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# Groundwater Sampling Event

## First Quarter, 2022

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*Conducted on*

**Tigard Union 76**

11440 SW Pacific Highway

Tigard, OR 97223

*Prepared for*

**cbb Bank**

3435 Wilshire Boulevard, Suite 700

Los Angeles, CA 90010

*Prepared by*

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March 11, 2022

Project No. 0221329-1



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March 11, 2022

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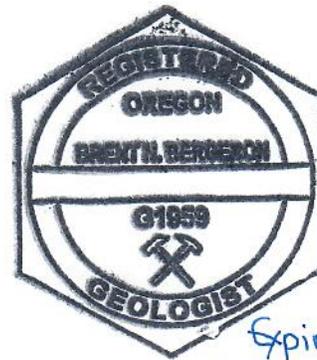
Subject: Groundwater Sampling Report  
 Tigard Union 76  
 11440 Southwest Pacific Highway  
 Tigard, OR 97223

Envitechnology, Inc. (Envitechnology) has prepared this Groundwater Sampling Report Event (GWSE) report performed at the above property.

The purpose of this GWSE was to evaluate any identified Constituents of Concern (COCs) in the groundwater to provide sufficient information regarding the nature and extent of groundwater contamination to assist in making informed business decisions about the property.

If you have any questions or require further clarification of the report findings, please get in touch with the undersigned at your convenience. Thank you for the opportunity to be of service to you.

Yours very truly,



*Jake S. Lee*

Jake S. Lee, Ph.D.  
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*Expires 6/1/22*



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## 1. INTRODUCTION

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Envitechnology, Inc. (Envitechnology) has completed the collection of the monitoring well groundwater samples at the property, Tigard Union 76, located at 11440 Southwest Pacific Highway, Tigard, OR 97223, subsequently referred to in the report as "the Site". The Site location is illustrated on Figure 1 – *Site Location Map*.

The purpose of the GWSE was to collect and evaluate groundwater data from the Site to determine potential impacts to human health and the environment resulting from on-site exposure and/or off-site migration of site contaminants via the underlying aquifer.

### 1.1. SCOPE OF SERVICES

The scope of work included the following tasks:

- Measurement of groundwater depth
- Monitoring well groundwater sampling and analysis
- Evaluation of results
- Discussion of Findings and Conclusions
- Recommendations

### 1.2. LIMITATIONS AND EXCEPTIONS OF ASSESSMENTS

No GWSE can eliminate all uncertainty regarding potential contaminants in the shallow groundwater. Furthermore, any groundwater sample taken for chemical analysis may or may not represent a larger population. Professional judgment and interpretation are inherent in the process, and uncertainty is inevitable. Additional groundwater assessment may be able to reduce the uncertainty. No other warranties, expressed or implied, are made as to the professional services provided under the terms of our contract and included in this report.

Even when GWSE services are performed with an appropriate site-specific standard of care, certain conditions present especially difficult detection problems. Such conditions may include but are not limited to complex geological settings, the fate and transport characteristics of certain hazardous substances, the distribution of existing contamination, physical limitations imposed by the location of utilities and other artificial objects, and the limitations of assessment technologies.

A simple GWSE does not generally require an exhaustive assessment of environmental conditions on a property. There is a point at which the cost of information obtained and the time required to obtain it outweighs the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions. If hazardous substance releases are confirmed on a parcel of property, the extent of further assessment is related to the degree of uncertainty that is acceptable to the user with respect to the real estate transaction.



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Groundwater measurements and sampling data only represent the site conditions during data collection. Therefore, the usability of data collected as part of this GWSE may have a finite lifetime depending on the application and use being made of the data. Therefore, an environmental professional should evaluate whether the generated data are appropriate.



## 2. BACKGROUND

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### 2.1. SITE DESCRIPTION AND FEATURES

The Subject Property is a fueling service station located on the south side of SW Pacific Highway (Hwy 99W) immediately west of SW Coronado Street and roughly two blocks west of the intersection of Interstate 5 and Hwy 99W in Tigard, Washington County, Oregon. The Site is bordered on the west by Discount Tire. The surrounding area is a mixed general-commercial (GC) setting.

