludge      L: Liquid      O: Other (please comment)

Sample ID	Sample Collection			# of containers	EPA 1613	EPA 8290	EPA 1668C	Other	TEF		
	Date	Time	Matrix						<input type="checkbox"/> 1998 WHO	<input type="checkbox"/> 2005 WHO	<input type="checkbox"/> Other
1	<u>B1-0-3</u>	<u>6/1/23</u>	<u>1200</u>	<u>S</u>	<u>1</u>	<u>X</u>					
2	<u>B2-0-3</u>		<u>1055</u>	<u>↓</u>	<u>1</u>						
3	<u>B3-0-3</u>		<u>1015</u>	<u>↓</u>	<u>1</u>						
4	<u>B3-9.5-10</u>		<u>1020</u>	<u>↓</u>	<u>1</u>						
5	<u>B4-0-3</u>		<u>935</u>	<u>↓</u>	<u>1</u>						
6	<u>B2-GW</u>	<u>6/2/23</u>	<u>1000</u>	<u>W</u>	<u>2</u>						
7	<u>B5-GW</u>		<u>1130</u>	<u>W</u>	<u>2</u>						
8											
9											
10											
11											
12											

*Samples will be disposed of 90 days after receipt unless other provisions have been made and agreed upon in writing.*

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (signature and Printed Name)	Date	Time
<u>John Shellcross</u>	<u>6/6/23</u>	<u>1500</u>	<u>Jonathan Williams</u>	<u>6/6/23</u>	<u>9:25</u>

Client understands that all terms described in the proposals, quotations, and/or the general terms and conditions of Ceres Analytical Laboratory will be followed. Ceres Analytical Laboratory reserves the right to terminate its service or withhold delivery of reports, if in Ceres' discretion the terms of the project have been broken.

Ceres ID: <u>16433</u>		Date/Time: <u>6/6/23 9:25</u>
Client Project ID: <u>AEC2023-14</u>		Received Temp: <u>3.7</u> °C Acceptable: <input checked="" type="radio"/> Y / <input type="radio"/> N
Chain of Custody Relinquished by signed?		<input checked="" type="radio"/> Y / <input type="radio"/> N
Chain of Custody Received by signed?		<input checked="" type="radio"/> Y / <input type="radio"/> N
Custody Seals?	Present?	Y / N
	Intact?	Y / N
	NA:	<input checked="" type="radio"/> NA
Unlabeled / Illegible Samples		Y <input checked="" type="radio"/> N
Proper Containers:		<input checked="" type="radio"/> Y / <input type="radio"/> N
Preservation Acceptable (Chemical or Temperature)?		<input checked="" type="radio"/> Y / <input type="radio"/> N
Drinking Water, Sodium Thiosulfate present? Residual Cl?		Y / N / <input checked="" type="radio"/> NA Y / N / <input checked="" type="radio"/> NA NA
Aqueous sample pH: <u>7, 7</u>		
List COC discrepancies:  <u>WON 6/6/23</u>		
List Damaged Samples:  <u>WON 6/6/23</u>		

## Section VII: Qualifiers/Abbreviations

<b>J</b>	Concentration found below the lower quantitation limit but greater than zero.
<b>B</b>	Analyte present in the associated Method Blank.
<b>E</b>	Concentration found exceeds the Calibration range of the HRGC/HRMS.
<b>D</b>	This analyte concentration was calculated from a dilution.
<b>X</b>	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
<b>H</b>	Recovery limits exceeded. See cover letter.
<b>*</b>	Results taken from dilution.
<b>I</b>	Interference. See cover letter.
<b>Conc.</b>	Concentration Found
<b>DL</b>	Calculated Detection Limit
<b>ND</b>	Non-Detect
<b>% Rec.</b>	Percent Recovery

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Jonathan D. Williams  
Alpine Environmental Consultants, LLC  
12210 Antioch Road  
White City, Oregon 97503

Generated 6/28/2023 5:55:18 AM

**JOB DESCRIPTION**

11th Street

**JOB NUMBER**

570-141701-1

# Eurofins Calscience

## Job Notes

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

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

## Authorization



Generated  
6/28/2023 5:55:18 AM

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Authorized for release by  
Don Burley, Senior Project Manager  
[Donald.Burley@et.eurofinsus.com](mailto:Donald.Burley@et.eurofinsus.com)  
(657)212-3033



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# Definitions/Glossary

Client: Alpine Environmental Consultants, LLC  
Project/Site: 11th Street

Job ID: 570-141701-1

## Qualifiers

### Air - GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
me	LCS Recovery is within Marginal Exceedance (ME) control limit range ( $\pm 4$ SD from the mean).

## Glossary

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

# Case Narrative

Client: Alpine Environmental Consultants, LLC  
Project/Site: 11th Street

Job ID: 570-141701-1

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## Job ID: 570-141701-1

---

### Laboratory: Eurofins Calscience

#### Narrative

---

#### Job Narrative 570-141701-1

#### Receipt

The samples were received on 6/14/2023 9:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 22.0°C

#### Air - GC/MS VOA

Method TO15\_PF: The continuing calibration verification (CCV) associated with batch 570-338271 recovered above the upper control limit for Chloromethane. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported.

Method TO15\_PF: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 570-338271 recovered outside control limits for Chloromethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

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

#### Air - GC VOA

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



# Detection Summary

Client: Alpine Environmental Consultants, LLC  
Project/Site: 11th Street

Job ID: 570-141701-1

## Client Sample ID: SG1

Lab Sample ID: 570-141701-1

No Detections.

## Client Sample ID: SG2

Lab Sample ID: 570-141701-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone	28		11	ug/m3	2.5		TO-15	Total/NA
Acetone	540		12	ug/m3	2.5		TO-15	Total/NA
Benzene	11		4.0	ug/m3	2.5		TO-15	Total/NA
Ethylbenzene	7.5		5.4	ug/m3	2.5		TO-15	Total/NA
o-Xylene	12		5.4	ug/m3	2.5		TO-15	Total/NA
m,p-Xylene	25		22	ug/m3	2.5		TO-15	Total/NA
Toluene	21		4.7	ug/m3	2.5		TO-15	Total/NA
Helium	480000		41000	ug/m3	1		D1946	Total/NA

## Client Sample ID: SG3

Lab Sample ID: 570-141701-3

No Detections.

## Client Sample ID: SG4

Lab Sample ID: 570-141701-4

No Detections.

## Client Sample ID: SG5

Lab Sample ID: 570-141701-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	22		4.8	ug/m3	1		TO-15	Total/NA
Chloromethane	1.0		1.0	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	2.7		2.5	ug/m3	1		TO-15	Total/NA

## Client Sample ID: SG6

Lab Sample ID: 570-141701-6

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone	110		55	ug/m3	12.5		TO-15	Total/NA
Toluene	34		24	ug/m3	12.5		TO-15	Total/NA
Acetone - DL	5300		340	ug/m3	70.75		TO-15	Total/NA

## Client Sample ID: SG7

Lab Sample ID: 570-141701-7

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone	150		55	ug/m3	12.5		TO-15	Total/NA
Toluene	51		24	ug/m3	12.5		TO-15	Total/NA
Acetone - DL	5200		340	ug/m3	70.75		TO-15	Total/NA

## Client Sample ID: SG8

Lab Sample ID: 570-141701-8

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone	77		55	ug/m3	12.5		TO-15	Total/NA
Toluene	44		24	ug/m3	12.5		TO-15	Total/NA
Acetone - DL	4200		350	ug/m3	73.75		TO-15	Total/NA

## Client Sample ID: SG9

Lab Sample ID: 570-141701-9

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Helium	190000		41000	ug/m3	1		D1946	Total/NA

This Detection Summary does not include radiochemical test results.

Euofins Calscience

# Detection Summary

Client: Alpine Environmental Consultants, LLC  
Project/Site: 11th Street

Job ID: 570-141701-1

## Client Sample ID: SG10

Lab Sample ID: 570-141701-10

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Helium	49000		41000	ug/m3	1		D1946	Total/NA

## Client Sample ID: SG11

Lab Sample ID: 570-141701-11

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2700		59	ug/m3	12.5		TO-15	Total/NA
Toluene	34		24	ug/m3	12.5		TO-15	Total/NA
Helium	100000		41000	ug/m3	1		D1946	Total/NA

## Client Sample ID: SG12

Lab Sample ID: 570-141701-12

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Helium	3200000		41000	ug/m3	1		D1946	Total/NA

## Client Sample ID: SG4-DUP

Lab Sample ID: 570-141701-13

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Calscience

# Client Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air

**Client Sample ID: SG2**  
**Date Collected: 06/08/23 08:35**  
**Date Received: 06/14/23 09:40**  
**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-2**  
**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		6.8	ug/m3			06/19/23 22:26	2.5
1,1,2,2-Tetrachloroethane	ND		17	ug/m3			06/19/23 22:26	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		29	ug/m3			06/19/23 22:26	2.5
1,1,2-Trichloroethane	ND		6.8	ug/m3			06/19/23 22:26	2.5
1,1-Dichloroethane	ND		5.1	ug/m3			06/19/23 22:26	2.5
1,1-Dichloroethene	ND		5.0	ug/m3			06/19/23 22:26	2.5
1,1-Difluoroethane	ND		34	ug/m3			06/19/23 22:26	2.5
1,2,4-Trichlorobenzene	ND		37	ug/m3			06/19/23 22:26	2.5
1,2,4-Trimethylbenzene	ND		18	ug/m3			06/19/23 22:26	2.5
1,2-Dibromo-3-Chloropropane	ND		12	ug/m3			06/19/23 22:26	2.5
1,2-Dibromoethane	ND		9.6	ug/m3			06/19/23 22:26	2.5
1,2-Dichlorobenzene	ND		7.5	ug/m3			06/19/23 22:26	2.5
1,2-Dichloroethane	ND		5.1	ug/m3			06/19/23 22:26	2.5
1,2-Dichloropropane	ND		5.8	ug/m3			06/19/23 22:26	2.5
1,3,5-Trimethylbenzene	ND		6.1	ug/m3			06/19/23 22:26	2.5
1,3-Dichlorobenzene	ND		7.5	ug/m3			06/19/23 22:26	2.5
1,4-Dichlorobenzene	ND		7.5	ug/m3			06/19/23 22:26	2.5
<b>2-Butanone</b>	<b>28</b>		11	ug/m3			06/19/23 22:26	2.5
2-Hexanone	ND		15	ug/m3			06/19/23 22:26	2.5
4-Ethyltoluene	ND		6.1	ug/m3			06/19/23 22:26	2.5
4-Methyl-2-pentanone	ND		15	ug/m3			06/19/23 22:26	2.5
<b>Acetone</b>	<b>540</b>		12	ug/m3			06/19/23 22:26	2.5
<b>Benzene</b>	<b>11</b>		4.0	ug/m3			06/19/23 22:26	2.5
Benzyl chloride	ND		19	ug/m3			06/19/23 22:26	2.5
Bromodichloromethane	ND		8.4	ug/m3			06/19/23 22:26	2.5
Bromoform	ND		13	ug/m3			06/19/23 22:26	2.5
Bromomethane	ND		4.9	ug/m3			06/19/23 22:26	2.5
cis-1,2-Dichloroethene	ND		5.0	ug/m3			06/19/23 22:26	2.5
cis-1,3-Dichloropropene	ND		5.7	ug/m3			06/19/23 22:26	2.5
Carbon disulfide	ND		16	ug/m3			06/19/23 22:26	2.5
Carbon tetrachloride	ND		7.9	ug/m3			06/19/23 22:26	2.5
Chlorobenzene	ND		5.8	ug/m3			06/19/23 22:26	2.5
Chloroethane	ND		3.3	ug/m3			06/19/23 22:26	2.5
Chloroform	ND		6.1	ug/m3			06/19/23 22:26	2.5
Chloromethane	ND		2.6	ug/m3			06/19/23 22:26	2.5
Dibromochloromethane	ND		11	ug/m3			06/19/23 22:26	2.5
Dichlorodifluoromethane	ND		6.2	ug/m3			06/19/23 22:26	2.5
Dichlorotetrafluoroethane	ND		35	ug/m3			06/19/23 22:26	2.5
<b>Ethylbenzene</b>	<b>7.5</b>		5.4	ug/m3			06/19/23 22:26	2.5
Hexachloro-1,3-butadiene	ND		40	ug/m3			06/19/23 22:26	2.5
Isopropanol	ND		31	ug/m3			06/19/23 22:26	2.5
Methylene Chloride	ND		11	ug/m3			06/19/23 22:26	2.5
Methyl-t-Butyl Ether (MTBE)	ND		18	ug/m3			06/19/23 22:26	2.5
n-Butylbenzene	ND		21	ug/m3			06/19/23 22:26	2.5
<b>o-Xylene</b>	<b>12</b>		5.4	ug/m3			06/19/23 22:26	2.5
<b>m,p-Xylene</b>	<b>25</b>		22	ug/m3			06/19/23 22:26	2.5
sec-Butylbenzene	ND		21	ug/m3			06/19/23 22:26	2.5
Styrene	ND		16	ug/m3			06/19/23 22:26	2.5

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# Client Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Client Sample ID: SG2**

**Date Collected: 06/08/23 08:35**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-2**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		5.0	ug/m3			06/19/23 22:26	2.5
trans-1,3-Dichloropropene	ND		11	ug/m3			06/19/23 22:26	2.5
tert-Butylbenzene	ND		21	ug/m3			06/19/23 22:26	2.5
Tetrachloroethene	ND		8.5	ug/m3			06/19/23 22:26	2.5
<b>Toluene</b>	<b>21</b>		4.7	ug/m3			06/19/23 22:26	2.5
Trichloroethene	ND		6.7	ug/m3			06/19/23 22:26	2.5
Trichlorofluoromethane	ND		14	ug/m3			06/19/23 22:26	2.5
Vinyl acetate	ND		18	ug/m3			06/19/23 22:26	2.5
Vinyl chloride	ND		3.2	ug/m3			06/19/23 22:26	2.5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		66 - 132				06/19/23 22:26	2.5
4-Bromofluorobenzene (Surr)	100		70 - 130				06/19/23 22:26	2.5
Toluene-d8 (Surr)	98		70 - 130				06/19/23 22:26	2.5

**Client Sample ID: SG5**

**Date Collected: 06/09/23 13:35**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-5**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		2.7	ug/m3			06/19/23 18:02	1
1,1,2,2-Tetrachloroethane	ND		6.9	ug/m3			06/19/23 18:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		11	ug/m3			06/19/23 18:02	1
1,1,2-Trichloroethane	ND		2.7	ug/m3			06/19/23 18:02	1
1,1-Dichloroethane	ND		2.0	ug/m3			06/19/23 18:02	1
1,1-Dichloroethene	ND		2.0	ug/m3			06/19/23 18:02	1
1,1-Difluoroethane	ND		14	ug/m3			06/19/23 18:02	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			06/19/23 18:02	1
1,2,4-Trimethylbenzene	ND		7.4	ug/m3			06/19/23 18:02	1
1,2-Dibromo-3-Chloropropane	ND		4.8	ug/m3			06/19/23 18:02	1
1,2-Dibromoethane	ND		3.8	ug/m3			06/19/23 18:02	1
1,2-Dichlorobenzene	ND		3.0	ug/m3			06/19/23 18:02	1
1,2-Dichloroethane	ND		2.0	ug/m3			06/19/23 18:02	1
1,2-Dichloropropane	ND		2.3	ug/m3			06/19/23 18:02	1
1,3,5-Trimethylbenzene	ND		2.5	ug/m3			06/19/23 18:02	1
1,3-Dichlorobenzene	ND		3.0	ug/m3			06/19/23 18:02	1
1,4-Dichlorobenzene	ND		3.0	ug/m3			06/19/23 18:02	1
2-Butanone	ND		4.4	ug/m3			06/19/23 18:02	1
2-Hexanone	ND		6.1	ug/m3			06/19/23 18:02	1
4-Ethyltoluene	ND		2.5	ug/m3			06/19/23 18:02	1
4-Methyl-2-pentanone	ND		6.1	ug/m3			06/19/23 18:02	1
<b>Acetone</b>	<b>22</b>		4.8	ug/m3			06/19/23 18:02	1
Benzene	ND		1.6	ug/m3			06/19/23 18:02	1
Benzyl chloride	ND		7.8	ug/m3			06/19/23 18:02	1
Bromodichloromethane	ND		3.4	ug/m3			06/19/23 18:02	1
Bromoform	ND		5.2	ug/m3			06/19/23 18:02	1
Bromomethane	ND		1.9	ug/m3			06/19/23 18:02	1
cis-1,2-Dichloroethene	ND		2.0	ug/m3			06/19/23 18:02	1
cis-1,3-Dichloropropene	ND		2.3	ug/m3			06/19/23 18:02	1

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# Client Sample Results

Client: Alpine Environmental Consultants, LLC  
Project/Site: 11th Street

Job ID: 570-141701-1

## Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Client Sample ID: SG5**

**Date Collected: 06/09/23 13:35**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-5**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		6.2	ug/m3			06/19/23 18:02	1
Carbon tetrachloride	ND		3.1	ug/m3			06/19/23 18:02	1
Chlorobenzene	ND		2.3	ug/m3			06/19/23 18:02	1
Chloroethane	ND		1.3	ug/m3			06/19/23 18:02	1
Chloroform	ND		2.4	ug/m3			06/19/23 18:02	1
<b>Chloromethane</b>	<b>1.0</b>		1.0	ug/m3			06/19/23 18:02	1
Dibromochloromethane	ND		4.3	ug/m3			06/19/23 18:02	1
<b>Dichlorodifluoromethane</b>	<b>2.7</b>		2.5	ug/m3			06/19/23 18:02	1
Dichlorotetrafluoroethane	ND		14	ug/m3			06/19/23 18:02	1
Ethylbenzene	ND		2.2	ug/m3			06/19/23 18:02	1
Hexachloro-1,3-butadiene	ND		16	ug/m3			06/19/23 18:02	1
Isopropanol	ND		12	ug/m3			06/19/23 18:02	1
Methylene Chloride	ND		4.3	ug/m3			06/19/23 18:02	1
Methyl-t-Butyl Ether (MTBE)	ND		7.2	ug/m3			06/19/23 18:02	1
n-Butylbenzene	ND		8.2	ug/m3			06/19/23 18:02	1
o-Xylene	ND		2.2	ug/m3			06/19/23 18:02	1
m,p-Xylene	ND		8.7	ug/m3			06/19/23 18:02	1
sec-Butylbenzene	ND		8.2	ug/m3			06/19/23 18:02	1
Styrene	ND		6.4	ug/m3			06/19/23 18:02	1
trans-1,2-Dichloroethene	ND		2.0	ug/m3			06/19/23 18:02	1
trans-1,3-Dichloropropene	ND		4.5	ug/m3			06/19/23 18:02	1
tert-Butylbenzene	ND		8.2	ug/m3			06/19/23 18:02	1
Tetrachloroethene	ND		3.4	ug/m3			06/19/23 18:02	1
Toluene	ND		1.9	ug/m3			06/19/23 18:02	1
Trichloroethene	ND		2.7	ug/m3			06/19/23 18:02	1
Trichlorofluoromethane	ND		5.6	ug/m3			06/19/23 18:02	1
Vinyl acetate	ND		7.0	ug/m3			06/19/23 18:02	1
Vinyl chloride	ND		1.3	ug/m3			06/19/23 18:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		66 - 132		06/19/23 18:02	1
4-Bromofluorobenzene (Surr)	103		70 - 130		06/19/23 18:02	1
Toluene-d8 (Surr)	97		70 - 130		06/19/23 18:02	1