The Subject Property currently maintains three (3) underground storage tanks (USTs) – one (1) 12,000-gallon regular-grade gasoline tank, one (1) 8,000-gallon premium-grade gasoline tank, and one (1) 8,000-gallon diesel tank. The tanks are double-walled fiberglass and equipped with built-in secondary containment. During site reconnaissance information gathering, the property owner, Mr. David Lee, indicated that he has no leak detection information available. Historical documentation suggested by the Phase I EFI Global report, states that the three current USTs have been in use since at least 1989. The current location of the 12,000-gasoline UST is within the former UST pit of five previous USTs.

The Subject Property is currently occupied by Mario's Auto Service Plus automotive repair and the Union 76 fueling service station. The Subject Property consists of two service bays with one bay equipped with an in-ground hydraulic lift and the other equipped with an above-ground hydraulic lift. Neither hydraulic lift is protected with underlying spill containment. No documentation was available to confirm the installation dates of the two hydraulic lifts. Mr. Lee has owned the Subject Property for the past 20 years and was not aware of the installation date of the hydraulic lifts. Mr. Lee recently sold the property. The hydraulic lifts may be as old as initial site construction in 1957, thus containing polychlorinated biphenyls (PCBs).

Two oil-water separators (OWSs) were also identified on the Subject Property. One is approximately 10 feet north of the building and one within the maintenance room.

The Site is approximately 0.59 acres (25,700 square feet) in size and is developed with a single-story commercial structure, which is approximately 1,128 square feet in size, and a fueling service station that includes a metal canopy and a small fueling kiosk, which are approximately 1,800 square feet and 16 square feet in size, respectively, on the central portion. The Site consists of two parcels: accessor's parcel numbers 1S136AD-06400 and 1S136AD-07200. The Site is currently occupied by Mario's Auto Service Plus and Union 76 Service Station for automotive repair and fueling service station purposes, respectively. The remaining portions of the property consist of asphalt- and concrete-paved areas on the west and central portions with vacant land on the east, west, and south portions. The surrounding area is used for commercial purposes. Subsequent to drilling in June 2021, groundwater was determined to flow towards the west.

### 2.2. ADJOINING PROPERTIES



Adjoining property is any real estate property whose border is contiguous or partially contiguous with the Subject Property, or that would be if the properties were not separated by a roadway, street, public thoroughfare, river, or stream. The following identifies specific adjacent property tenants and/or use:

Direction	Site Use	Adjoining Street
East	Commercial (Frontline Cars)	Non-applicable
West	Commercial (Discount Tire)	Non-applicable
South	Commercial (Portland General Electric sub-station)	Non-applicable
North	Commercial (Tigard Regency Inn, Bounty Hunter Saloon, and Carl's Jr.)	SW Pacific Hwy

### 2.3. PHYSICAL SETTING

The objective of reviewing the physical setting is to provide information about the impact of potential environmental contaminant migration.

A current United States Geological Survey (USGS) 7.5 Minute Topographic Map was reviewed to determine the topography of the Subject Property. The Quadangle Map shows no physical features that may have impacted the Subject Property environmentally.

The surface elevation at the Site is approximately 375 feet above mean sea level. The parcels slope gently to the west-southwest. Information on groundwater flow and soil type was obtained to determine how easily contaminants from surrounding properties can reach the Subject Property. Based upon the USGS map and surface topography, groundwater is inferred to flow generally to the west-southwest. However, topography is not always reliable for predicting the groundwater flow direction. Local gradient under the Subject Property may be influenced naturally by higher or lower permeability zones, or artificially by nearby pumping or recharge, and may deviate in any particular location for the overall regional trend.

According to the United States Department of Agriculture (USDA) Soil Conservation, the dominant soil type in this area is "Cascade silt loam, 3 to 7 percent slope" and "Helvetia silt loam, 2 to 7 percent slope". Cascade silt loam is somewhat poorly drained. Available water capacity is low (about 5.1 inches). A typical soil profile is a layer of silt loam to a depth of 60 inches. Helvetia silt loam is moderately well-drained. Available water capacity is high (about 10.8 inches). A typical soil profile is a layer of silt loam to a depth of 5 inches, underlain by a layer of silty clay loam to a depth of 10 inches, underlain by a layer of silty clay to a depth of 48 inches, and underlain by a layer of silty clay loam to a depth of 60 inches.

According to depth-to-water data collected from the Site on June 10, 2021, shallow groundwater was encountered in the three newly installed monitoring wells at 11.17 feet below the top of casing (btoc), 10.92 feet btoc, and 11.59 feet btoc in wells MW-1, MW-2, and MW-3, respectively. This shallow groundwater could be perched. According to depth-to-water data collected from



the Site on February 3, 2022, shallow groundwater was encountered in the three monitoring wells at 8.79 feet (btoc), 9.34 feet btoc, and 9.13 feet btoc in wells MW-1, MW-2, and MW-3, respectively.

According to data obtained from the EFI Global document and reported in the Phase I ESA report, depth to groundwater below the Site is apparently 78 feet bgs. No significant bodies of water are present on-site or within 0.5 miles of the Site.

## 2.4. SITE HISTORY AND LAND USE

The Subject Property was utilized for agricultural purposes in at least 1936. By 1948, the Site was plowed and remained vacant land through at least 1955. By 1957, the Subject Property was developed with the existing fueling service station and single-story commercial structure on the central portion. The Subject Property has remained in this configuration through the present and has been utilized solely as a fueling service station and for automotive repair purposes. The commercial structure has been occupied by various auto body repair, tire shops, and automotive repair facilities since construction. The Subject Property is currently occupied by Mario's Auto Service Plus and Union 76 Service Station for automotive repair and fueling service station purposes, respectively. According to available historical sources, the Subject Property was built in 1957 along with five USTs. The current USTs were added in 1989.

## 2.5. PREVIOUS ENVIRONMENTAL INVESTIGATIONS

A Phase I ESA Report was conducted at the Subject Property by Environmental Inspection Services (EIS) - dated September 30, 2020. The Site was identified as being associated with a LUST case, ID number 34-89-0201, UST ID number 810, and Facility Registry Service (FRS) ID number 110014121663, in 1989. Additionally, the Subject Property was assigned the air quality permit number AWGP-023 and Facility ID number 106356. The findings/conclusions of this Phase I ESA report indicated that the presence of the three aforementioned USTs, two in-ground hydraulic hoists, and four partially filled poly containers of spent engine coolant and motor oil represented RECs for the Subject Property and recommended a Phase II ESA at the time.

It should be noted that a site map within building permits obtained from the City of Tigard Building Division indicated that a 550-gallon waste oil UST was present in 1989 along with five other USTs: one 8,000-gallon gasoline, one 6,000-gallon gasoline, one 5,000-gallon gasoline, and two 4,000-gallon gasoline USTs. An unauthorized gasoline release (Facility ID 34-89-0201) was discovered on-site on September 19, 1989, during tank removal activities. Soil contamination was discovered below the 6,000-gallon gasoline and 550-gallon waste oil UST excavations. Approximately 600 cubic yards of contaminated soil were removed and disposed of at an approved landfill (Lane County Landfill). Confirmation soil sampling was conducted. However, the maximum depth to which the soil borings were advanced was not provided. Analytical results indicated maximum concentrations of 66 milligrams per kilogram (mg/kg) Total Petroleum Hydrocarbons as gasoline (GRO) in the area of the former 6,000-gallon gasoline UST and a



maximum concentration of 350 mg/kg TPH as oil (ORO) in the area of the former waste oil UST, which were below the 80 and 500 mg/kg cleanup levels established at the time for GRO and ORO, respectively. The site cleanup was started on September 19, 1989, and completed on September 28, 1989, meeting the Oregon Department of Environmental Quality's (ODEQs) closure criteria and regulations at the time. Based on this information, no further action was recommended at the time.

Correspondence from the ODEQ's Environmental Cleanup Division, LUST Section indicated that an environmental monitoring and site assessment, dated November 9, 1989, was conducted at the Subject Property by Rittenhouse-Zeman Associates (RZA). This report was not provided to EFI Global for review.