**Client Sample ID: SG6**

**Date Collected: 06/09/23 14:25**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-6**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		34	ug/m3			06/18/23 07:19	12.5
1,1,2,2-Tetrachloroethane	ND		86	ug/m3			06/18/23 07:19	12.5
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		140	ug/m3			06/18/23 07:19	12.5
1,1,2-Trichloroethane	ND		34	ug/m3			06/18/23 07:19	12.5
1,1-Dichloroethane	ND		25	ug/m3			06/18/23 07:19	12.5
1,1-Dichloroethene	ND		25	ug/m3			06/18/23 07:19	12.5
1,1-Difluoroethane	ND		170	ug/m3			06/18/23 07:19	12.5
1,2,4-Trichlorobenzene	ND		190	ug/m3			06/18/23 07:19	12.5
1,2,4-Trimethylbenzene	ND		92	ug/m3			06/18/23 07:19	12.5
1,2-Dibromo-3-Chloropropane	ND		60	ug/m3			06/18/23 07:19	12.5

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# Client Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Client Sample ID: SG6**

**Date Collected: 06/09/23 14:25**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-6**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		48	ug/m3			06/18/23 07:19	12.5
1,2-Dichlorobenzene	ND		38	ug/m3			06/18/23 07:19	12.5
1,2-Dichloroethane	ND		25	ug/m3			06/18/23 07:19	12.5
1,2-Dichloropropane	ND		29	ug/m3			06/18/23 07:19	12.5
1,3,5-Trimethylbenzene	ND		31	ug/m3			06/18/23 07:19	12.5
1,3-Dichlorobenzene	ND		38	ug/m3			06/18/23 07:19	12.5
1,4-Dichlorobenzene	ND		38	ug/m3			06/18/23 07:19	12.5
<b>2-Butanone</b>	<b>110</b>		55	ug/m3			06/18/23 07:19	12.5
2-Hexanone	ND		77	ug/m3			06/18/23 07:19	12.5
4-Ethyltoluene	ND		31	ug/m3			06/18/23 07:19	12.5
4-Methyl-2-pentanone	ND		77	ug/m3			06/18/23 07:19	12.5
Benzene	ND		20	ug/m3			06/18/23 07:19	12.5
Benzyl chloride	ND		97	ug/m3			06/18/23 07:19	12.5
Bromodichloromethane	ND		42	ug/m3			06/18/23 07:19	12.5
Bromoform	ND		65	ug/m3			06/18/23 07:19	12.5
Bromomethane	ND		24	ug/m3			06/18/23 07:19	12.5
cis-1,2-Dichloroethene	ND		25	ug/m3			06/18/23 07:19	12.5
cis-1,3-Dichloropropene	ND		28	ug/m3			06/18/23 07:19	12.5
Carbon disulfide	ND		78	ug/m3			06/18/23 07:19	12.5
Carbon tetrachloride	ND		39	ug/m3			06/18/23 07:19	12.5
Chlorobenzene	ND		29	ug/m3			06/18/23 07:19	12.5
Chloroethane	ND		16	ug/m3			06/18/23 07:19	12.5
Chloroform	ND		31	ug/m3			06/18/23 07:19	12.5
Chloromethane	ND		13	ug/m3			06/18/23 07:19	12.5
Dibromochloromethane	ND		53	ug/m3			06/18/23 07:19	12.5
Dichlorodifluoromethane	ND		31	ug/m3			06/18/23 07:19	12.5
Dichlorotetrafluoroethane	ND		170	ug/m3			06/18/23 07:19	12.5
Ethylbenzene	ND		27	ug/m3			06/18/23 07:19	12.5
Hexachloro-1,3-butadiene	ND		200	ug/m3			06/18/23 07:19	12.5
Isopropanol	ND		150	ug/m3			06/18/23 07:19	12.5
Methylene Chloride	ND		54	ug/m3			06/18/23 07:19	12.5
Methyl-t-Butyl Ether (MTBE)	ND		90	ug/m3			06/18/23 07:19	12.5
n-Butylbenzene	ND		100	ug/m3			06/18/23 07:19	12.5
o-Xylene	ND		27	ug/m3			06/18/23 07:19	12.5
m,p-Xylene	ND		110	ug/m3			06/18/23 07:19	12.5
sec-Butylbenzene	ND		100	ug/m3			06/18/23 07:19	12.5
Styrene	ND		80	ug/m3			06/18/23 07:19	12.5
trans-1,2-Dichloroethene	ND		25	ug/m3			06/18/23 07:19	12.5
trans-1,3-Dichloropropene	ND		57	ug/m3			06/18/23 07:19	12.5
tert-Butylbenzene	ND		100	ug/m3			06/18/23 07:19	12.5
Tetrachloroethene	ND		42	ug/m3			06/18/23 07:19	12.5
<b>Toluene</b>	<b>34</b>		24	ug/m3			06/18/23 07:19	12.5
Trichloroethene	ND		34	ug/m3			06/18/23 07:19	12.5
Trichlorofluoromethane	ND		70	ug/m3			06/18/23 07:19	12.5
Vinyl acetate	ND		88	ug/m3			06/18/23 07:19	12.5
Vinyl chloride	ND		16	ug/m3			06/18/23 07:19	12.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		66 - 132		06/18/23 07:19	12.5

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# Client Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Client Sample ID: SG6**  
**Date Collected: 06/09/23 14:25**  
**Date Received: 06/14/23 09:40**  
**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-6**  
**Matrix: Air**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130		06/18/23 07:19	12.5
Toluene-d8 (Surr)	94		70 - 130		06/18/23 07:19	12.5

**Client Sample ID: SG7**  
**Date Collected: 06/09/23 14:05**  
**Date Received: 06/14/23 09:40**  
**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-7**  
**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		34	ug/m3			06/18/23 08:03	12.5
1,1,2,2-Tetrachloroethane	ND		86	ug/m3			06/18/23 08:03	12.5
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		140	ug/m3			06/18/23 08:03	12.5
1,1,2-Trichloroethane	ND		34	ug/m3			06/18/23 08:03	12.5
1,1-Dichloroethane	ND		25	ug/m3			06/18/23 08:03	12.5
1,1-Dichloroethene	ND		25	ug/m3			06/18/23 08:03	12.5
1,1-Difluoroethane	ND		170	ug/m3			06/18/23 08:03	12.5
1,2,4-Trichlorobenzene	ND		190	ug/m3			06/18/23 08:03	12.5
1,2,4-Trimethylbenzene	ND		92	ug/m3			06/18/23 08:03	12.5
1,2-Dibromo-3-Chloropropane	ND		60	ug/m3			06/18/23 08:03	12.5
1,2-Dibromoethane	ND		48	ug/m3			06/18/23 08:03	12.5
1,2-Dichlorobenzene	ND		38	ug/m3			06/18/23 08:03	12.5
1,2-Dichloroethane	ND		25	ug/m3			06/18/23 08:03	12.5
1,2-Dichloropropane	ND		29	ug/m3			06/18/23 08:03	12.5
1,3,5-Trimethylbenzene	ND		31	ug/m3			06/18/23 08:03	12.5
1,3-Dichlorobenzene	ND		38	ug/m3			06/18/23 08:03	12.5
1,4-Dichlorobenzene	ND		38	ug/m3			06/18/23 08:03	12.5
<b>2-Butanone</b>	<b>150</b>		55	ug/m3			06/18/23 08:03	12.5
2-Hexanone	ND		77	ug/m3			06/18/23 08:03	12.5
4-Ethyltoluene	ND		31	ug/m3			06/18/23 08:03	12.5
4-Methyl-2-pentanone	ND		77	ug/m3			06/18/23 08:03	12.5
Benzene	ND		20	ug/m3			06/18/23 08:03	12.5
Benzyl chloride	ND		97	ug/m3			06/18/23 08:03	12.5
Bromodichloromethane	ND		42	ug/m3			06/18/23 08:03	12.5
Bromoform	ND		65	ug/m3			06/18/23 08:03	12.5
Bromomethane	ND		24	ug/m3			06/18/23 08:03	12.5
cis-1,2-Dichloroethene	ND		25	ug/m3			06/18/23 08:03	12.5
cis-1,3-Dichloropropene	ND		28	ug/m3			06/18/23 08:03	12.5
Carbon disulfide	ND		78	ug/m3			06/18/23 08:03	12.5
Carbon tetrachloride	ND		39	ug/m3			06/18/23 08:03	12.5
Chlorobenzene	ND		29	ug/m3			06/18/23 08:03	12.5
Chloroethane	ND		16	ug/m3			06/18/23 08:03	12.5
Chloroform	ND		31	ug/m3			06/18/23 08:03	12.5
Chloromethane	ND		13	ug/m3			06/18/23 08:03	12.5
Dibromochloromethane	ND		53	ug/m3			06/18/23 08:03	12.5
Dichlorodifluoromethane	ND		31	ug/m3			06/18/23 08:03	12.5
Dichlorotetrafluoroethane	ND		170	ug/m3			06/18/23 08:03	12.5
Ethylbenzene	ND		27	ug/m3			06/18/23 08:03	12.5
Hexachloro-1,3-butadiene	ND		200	ug/m3			06/18/23 08:03	12.5
Isopropanol	ND		150	ug/m3			06/18/23 08:03	12.5

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# Client Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Client Sample ID: SG7**  
**Date Collected: 06/09/23 14:05**  
**Date Received: 06/14/23 09:40**  
**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-7**  
**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		54	ug/m3			06/18/23 08:03	12.5
Methyl-t-Butyl Ether (MTBE)	ND		90	ug/m3			06/18/23 08:03	12.5
n-Butylbenzene	ND		100	ug/m3			06/18/23 08:03	12.5
o-Xylene	ND		27	ug/m3			06/18/23 08:03	12.5
m,p-Xylene	ND		110	ug/m3			06/18/23 08:03	12.5
sec-Butylbenzene	ND		100	ug/m3			06/18/23 08:03	12.5
Styrene	ND		80	ug/m3			06/18/23 08:03	12.5
trans-1,2-Dichloroethene	ND		25	ug/m3			06/18/23 08:03	12.5
trans-1,3-Dichloropropene	ND		57	ug/m3			06/18/23 08:03	12.5
tert-Butylbenzene	ND		100	ug/m3			06/18/23 08:03	12.5
Tetrachloroethene	ND		42	ug/m3			06/18/23 08:03	12.5
<b>Toluene</b>	<b>51</b>		24	ug/m3			06/18/23 08:03	12.5
Trichloroethene	ND		34	ug/m3			06/18/23 08:03	12.5
Trichlorofluoromethane	ND		70	ug/m3			06/18/23 08:03	12.5
Vinyl acetate	ND		88	ug/m3			06/18/23 08:03	12.5
Vinyl chloride	ND		16	ug/m3			06/18/23 08:03	12.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		66 - 132		06/18/23 08:03	12.5
4-Bromofluorobenzene (Surr)	101		70 - 130		06/18/23 08:03	12.5
Toluene-d8 (Surr)	96		70 - 130		06/18/23 08:03	12.5

**Client Sample ID: SG8**  
**Date Collected: 06/08/23 14:00**  
**Date Received: 06/14/23 09:40**  
**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-8**  
**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		34	ug/m3			06/18/23 08:47	12.5
1,1,2,2-Tetrachloroethane	ND		86	ug/m3			06/18/23 08:47	12.5
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		140	ug/m3			06/18/23 08:47	12.5
1,1,2-Trichloroethane	ND		34	ug/m3			06/18/23 08:47	12.5
1,1-Dichloroethane	ND		25	ug/m3			06/18/23 08:47	12.5
1,1-Dichloroethene	ND		25	ug/m3			06/18/23 08:47	12.5
1,1-Difluoroethane	ND		170	ug/m3			06/18/23 08:47	12.5
1,2,4-Trichlorobenzene	ND		190	ug/m3			06/18/23 08:47	12.5
1,2,4-Trimethylbenzene	ND		92	ug/m3			06/18/23 08:47	12.5
1,2-Dibromo-3-Chloropropane	ND		60	ug/m3			06/18/23 08:47	12.5
1,2-Dibromoethane	ND		48	ug/m3			06/18/23 08:47	12.5
1,2-Dichlorobenzene	ND		38	ug/m3			06/18/23 08:47	12.5
1,2-Dichloroethane	ND		25	ug/m3			06/18/23 08:47	12.5
1,2-Dichloropropane	ND		29	ug/m3			06/18/23 08:47	12.5
1,3,5-Trimethylbenzene	ND		31	ug/m3			06/18/23 08:47	12.5
1,3-Dichlorobenzene	ND		38	ug/m3			06/18/23 08:47	12.5
1,4-Dichlorobenzene	ND		38	ug/m3			06/18/23 08:47	12.5
<b>2-Butanone</b>	<b>77</b>		55	ug/m3			06/18/23 08:47	12.5
2-Hexanone	ND		77	ug/m3			06/18/23 08:47	12.5
4-Ethyltoluene	ND		31	ug/m3			06/18/23 08:47	12.5
4-Methyl-2-pentanone	ND		77	ug/m3			06/18/23 08:47	12.5
Benzene	ND		20	ug/m3			06/18/23 08:47	12.5

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# Client Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Client Sample ID: SG8**

**Date Collected: 06/08/23 14:00**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-8**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzyl chloride	ND		97	ug/m3			06/18/23 08:47	12.5
Bromodichloromethane	ND		42	ug/m3			06/18/23 08:47	12.5
Bromoform	ND		65	ug/m3			06/18/23 08:47	12.5
Bromomethane	ND		24	ug/m3			06/18/23 08:47	12.5
cis-1,2-Dichloroethene	ND		25	ug/m3			06/18/23 08:47	12.5
cis-1,3-Dichloropropene	ND		28	ug/m3			06/18/23 08:47	12.5
Carbon disulfide	ND		78	ug/m3			06/18/23 08:47	12.5
Carbon tetrachloride	ND		39	ug/m3			06/18/23 08:47	12.5
Chlorobenzene	ND		29	ug/m3			06/18/23 08:47	12.5
Chloroethane	ND		16	ug/m3			06/18/23 08:47	12.5
Chloroform	ND		31	ug/m3			06/18/23 08:47	12.5
Chloromethane	ND		13	ug/m3			06/18/23 08:47	12.5
Dibromochloromethane	ND		53	ug/m3			06/18/23 08:47	12.5
Dichlorodifluoromethane	ND		31	ug/m3			06/18/23 08:47	12.5
Dichlorotetrafluoroethane	ND		170	ug/m3			06/18/23 08:47	12.5
Ethylbenzene	ND		27	ug/m3			06/18/23 08:47	12.5
Hexachloro-1,3-butadiene	ND		200	ug/m3			06/18/23 08:47	12.5
Isopropanol	ND		150	ug/m3			06/18/23 08:47	12.5
Methylene Chloride	ND		54	ug/m3			06/18/23 08:47	12.5
Methyl-t-Butyl Ether (MTBE)	ND		90	ug/m3			06/18/23 08:47	12.5
n-Butylbenzene	ND		100	ug/m3			06/18/23 08:47	12.5
o-Xylene	ND		27	ug/m3			06/18/23 08:47	12.5
m,p-Xylene	ND		110	ug/m3			06/18/23 08:47	12.5
sec-Butylbenzene	ND		100	ug/m3			06/18/23 08:47	12.5
Styrene	ND		80	ug/m3			06/18/23 08:47	12.5
trans-1,2-Dichloroethene	ND		25	ug/m3			06/18/23 08:47	12.5
trans-1,3-Dichloropropene	ND		57	ug/m3			06/18/23 08:47	12.5
tert-Butylbenzene	ND		100	ug/m3			06/18/23 08:47	12.5
Tetrachloroethene	ND		42	ug/m3			06/18/23 08:47	12.5
<b>Toluene</b>	<b>44</b>		24	ug/m3			06/18/23 08:47	12.5
Trichloroethene	ND		34	ug/m3			06/18/23 08:47	12.5
Trichlorofluoromethane	ND		70	ug/m3			06/18/23 08:47	12.5
Vinyl acetate	ND		88	ug/m3			06/18/23 08:47	12.5
Vinyl chloride	ND		16	ug/m3			06/18/23 08:47	12.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		66 - 132		06/18/23 08:47	12.5
4-Bromofluorobenzene (Surr)	99		70 - 130		06/18/23 08:47	12.5
Toluene-d8 (Surr)	93		70 - 130		06/18/23 08:47	12.5

**Client Sample ID: SG11**

**Date Collected: 06/08/23 11:43**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-11**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		34	ug/m3			06/18/23 09:08	12.5
1,1,1,2-Tetrachloroethane	ND		86	ug/m3			06/18/23 09:08	12.5
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		140	ug/m3			06/18/23 09:08	12.5
1,1,2-Trichloroethane	ND		34	ug/m3			06/18/23 09:08	12.5

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# Client Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Client Sample ID: SG11**