The Site was issued two general air contaminant discharge permits (ACDPs), permit numbers 34-9652 and 34-9652-23-01, dated 2010 and 2020, which expires (d) in 2020 and 2025.

On April 20, 2021, Envitechnology supervised the advancement of seven (7) borings (borings B1 through B7) via geoprobe™ methodology. The seven (7) borings were extended between depths of 8 and 13 feet bgs. Native soils below up to 5 feet of pea gravel fill consisted of olive gray, sandy SILT (ML) with clay to yellowish brown, silty SAND (SW) with clay. Groundwater was encountered in borings B1 and B2 at depths of 10.5 feet bgs and 9.8 feet bgs, respectively. Groundwater was not encountered in borings B3 through B7.

Laboratory analysis of the seven soil samples (one per boring) for GRO; DRO; ORO; benzene, toluene, ethylbenzene, and xylenes (BTEX); naphthalene; and poly-chlorinated biphenyls (PCBs) indicated that no COCs were detected in all seven (7) soil samples. Concentrations for all seven (7) soil samples were below the laboratory method detection limits (ND) and therefore are below their respective risk-based concentrations (RBCs).

Laboratory analysis of the two groundwater samples (B1-W and B2-W) for GRO, DRO, ORO, BTEX, and naphthalene indicated that GRO, DRO, ORO, BTEX, and naphthalene were detected in groundwater sample B2-W and that ORO was detected in groundwater sample B1-W. The concentrations of GRO at 26,100 micrograms per liter ( $\mu\text{g/L}$ ), DRO at 516  $\mu\text{g/L}$ , benzene at 11.2  $\mu\text{g/L}$ , ethylbenzene at 169  $\mu\text{g/L}$ , total xylenes at 6100  $\mu\text{g/L}$ , and naphthalene at 116  $\mu\text{g/L}$  exceeded the RBC of Ingestion and Inhalation for Tap Water (RBC<sub>tw</sub>) for *Urban Residential* and *Occupational* receptors. Furthermore, the GRO concentration of 26,100  $\mu\text{g/L}$  in groundwater sample B2-W exceeded the RBC of Groundwater in Excavation (RBC<sub>w</sub>) for Construction and Excavation Worker receptors. Whereas the Groundwater in Excavation (RBC<sub>w</sub>) for Construction and Excavation Worker receptors scenario is indeed a complete pathway, the Ingestion and Inhalation for Tap Water (RBC<sub>tw</sub>) for *Urban Residential* and *Occupational* receptors scenario is not necessarily a complete pathway, if the source of domestic water to the Site is not from the on-site private water well but from the municipal water supply.

The ORO concentration of 198  $\mu\text{g/L}$  in groundwater sample B1-W did not exceed applicable RBCs.

During an additional subsurface investigation conducted at the Site by Envitechnology from June 8 – 10, 2021, 11 soil borings (B8 through B18) were advanced. Laboratory analysis of twelve (12)



soil samples for GRO, DRO, ORO, VOCs, and total lead, indicated that GRO was detected at concentrations of 147 mg/Kg in soil sample B15-8' and 292 mg/Kg in soil sample B18-14', which both exceed the applicable RBC of Vapor Intrusion Into Buildings (RBCvi) for future *Urban Residential* receptors. Hence, future use of commercial dwellings as allowed for upstairs occupants is prohibited.

VOCs were detected in soil samples B-15-8' (n-butylbenzene, sec-butylbenzene, ethylbenzene, isopropylbenzene, naphthalene, and n-propylbenzene); B-15-12' (benzene); and B-18-14' (isopropylbenzene and n-propylbenzene). However, assuming the Site is supplied by municipal water supply and zoned specifically for commercial use (and potentially future urban residential use), all of the VOC concentrations in the three soil samples listed above are below their respective, applicable RBCs.

Total lead was detected in all twelve (12) soil samples at concentrations ranging from 6.04 to 9.64 mg/Kg in B-12-9.5' and B-11-10', respectively. However, assuming the Site is supplied by municipal water supply and zoned specifically for commercial use (and potentially future urban residential use), all twelve (12) of the total lead concentrations are below their respective, applicable RBCs.