**Date Collected: 06/08/23 11:43**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-11**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	ND		25	ug/m3			06/18/23 09:08	12.5
1,1-Dichloroethene	ND		25	ug/m3			06/18/23 09:08	12.5
1,1-Difluoroethane	ND		170	ug/m3			06/18/23 09:08	12.5
1,2,4-Trichlorobenzene	ND		190	ug/m3			06/18/23 09:08	12.5
1,2,4-Trimethylbenzene	ND		92	ug/m3			06/18/23 09:08	12.5
1,2-Dibromo-3-Chloropropane	ND		60	ug/m3			06/18/23 09:08	12.5
1,2-Dibromoethane	ND		48	ug/m3			06/18/23 09:08	12.5
1,2-Dichlorobenzene	ND		38	ug/m3			06/18/23 09:08	12.5
1,2-Dichloroethane	ND		25	ug/m3			06/18/23 09:08	12.5
1,2-Dichloropropane	ND		29	ug/m3			06/18/23 09:08	12.5
1,3,5-Trimethylbenzene	ND		31	ug/m3			06/18/23 09:08	12.5
1,3-Dichlorobenzene	ND		38	ug/m3			06/18/23 09:08	12.5
1,4-Dichlorobenzene	ND		38	ug/m3			06/18/23 09:08	12.5
2-Butanone	ND		55	ug/m3			06/18/23 09:08	12.5
2-Hexanone	ND		77	ug/m3			06/18/23 09:08	12.5
4-Ethyltoluene	ND		31	ug/m3			06/18/23 09:08	12.5
4-Methyl-2-pentanone	ND		77	ug/m3			06/18/23 09:08	12.5
<b>Acetone</b>	<b>2700</b>		59	ug/m3			06/18/23 09:08	12.5
Benzene	ND		20	ug/m3			06/18/23 09:08	12.5
Benzyl chloride	ND		97	ug/m3			06/18/23 09:08	12.5
Bromodichloromethane	ND		42	ug/m3			06/18/23 09:08	12.5
Bromoform	ND		65	ug/m3			06/18/23 09:08	12.5
Bromomethane	ND		24	ug/m3			06/18/23 09:08	12.5
cis-1,2-Dichloroethene	ND		25	ug/m3			06/18/23 09:08	12.5
cis-1,3-Dichloropropene	ND		28	ug/m3			06/18/23 09:08	12.5
Carbon disulfide	ND		78	ug/m3			06/18/23 09:08	12.5
Carbon tetrachloride	ND		39	ug/m3			06/18/23 09:08	12.5
Chlorobenzene	ND		29	ug/m3			06/18/23 09:08	12.5
Chloroethane	ND		16	ug/m3			06/18/23 09:08	12.5
Chloroform	ND		31	ug/m3			06/18/23 09:08	12.5
Chloromethane	ND	+	13	ug/m3			06/18/23 09:08	12.5
Dibromochloromethane	ND		53	ug/m3			06/18/23 09:08	12.5
Dichlorodifluoromethane	ND		31	ug/m3			06/18/23 09:08	12.5
Dichlorotetrafluoroethane	ND		170	ug/m3			06/18/23 09:08	12.5
Ethylbenzene	ND		27	ug/m3			06/18/23 09:08	12.5
Hexachloro-1,3-butadiene	ND		200	ug/m3			06/18/23 09:08	12.5
Isopropanol	ND		150	ug/m3			06/18/23 09:08	12.5
Methylene Chloride	ND		54	ug/m3			06/18/23 09:08	12.5
Methyl-t-Butyl Ether (MTBE)	ND		90	ug/m3			06/18/23 09:08	12.5
n-Butylbenzene	ND		100	ug/m3			06/18/23 09:08	12.5
o-Xylene	ND		27	ug/m3			06/18/23 09:08	12.5
m,p-Xylene	ND		110	ug/m3			06/18/23 09:08	12.5
sec-Butylbenzene	ND		100	ug/m3			06/18/23 09:08	12.5
Styrene	ND		80	ug/m3			06/18/23 09:08	12.5
trans-1,2-Dichloroethene	ND		25	ug/m3			06/18/23 09:08	12.5
trans-1,3-Dichloropropene	ND		57	ug/m3			06/18/23 09:08	12.5
tert-Butylbenzene	ND		100	ug/m3			06/18/23 09:08	12.5
Tetrachloroethene	ND		42	ug/m3			06/18/23 09:08	12.5

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# Client Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Client Sample ID: SG11**  
**Date Collected: 06/08/23 11:43**  
**Date Received: 06/14/23 09:40**  
**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-11**  
**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Toluene</b>	<b>34</b>		24	ug/m3			06/18/23 09:08	12.5
Trichloroethene	ND		34	ug/m3			06/18/23 09:08	12.5
Trichlorofluoromethane	ND		70	ug/m3			06/18/23 09:08	12.5
Vinyl acetate	ND		88	ug/m3			06/18/23 09:08	12.5
Vinyl chloride	ND		16	ug/m3			06/18/23 09:08	12.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>1,2-Dichloroethane-d4 (Surr)</i>	107		66 - 132		06/18/23 09:08	12.5
<i>4-Bromofluorobenzene (Surr)</i>	105		70 - 130		06/18/23 09:08	12.5
<i>Toluene-d8 (Surr)</i>	99		70 - 130		06/18/23 09:08	12.5



# Client Sample Results

Client: Alpine Environmental Consultants, LLC  
Project/Site: 11th Street

Job ID: 570-141701-1

## Method: EPA TO-15 - Volatile Organic Compounds in Ambient Air - DL

**Client Sample ID: SG6**

**Date Collected: 06/09/23 14:25**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-6**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5300		340	ug/m3	-		06/19/23 18:45	70.75
						<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
1,2-Dichloroethane-d4 (Surr)	104		66 - 132				06/19/23 18:45	70.75
4-Bromofluorobenzene (Surr)	100		70 - 130				06/19/23 18:45	70.75
Toluene-d8 (Surr)	95		70 - 130				06/19/23 18:45	70.75

**Client Sample ID: SG7**

**Date Collected: 06/09/23 14:05**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-7**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5200		340	ug/m3	-		06/19/23 19:28	70.75
						<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
1,2-Dichloroethane-d4 (Surr)	104		66 - 132				06/19/23 19:28	70.75
4-Bromofluorobenzene (Surr)	99		70 - 130				06/19/23 19:28	70.75
Toluene-d8 (Surr)	96		70 - 130				06/19/23 19:28	70.75

**Client Sample ID: SG8**

**Date Collected: 06/08/23 14:00**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-8**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	4200		350	ug/m3	-		06/19/23 20:12	73.75
						<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
1,2-Dichloroethane-d4 (Surr)	105		66 - 132				06/19/23 20:12	73.75
4-Bromofluorobenzene (Surr)	99		70 - 130				06/19/23 20:12	73.75
Toluene-d8 (Surr)	95		70 - 130				06/19/23 20:12	73.75

# Client Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: ASTM D1946 - Fixed Gases (Helium)

**Client Sample ID: SG1**

**Date Collected: 06/08/23 14:44**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-1**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Helium	ND		41000	ug/m3			06/15/23 11:05	1

**Client Sample ID: SG2**

**Date Collected: 06/08/23 08:35**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-2**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Helium	480000		41000	ug/m3			06/15/23 11:28	1

**Client Sample ID: SG3**

**Date Collected: 06/09/23 14:40**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-3**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Helium	ND		41000	ug/m3			06/15/23 11:51	1

**Client Sample ID: SG4**

**Date Collected: 06/09/23 13:15**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-4**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Helium	ND		41000	ug/m3			06/15/23 12:13	1

**Client Sample ID: SG5**

**Date Collected: 06/09/23 13:35**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-5**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Helium	ND		41000	ug/m3			06/15/23 12:59	1

**Client Sample ID: SG6**

**Date Collected: 06/09/23 14:25**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-6**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Helium	ND		41000	ug/m3			06/15/23 12:34	1

**Client Sample ID: SG7**

**Date Collected: 06/09/23 14:05**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-7**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Helium	ND		41000	ug/m3			06/15/23 13:22	1

**Client Sample ID: SG8**

**Date Collected: 06/08/23 14:00**

**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

**Lab Sample ID: 570-141701-8**

**Matrix: Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Helium	ND		41000	ug/m3			06/15/23 13:43	1

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# Client Sample Results

Client: Alpine Environmental Consultants, LLC  
Project/Site: 11th Street

Job ID: 570-141701-1

## Method: ASTM D1946 - Fixed Gases (Helium)

Client Sample ID: SG9

Date Collected: 06/08/23 13:05

Date Received: 06/14/23 09:40

Sample Container: Summa Canister 1L

Lab Sample ID: 570-141701-9

Matrix: Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Helium	190000		41000	ug/m3			06/15/23 14:06	1

Client Sample ID: SG10

Date Collected: 06/08/23 13:30

Date Received: 06/14/23 09:40

Sample Container: Summa Canister 1L

Lab Sample ID: 570-141701-10

Matrix: Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Helium	49000		41000	ug/m3			06/15/23 14:27	1

Client Sample ID: SG11

Date Collected: 06/08/23 11:43

Date Received: 06/14/23 09:40

Sample Container: Summa Canister 1L

Lab Sample ID: 570-141701-11

Matrix: Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Helium	100000		41000	ug/m3			06/15/23 14:48	1

Client Sample ID: SG12

Date Collected: 06/07/23 12:35

Date Received: 06/14/23 09:40

Sample Container: Summa Canister 1L

Lab Sample ID: 570-141701-12

Matrix: Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Helium	3200000		41000	ug/m3			06/15/23 15:11	1

Client Sample ID: SG4-DUP

Date Collected: 06/09/23 15:05

Date Received: 06/14/23 09:40

Sample Container: Summa Canister 1L

Lab Sample ID: 570-141701-13

Matrix: Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Helium	ND		41000	ug/m3			06/15/23 15:34	1

# Client Sample Results

Client: Alpine Environmental Consultants, LLC  
Project/Site: 11th Street

Job ID: 570-141701-1

## Method: ASTM D1946 - Fixed Gases in Air (GC)

Client Sample ID: SG1

Date Collected: 06/08/23 14:44

Date Received: 06/14/23 09:40

Sample Container: Summa Canister 1L

Lab Sample ID: 570-141701-1

Matrix: Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		0.50	% v/v			06/15/23 12:15	1

Client Sample ID: SG2

Date Collected: 06/08/23 08:35

Date Received: 06/14/23 09:40

Sample Container: Summa Canister 1L

Lab Sample ID: 570-141701-2

Matrix: Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		0.50	% v/v			06/15/23 12:40	1

Client Sample ID: SG3

Date Collected: 06/09/23 14:40

Date Received: 06/14/23 09:40

Sample Container: Summa Canister 1L

Lab Sample ID: 570-141701-3

Matrix: Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		0.50	% v/v			06/15/23 13:04	1

Client Sample ID: SG4

Date Collected: 06/09/23 13:15

Date Received: 06/14/23 09:40

Sample Container: Summa Canister 1L

Lab Sample ID: 570-141701-4

Matrix: Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		0.50	% v/v			06/15/23 13:32	1

Client Sample ID: SG5

Date Collected: 06/09/23 13:35

Date Received: 06/14/23 09:40

Sample Container: Summa Canister 1L

Lab Sample ID: 570-141701-5

Matrix: Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		0.50	% v/v			06/15/23 13:57	1

Client Sample ID: SG6

Date Collected: 06/09/23 14:25

Date Received: 06/14/23 09:40

Sample Container: Summa Canister 1L

Lab Sample ID: 570-141701-6

Matrix: Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		0.50	% v/v			06/15/23 15:17	1

Client Sample ID: SG7

Date Collected: 06/09/23 14:05

Date Received: 06/14/23 09:40

Sample Container: Summa Canister 1L

Lab Sample ID: 570-141701-7

Matrix: Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		0.50	% v/v			06/15/23 17:02	1

Client Sample ID: SG8

Date Collected: 06/08/23 14:00

Date Received: 06/14/23 09:40

Sample Container: Summa Canister 1L

Lab Sample ID: 570-141701-8

Matrix: Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		0.50	% v/v			06/15/23 17:26	1

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# Client Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: ASTM D1946 - Fixed Gases in Air (GC)

**Client Sample ID: SG9** **Lab Sample ID: 570-141701-9**  
**Date Collected: 06/08/23 13:05** **Matrix: Air**  
**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		0.50	% v/v			06/15/23 17:57	1

**Client Sample ID: SG10** **Lab Sample ID: 570-141701-10**  
**Date Collected: 06/08/23 13:30** **Matrix: Air**  
**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		0.50	% v/v			06/15/23 18:46	1

**Client Sample ID: SG11** **Lab Sample ID: 570-141701-11**  
**Date Collected: 06/08/23 11:43** **Matrix: Air**  
**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		0.50	% v/v			06/15/23 19:18	1

**Client Sample ID: SG12** **Lab Sample ID: 570-141701-12**  
**Date Collected: 06/07/23 12:35** **Matrix: Air**  
**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		0.50	% v/v			06/16/23 11:50	1

**Client Sample ID: SG4-DUP** **Lab Sample ID: 570-141701-13**  
**Date Collected: 06/09/23 15:05** **Matrix: Air**  
**Date Received: 06/14/23 09:40**

**Sample Container: Summa Canister 1L**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		0.50	% v/v			06/15/23 21:04	1

# Surrogate Summary

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air

Matrix: Air

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DCA (66-132)	BFB (70-130)	TOL (70-130)
570-141701-2	SG2	106	100	98
570-141701-5	SG5	104	103	97
570-141701-6	SG6	106	101	94
570-141701-6 - DL	SG6	104	100	95
570-141701-7	SG7	104	101	96
570-141701-7 - DL	SG7	104	99	96
570-141701-8	SG8	103	99	93
570-141701-8 - DL	SG8	105	99	95
570-141701-11	SG11	107	105	99
LCS 570-338271/4	Lab Control Sample	100	99	100
LCS 570-338419/3	Lab Control Sample	101	96	100
LCS 570-338491/3	Lab Control Sample	104	101	101
LCSD 570-338271/5	Lab Control Sample Dup	99	99	102
LCSD 570-338419/4	Lab Control Sample Dup	101	96	101
LCSD 570-338491/4	Lab Control Sample Dup	103	100	101
MB 570-338271/7	Method Blank	104	106	97
MB 570-338419/6	Method Blank	100	98	96
MB 570-338491/6	Method Blank	102	100	96

#### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air

**Lab Sample ID: MB 570-338271/7**

**Matrix: Air**

**Analysis Batch: 338271**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		2.7	ug/m3			06/17/23 20:33	1
1,1,2,2-Tetrachloroethane	ND		6.9	ug/m3			06/17/23 20:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		11	ug/m3			06/17/23 20:33	1
1,1,2-Trichloroethane	ND		2.7	ug/m3			06/17/23 20:33	1
1,1-Dichloroethane	ND		2.0	ug/m3			06/17/23 20:33	1
1,1-Dichloroethene	ND		2.0	ug/m3			06/17/23 20:33	1
1,1-Difluoroethane	ND		14	ug/m3			06/17/23 20:33	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			06/17/23 20:33	1
1,2,4-Trimethylbenzene	ND		7.4	ug/m3			06/17/23 20:33	1
1,2-Dibromo-3-Chloropropane	ND		4.8	ug/m3			06/17/23 20:33	1
1,2-Dibromoethane	ND		3.8	ug/m3			06/17/23 20:33	1
1,2-Dichlorobenzene	ND		3.0	ug/m3			06/17/23 20:33	1
1,2-Dichloroethane	ND		2.0	ug/m3			06/17/23 20:33	1
1,2-Dichloropropane	ND		2.3	ug/m3			06/17/23 20:33	1
1,3,5-Trimethylbenzene	ND		2.5	ug/m3			06/17/23 20:33	1
1,3-Dichlorobenzene	ND		3.0	ug/m3			06/17/23 20:33	1
1,4-Dichlorobenzene	ND		3.0	ug/m3			06/17/23 20:33	1
2-Butanone	ND		4.4	ug/m3			06/17/23 20:33	1
2-Hexanone	ND		6.1	ug/m3			06/17/23 20:33	1
4-Ethyltoluene	ND		2.5	ug/m3			06/17/23 20:33	1
4-Methyl-2-pentanone	ND		6.1	ug/m3			06/17/23 20:33	1
Acetone	ND		4.8	ug/m3			06/17/23 20:33	1
Benzene	ND		1.6	ug/m3			06/17/23 20:33	1
Benzyl chloride	ND		7.8	ug/m3			06/17/23 20:33	1
Bromodichloromethane	ND		3.4	ug/m3			06/17/23 20:33	1
Bromoform	ND		5.2	ug/m3			06/17/23 20:33	1
Bromomethane	ND		1.9	ug/m3			06/17/23 20:33	1
cis-1,2-Dichloroethene	ND		2.0	ug/m3			06/17/23 20:33	1
cis-1,3-Dichloropropene	ND		2.3	ug/m3			06/17/23 20:33	1
Carbon disulfide	ND		6.2	ug/m3			06/17/23 20:33	1
Carbon tetrachloride	ND		3.1	ug/m3			06/17/23 20:33	1
Chlorobenzene	ND		2.3	ug/m3			06/17/23 20:33	1
Chloroethane	ND		1.3	ug/m3			06/17/23 20:33	1
Chloroform	ND		2.4	ug/m3			06/17/23 20:33	1
Chloromethane	ND		1.0	ug/m3			06/17/23 20:33	1
Dibromochloromethane	ND		4.3	ug/m3			06/17/23 20:33	1
Dichlorodifluoromethane	ND		2.5	ug/m3			06/17/23 20:33	1
Dichlorotetrafluoroethane	ND		14	ug/m3			06/17/23 20:33	1
Ethylbenzene	ND		2.2	ug/m3			06/17/23 20:33	1
Hexachloro-1,3-butadiene	ND		16	ug/m3			06/17/23 20:33	1
Isopropanol	ND		12	ug/m3			06/17/23 20:33	1
Methylene Chloride	ND		4.3	ug/m3			06/17/23 20:33	1
Methyl-t-Butyl Ether (MTBE)	ND		7.2	ug/m3			06/17/23 20:33	1
n-Butylbenzene	ND		8.2	ug/m3			06/17/23 20:33	1
o-Xylene	ND		2.2	ug/m3			06/17/23 20:33	1
m,p-Xylene	ND		8.7	ug/m3			06/17/23 20:33	1
sec-Butylbenzene	ND		8.2	ug/m3			06/17/23 20:33	1
Styrene	ND		6.4	ug/m3			06/17/23 20:33	1

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# QC Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: MB 570-338271/7**  
**Matrix: Air**  
**Analysis Batch: 338271**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		2.0	ug/m3			06/17/23 20:33	1
trans-1,3-Dichloropropene	ND		4.5	ug/m3			06/17/23 20:33	1
tert-Butylbenzene	ND		8.2	ug/m3			06/17/23 20:33	1
Tetrachloroethene	ND		3.4	ug/m3			06/17/23 20:33	1
Toluene	ND		1.9	ug/m3			06/17/23 20:33	1
Trichloroethene	ND		2.7	ug/m3			06/17/23 20:33	1
Trichlorofluoromethane	ND		5.6	ug/m3			06/17/23 20:33	1
Vinyl acetate	ND		7.0	ug/m3			06/17/23 20:33	1
Vinyl chloride	ND		1.3	ug/m3			06/17/23 20:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		66 - 132		06/17/23 20:33	1
4-Bromofluorobenzene (Surr)	106		70 - 130		06/17/23 20:33	1
Toluene-d8 (Surr)	97		70 - 130		06/17/23 20:33	1

**Lab Sample ID: LCS 570-338271/4**  
**Matrix: Air**  
**Analysis Batch: 338271**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	136	141.4		ug/m3		104	67 - 135
1,1,1,2-Tetrachloroethane	172	170.1		ug/m3		99	70 - 130
1,1,1,2-Trichloro-1,2,2-trifluoroethane	192	209.7		ug/m3		109	70 - 130
1,1,2-Trichloroethane	136	137.1		ug/m3		101	69 - 131
1,1-Dichloroethane	101	106.2		ug/m3		105	69 - 130
1,1-Dichloroethene	99.1	103.5		ug/m3		104	64 - 135
1,1-Difluoroethane	67.5	76.00		ug/m3		113	57 - 146
1,2,4-Trichlorobenzene	186	215.2		ug/m3		116	51 - 134
1,2,4-Trimethylbenzene	123	130.1		ug/m3		106	68 - 130
1,2-Dibromo-3-Chloropropane	242	237.5		ug/m3		98	66 - 130
1,2-Dibromoethane	192	190.1		ug/m3		99	70 - 130
1,2-Dichlorobenzene	150	154.2		ug/m3		103	68 - 130
1,2-Dichloroethane	101	103.9		ug/m3		103	65 - 136
1,2-Dichloropropane	116	118.0		ug/m3		102	68 - 132
1,3,5-Trimethylbenzene	123	125.8		ug/m3		102	69 - 130
1,3-Dichlorobenzene	150	156.0		ug/m3		104	65 - 130
1,4-Dichlorobenzene	150	154.0		ug/m3		102	64 - 130
2-Butanone	73.7	75.85		ug/m3		103	66 - 143
2-Hexanone	102	88.51		ug/m3		86	64 - 139
4-Ethyltoluene	123	127.7		ug/m3		104	69 - 130
4-Methyl-2-pentanone	102	100.9		ug/m3		99	65 - 135
Acetone	59.4	63.71		ug/m3		107	70 - 130
Benzene	79.9	81.27		ug/m3		102	68 - 134
Benzyl chloride	129	137.8		ug/m3		106	70 - 130
Bromodichloromethane	168	171.6		ug/m3		102	69 - 132
Bromoform	258	271.6		ug/m3		105	70 - 130
Bromomethane	97.1	102.1		ug/m3		105	65 - 130
cis-1,2-Dichloroethene	99.1	101.0		ug/m3		102	70 - 130

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# QC Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCS 570-338271/4**  
**Matrix: Air**  
**Analysis Batch: 338271**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
cis-1,3-Dichloropropene	113	116.9		ug/m3		103	70 - 134
Carbon disulfide	77.9	84.45		ug/m3		108	70 - 130
Carbon tetrachloride	157	160.9		ug/m3		102	68 - 133
Chlorobenzene	115	114.4		ug/m3		99	70 - 130
Chloroethane	66.0	72.39		ug/m3		110	66 - 134
Chloroform	122	124.3		ug/m3		102	67 - 131
Chloromethane	51.6	72.61	*+ me	ug/m3		141	60 - 137
Dibromochloromethane	213	218.7		ug/m3		103	70 - 130
Dichlorodifluoromethane	124	127.9		ug/m3		103	57 - 138
Dichlorotetrafluoroethane	175	196.9		ug/m3		113	60 - 133
Ethylbenzene	109	109.1		ug/m3		101	70 - 130
Hexachloro-1,3-butadiene	267	298.6		ug/m3		112	58 - 130
Isopropanol	61.5	60.48		ug/m3		98	64 - 133
Methylene Chloride	86.8	95.34		ug/m3		110	65 - 130
Methyl-t-Butyl Ether (MTBE)	90.1	96.87		ug/m3		107	70 - 130
n-Butylbenzene	137	150.0		ug/m3		109	64 - 130
o-Xylene	109	109.3		ug/m3		101	68 - 130
m,p-Xylene	217	218.4		ug/m3		101	70 - 130
sec-Butylbenzene	137	139.3		ug/m3		102	67 - 130
Styrene	106	106.9		ug/m3		100	70 - 130
trans-1,2-Dichloroethene	99.1	111.1		ug/m3		112	70 - 130
trans-1,3-Dichloropropene	113	117.4		ug/m3		104	66 - 142
tert-Butylbenzene	137	141.3		ug/m3		103	70 - 130
Tetrachloroethene	170	166.6		ug/m3		98	70 - 130
Toluene	94.2	94.05		ug/m3		100	70 - 130
Trichloroethene	134	135.2		ug/m3		101	69 - 130
Trichlorofluoromethane	140	155.9		ug/m3		111	62 - 139
Vinyl acetate	88.0	86.99		ug/m3		99	64 - 139
Vinyl chloride	63.9	66.84		ug/m3		105	65 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		66 - 132
4-Bromofluorobenzene (Surr)	99		70 - 130
Toluene-d8 (Surr)	100		70 - 130

**Lab Sample ID: LCSD 570-338271/5**  
**Matrix: Air**  
**Analysis Batch: 338271**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane	136	133.7		ug/m3		98	67 - 135	6	25
1,1,2,2-Tetrachloroethane	172	165.6		ug/m3		96	70 - 130	3	25
1,1,2-Trichloro-1,2,2-trifluoroethane	192	190.7		ug/m3		100	70 - 130	10	25
1,1,2-Trichloroethane	136	133.2		ug/m3		98	69 - 131	3	25
1,1-Dichloroethane	101	98.84		ug/m3		98	69 - 130	7	25
1,1-Dichloroethene	99.1	99.22		ug/m3		100	64 - 135	4	25
1,1-Difluoroethane	67.5	71.09		ug/m3		105	57 - 146	7	25
1,2,4-Trichlorobenzene	186	218.5		ug/m3		118	51 - 134	2	25

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# QC Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCSD 570-338271/5**

**Client Sample ID: Lab Control Sample Dup**

**Matrix: Air**

**Prep Type: Total/NA**

**Analysis Batch: 338271**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trimethylbenzene	123	127.2		ug/m3		104	68 - 130	2	25
1,2-Dibromo-3-Chloropropane	242	236.7		ug/m3		98	66 - 130	0	25
1,2-Dibromoethane	192	189.1		ug/m3		98	70 - 130	1	25
1,2-Dichlorobenzene	150	152.4		ug/m3		101	68 - 130	1	25
1,2-Dichloroethane	101	97.57		ug/m3		96	65 - 136	6	25
1,2-Dichloropropane	116	113.4		ug/m3		98	68 - 132	4	25
1,3,5-Trimethylbenzene	123	123.0		ug/m3		100	69 - 130	2	25
1,3-Dichlorobenzene	150	152.5		ug/m3		101	65 - 130	2	25
1,4-Dichlorobenzene	150	151.5		ug/m3		101	64 - 130	2	25
2-Butanone	73.7	70.35		ug/m3		95	66 - 143	8	25
2-Hexanone	102	90.64		ug/m3		88	64 - 139	2	25
4-Ethyltoluene	123	127.8		ug/m3		104	69 - 130	0	25
4-Methyl-2-pentanone	102	98.20		ug/m3		96	65 - 135	3	25
Acetone	59.4	61.58		ug/m3		104	70 - 130	3	25
Benzene	79.9	79.55		ug/m3		100	68 - 134	2	25
Benzyl chloride	129	137.1		ug/m3		106	70 - 130	1	25
Bromodichloromethane	168	167.7		ug/m3		100	69 - 132	2	25
Bromoform	258	258.6		ug/m3		100	70 - 130	5	25
Bromomethane	97.1	97.90		ug/m3		101	65 - 130	4	25
cis-1,2-Dichloroethene	99.1	100.3		ug/m3		101	70 - 130	1	25
cis-1,3-Dichloropropene	113	116.1		ug/m3		102	70 - 134	1	25
Carbon disulfide	77.9	76.36		ug/m3		98	70 - 130	10	25
Carbon tetrachloride	157	156.9		ug/m3		100	68 - 133	2	25
Chlorobenzene	115	112.8		ug/m3		98	70 - 130	1	25
Chloroethane	66.0	69.15		ug/m3		105	66 - 134	5	25
Chloroform	122	117.2		ug/m3		96	67 - 131	6	25
Chloromethane	51.6	71.41	*+ me	ug/m3		138	60 - 137	2	25
Dibromochloromethane	213	214.2		ug/m3		101	70 - 130	2	25
Dichlorodifluoromethane	124	121.4		ug/m3		98	57 - 138	5	25
Dichlorotetrafluoroethane	175	185.1		ug/m3		106	60 - 133	6	25
Ethylbenzene	109	110.4		ug/m3		102	70 - 130	1	25
Hexachloro-1,3-butadiene	267	280.9		ug/m3		105	58 - 130	6	25
Isopropanol	61.5	60.36		ug/m3		98	64 - 133	0	25
Methylene Chloride	86.8	88.04		ug/m3		101	65 - 130	8	25
Methyl-t-Butyl Ether (MTBE)	90.1	88.17		ug/m3		98	70 - 130	9	25
n-Butylbenzene	137	148.8		ug/m3		108	64 - 130	1	25
o-Xylene	109	105.5		ug/m3		97	68 - 130	4	25
m,p-Xylene	217	212.5		ug/m3		98	70 - 130	3	25
sec-Butylbenzene	137	136.5		ug/m3		99	67 - 130	2	25
Styrene	106	104.5		ug/m3		98	70 - 130	2	25
trans-1,2-Dichloroethene	99.1	98.07		ug/m3		99	70 - 130	12	25
trans-1,3-Dichloropropene	113	115.6		ug/m3		102	66 - 142	2	25
tert-Butylbenzene	137	138.7		ug/m3		101	70 - 130	2	25
Tetrachloroethene	170	164.7		ug/m3		97	70 - 130	1	25
Toluene	94.2	91.44		ug/m3		97	70 - 130	3	25
Trichloroethene	134	132.7		ug/m3		99	69 - 130	2	25
Trichlorofluoromethane	140	145.4		ug/m3		104	62 - 139	7	25
Vinyl acetate	88.0	84.89		ug/m3		96	64 - 139	2	25
Vinyl chloride	63.9	63.55		ug/m3		99	65 - 130	5	25

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# QC Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

<i>Surrogate</i>	<i>LCSD %Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	99		66 - 132
4-Bromofluorobenzene (Surr)	99		70 - 130
Toluene-d8 (Surr)	102		70 - 130

**Lab Sample ID: MB 570-338419/6**  
**Matrix: Air**  
**Analysis Batch: 338419**

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

<b>Analyte</b>	<b>MB Result</b>	<b>MB Qualifier</b>	<b>RL</b>	<b>Unit</b>	<b>D</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,1,1-Trichloroethane	ND		2.7	ug/m3			06/17/23 16:15	1
1,1,1,2,2-Tetrachloroethane	ND		6.9	ug/m3			06/17/23 16:15	1
1,1,1,2-Trichloro-1,2,2-trifluoroethane	ND		11	ug/m3			06/17/23 16:15	1
1,1,2-Trichloroethane	ND		2.7	ug/m3			06/17/23 16:15	1
1,1-Dichloroethane	ND		2.0	ug/m3			06/17/23 16:15	1
1,1-Dichloroethene	ND		2.0	ug/m3			06/17/23 16:15	1
1,1-Difluoroethane	ND		14	ug/m3			06/17/23 16:15	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			06/17/23 16:15	1
1,2,4-Trimethylbenzene	ND		7.4	ug/m3			06/17/23 16:15	1
1,2-Dibromo-3-Chloropropane	ND		4.8	ug/m3			06/17/23 16:15	1
1,2-Dibromoethane	ND		3.8	ug/m3			06/17/23 16:15	1
1,2-Dichlorobenzene	ND		3.0	ug/m3			06/17/23 16:15	1
1,2-Dichloroethane	ND		2.0	ug/m3			06/17/23 16:15	1
1,2-Dichloropropane	ND		2.3	ug/m3			06/17/23 16:15	1
1,3,5-Trimethylbenzene	ND		2.5	ug/m3			06/17/23 16:15	1
1,3-Dichlorobenzene	ND		3.0	ug/m3			06/17/23 16:15	1
1,4-Dichlorobenzene	ND		3.0	ug/m3			06/17/23 16:15	1
2-Butanone	ND		4.4	ug/m3			06/17/23 16:15	1
2-Hexanone	ND		6.1	ug/m3			06/17/23 16:15	1
4-Ethyltoluene	ND		2.5	ug/m3			06/17/23 16:15	1
4-Methyl-2-pentanone	ND		6.1	ug/m3			06/17/23 16:15	1
Acetone	ND		4.8	ug/m3			06/17/23 16:15	1
Benzene	ND		1.6	ug/m3			06/17/23 16:15	1
Benzyl chloride	ND		7.8	ug/m3			06/17/23 16:15	1
Bromodichloromethane	ND		3.4	ug/m3			06/17/23 16:15	1
Bromoform	ND		5.2	ug/m3			06/17/23 16:15	1
Bromomethane	ND		1.9	ug/m3			06/17/23 16:15	1
cis-1,2-Dichloroethene	ND		2.0	ug/m3			06/17/23 16:15	1
cis-1,3-Dichloropropene	ND		2.3	ug/m3			06/17/23 16:15	1
Carbon disulfide	ND		6.2	ug/m3			06/17/23 16:15	1
Carbon tetrachloride	ND		3.1	ug/m3			06/17/23 16:15	1
Chlorobenzene	ND		2.3	ug/m3			06/17/23 16:15	1
Chloroethane	ND		1.3	ug/m3			06/17/23 16:15	1
Chloroform	ND		2.4	ug/m3			06/17/23 16:15	1
Chloromethane	ND		1.0	ug/m3			06/17/23 16:15	1
Dibromochloromethane	ND		4.3	ug/m3			06/17/23 16:15	1
Dichlorodifluoromethane	ND		2.5	ug/m3			06/17/23 16:15	1
Dichlorotetrafluoroethane	ND		14	ug/m3			06/17/23 16:15	1
Ethylbenzene	ND		2.2	ug/m3			06/17/23 16:15	1
Hexachloro-1,3-butadiene	ND		16	ug/m3			06/17/23 16:15	1
Isopropanol	ND		12	ug/m3			06/17/23 16:15	1
Methylene Chloride	ND		4.3	ug/m3			06/17/23 16:15	1

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# QC Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: MB 570-338419/6**  
**Matrix: Air**  
**Analysis Batch: 338419**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl-t-Butyl Ether (MTBE)	ND		7.2	ug/m3			06/17/23 16:15	1
n-Butylbenzene	ND		8.2	ug/m3			06/17/23 16:15	1
o-Xylene	ND		2.2	ug/m3			06/17/23 16:15	1
m,p-Xylene	ND		8.7	ug/m3			06/17/23 16:15	1
sec-Butylbenzene	ND		8.2	ug/m3			06/17/23 16:15	1
Styrene	ND		6.4	ug/m3			06/17/23 16:15	1
trans-1,2-Dichloroethene	ND		2.0	ug/m3			06/17/23 16:15	1
trans-1,3-Dichloropropene	ND		4.5	ug/m3			06/17/23 16:15	1
tert-Butylbenzene	ND		8.2	ug/m3			06/17/23 16:15	1
Tetrachloroethene	ND		3.4	ug/m3			06/17/23 16:15	1
Toluene	ND		1.9	ug/m3			06/17/23 16:15	1
Trichloroethene	ND		2.7	ug/m3			06/17/23 16:15	1
Trichlorofluoromethane	ND		5.6	ug/m3			06/17/23 16:15	1
Vinyl acetate	ND		7.0	ug/m3			06/17/23 16:15	1
Vinyl chloride	ND		1.3	ug/m3			06/17/23 16:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		66 - 132		06/17/23 16:15	1
4-Bromofluorobenzene (Surr)	98		70 - 130		06/17/23 16:15	1
Toluene-d8 (Surr)	96		70 - 130		06/17/23 16:15	1

**Lab Sample ID: LCS 570-338419/3**  
**Matrix: Air**  
**Analysis Batch: 338419**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	136	141.6		ug/m3		104	67 - 135
1,1,1,2-Tetrachloroethane	172	154.0		ug/m3		90	70 - 130
1,1,1,2-Trichloro-1,1,2-trifluoroethane	192	196.5		ug/m3		103	70 - 130
1,1,2-Trichloroethane	136	138.1		ug/m3		101	69 - 131
1,1-Dichloroethane	101	100.7		ug/m3		99	69 - 130
1,1-Dichloroethene	99.1	103.7		ug/m3		105	64 - 135
1,1-Difluoroethane	67.5	68.72		ug/m3		102	57 - 146
1,2,4-Trichlorobenzene	186	144.0		ug/m3		78	51 - 134
1,2,4-Trimethylbenzene	123	105.7		ug/m3		86	68 - 130
1,2-Dibromo-3-Chloropropane	242	209.9		ug/m3		87	66 - 130
1,2-Dibromoethane	192	183.0		ug/m3		95	70 - 130
1,2-Dichlorobenzene	150	121.9		ug/m3		81	68 - 130
1,2-Dichloroethane	101	102.2		ug/m3		101	65 - 136
1,2-Dichloropropane	116	118.5		ug/m3		103	68 - 132
1,3,5-Trimethylbenzene	123	108.9		ug/m3		89	69 - 130
1,3-Dichlorobenzene	150	122.8		ug/m3		82	65 - 130
1,4-Dichlorobenzene	150	126.3		ug/m3		84	64 - 130
2-Butanone	73.7	71.83		ug/m3		97	66 - 143
2-Hexanone	102	99.33		ug/m3		97	64 - 139
4-Ethyltoluene	123	112.1		ug/m3		91	69 - 130
4-Methyl-2-pentanone	102	99.66		ug/m3		97	65 - 135
Acetone	59.4	58.34		ug/m3		98	70 - 130