Laboratory analysis of the three (3) groundwater samples (MW-1-6/10/21, MW-2-6/10/21, and MW-3-6/10/21) for GRO, DRO, ORO, VOCs, and total lead indicated the following:

- ORO was not detected in any of the three (3) groundwater samples above the laboratory method reporting limit (MRL).
- DRO was detected in groundwater samples MW-1-6/10/21 and MW-2-6/10/21 at 173 µg/L and 360 µg/L, respectively.
- GRO was detected in groundwater sample MW-2-6/10/21 at 144 µg/L.
- Methyl tert-butyl ether (MTBE) and xylenes were detected in groundwater sample MW-1-6/10/21 at 4.43 µg/L and 0.700 µg/L, respectively.
- N-Propylbenzene and xylenes were detected in groundwater sample MW-2-6/10/21 at 0.900 µg/L and 0.890 µg/L, respectively.
- Acetone was detected in groundwater sample MW-3-6/10/21 at 27.4 µg/L.
- Total lead was detected in all three groundwater samples at concentrations ranging from 0.308 µg/L in MW-3-6/10/21 to 40.5 µg/L in MW-2-6/10/21.

Assuming the Site is supplied by municipal water supply and zoned specifically for commercial use with potential future use for urban residential occupancy, none of the DRO, GRO, VOC, or total lead detections in groundwater exceeded the applicable RBCs.



## 3. FIELD INVESTIGATIONS

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This section describes the sample collection methods and field observations during field activities, including gauging and sampling three (3) groundwater monitoring wells (MW-1 through MW-3). The monitoring well locations are illustrated in Figure 2 – *Site Exploration Map*.

### 3.1. HEALTH AND SAFETY

A Site-Specific Health and Safety Plan was prepared before performing the February 3, 2022 GWSE field activities. Envitechnology personnel donned the proper personal protective equipment (PPE) during the GWSE, including safety glasses, hearing protection, steel-toed boots, reflective safety vest, long sleeve shirt, and chemical resistant gloves.

### 3.2. WATER LEVEL MEASUREMENT

Before any well purging or sampling, a complete round of water level measurements was conducted using a water level meter. The water level meter consists of a liquid sensor attached to a measuring tape lowered down into the well until the water is encountered. A buzzer sounds when the probe reaches groundwater, and the depth is read from the tape relative to the high north on the top of the well casing (TOC). Water level measurements for each well were recorded in the field logbook.

Groundwater elevations (Table 1) were calculated from the surveyed TOC elevations. Using the calculated groundwater elevations obtained during the February 3, 2022 GWSE, a groundwater elevation contour map was prepared (Figure 4). A groundwater elevation contour map is included for comparison based on the data collected during the June 19, 2021 field activities.

### 3.3. GROUNDWATER MONITORING WELL PURGING

Before collecting each sample, each well was purged of groundwater to ensure that representative samples of the surrounding formation waters were collected for chemical analysis. The well purging consisted of removing approximately three to six casing volumes of groundwater from the well before sampling. Casing volumes were calculated by first measuring the depth to groundwater and then measuring the total depth of the well. The resulting height of the water column was then multiplied by a conversion factor to determine the number of gallons in one casing volume.

A peristaltic pump and dedicated tubing was used to purge groundwater from the monitoring wells. The physical groundwater parameters of temperature, dissolved oxygen, specific conductivity, and pH were collected during well purging using a Horbiba U-52 multimeter. Stabilization of these parameters serves as an indicator of adequate purging in preparation for collecting a representative groundwater sample.



### 3.4. GROUNDWATER SAMPLING

Once at least three well volumes had been purged and the physical parameters stabilized, one (1) groundwater sample was collected from each of the three (3) monitoring wells. Monitoring well MW-3 purged dry, prior to collection of the groundwater sample from that well on February 3, 2022.

Groundwater samples were collected by using the low-flow sampling technique. The intake of the pump tubing was set approximately one foot below the groundwater surface. Dedicated polyethylene tubing was used. Discharge from the pump was directed into each sample container. Each groundwater sample was obtained in three 40-milliliter (mL) glass vials preserved with hydrochloric acid, one 1-liter amber glass jar (unpreserved), one 500-mL amber glass jar preserved with hydrochloric acid, and one 500-mL plastic container preserved with nitric acid. When the sampling containers were immediately filled with water, they were sealed and then checked for air bubbles to ensure no container headspace. The bottle was labeled, a chain of custody form was prepared, and the sample was transferred to a cooler chilled with ice and ready for transport to the analytical laboratory.

### 3.5. CHEMICAL ANALYTICAL METHODS

COCs are those chemicals that potentially present an environmental risk. The COCs for the Site are GRO, DRO, ORO, BTEX, naphthalene, MTBE, polynuclear aromatic hydrocarbons (PAHs), and iso-propylbenzene. PCBs were tested for in boring B4 advanced near the auto bay during the April 10, 2021 field activities; however, no PCBs were detected and are no longer considered a COC.

All three (3) groundwater samples were analyzed for the presence of DRO and ORO via Northwest Method NWTPH-Dx, GRO via Northwest Method NWTPH-Gx, VOCs via EPA Method 8260D, PAHs via EPA Method 8270E SIM, and total lead via EPA Method Series 6020B. The location, depth, and type of groundwater samples collected are summarized in Table 2 – *Type of Samples Collected*. The locations of the three (3) monitoring wells are illustrated in Figure 2 – *Site Exploration Map*.

### 3.6. QUALITY CONTROL

The chemical testing was designed to detect the contaminants suspected to be present in the samples collected. The testing plan included tests that provide quality assurance (QA) and techniques that provide quality control (QC) over the chemical analysis.

A completed chain of custody record accompanied each sample shipment to the analytical laboratory. Chain of custody records provide written documentation regarding sample collection and handling, identify the persons involved in the chain of sample possession, and a written record of requested analytical parameters.



The analytical laboratory provided QA/QC control, including surrogate recoveries for each sample, method blank results, duplicate analysis, and laboratory control samples. All analytical laboratory QA/QC results were within required limits. Analytical laboratory results are provided in Appendix 1 – *Laboratory Report*.

### **3.7. INVESTIGATION-DERIVED WASTE**

Investigation-derived waste for this project consisted of decontamination water (Alconox soap and potable water solution followed by potable water rinse) from cleaning the Solinst interface meter probe and purge water from the three monitoring wells during groundwater sampling.

These wastes were placed into a US Department of Transportation-approved 55-gallon drum. The drum was appropriately labeled, properly sealed, and stored for subsequent characterization and disposal. The drum is temporarily staged to the south of the building on-site.



## 4. ANALYTICAL RESULTS

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### 4.1. MONITORING WELL GROUNDWATER ANALYTICAL RESULTS

A groundwater monitoring event was conducted on February 3, 2022. It includes sampling three (3) groundwater monitoring wells (MW1 through MW3).

The groundwater analytical results along with the ODEQ RBCs are summarized in Table 3 – *Groundwater Analytical Results*. Laboratory analytical documentation is located in Appendix 1 – *Laboratory Report*.

Laboratory analysis of the three (3) groundwater samples (MW1-2/3/22, MW2-2/3/22, and MW3-2/3/22) for GRO, DRO, ORO, VOCs, PAHs, and total lead indicated the following:

- ORO was not detected in any of the three (3) groundwater samples above the laboratory MRL.
- DRO was not detected in any of the three (3) groundwater samples above the laboratory MRL.
- GRO was not detected in any of the three (3) groundwater samples above the laboratory MRL.
- Chloromethane was detected in groundwater samples MW1-2/3/22 at 82.0 µg/L and MW2-2-3-22 at 68.2 µg/L, respectively.
- PAHs were not detected in any of the three groundwater samples above the laboratory MRLs.
- Total lead was not detected in any of the three groundwater samples above the laboratory MRL.

No generic risk-based concentrations (RBCs) have been established by the ODEQ for chloromethane. Therefore, no RBCs were exceeded for any analytes during the February 3, 2022 GWSE.

### 4.2. GROUNDWATER ELEVATIONS AND FLOW DIRECTION

Monitoring well TOC elevation depth to groundwater and groundwater elevations are presented in Table 1 - *Groundwater Elevations*.