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# QC Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCS 570-338419/3**  
**Matrix: Air**  
**Analysis Batch: 338419**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	79.9	81.27		ug/m3		102	68 - 134
Benzyl chloride	129	111.0		ug/m3		86	70 - 130
Bromodichloromethane	168	177.2		ug/m3		106	69 - 132
Bromoform	258	244.7		ug/m3		95	70 - 130
Bromomethane	97.1	100.3		ug/m3		103	65 - 130
cis-1,2-Dichloroethene	99.1	100.7		ug/m3		102	70 - 130
cis-1,3-Dichloropropene	113	119.0		ug/m3		105	70 - 134
Carbon disulfide	77.9	69.24		ug/m3		89	70 - 130
Carbon tetrachloride	157	168.3		ug/m3		107	68 - 133
Chlorobenzene	115	110.6		ug/m3		96	70 - 130
Chloroethane	66.0	67.93		ug/m3		103	66 - 134
Chloroform	122	121.7		ug/m3		100	67 - 131
Chloromethane	51.6	52.72		ug/m3		102	60 - 137
Dibromochloromethane	213	210.6		ug/m3		99	70 - 130
Dichlorodifluoromethane	124	130.1		ug/m3		105	57 - 138
Dichlorotetrafluoroethane	175	177.3		ug/m3		101	60 - 133
Ethylbenzene	109	103.2		ug/m3		95	70 - 130
Hexachloro-1,3-butadiene	267	201.2		ug/m3		75	58 - 130
Isopropanol	61.5	61.85		ug/m3		101	64 - 133
Methylene Chloride	86.8	90.33		ug/m3		104	65 - 130
Methyl-t-Butyl Ether (MTBE)	90.1	90.35		ug/m3		100	70 - 130
n-Butylbenzene	137	124.6		ug/m3		91	64 - 130
o-Xylene	109	98.28		ug/m3		91	68 - 130
m,p-Xylene	217	200.9		ug/m3		93	70 - 130
sec-Butylbenzene	137	121.4		ug/m3		88	67 - 130
Styrene	106	101.6		ug/m3		95	70 - 130
trans-1,2-Dichloroethene	99.1	93.80		ug/m3		95	70 - 130
trans-1,3-Dichloropropene	113	116.0		ug/m3		102	66 - 142
tert-Butylbenzene	137	119.8		ug/m3		87	70 - 130
Tetrachloroethene	170	160.7		ug/m3		95	70 - 130
Toluene	94.2	88.95		ug/m3		94	70 - 130
Trichloroethene	134	135.3		ug/m3		101	69 - 130
Trichlorofluoromethane	140	144.3		ug/m3		103	62 - 139
Vinyl acetate	88.0	85.34		ug/m3		97	64 - 139
Vinyl chloride	63.9	66.32		ug/m3		104	65 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		66 - 132
4-Bromofluorobenzene (Surr)	96		70 - 130
Toluene-d8 (Surr)	100		70 - 130

**Lab Sample ID: LCSD 570-338419/4**  
**Matrix: Air**  
**Analysis Batch: 338419**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane	136	139.2		ug/m3		102	67 - 135	2	25
1,1,1,2-Tetrachloroethane	172	155.8		ug/m3		91	70 - 130	1	25

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# QC Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCSD 570-338419/4**  
**Matrix: Air**  
**Analysis Batch: 338419**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,2-Trichloro-1,2,2-trifluoroethane	192	193.1		ug/m3		101	70 - 130	2	25
1,1,2-Trichloroethane	136	137.4		ug/m3		101	69 - 131	0	25
1,1-Dichloroethane	101	99.61		ug/m3		98	69 - 130	1	25
1,1-Dichloroethene	99.1	102.9		ug/m3		104	64 - 135	1	25
1,1-Difluoroethane	67.5	67.91		ug/m3		101	57 - 146	1	25
1,2,4-Trichlorobenzene	186	145.5		ug/m3		78	51 - 134	1	25
1,2,4-Trimethylbenzene	123	106.1		ug/m3		86	68 - 130	0	25
1,2-Dibromo-3-Chloropropane	242	212.4		ug/m3		88	66 - 130	1	25
1,2-Dibromoethane	192	183.4		ug/m3		95	70 - 130	0	25
1,2-Dichlorobenzene	150	121.8		ug/m3		81	68 - 130	0	25
1,2-Dichloroethane	101	101.1		ug/m3		100	65 - 136	1	25
1,2-Dichloropropane	116	119.5		ug/m3		103	68 - 132	1	25
1,3,5-Trimethylbenzene	123	109.2		ug/m3		89	69 - 130	0	25
1,3-Dichlorobenzene	150	123.7		ug/m3		82	65 - 130	1	25
1,4-Dichlorobenzene	150	127.1		ug/m3		85	64 - 130	1	25
2-Butanone	73.7	71.28		ug/m3		97	66 - 143	1	25
2-Hexanone	102	99.50		ug/m3		97	64 - 139	0	25
4-Ethyltoluene	123	112.4		ug/m3		91	69 - 130	0	25
4-Methyl-2-pentanone	102	95.38		ug/m3		93	65 - 135	4	25
Acetone	59.4	58.76		ug/m3		99	70 - 130	1	25
Benzene	79.9	81.07		ug/m3		102	68 - 134	0	25
Benzyl chloride	129	111.5		ug/m3		86	70 - 130	0	25
Bromodichloromethane	168	174.7		ug/m3		104	69 - 132	1	25
Bromoform	258	253.7		ug/m3		98	70 - 130	4	25
Bromomethane	97.1	100.5		ug/m3		103	65 - 130	0	25
cis-1,2-Dichloroethene	99.1	100.7		ug/m3		102	70 - 130	0	25
cis-1,3-Dichloropropene	113	116.1		ug/m3		102	70 - 134	2	25
Carbon disulfide	77.9	68.39		ug/m3		88	70 - 130	1	25
Carbon tetrachloride	157	166.9		ug/m3		106	68 - 133	1	25
Chlorobenzene	115	111.7		ug/m3		97	70 - 130	1	25
Chloroethane	66.0	69.32		ug/m3		105	66 - 134	2	25
Chloroform	122	120.3		ug/m3		99	67 - 131	1	25
Chloromethane	51.6	51.88		ug/m3		100	60 - 137	2	25
Dibromochloromethane	213	213.1		ug/m3		100	70 - 130	1	25
Dichlorodifluoromethane	124	127.8		ug/m3		103	57 - 138	2	25
Dichlorotetrafluoroethane	175	177.6		ug/m3		102	60 - 133	0	25
Ethylbenzene	109	110.5		ug/m3		102	70 - 130	7	25
Hexachloro-1,3-butadiene	267	200.3		ug/m3		75	58 - 130	0	25
Isopropanol	61.5	62.15		ug/m3		101	64 - 133	0	25
Methylene Chloride	86.8	88.59		ug/m3		102	65 - 130	2	25
Methyl-t-Butyl Ether (MTBE)	90.1	89.75		ug/m3		100	70 - 130	1	25
n-Butylbenzene	137	124.9		ug/m3		91	64 - 130	0	25
o-Xylene	109	99.19		ug/m3		91	68 - 130	1	25
m,p-Xylene	217	212.3		ug/m3		98	70 - 130	6	25
sec-Butylbenzene	137	122.2		ug/m3		89	67 - 130	1	25
Styrene	106	104.8		ug/m3		98	70 - 130	3	25
trans-1,2-Dichloroethene	99.1	91.91		ug/m3		93	70 - 130	2	25
trans-1,3-Dichloropropene	113	114.4		ug/m3		101	66 - 142	1	25

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# QC Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCSD 570-338419/4**  
**Matrix: Air**  
**Analysis Batch: 338419**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
tert-Butylbenzene	137	119.9		ug/m3		87	70 - 130	0	25
Tetrachloroethene	170	162.6		ug/m3		96	70 - 130	1	25
Toluene	94.2	89.44		ug/m3		95	70 - 130	1	25
Trichloroethene	134	135.3		ug/m3		101	69 - 130	0	25
Trichlorofluoromethane	140	145.2		ug/m3		103	62 - 139	1	25
Vinyl acetate	88.0	84.61		ug/m3		96	64 - 139	1	25
Vinyl chloride	63.9	65.58		ug/m3		103	65 - 130	1	25

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	101		66 - 132
4-Bromofluorobenzene (Surr)	96		70 - 130
Toluene-d8 (Surr)	101		70 - 130

**Lab Sample ID: MB 570-338491/6**  
**Matrix: Air**  
**Analysis Batch: 338491**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		2.7	ug/m3			06/19/23 17:13	1
1,1,2,2-Tetrachloroethane	ND		6.9	ug/m3			06/19/23 17:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		11	ug/m3			06/19/23 17:13	1
1,1,2-Trichloroethane	ND		2.7	ug/m3			06/19/23 17:13	1
1,1-Dichloroethane	ND		2.0	ug/m3			06/19/23 17:13	1
1,1-Dichloroethene	ND		2.0	ug/m3			06/19/23 17:13	1
1,1-Difluoroethane	ND		14	ug/m3			06/19/23 17:13	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			06/19/23 17:13	1
1,2,4-Trimethylbenzene	ND		7.4	ug/m3			06/19/23 17:13	1
1,2-Dibromo-3-Chloropropane	ND		4.8	ug/m3			06/19/23 17:13	1
1,2-Dibromoethane	ND		3.8	ug/m3			06/19/23 17:13	1
1,2-Dichlorobenzene	ND		3.0	ug/m3			06/19/23 17:13	1
1,2-Dichloroethane	ND		2.0	ug/m3			06/19/23 17:13	1
1,2-Dichloropropane	ND		2.3	ug/m3			06/19/23 17:13	1
1,3,5-Trimethylbenzene	ND		2.5	ug/m3			06/19/23 17:13	1
1,3-Dichlorobenzene	ND		3.0	ug/m3			06/19/23 17:13	1
1,4-Dichlorobenzene	ND		3.0	ug/m3			06/19/23 17:13	1
2-Butanone	ND		4.4	ug/m3			06/19/23 17:13	1
2-Hexanone	ND		6.1	ug/m3			06/19/23 17:13	1
4-Ethyltoluene	ND		2.5	ug/m3			06/19/23 17:13	1
4-Methyl-2-pentanone	ND		6.1	ug/m3			06/19/23 17:13	1
Acetone	ND		4.8	ug/m3			06/19/23 17:13	1
Benzene	ND		1.6	ug/m3			06/19/23 17:13	1
Benzyl chloride	ND		7.8	ug/m3			06/19/23 17:13	1
Bromodichloromethane	ND		3.4	ug/m3			06/19/23 17:13	1
Bromoform	ND		5.2	ug/m3			06/19/23 17:13	1
Bromomethane	ND		1.9	ug/m3			06/19/23 17:13	1
cis-1,2-Dichloroethene	ND		2.0	ug/m3			06/19/23 17:13	1
cis-1,3-Dichloropropene	ND		2.3	ug/m3			06/19/23 17:13	1
Carbon disulfide	ND		6.2	ug/m3			06/19/23 17:13	1

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# QC Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: MB 570-338491/6**  
**Matrix: Air**  
**Analysis Batch: 338491**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		3.1	ug/m3			06/19/23 17:13	1
Chlorobenzene	ND		2.3	ug/m3			06/19/23 17:13	1
Chloroethane	ND		1.3	ug/m3			06/19/23 17:13	1
Chloroform	ND		2.4	ug/m3			06/19/23 17:13	1
Chloromethane	ND		1.0	ug/m3			06/19/23 17:13	1
Dibromochloromethane	ND		4.3	ug/m3			06/19/23 17:13	1
Dichlorodifluoromethane	ND		2.5	ug/m3			06/19/23 17:13	1
Dichlorotetrafluoroethane	ND		14	ug/m3			06/19/23 17:13	1
Ethylbenzene	ND		2.2	ug/m3			06/19/23 17:13	1
Hexachloro-1,3-butadiene	ND		16	ug/m3			06/19/23 17:13	1
Isopropanol	ND		12	ug/m3			06/19/23 17:13	1
Methylene Chloride	ND		4.3	ug/m3			06/19/23 17:13	1
Methyl-t-Butyl Ether (MTBE)	ND		7.2	ug/m3			06/19/23 17:13	1
n-Butylbenzene	ND		8.2	ug/m3			06/19/23 17:13	1
o-Xylene	ND		2.2	ug/m3			06/19/23 17:13	1
m,p-Xylene	ND		8.7	ug/m3			06/19/23 17:13	1
sec-Butylbenzene	ND		8.2	ug/m3			06/19/23 17:13	1
Styrene	ND		6.4	ug/m3			06/19/23 17:13	1
trans-1,2-Dichloroethene	ND		2.0	ug/m3			06/19/23 17:13	1
trans-1,3-Dichloropropene	ND		4.5	ug/m3			06/19/23 17:13	1
tert-Butylbenzene	ND		8.2	ug/m3			06/19/23 17:13	1
Tetrachloroethene	ND		3.4	ug/m3			06/19/23 17:13	1
Toluene	ND		1.9	ug/m3			06/19/23 17:13	1
Trichloroethene	ND		2.7	ug/m3			06/19/23 17:13	1
Trichlorofluoromethane	ND		5.6	ug/m3			06/19/23 17:13	1
Vinyl acetate	ND		7.0	ug/m3			06/19/23 17:13	1
Vinyl chloride	ND		1.3	ug/m3			06/19/23 17:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		66 - 132		06/19/23 17:13	1
4-Bromofluorobenzene (Surr)	100		70 - 130		06/19/23 17:13	1
Toluene-d8 (Surr)	96		70 - 130		06/19/23 17:13	1

**Lab Sample ID: LCS 570-338491/3**  
**Matrix: Air**  
**Analysis Batch: 338491**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	136	141.7		ug/m3		104	67 - 135
1,1,2,2-Tetrachloroethane	172	148.6		ug/m3		87	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	192	193.7		ug/m3		101	70 - 130
1,1,2-Trichloroethane	136	132.5		ug/m3		97	69 - 131
1,1-Dichloroethane	101	98.74		ug/m3		98	69 - 130
1,1-Dichloroethene	99.1	104.3		ug/m3		105	64 - 135
1,1-Difluoroethane	67.5	66.45		ug/m3		98	57 - 146
1,2,4-Trichlorobenzene	186	133.9		ug/m3		72	51 - 134
1,2,4-Trimethylbenzene	123	103.8		ug/m3		84	68 - 130
1,2-Dibromo-3-Chloropropane	242	202.7		ug/m3		84	66 - 130

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# QC Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCS 570-338491/3**

**Matrix: Air**

**Analysis Batch: 338491**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dibromoethane	192	175.5		ug/m3		91	70 - 130
1,2-Dichlorobenzene	150	117.5		ug/m3		78	68 - 130
1,2-Dichloroethane	101	103.7		ug/m3		103	65 - 136
1,2-Dichloropropane	116	113.6		ug/m3		98	68 - 132
1,3,5-Trimethylbenzene	123	106.3		ug/m3		86	69 - 130
1,3-Dichlorobenzene	150	118.4		ug/m3		79	65 - 130
1,4-Dichlorobenzene	150	121.6		ug/m3		81	64 - 130
2-Butanone	73.7	71.59		ug/m3		97	66 - 143
2-Hexanone	102	93.40		ug/m3		91	64 - 139
4-Ethyltoluene	123	108.1		ug/m3		88	69 - 130
4-Methyl-2-pentanone	102	92.91		ug/m3		91	65 - 135
Acetone	59.4	57.14		ug/m3		96	70 - 130
Benzene	79.9	77.32		ug/m3		97	68 - 134
Benzyl chloride	129	107.0		ug/m3		83	70 - 130
Bromodichloromethane	168	172.5		ug/m3		103	69 - 132
Bromoform	258	239.1		ug/m3		93	70 - 130
Bromomethane	97.1	97.32		ug/m3		100	65 - 130
cis-1,2-Dichloroethene	99.1	97.43		ug/m3		98	70 - 130
cis-1,3-Dichloropropene	113	110.6		ug/m3		97	70 - 134
Carbon disulfide	77.9	67.10		ug/m3		86	70 - 130
Carbon tetrachloride	157	168.4		ug/m3		107	68 - 133
Chlorobenzene	115	105.6		ug/m3		92	70 - 130
Chloroethane	66.0	66.75		ug/m3		101	66 - 134
Chloroform	122	121.1		ug/m3		99	67 - 131
Chloromethane	51.6	51.21		ug/m3		99	60 - 137
Dibromochloromethane	213	205.9		ug/m3		97	70 - 130
Dichlorodifluoromethane	124	130.1		ug/m3		105	57 - 138
Dichlorotetrafluoroethane	175	170.9		ug/m3		98	60 - 133
Ethylbenzene	109	98.67		ug/m3		91	70 - 130
Hexachloro-1,3-butadiene	267	197.2		ug/m3		74	58 - 130
Isopropanol	61.5	60.73		ug/m3		99	64 - 133
Methylene Chloride	86.8	88.01		ug/m3		101	65 - 130
Methyl-t-Butyl Ether (MTBE)	90.1	88.32		ug/m3		98	70 - 130
n-Butylbenzene	137	120.1		ug/m3		88	64 - 130
o-Xylene	109	94.66		ug/m3		87	68 - 130
m,p-Xylene	217	194.6		ug/m3		90	70 - 130
sec-Butylbenzene	137	118.6		ug/m3		86	67 - 130
Styrene	106	97.48		ug/m3		92	70 - 130
trans-1,2-Dichloroethene	99.1	90.47		ug/m3		91	70 - 130
trans-1,3-Dichloropropene	113	111.1		ug/m3		98	66 - 142
tert-Butylbenzene	137	117.4		ug/m3		86	70 - 130
Tetrachloroethene	170	156.1		ug/m3		92	70 - 130
Toluene	94.2	84.20		ug/m3		89	70 - 130
Trichloroethene	134	132.2		ug/m3		98	69 - 130
Trichlorofluoromethane	140	148.7		ug/m3		106	62 - 139
Vinyl acetate	88.0	84.49		ug/m3		96	64 - 139
Vinyl chloride	63.9	64.48		ug/m3		101	65 - 130

# QC Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCS 570-338491/3**  
**Matrix: Air**  
**Analysis Batch: 338491**

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

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	104		66 - 132
4-Bromofluorobenzene (Surr)	101		70 - 130
Toluene-d8 (Surr)	101		70 - 130

**Lab Sample ID: LCSD 570-338491/4**  
**Matrix: Air**  
**Analysis Batch: 338491**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD
									Limit
1,1,1-Trichloroethane	136	144.3		ug/m3		106	67 - 135	2	25
1,1,2,2-Tetrachloroethane	172	151.9		ug/m3		89	70 - 130	2	25
1,1,2-Trichloro-1,2,2-trifluoroethane	192	198.3		ug/m3		103	70 - 130	2	25
1,1,2-Trichloroethane	136	136.4		ug/m3		100	69 - 131	3	25
1,1-Dichloroethane	101	101.8		ug/m3		101	69 - 130	3	25
1,1-Dichloroethene	99.1	105.2		ug/m3		106	64 - 135	1	25
1,1-Difluoroethane	67.5	66.85		ug/m3		99	57 - 146	1	25
1,2,4-Trichlorobenzene	186	136.8		ug/m3		74	51 - 134	2	25
1,2,4-Trimethylbenzene	123	104.9		ug/m3		85	68 - 130	1	25
1,2-Dibromo-3-Chloropropane	242	205.4		ug/m3		85	66 - 130	1	25
1,2-Dibromoethane	192	180.1		ug/m3		94	70 - 130	3	25
1,2-Dichlorobenzene	150	119.5		ug/m3		80	68 - 130	2	25
1,2-Dichloroethane	101	105.3		ug/m3		104	65 - 136	1	25
1,2-Dichloropropane	116	117.7		ug/m3		102	68 - 132	4	25
1,3,5-Trimethylbenzene	123	107.8		ug/m3		88	69 - 130	1	25
1,3-Dichlorobenzene	150	119.6		ug/m3		80	65 - 130	1	25
1,4-Dichlorobenzene	150	122.7		ug/m3		82	64 - 130	1	25
2-Butanone	73.7	73.97		ug/m3		100	66 - 143	3	25
2-Hexanone	102	95.77		ug/m3		93	64 - 139	3	25
4-Ethyltoluene	123	110.2		ug/m3		90	69 - 130	2	25
4-Methyl-2-pentanone	102	94.30		ug/m3		92	65 - 135	1	25
Acetone	59.4	57.77		ug/m3		97	70 - 130	1	25
Benzene	79.9	80.13		ug/m3		100	68 - 134	4	25
Benzyl chloride	129	107.7		ug/m3		83	70 - 130	1	25
Bromodichloromethane	168	175.0		ug/m3		104	69 - 132	1	25
Bromoform	258	243.7		ug/m3		94	70 - 130	2	25
Bromomethane	97.1	100.6		ug/m3		104	65 - 130	3	25
cis-1,2-Dichloroethene	99.1	100.7		ug/m3		102	70 - 130	3	25
cis-1,3-Dichloropropene	113	113.9		ug/m3		100	70 - 134	3	25
Carbon disulfide	77.9	69.42		ug/m3		89	70 - 130	3	25
Carbon tetrachloride	157	170.3		ug/m3		108	68 - 133	1	25
Chlorobenzene	115	107.9		ug/m3		94	70 - 130	2	25
Chloroethane	66.0	67.46		ug/m3		102	66 - 134	1	25
Chloroform	122	123.5		ug/m3		101	67 - 131	2	25
Chloromethane	51.6	52.43		ug/m3		102	60 - 137	2	25
Dibromochloromethane	213	212.2		ug/m3		100	70 - 130	3	25
Dichlorodifluoromethane	124	132.2		ug/m3		107	57 - 138	2	25
Dichlorotetrafluoroethane	175	179.8		ug/m3		103	60 - 133	5	25
Ethylbenzene	109	101.6		ug/m3		94	70 - 130	3	25

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# QC Sample Results

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCSD 570-338491/4**  
**Matrix: Air**  
**Analysis Batch: 338491**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexachloro-1,3-butadiene	267	198.8		ug/m3		75	58 - 130	1	25
Isopropanol	61.5	61.91		ug/m3		101	64 - 133	2	25
Methylene Chloride	86.8	89.59		ug/m3		103	65 - 130	2	25
Methyl-t-Butyl Ether (MTBE)	90.1	90.82		ug/m3		101	70 - 130	3	25
n-Butylbenzene	137	122.2		ug/m3		89	64 - 130	2	25
o-Xylene	109	96.87		ug/m3		89	68 - 130	2	25
m,p-Xylene	217	198.5		ug/m3		91	70 - 130	2	25
sec-Butylbenzene	137	119.8		ug/m3		87	67 - 130	1	25
Styrene	106	100.4		ug/m3		94	70 - 130	3	25
trans-1,2-Dichloroethene	99.1	93.67		ug/m3		95	70 - 130	3	25
trans-1,3-Dichloropropene	113	113.1		ug/m3		100	66 - 142	2	25
tert-Butylbenzene	137	119.1		ug/m3		87	70 - 130	1	25
Tetrachloroethene	170	158.1		ug/m3		93	70 - 130	1	25
Toluene	94.2	86.48		ug/m3		92	70 - 130	3	25
Trichloroethene	134	134.9		ug/m3		100	69 - 130	2	25
Trichlorofluoromethane	140	148.7		ug/m3		106	62 - 139	0	25
Vinyl acetate	88.0	87.33		ug/m3		99	64 - 139	3	25
Vinyl chloride	63.9	66.70		ug/m3		104	65 - 130	3	25

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	103		66 - 132
4-Bromofluorobenzene (Surr)	100		70 - 130
Toluene-d8 (Surr)	101		70 - 130

## Method: D1946 - Fixed Gases (Helium)

**Lab Sample ID: MB 570-337595/4**  
**Matrix: Air**  
**Analysis Batch: 337595**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Helium	ND		41000	ug/m3			06/15/23 10:35	1

**Lab Sample ID: LCS 570-337595/2**  
**Matrix: Air**  
**Analysis Batch: 337595**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Helium	1650000	1766000		ug/m3		107	80 - 120

**Lab Sample ID: LCSD 570-337595/3**  
**Matrix: Air**  
**Analysis Batch: 337595**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Helium	1650000	1863000		ug/m3		113	80 - 120	5	20

# QC Sample Results

Client: Alpine Environmental Consultants, LLC  
Project/Site: 11th Street

Job ID: 570-141701-1

## Method: D1946 - Fixed Gases in Air (GC)

Lab Sample ID: MB 570-337579/5  
Matrix: Air  
Analysis Batch: 337579

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		0.50	% v/v			06/15/23 10:51	1

Lab Sample ID: MB 570-337973/5  
Matrix: Air  
Analysis Batch: 337973

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		0.50	% v/v			06/16/23 11:02	1

# Marginal Exceedance (ME) Summary

Client: Alpine Environmental Consultants, LLC  
Project/Site: 11th Street

Job ID: 570-141701-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air

Lab Sample ID: LCS 570-338271/4

Matrix: Air

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	%Rec	%Rec. Limits	ME %Rec. Limits	Marginal Exceedance
								Status
1,1,1-Trichloroethane	136	141.4		ug/m3	104	67 - 135	56 - 146	
1,1,2,2-Tetrachloroethane	172	170.1		ug/m3	99	70 - 130	60 - 140	
1,1,2-Trichloro-1,2,2-trifluoroethane	192	209.7		ug/m3	109	70 - 130	60 - 140	
1,1,2-Trichloroethane	136	137.1		ug/m3	101	69 - 131	59 - 141	
1,1-Dichloroethane	101	106.2		ug/m3	105	69 - 130	59 - 140	
1,1-Dichloroethene	99.1	103.5		ug/m3	104	64 - 135	52 - 147	
1,1-Difluoroethane	67.5	76.00		ug/m3	113	57 - 146	42 - 161	
1,2,4-Trichlorobenzene	186	215.2		ug/m3	116	51 - 134	37 - 148	
1,2,4-Trimethylbenzene	123	130.1		ug/m3	106	68 - 130	58 - 140	
1,2-Dibromo-3-Chloropropane	242	237.5		ug/m3	98	66 - 130	55 - 141	
1,2-Dibromoethane	192	190.1		ug/m3	99	70 - 130	60 - 140	
1,2-Dichlorobenzene	150	154.2		ug/m3	103	68 - 130	58 - 140	
1,2-Dichloroethane	101	103.9		ug/m3	103	65 - 136	53 - 148	
1,2-Dichloropropane	116	118.0		ug/m3	102	68 - 132	57 - 143	
1,3,5-Trimethylbenzene	123	125.8		ug/m3	102	69 - 130	59 - 140	
1,3-Dichlorobenzene	150	156.0		ug/m3	104	65 - 130	54 - 141	
1,4-Dichlorobenzene	150	154.0		ug/m3	102	64 - 130	53 - 141	
2-Butanone	73.7	75.85		ug/m3	103	66 - 143	53 - 156	
2-Hexanone	102	88.51		ug/m3	86	64 - 139	52 - 152	
4-Ethyltoluene	123	127.7		ug/m3	104	69 - 130	59 - 140	
4-Methyl-2-pentanone	102	100.9		ug/m3	99	65 - 135	53 - 147	
Acetone	59.4	63.71		ug/m3	107	70 - 130	60 - 140	
Benzene	79.9	81.27		ug/m3	102	68 - 134	57 - 145	
Benzyl chloride	129	137.8		ug/m3	106	70 - 130	60 - 140	
Bromodichloromethane	168	171.6		ug/m3	102	69 - 132	59 - 143	
Bromoform	258	271.6		ug/m3	105	70 - 130	60 - 140	
Bromomethane	97.1	102.1		ug/m3	105	65 - 130	54 - 141	
cis-1,2-Dichloroethene	99.1	101.0		ug/m3	102	70 - 130	60 - 140	
cis-1,3-Dichloropropene	113	116.9		ug/m3	103	70 - 134	59 - 145	
Carbon disulfide	77.9	84.45		ug/m3	108	70 - 130	60 - 140	
Carbon tetrachloride	157	160.9		ug/m3	102	68 - 133	57 - 144	
Chlorobenzene	115	114.4		ug/m3	99	70 - 130	60 - 140	
Chloroethane	66.0	72.39		ug/m3	110	66 - 134	55 - 145	
Chloroform	122	124.3		ug/m3	102	67 - 131	56 - 142	
Chloromethane	51.6	72.61	*+ me	ug/m3	141	60 - 137	47 - 150	ME
Dibromochloromethane	213	218.7		ug/m3	103	70 - 130	60 - 140	
Dichlorodifluoromethane	124	127.9		ug/m3	103	57 - 138	44 - 152	
Dichlorotetrafluoroethane	175	196.9		ug/m3	113	60 - 133	48 - 145	
Ethylbenzene	109	109.1		ug/m3	101	70 - 130	60 - 140	
Hexachloro-1,3-butadiene	267	298.6		ug/m3	112	58 - 130	46 - 142	
Isopropanol	61.5	60.48		ug/m3	98	64 - 133	53 - 145	
Methylene Chloride	86.8	95.34		ug/m3	110	65 - 130	54 - 141	
Methyl-t-Butyl Ether (MTBE)	90.1	96.87		ug/m3	107	70 - 130	60 - 140	
n-Butylbenzene	137	150.0		ug/m3	109	64 - 130	53 - 141	
o-Xylene	109	109.3		ug/m3	101	68 - 130	58 - 140	
m,p-Xylene	217	218.4		ug/m3	101	70 - 130	60 - 140	
sec-Butylbenzene	137	139.3		ug/m3	102	67 - 130	57 - 141	
Styrene	106	106.9		ug/m3	100	70 - 130	60 - 140	
trans-1,2-Dichloroethene	99.1	111.1		ug/m3	112	70 - 130	60 - 140	

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# Marginal Exceedance (ME) Summary

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 570-338271/4

Client Sample ID: Lab Control Sample

Matrix: Air

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	%Rec	%Rec. Limits	ME %Rec. Limits	Marginal Exceedance Status
trans-1,3-Dichloropropene	113	117.4		ug/m3	104	66 - 142	53 - 155	
tert-Butylbenzene	137	141.3		ug/m3	103	70 - 130	60 - 140	
Tetrachloroethene	170	166.6		ug/m3	98	70 - 130	60 - 140	
Toluene	94.2	94.05		ug/m3	100	70 - 130	60 - 140	
Trichloroethene	134	135.2		ug/m3	101	69 - 130	59 - 140	
Trichlorofluoromethane	140	155.9		ug/m3	111	62 - 139	49 - 152	
Vinyl acetate	88.0	86.99		ug/m3	99	64 - 139	52 - 152	
Vinyl chloride	63.9	66.84		ug/m3	105	65 - 130	54 - 141	

### Summary

Number of Analytes Reported	Number of Marginal Exceedances Allowed	Number of Marginal Exceedances Found
57	3	1

ME = Marginal Exceedance

Lab Sample ID: LCSD 570-338271/5

Client Sample ID: Lab Control Sample Dup

Matrix: Air

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	%Rec	%Rec. Limits	ME %Rec. Limits	Marginal Exceedance Status
1,1,1-Trichloroethane	136	133.7		ug/m3	98	67 - 135	56 - 146	
1,1,2,2-Tetrachloroethane	172	165.6		ug/m3	96	70 - 130	60 - 140	
1,1,2-Trichloro-1,2,2-trifluoroethane	192	190.7		ug/m3	100	70 - 130	60 - 140	
1,1,2-Trichloroethane	136	133.2		ug/m3	98	69 - 131	59 - 141	
1,1-Dichloroethane	101	98.84		ug/m3	98	69 - 130	59 - 140	
1,1-Dichloroethene	99.1	99.22		ug/m3	100	64 - 135	52 - 147	
1,1-Difluoroethane	67.5	71.09		ug/m3	105	57 - 146	42 - 161	
1,2,4-Trichlorobenzene	186	218.5		ug/m3	118	51 - 134	37 - 148	
1,2,4-Trimethylbenzene	123	127.2		ug/m3	104	68 - 130	58 - 140	
1,2-Dibromo-3-Chloropropane	242	236.7		ug/m3	98	66 - 130	55 - 141	
1,2-Dibromoethane	192	189.1		ug/m3	98	70 - 130	60 - 140	
1,2-Dichlorobenzene	150	152.4		ug/m3	101	68 - 130	58 - 140	
1,2-Dichloroethane	101	97.57		ug/m3	96	65 - 136	53 - 148	
1,2-Dichloropropane	116	113.4		ug/m3	98	68 - 132	57 - 143	
1,3,5-Trimethylbenzene	123	123.0		ug/m3	100	69 - 130	59 - 140	
1,3-Dichlorobenzene	150	152.5		ug/m3	101	65 - 130	54 - 141	
1,4-Dichlorobenzene	150	151.5		ug/m3	101	64 - 130	53 - 141	
2-Butanone	73.7	70.35		ug/m3	95	66 - 143	53 - 156	
2-Hexanone	102	90.64		ug/m3	88	64 - 139	52 - 152	
4-Ethyltoluene	123	127.8		ug/m3	104	69 - 130	59 - 140	
4-Methyl-2-pentanone	102	98.20		ug/m3	96	65 - 135	53 - 147	
Acetone	59.4	61.58		ug/m3	104	70 - 130	60 - 140	
Benzene	79.9	79.55		ug/m3	100	68 - 134	57 - 145	
Benzyl chloride	129	137.1		ug/m3	106	70 - 130	60 - 140	
Bromodichloromethane	168	167.7		ug/m3	100	69 - 132	59 - 143	
Bromoform	258	258.6		ug/m3	100	70 - 130	60 - 140	
Bromomethane	97.1	97.90		ug/m3	101	65 - 130	54 - 141	
cis-1,2-Dichloroethene	99.1	100.3		ug/m3	101	70 - 130	60 - 140	
cis-1,3-Dichloropropene	113	116.1		ug/m3	102	70 - 134	59 - 145	
Carbon disulfide	77.9	76.36		ug/m3	98	70 - 130	60 - 140	

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# Marginal Exceedance (ME) Summary

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 570-338271/5

Client Sample ID: Lab Control Sample Dup

Matrix: Air

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	%Rec	%Rec.	ME %Rec.	Marginal Exceedance Status
						Limits	Limits	
Carbon tetrachloride	157	156.9		ug/m3	100	68 - 133	57 - 144	
Chlorobenzene	115	112.8		ug/m3	98	70 - 130	60 - 140	
Chloroethane	66.0	69.15		ug/m3	105	66 - 134	55 - 145	
Chloroform	122	117.2		ug/m3	96	67 - 131	56 - 142	
Chloromethane	51.6	71.41	*+ me	ug/m3	138	60 - 137	47 - 150	ME
Dibromochloromethane	213	214.2		ug/m3	101	70 - 130	60 - 140	
Dichlorodifluoromethane	124	121.4		ug/m3	98	57 - 138	44 - 152	
Dichlorotetrafluoroethane	175	185.1		ug/m3	106	60 - 133	48 - 145	
Ethylbenzene	109	110.4		ug/m3	102	70 - 130	60 - 140	
Hexachloro-1,3-butadiene	267	280.9		ug/m3	105	58 - 130	46 - 142	
Isopropanol	61.5	60.36		ug/m3	98	64 - 133	53 - 145	
Methylene Chloride	86.8	88.04		ug/m3	101	65 - 130	54 - 141	
Methyl-t-Butyl Ether (MTBE)	90.1	88.17		ug/m3	98	70 - 130	60 - 140	
n-Butylbenzene	137	148.8		ug/m3	108	64 - 130	53 - 141	
o-Xylene	109	105.5		ug/m3	97	68 - 130	58 - 140	
m,p-Xylene	217	212.5		ug/m3	98	70 - 130	60 - 140	
sec-Butylbenzene	137	136.5		ug/m3	99	67 - 130	57 - 141	
Styrene	106	104.5		ug/m3	98	70 - 130	60 - 140	
trans-1,2-Dichloroethene	99.1	98.07		ug/m3	99	70 - 130	60 - 140	
trans-1,3-Dichloropropene	113	115.6		ug/m3	102	66 - 142	53 - 155	
tert-Butylbenzene	137	138.7		ug/m3	101	70 - 130	60 - 140	
Tetrachloroethene	170	164.7		ug/m3	97	70 - 130	60 - 140	
Toluene	94.2	91.44		ug/m3	97	70 - 130	60 - 140	
Trichloroethene	134	132.7		ug/m3	99	69 - 130	59 - 140	
Trichlorofluoromethane	140	145.4		ug/m3	104	62 - 139	49 - 152	
Vinyl acetate	88.0	84.89		ug/m3	96	64 - 139	52 - 152	
Vinyl chloride	63.9	63.55		ug/m3	99	65 - 130	54 - 141	