Using tabulated groundwater elevations, groundwater flow direction was determined graphically on a scaled site plan. Groundwater flow direction was determined to be west, with an approximate gradient of 0.04 feet per foot (Figure 4 – *Groundwater Elevation Contour Map [2/3/2022]*).



## 5. CONCLUSIONS AND RECOMMENDATIONS

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We provide the following conclusions and recommendations for the investigation area based on the findings presented above. Three (3) groundwater samples were collected from three (3) groundwater monitoring wells and analyzed for GRO, DRO, ORO, VOCs, PAHs, and total lead.

The findings of this study are summarized as follows:

- No COCs were detected above applicable RBCs in all three groundwater samples collected on June 10, 2021.
- No COCs were detected above applicable RBCs in all three groundwater samples collected on February 3, 2022.
- Both GWSEs were conducted via monitoring wells completed in the vicinity of grab groundwater sample from B2-W, which yielded the GRO concentration of 26,000 µg/L and exceeded applicable RBCs.

Based on the results of the April 20, 2021 Limited Phase II ESA, the June 8 – 10, 2021 Secondary Limited Phase II ESA, and the February 3, 2022 GWSE, future installation of on-site, private water wells is prohibited, and future use of any secondary floors of commercial buildings for urban residential use is prohibited.

The recommendations are as follows:

- Additional quarters of groundwater sampling should be performed via the existing monitoring wells. The three groundwater samples should be analyzed for DRO, ORO, GRO, total lead, and VOCs. PAH analysis is not necessary.
- Future on-site private water well installation should be prohibited.
- Habitation in future commercial dwellings erected on-site should be prohibited by potential urban residents.
- A Contaminated Media Management Plan (CMMP) should be completed prior to intrusive activity at the Site for future excavation or construction purposes. A copy of this CMMP should remain on-site for future reference, prior to conducting future excavation or construction activities.



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## **TABLES**

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Table 1. Groundwater Elevations

Table 2. Type of Samples Collected

Table 3. Monitoring Well Groundwater Analytical Results



**Table 1. Groundwater Elevations**

Well No.	Date	TOC Elevation	Depth to water	Actual GW Elevation
MW1	06/10/2021	376.87	11.17	365.70
	02/03/2022		8.79	368.08
MW2	06/10/2021	377.44	10.92	366.52
	02/03/2022		9.34	368.10
MW3	06/10/2021	375.12	11.59	363.53
	02/03/2022		9.13	365.99

Notes

All values are reported in feet

TOC – Top of casing elevation relative to the assigned benchmark



**Table 2. Type of Samples Collected**

Sample ID	Sample type	Location	Constituents of concern	Analysis method	Date collected
<b>MW-1</b>	Water	MW1	GRO DRO, ORO VOCs Pb	NWTPH-Gx NWTPH-DX EPA 8260D EPA 6020B	06/10/2021
			GRO DRO, ORO VOCs PAHs Pb	NWTPH-Gx NWTPH-DX EPA 8260D EPA 8270E SIM EPA 6020B	02/03/2022
<b>MW-2</b>	Water	MW2	GRO DRO, ORO VOCs Pb	NWTPH-Gx NWTPH-DX EPA 8260D EPA 6020B	06/10/2021
			GRO DRO, ORO VOCs PAHs Pb	NWTPH-Gx NWTPH-DX EPA 8260D EPA 8270E SIM EPA 6020B	02/03/2022
<b>MW-3</b>	Water	MW3	GRO DRO, ORO VOCs Pb	NWTPH-Gx NWTPH-DX EPA 8260D EPA 6020B	06/10/2021
			GRO DRO, ORO VOCs PAHs Pb	NWTPH-Gx NWTPH-DX EPA 8260D EPA 8270E SIM EPA 6020B	02/03/2022