### Summary

Number of Analytes Reported	Number of Marginal Exceedances Allowed	Number of Marginal Exceedances Found
57	3	1

ME = Marginal Exceedance

# QC Association Summary

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Air - GC/MS VOA

### Analysis Batch: 338271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-141701-11	SG11	Total/NA	Air	TO-15	
MB 570-338271/7	Method Blank	Total/NA	Air	TO-15	
LCS 570-338271/4	Lab Control Sample	Total/NA	Air	TO-15	
LCSD 570-338271/5	Lab Control Sample Dup	Total/NA	Air	TO-15	

### Analysis Batch: 338419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-141701-6	SG6	Total/NA	Air	TO-15	
570-141701-7	SG7	Total/NA	Air	TO-15	
570-141701-8	SG8	Total/NA	Air	TO-15	
MB 570-338419/6	Method Blank	Total/NA	Air	TO-15	
LCS 570-338419/3	Lab Control Sample	Total/NA	Air	TO-15	
LCSD 570-338419/4	Lab Control Sample Dup	Total/NA	Air	TO-15	

### Analysis Batch: 338491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-141701-2	SG2	Total/NA	Air	TO-15	
570-141701-5	SG5	Total/NA	Air	TO-15	
570-141701-6 - DL	SG6	Total/NA	Air	TO-15	
570-141701-7 - DL	SG7	Total/NA	Air	TO-15	
570-141701-8 - DL	SG8	Total/NA	Air	TO-15	
MB 570-338491/6	Method Blank	Total/NA	Air	TO-15	
LCS 570-338491/3	Lab Control Sample	Total/NA	Air	TO-15	
LCSD 570-338491/4	Lab Control Sample Dup	Total/NA	Air	TO-15	

## Air - GC VOA

### Analysis Batch: 337579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-141701-1	SG1	Total/NA	Air	D1946	
570-141701-2	SG2	Total/NA	Air	D1946	
570-141701-3	SG3	Total/NA	Air	D1946	
570-141701-4	SG4	Total/NA	Air	D1946	
570-141701-5	SG5	Total/NA	Air	D1946	
570-141701-6	SG6	Total/NA	Air	D1946	
570-141701-7	SG7	Total/NA	Air	D1946	
570-141701-8	SG8	Total/NA	Air	D1946	
570-141701-9	SG9	Total/NA	Air	D1946	
570-141701-10	SG10	Total/NA	Air	D1946	
570-141701-11	SG11	Total/NA	Air	D1946	
570-141701-13	SG4-DUP	Total/NA	Air	D1946	
MB 570-337579/5	Method Blank	Total/NA	Air	D1946	
LCS 570-337579/2	Lab Control Sample	Total/NA	Air	D1946	
LCSD 570-337579/3	Lab Control Sample Dup	Total/NA	Air	D1946	

### Analysis Batch: 337595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-141701-1	SG1	Total/NA	Air	D1946	
570-141701-2	SG2	Total/NA	Air	D1946	
570-141701-3	SG3	Total/NA	Air	D1946	
570-141701-4	SG4	Total/NA	Air	D1946	

# QC Association Summary

Client: Alpine Environmental Consultants, LLC  
Project/Site: 11th Street

Job ID: 570-141701-1

## Air - GC VOA (Continued)

### Analysis Batch: 337595 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-141701-5	SG5	Total/NA	Air	D1946	
570-141701-6	SG6	Total/NA	Air	D1946	
570-141701-7	SG7	Total/NA	Air	D1946	
570-141701-8	SG8	Total/NA	Air	D1946	
570-141701-9	SG9	Total/NA	Air	D1946	
570-141701-10	SG10	Total/NA	Air	D1946	
570-141701-11	SG11	Total/NA	Air	D1946	
570-141701-12	SG12	Total/NA	Air	D1946	
570-141701-13	SG4-DUP	Total/NA	Air	D1946	
MB 570-337595/4	Method Blank	Total/NA	Air	D1946	
LCS 570-337595/2	Lab Control Sample	Total/NA	Air	D1946	
LCSD 570-337595/3	Lab Control Sample Dup	Total/NA	Air	D1946	

### Analysis Batch: 337973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-141701-12	SG12	Total/NA	Air	D1946	
MB 570-337973/5	Method Blank	Total/NA	Air	D1946	
LCS 570-337973/2	Lab Control Sample	Total/NA	Air	D1946	
LCSD 570-337973/3	Lab Control Sample Dup	Total/NA	Air	D1946	

# Lab Chronicle

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Client Sample ID: SG1

Lab Sample ID: 570-141701-1

Date Collected: 06/08/23 14:44

Matrix: Air

Date Received: 06/14/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D1946		1	1 mL	1 mL	337595	06/15/23 11:05	HK	EET CAL 4
Instrument ID: GC55										
Total/NA	Analysis	D1946		1	1 mL	1 mL	337579	06/15/23 12:15	I9H5	EET CAL 4
Instrument ID: GC65										

## Client Sample ID: SG2

Lab Sample ID: 570-141701-2

Date Collected: 06/08/23 08:35

Matrix: Air

Date Received: 06/14/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		2.5	250 mL	250 mL	338491	06/19/23 22:26	USQD	EET CAL 4
Instrument ID: GCMSSH										
Total/NA	Analysis	D1946		1	1 mL	1 mL	337595	06/15/23 11:28	HK	EET CAL 4
Instrument ID: GC55										
Total/NA	Analysis	D1946		1	1 mL	1 mL	337579	06/15/23 12:40	I9H5	EET CAL 4
Instrument ID: GC65										

## Client Sample ID: SG3

Lab Sample ID: 570-141701-3

Date Collected: 06/09/23 14:40

Matrix: Air

Date Received: 06/14/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D1946		1	1 mL	1 mL	337595	06/15/23 11:51	HK	EET CAL 4
Instrument ID: GC55										
Total/NA	Analysis	D1946		1	1 mL	1 mL	337579	06/15/23 13:04	I9H5	EET CAL 4
Instrument ID: GC65										

## Client Sample ID: SG4

Lab Sample ID: 570-141701-4

Date Collected: 06/09/23 13:15

Matrix: Air

Date Received: 06/14/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D1946		1	1 mL	1 mL	337595	06/15/23 12:13	HK	EET CAL 4
Instrument ID: GC55										
Total/NA	Analysis	D1946		1	1 mL	1 mL	337579	06/15/23 13:32	I9H5	EET CAL 4
Instrument ID: GC65										

## Client Sample ID: SG5

Lab Sample ID: 570-141701-5

Date Collected: 06/09/23 13:35

Matrix: Air

Date Received: 06/14/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	250 mL	250 mL	338491	06/19/23 18:02	USQD	EET CAL 4
Instrument ID: GCMSSH										
Total/NA	Analysis	D1946		1	1 mL	1 mL	337595	06/15/23 12:59	HK	EET CAL 4
Instrument ID: GC55										

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# Lab Chronicle

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Client Sample ID: SG5

Lab Sample ID: 570-141701-5

Date Collected: 06/09/23 13:35

Matrix: Air

Date Received: 06/14/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D1946		1	1 mL	1 mL	337579	06/15/23 13:57	I9H5	EET CAL 4

## Client Sample ID: SG6

Lab Sample ID: 570-141701-6

Date Collected: 06/09/23 14:25

Matrix: Air

Date Received: 06/14/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15 Instrument ID: GCMSHH		12.5	250 mL	250 mL	338419	06/18/23 07:19	UHOG	EET CAL 4
Total/NA	Analysis	TO-15 Instrument ID: GCMSHH	DL	70.75	250 mL	250 mL	338491	06/19/23 18:45	USQD	EET CAL 4
Total/NA	Analysis	D1946 Instrument ID: GC55		1	1 mL	1 mL	337595	06/15/23 12:34	HK	EET CAL 4
Total/NA	Analysis	D1946 Instrument ID: GC65		1	1 mL	1 mL	337579	06/15/23 15:17	I9H5	EET CAL 4

## Client Sample ID: SG7

Lab Sample ID: 570-141701-7

Date Collected: 06/09/23 14:05

Matrix: Air

Date Received: 06/14/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15 Instrument ID: GCMSHH		12.5	250 mL	250 mL	338419	06/18/23 08:03	UHOG	EET CAL 4
Total/NA	Analysis	TO-15 Instrument ID: GCMSHH	DL	70.75	250 mL	250 mL	338491	06/19/23 19:28	USQD	EET CAL 4
Total/NA	Analysis	D1946 Instrument ID: GC55		1	1 mL	1 mL	337595	06/15/23 13:22	HK	EET CAL 4
Total/NA	Analysis	D1946 Instrument ID: GC65		1	1 mL	1 mL	337579	06/15/23 17:02	I9H5	EET CAL 4

## Client Sample ID: SG8

Lab Sample ID: 570-141701-8

Date Collected: 06/08/23 14:00

Matrix: Air

Date Received: 06/14/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15 Instrument ID: GCMSHH		12.5	250 mL	250 mL	338419	06/18/23 08:47	UHOG	EET CAL 4
Total/NA	Analysis	TO-15 Instrument ID: GCMSHH	DL	73.75	250 mL	250 mL	338491	06/19/23 20:12	USQD	EET CAL 4
Total/NA	Analysis	D1946 Instrument ID: GC55		1	1 mL	1 mL	337595	06/15/23 13:43	HK	EET CAL 4
Total/NA	Analysis	D1946 Instrument ID: GC65		1	1 mL	1 mL	337579	06/15/23 17:26	I9H5	EET CAL 4

# Lab Chronicle

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job ID: 570-141701-1

## Client Sample ID: SG9

Lab Sample ID: 570-141701-9

Date Collected: 06/08/23 13:05

Matrix: Air

Date Received: 06/14/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D1946		1	1 mL	1 mL	337595	06/15/23 14:06	HK	EET CAL 4
Instrument ID: GC55										
Total/NA	Analysis	D1946		1	1 mL	1 mL	337579	06/15/23 17:57	I9H5	EET CAL 4
Instrument ID: GC65										

## Client Sample ID: SG10

Lab Sample ID: 570-141701-10

Date Collected: 06/08/23 13:30

Matrix: Air

Date Received: 06/14/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D1946		1	1 mL	1 mL	337595	06/15/23 14:27	HK	EET CAL 4
Instrument ID: GC55										
Total/NA	Analysis	D1946		1	1 mL	1 mL	337579	06/15/23 18:46	I9H5	EET CAL 4
Instrument ID: GC65										

## Client Sample ID: SG11

Lab Sample ID: 570-141701-11

Date Collected: 06/08/23 11:43

Matrix: Air

Date Received: 06/14/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		12.5	250 mL	250 mL	338271	06/18/23 09:08	UJHY	EET CAL 4
Instrument ID: GCMSZZ										
Total/NA	Analysis	D1946		1	1 mL	1 mL	337595	06/15/23 14:48	HK	EET CAL 4
Instrument ID: GC55										
Total/NA	Analysis	D1946		1	1 mL	1 mL	337579	06/15/23 19:18	I9H5	EET CAL 4
Instrument ID: GC65										

## Client Sample ID: SG12

Lab Sample ID: 570-141701-12

Date Collected: 06/07/23 12:35

Matrix: Air

Date Received: 06/14/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D1946		1	1 mL	1 mL	337595	06/15/23 15:11	HK	EET CAL 4
Instrument ID: GC55										
Total/NA	Analysis	D1946		1	1 mL	1 mL	337973	06/16/23 11:50	HK	EET CAL 4
Instrument ID: GC65										

## Client Sample ID: SG4-DUP

Lab Sample ID: 570-141701-13

Date Collected: 06/09/23 15:05

Matrix: Air

Date Received: 06/14/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D1946		1	1 mL	1 mL	337595	06/15/23 15:34	HK	EET CAL 4
Instrument ID: GC55										
Total/NA	Analysis	D1946		1	1 mL	1 mL	337579	06/15/23 21:04	I9H5	EET CAL 4
Instrument ID: GC65										

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# Lab Chronicle

Client: Alpine Environmental Consultants, LLC  
Project/Site: 11th Street

Job ID: 570-141701-1

**Laboratory References:**

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

- 1
- 2
- 3
- 4
- 5
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# Accreditation/Certification Summary

Client: Alpine Environmental Consultants, LLC  
Project/Site: 11th Street

Job ID: 570-141701-1

## Laboratory: Eurofins Calscience

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4175	02-02-24

- 1
- 2
- 3
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- 12
- 13
- 14
- 15
- 16

# Method Summary

Client: Alpine Environmental Consultants, LLC  
Project/Site: 11th Street

Job ID: 570-141701-1

Method	Method Description	Protocol	Laboratory
TO-15	Volatile Organic Compounds in Ambient Air	EPA	EET CAL 4
D1946	Fixed Gases (Helium)	ASTM	EET CAL 4
D1946	Fixed Gases in Air (GC)	ASTM	EET CAL 4

**Protocol References:**

ASTM = ASTM International

EPA = US Environmental Protection Agency

**Laboratory References:**

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494



# Sample Summary

Client: Alpine Environmental Consultants, LLC  
Project/Site: 11th Street

Job ID: 570-141701-1

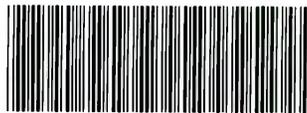
Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-141701-1	SG1	Air	06/08/23 14:44	06/14/23 09:40	Air Canister (1-Liter) #LC127
570-141701-2	SG2	Air	06/08/23 08:35	06/14/23 09:40	Air Canister (1-Liter) #LC162
570-141701-3	SG3	Air	06/09/23 14:40	06/14/23 09:40	Air Canister (1-Liter) #LC044
570-141701-4	SG4	Air	06/09/23 13:15	06/14/23 09:40	Air Canister (1-Liter) #LC280
570-141701-5	SG5	Air	06/09/23 13:35	06/14/23 09:40	Air Canister (1-Liter) #LC359
570-141701-6	SG6	Air	06/09/23 14:25	06/14/23 09:40	Air Canister (1-Liter) #LC737
570-141701-7	SG7	Air	06/09/23 14:05	06/14/23 09:40	Air Canister (1-Liter) #LC1285
570-141701-8	SG8	Air	06/08/23 14:00	06/14/23 09:40	Air Canister (1-Liter) #LC207
570-141701-9	SG9	Air	06/08/23 13:05	06/14/23 09:40	Air Canister (1-Liter) #LC122
570-141701-10	SG10	Air	06/08/23 13:30	06/14/23 09:40	Air Canister (1-Liter) #SLC052
570-141701-11	SG11	Air	06/08/23 11:43	06/14/23 09:40	Air Canister (1-Liter) #LC494
570-141701-12	SG12	Air	06/07/23 12:35	06/14/23 09:40	Air Canister (1-Liter) #LC774
570-141701-13	SG4-DUP	Air	06/09/23 15:05	06/14/23 09:40	Air Canister (1-Liter) #LC634



Environment Testing  
Calscience

2841 Dow Avenue, Suite 100, Tustin, CA 92780 • (714) 895-5494

For courier service / sample drop off information, contact us26\_sales@eurofinsus.com or call us.



570-141701 Chain of Custody

AIR CHAIN-OF-CUSTODY RECORD

DATE: 6/13/23

PAGE: 1 OF 2

LABORATORY CLIENT: <u>Alpine Environmental Consultants LLC</u>			CLIENT PROJECT NAME / NO.: <u>11th Street</u>			P.O. NO.:											
ADDRESS: <u>12210 Antioch Rd</u>			PROJECT CONTACT: <u>Jonathan Williams</u>			LAB CONTACT OR QUOTE NO.:											
CITY: <u>White City</u>	STATE: <u>OR</u>	ZIP: <u>97503</u>	PROJECT ADDRESS: <u>7696 11th Street</u>			SAMPLER(S) (PRINT) <u>Toby Shallcross</u>											
TEL: <u>541.944.4685</u>			E-MAIL: <u>jwilliams@alpine-env-llc</u>			CITY: <u>White City</u>			STATE: <u>OR</u>			ZIP: <u>97503</u>			REQUESTED ANALYSES		
TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):																	
<input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input checked="" type="checkbox"/> STANDARD																	
EOD: <input type="checkbox"/> COELT EDF <input type="checkbox"/> OTHER			UNITS:														
SPECIAL INSTRUCTIONS:																	

LAB USE ONLY	SAMPLE ID	FIELD ID / POINT OF COLLECTION	MATRIX			SAMPLING EQUIPMENT			START SAMPLING INFORMATION			STOP SAMPLING INFORMATION			Helium	Methane	VOCs
			Indoor (I)	Soil Vap. (SV)	Ambient (A)	Media ID	Canister Size 6L or 1L	Flow Controller ID	Date	Time (24 hr clock)	Canister Pressure (In Hg)	Date	Time (24 hr clock)	Canister Pressure (In Hg)			
	SG1			SV		LC127	1L	A455	6/8/23	1435	31	6/8/23	1444	5	X	X	
	SG2					LC162		A511	6/8/23	830	29	6/8/23	835	2		X	
	SG3					LC044		A479	6/9/23	1435	29	6/9/23	1440	1			
	SG4					LC280		A73	6/9/23	1300	25	6/9/23	1315	12			
	SG5					LC359		A247	6/9/23	1330	29	6/9/23	1335	3			X
	SG6					LC737		A421	6/9/23	1420	29	6/9/23	1425	3			X
	SG7					LC1285		A390	6/9/23	1400	29	6/9/23	1405	4			X
	SG8					LC207		A363	6/9/23	1355	28	6/9/23	1400	4			X
	SG9					LC122		A23	6/9/23	1300	25	6/9/23	1305	5			
	SG10					SLC052		A14	6/8/23	1325	29	6/8/23	1330	4			

Relinquished by: (Signature) <u>Toby Shallcross</u>	Date: <u>6/13/23</u>	Time: <u>1400</u>	Received by: (Signature/Affiliation) <u>[Signature]</u>	Date: <u>6/14/23</u>	Time: <u>0940</u>
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature/Affiliation)	Date:	Time:

ACD

141701



Environment Testing  
Calscience

2841 Dow Avenue, Suite 100, Tustin, CA 92780 · (714) 895-5494

For courier service / sample drop off information, contact us26\_sales@eurofins.com or call us.

AIR CHAIN-OF-CUSTODY RECORD

DATE: 6/13/23  
PAGE: 2 OF 2

LABORATORY CLIENT: <u>Alpine Environmental Consultants LLC</u>		CLIENT PROJECT NAME / NO.: <u>11th Street</u>		P.O. NO.:	
ADDRESS: <u>12210 Antioch Rd</u>		PROJECT CONTACT: <u>Jonathan Williams</u>		LAB CONTACT OR QUOTE NO.:	
CITY: <u>White City</u>	STATE: <u>OR</u>	ZIP: <u>97503</u>	PROJECT ADDRESS: <u>7696 11th Street</u>		SAMPLER(S): (PRINT) <u>Toby Shallock</u>
TEL: <u>541-944-4685</u>	E-MAIL: <u>Jwilliams@alpine-env.llc</u>		CITY: <u>White City</u>		STATE: <u>OR</u>
TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):		ZIP: <u>97503</u>		REQUESTED ANALYSES	
<input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input checked="" type="checkbox"/> STANDARD		EOD: <input type="checkbox"/> COELT EDF <input type="checkbox"/> OTHER		UNITS:	

SPECIAL INSTRUCTIONS:

Helium  
Methan  
VOCs

LAB USE ONLY	SAMPLE ID	FIELD ID / POINT OF COLLECTION	MATRIX			SAMPLING EQUIPMENT			START SAMPLING INFORMATION			STOP SAMPLING INFORMATION			
			Indoor (I)	Soil Vap. (SV)	Ambient (A)	Media ID	Canister Size 6L or 1L	Flow Controller ID	Date	Time (24 hr clock)	Canister Pressure (In Hg)	Date	Time (24 hr clock)	Canister Pressure (In Hg)	
11	SG11		SV	LC494	1L	A184	6/8/23	1135	29	6/8/23	1143	5	X	X	X
12	SG12		↓	LC774	↓	A104	6/7/23	1230	23	6/7/23	1235	1	↓	↓	↓
13	SGH-Dup		↓	LC634	↓	A509	6/9/23	1500	29	6/9/23	1505	4	↓	↓	↓

Relinquished by: (Signature) <u>Toby Shallock</u>	Date: <u>6/13/23</u>	Time: <u>1400</u>	Received by: (Signature/Affiliation) <u>[Signature]</u>	Date: <u>6/14/23</u>	Time: <u>0940</u>
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature/Affiliation)	Date:	Time:

# Login Sample Receipt Checklist

Client: Alpine Environmental Consultants, LLC

Job Number: 570-141701-1

**Login Number: 141701**

**List Source: Eurofins Calscience**

**List Number: 1**

**Creator: Cortez Diaz, Antonio**

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

## Summa Canister Dilution Worksheet

Client: Alpine Environmental Consultants, LLC  
 Project/Site: 11th Street

Job No.: 570-141701-1

Lab Sample ID	Canister Volume (L)	Presampling Pressure ("Hg)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Pressure Gauge ID	Date	Analyst Initials
570-141701-1	1	-29.5	-4	0.87	0.87	-1.96462	0.87	0.87		1.00	1.00	Air Mg 6	06/14/23 15:59	HK
570-141701-2	1	-29.5	-5	0.83	0.83	-2.45577	0.83	0.83		1.00	1.00	Air Mg 6	06/14/23 16:00	HK
570-141701-3	1	-29.5	-2	0.93	0.93	-0.982308	0.93	0.93		1.00	1.00	Air Mg 6	06/14/23 16:00	HK
570-141701-3	1	-29.5	-2.0	0.93	0.93	20	2.36	2.36		2.53	2.53	Air Mg 6	06/19/23 17:19	UG5A
570-141701-4	1	-29.5	-13	0.57	0.57	-6.385	0.57	0.57		1.00	1.00	Air Mg 6	06/14/23 16:01	HK
570-141701-4	1	-29.5	-14	0.53	0.53	20	2.36	2.36		4.44	4.44	Air Mg 6	06/19/23 17:19	UG5A
570-141701-5	1	-29.5	-4	0.87	0.87	-1.96462	0.87	0.87		1.00	1.00	Air Mg 6	06/14/23 16:01	HK
570-141701-6	1	-29.5	-4	0.87	0.87	-1.96462	0.87	0.87		1.00	1.00	Air Mg 6	06/14/23 16:02	HK
570-141701-6	1	-29.5	-5.0	0.83	0.83	20	2.36	2.36		2.83	2.83	Air Mg 6	06/19/23 17:18	UG5A
570-141701-7	1	-29.5	-4	0.87	0.87	-1.96462	0.87	0.87		1.00	1.00	Air mg 6	06/14/23 16:02	HK
570-141701-7	1	-29.5	-5.0	0.83	0.83	20	2.36	2.36		2.83	2.83	Air mg 6	06/19/23 17:17	UG5A
570-141701-8	1	-29.5	-5	0.83	0.83	-2.45577	0.83	0.83		1.00	1.00	Air Mg 6	06/14/23 16:03	HK
570-141701-8	1	-29.5	-6.0	0.80	0.80	20	2.36	2.36		2.95	2.95	Air Mg 6	06/19/23 17:16	UG5A
570-141701-9	1	-29.5	-7	0.77	0.77	-3.43808	0.77	0.77		1.00	1.00	Air Mg 7	06/14/23 16:04	HK
570-141701-10	1	-29.5	-4	0.87	0.87	-1.96462	0.87	0.87		1.00	1.00	Air Mg 7	06/14/23 16:05	HK
570-141701-11	1	-29.5	-2	0.93	0.93	-0.982308	0.93	0.93		1.00	1.00	Air Mg 7	06/14/23 16:05	HK
570-141701-12	1	-29.5	-3	0.90	0.90	-1.47346	0.90	0.90		1.00	1.00	Air Mg 7	06/14/23 16:06	HK
570-141701-13	1	-29.5	-7	0.77	0.77	-3.43808	0.77	0.77		1.00	1.00	Air Mg 7	06/14/23 16:07	HK

## Summa Canister Dilution Worksheet

Client: Alpine Environmental Consultants, LLC  
Project/Site: 11th Street

Job No.: 570-141701-1

### Formulae:

Preadjusted Volume (L) = ((Preadjusted Pressure ("Hg) + 29.92 "Hg) \* Vol L ) / 29.92 "Hg

Adjusted Volume (L) = (( Adjusted Pressure (psig) + 14.7 psig ) \* Vol L ) / 14.7 psig

Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

### Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury ("Hg)

14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

---

## **APPENDIX 4**

Soil Gas Sampling Field Sampling Data Sheets

SOIL GAS SAMPLING FIELD DATA SHEET

Luxelock

Site: \_\_\_\_\_  
 Site Address: 7696 11th Street, White City Date: 6/8/23

Sampler: Toby Shallcross

Probe Location: SG1

Probe Depth: 36"

Purge Data:

Purge Method: 1.5 oz Plunger

Purge Rate (100-200 ml/min): 3x J

One Purge Volume: 40 ml

Three Purge Volumes: 120 ml

Time of Purge: Before sampling

Volume Purged: 120 ml

Sample Data:

Sample ID: SG1 Pre-Vacuum: 31

Sample Time: 1435 - 1444 Post-Vacuum: 5

Summa™ Serial Number: LC127

Flow Controller Serial Number: A455

Summa™ Flow Rate: < 200 ml/min

Helium Concentration (%): 51%

Shut in Test: Initial: NA

Final: -

Comments: Run time was 9 min, so per flow rate was less than the regulated 200 ml/min

## SOIL GAS SAMPLING FIELD DATA SHEET

Luxelock

Site: \_\_\_\_\_  
Site Address: 7696 11th Street, White City Date: 6/8/23Sampler: Toby ShallcrossProbe Location: SG2Probe Depth: 36"Purge Data:Purge Method: 1.5 oz PlungerPurge Rate (100-200 ml/min): 3x JOne Purge Volume: 40 mlThree Purge Volumes: 120 mlTime of Purge: Before samplingVolume Purged: 120 mlSample Data:Sample ID: SG2 Pre-Vacuum: 29Sample Time: 830-835 Post-Vacuum: 2Summa™ Serial Number: LC162Flow Controller Serial Number: A511Summa™ Flow Rate: 200 ml/minHelium Concentration (%): 43%Shut in Test: Initial: NAFinal: -Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SOIL GAS SAMPLING FIELD DATA SHEET

Luxehock

Site: \_\_\_\_\_  
 Site Address: 7696 11th Street, White City Date: 6/9/23

Sampler: Toby Shallcross

Probe Location: SG3

Probe Depth: 32"

Purge Data:

Purge Method: 1.5 oz Plunger

Purge Rate (100-200 ml/min): 3x ↑

One Purge Volume: 40 ml

Three Purge Volumes: 120 ml

Time of Purge: Before Sampling

Volume Purged: 120 ml

Sample Data:

Sample ID: SG3 Pre-Vacuum: 29

Sample Time: 1435-1440 Post-Vacuum: 1

Summa™ Serial Number: LCO44

Flow Controller Serial Number: A479

Summa™ Flow Rate: 200 ml/min

Helium Concentration (%): 49%

Shut in Test: Initial: NA

Final: -

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## SOIL GAS SAMPLING FIELD DATA SHEET

Luxe lock

Site: \_\_\_\_\_  
Site Address: 7696 11th Street, White City Date: 6/9/23Sampler: Toby ShallcrossProbe Location: SG4Probe Depth: 36"Purge Data:Purge Method: 1.5 oz PlungerPurge Rate (100-200 ml/min): 3x ↓One Purge Volume: 40 mlThree Purge Volumes: 120 mlTime of Purge: Before SamplingVolume Purged: 120 mlSample Data:Sample ID: SG4 Pre-Vacuum: 25Sample Time: 1300-1315 Post-Vacuum: 12Summa™ Serial Number: LC280Flow Controller Serial Number: A73Summa™ Flow Rate: < 200 ml/minHelium Concentration (%): 45%Shut in Test: Initial: NAFinal: -Comments: Run time was 15 min; Equipment likely faulty (flow controller, gauge broken) The test was redone as SG4-Dup

SOIL GAS SAMPLING FIELD DATA SHEET

Luxebrock

Site: \_\_\_\_\_  
 Site Address: 7696 11th Street, White City Date: 6/9/23

Sampler: Toby Shallcross

Probe Location: SG5

Probe Depth: 30"

Purge Data:

Purge Method: 1.5 oz Plunger

Purge Rate (100-200 ml/min): 3 x J

One Purge Volume: 40 ml

Three Purge Volumes: 120 ml

Time of Purge: Before sampling

Volume Purged: 120 ml

Sample Data:

Sample ID: SG5 Pre-Vacuum: 29

Sample Time: 1330-1335 Post-Vacuum: 3

Summa™ Serial Number: LC359

Flow Controller Serial Number: A247

Summa™ Flow Rate: 200 ml/min

Helium Concentration (%): 40%

Shut in Test: Initial: NA

Final: -

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SOIL GAS SAMPLING FIELD DATA SHEET

Luxehock

Site: \_\_\_\_\_  
 Site Address: 7696 11th Street, White City Date: 6/9/23

Sampler: Toby Shallcross

Probe Location: SG6

Probe Depth: 30"

Purge Data:

Purge Method: 1.5 oz Plunger

Purge Rate (100-200 ml/min): 3x ↑

One Purge Volume: 40 ml

Three Purge Volumes: 120 ml

Time of Purge: Before sampling

Volume Purged: 120 ml

Sample Data:

Sample ID: SG6 Pre-Vacuum: 29

Sample Time: 1420-1425 Post-Vacuum: 3

Summa™ Serial Number: LC737

Flow Controller Serial Number: A427

Summa™ Flow Rate: 200 ml/min

Helium Concentration (%): 47%

Shut in Test: Initial: NA

Final: -

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SOIL GAS SAMPLING FIELD DATA SHEET

Luxelock

Site: \_\_\_\_\_  
 Site Address: 7696 11th Street, White City Date: 6/9/23

Sampler: Toby Shallcross

Probe Location: SG7

Probe Depth: 31"

Purge Data:

Purge Method: 1.5 oz Plunger

Purge Rate (100-200 ml/min): 3x ↑

One Purge Volume: 40 ml

Three Purge Volumes: 120 ml

Time of Purge: Before Sampling

Volume Purged: 120 ml

Sample Data:

Sample ID: SG7 Pre-Vacuum: 29

Sample Time: 1400-1405 Post-Vacuum: 4

Summa™ Serial Number: LE1285

Flow Controller Serial Number: A390

Summa™ Flow Rate: 200 ml/min

Helium Concentration (%): 50%

Shut in Test: Initial: NA

Final: -

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SOIL GAS SAMPLING FIELD DATA SHEET

Luxelock

Site: \_\_\_\_\_  
 Site Address: 7696 11th Street, White City Date: 6/8/23

Sampler: Toby Shallcross

Probe Location: SG8

Probe Depth: 34"

Purge Data:

Purge Method: 1.5 oz Plunger

Purge Rate (100-200 ml/min): 3x ↑

One Purge Volume: 40 ml

Three Purge Volumes: 120 ml

Time of Purge: Before Sampling

Volume Purged: 120 ml

Sample Data:

Sample ID: SG8 Pre-Vacuum: 28

Sample Time: 1355-1400 Post-Vacuum: 4

Summa™ Serial Number: LC207

Flow Controller Serial Number: A363

Summa™ Flow Rate: 200 ml/min

Helium Concentration (%): 50%

Shut in Test: Initial: NA

Final: -

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SOIL GAS SAMPLING FIELD DATA SHEET

Luxelock

Site: \_\_\_\_\_  
 Site Address: 7696 11th Street, White City Date: 6/8/23

Sampler: Toby Shallcross

Probe Location: SG9

Probe Depth: 30"

Purge Data:

Purge Method: 1.5 oz Plunger

Purge Rate (100-200 ml/min): 3 x ↑

One Purge Volume: 40 ml

Three Purge Volumes: 120 ml

Time of Purge: Before Sampling

Volume Purged: 120 ml

Sample Data:

Sample ID: SG9 Pre-Vacuum: 25

Sample Time: 1300-1305 Post-Vacuum: 5

Summa™ Serial Number: LC122

Flow Controller Serial Number: A23

Summa™ Flow Rate: < 200 ml/min

Helium Concentration (%): 44%

Shut in Test: Initial: NA

Final: -

Comments: Initial vacuum was low, canister may not have obtained desired volume.

SOIL GAS SAMPLING FIELD DATA SHEET

Luxelock

Site: \_\_\_\_\_  
 Site Address: 7696 11th Street, White City Date: 6/8/23

Sampler: Toby Shallcross

Probe Location: SG10

Probe Depth: 32"

Purge Data:

Purge Method: 1.5 oz Plunger

Purge Rate (100-200 ml/min): 3x ↑

One Purge Volume: 40 ml

Three Purge Volumes: 120 ml

Time of Purge: Before Sampling

Volume Purged: 120 ml

Sample Data:

Sample ID: SG10 Pre-Vacuum: 29

Sample Time: 1325-1330 Post-Vacuum: 4

Summa™ Serial Number: LC052

Flow Controller Serial Number: A14

Summa™ Flow Rate: 200 ml/min

Helium Concentration (%): 40%

Shut in Test: Initial: NA

Final: -

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SOIL GAS SAMPLING FIELD DATA SHEET

Luxelock

Site: \_\_\_\_\_  
 Site Address: 7696 11th Street, White City Date: 6/8/23

Sampler: Toby Shallcross

Probe Location: SG11

Probe Depth: 30"

Purge Data:

Purge Method: 1.5 oz Plunger

Purge Rate (100-200 ml/min): 3x J

One Purge Volume: 40 ml

Three Purge Volumes: 120 ml

Time of Purge: Before sampling

Volume Purged: 120 ml

Sample Data:

Sample ID: SG11 Pre-Vacuum: 29

Sample Time: 1135-1143 Post-Vacuum: 5

Summa™ Serial Number: LCH94

Flow Controller Serial Number: A184

Summa™ Flow Rate: < 200 ml/min

Helium Concentration (%): 45%

Shut in Test: Initial: NA

Final: -

Comments: Run time was 8min

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

SOIL GAS SAMPLING FIELD DATA SHEET

Luxelock

Site: \_\_\_\_\_  
 Site Address: 7696 11th Street, White City Date: 6/7/23

Sampler: Toby Shallcross

Probe Location: SG12

Probe Depth: 30"

Purge Data:

Purge Method: 1.5 oz Plunger

Purge Rate (100-200 ml/min): 3x J

One Purge Volume: 40 ml

Three Purge Volumes: 120 ml

Time of Purge: Before sampling

Volume Purged: 120 ml

Sample Data:

Sample ID: SG12 Pre-Vacuum: 23

Sample Time: 1230-1235 Post-Vacuum: 1

Summa™ Serial Number: LC774

Flow Controller Serial Number: A104

Summa™ Flow Rate: <200 ml/min

Helium Concentration (%): 46%

Shut in Test: Initial: NA

Final: -

Comments: Run time was 5min, but initial vacuum was low.

SOIL GAS SAMPLING FIELD DATA SHEET

Luxelock

Site: \_\_\_\_\_  
 Site Address: 7696 11th Street, White City Date: 6/9/23

Sampler: Toby Shallcross

Probe Location: SG4

Probe Depth: 36"

Purge Data:

Purge Method: 1.5 oz Plunger

Purge Rate (100-200 ml/min): 3x ↑

One Purge Volume: 40 ml

Three Purge Volumes: 120 ml

Time of Purge: Before Sampling

Volume Purged: 120 ml

Sample Data:

Sample ID: SG4-Dup Pre-Vacuum: 29

Sample Time: 1500-1505 Post-Vacuum: 4

Summa™ Serial Number: LC634

Flow Controller Serial Number: A509

Summa™ Flow Rate: 200 ml/min

Helium Concentration (%): 43%

Shut in Test: Initial: NA

Final: —

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_