Notes

GRO – Gasoline range organics

DRO – Diesel range organics

ORO – Oil range organics

VOCs – Volatile organic compounds

PAH – Polycyclic aromatic hydrocarbons

Pb – Total Lead



**Table 3. Groundwater Analytical Results (µg/L)**

Samples	Date	TPHs			VOCs								PAHs	Metals
		GRO	DRO	ORO	B	T	E	X	N	MTBE	CM	IPB	PAHs	Lead
B1-W	04/20/21	<100	<74.8	<b>198</b>	<0.200	<1.00	<0.500	<1.50	<4.00	NA	NA	NA	NA	NA
B2-W	04/20/21	<b>26,100</b>	<b>516</b>	< 167	<b>11.2</b>	<b>429</b>	<b>169</b>	<b>6100</b>	<b>116</b>	NA	NA	NA	NA	NA
MW-1	06/10/21	<100	<b>173</b>	<178	<0.200	<1.00	<0.500	<b>0.700</b>	<2.00	<b>4.43</b>	<5.00	<1.00	NA	<b>0.875</b>
	02/03/22	<100	<75.5	<151	<0.200	<1.00	<0.500	<1.500	<2.00	<1.00	<b>82.0</b>	<1.00	ND	<0.200
MW-2	06/10/21	<b>144</b>	<b>360</b>	<163	<0.200	<1.00	<0.500	<b>0.890</b>	<2.00	<1.00	<5.00	<1.00	NA	<b>40.5</b>
	02/03/22	<100	<79.2	<158	<0.200	<1.00	<0.500	<1.500	<2.00	<1.00	<b>68.1</b>	<1.00	ND	<0.200
MW-3	06/10/21	<100	<78.4	<157	<0.200	<1.00	<0.500	<1.50	<2.00	<2.00	<5.00	<1.00	NA	<b>0.308</b>
	02/03/22	<100	<78.4	<157	<0.200	<1.00	<0.500	<1.500	<2.00	<2.00	<5.00	<1.00	ND	<0.200
<b><i>Ingestion &amp; Inhalation From Tapwater (RBCtw)</i></b>														
Urban Residential		110	100	100	2.0	4,400	6.7	710	0.78	64	DNE	1,800	V	15
Occupational		450	430	430	2.1	6,300	6.4	830	0.72	68	DNE	2,000	V	15
<b><i>Vapor Intrusion Into Buildings (RBCwi)</i></b>														
Urban Residential		22,000	>S	>S	510	>S	1,500	86,000	2,000	160,000	DNE	>S	V	NV
Occupational		>S	>S	>S	2,800	>S	8,200	>S	11,000	870,000	DNE	>S	V	NV
<b><i>Groundwater In Excavation (RBCwe)</i></b>														
Construction & Excavation Worker		14,000	>S	>S	1,800	220,000	4,500	23,000	500	63,000	DNE	51,000	V	<5



Notes

All values presented in microgram per liter ( $\mu\text{g/L}$ )

TPHs – Total petroleum hydrocarbons

VOCs – Volatile organic compounds

PAHs – Polycyclic aromatic hydrocarbons

GRO – Gasoline range organics

DRO – Diesel range organics

ORO – Heavy oil range organics

B – Benzene

T – Toluene

E – Ethylbenzene

X – Xylene

N – Naphthalene

M – Methyl tert-butyl ether (MTBE)

CM – Chloromethane

IPB – Iso-propyl benzene

NA – Not analyzed

NV – Nonvolatile

ND – Not detected above the laboratory method detection limits.

V – various concentrations

DNE – Does not exist

RBC<sub>tw</sub> – Risk-based concentration = Ingestion and Inhalation from Tapwater - Occupational Receptor

RBC<sub>we</sub> – Risk-based concentration = Groundwater in Excavation - Construction & Excavation Worker Receptor

>S – The constituent RBC for this pathway is calculated as greater than 1,000,000 mg/L. Therefore, this substance is deemed not to pose risks in this scenario.

**Numbers in bold** indicate concentrations detected above the laboratory method detection limits.

**Numbers in bold red** indicate concentrations above the RBCs.

\*Acetone was detected in groundwater sample MW-3-6/10/21 at 27.4  $\mu\text{g/L}$ . No RBCs exist for this compound.



## FIGURES

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Figure 1. Site Location Map

Figure 2. Site Exploration Map

Figure 3. Groundwater Elevation Contour Map (6/10/2021)

Figure 4. Groundwater Elevation Contour Map (2/3/2022)



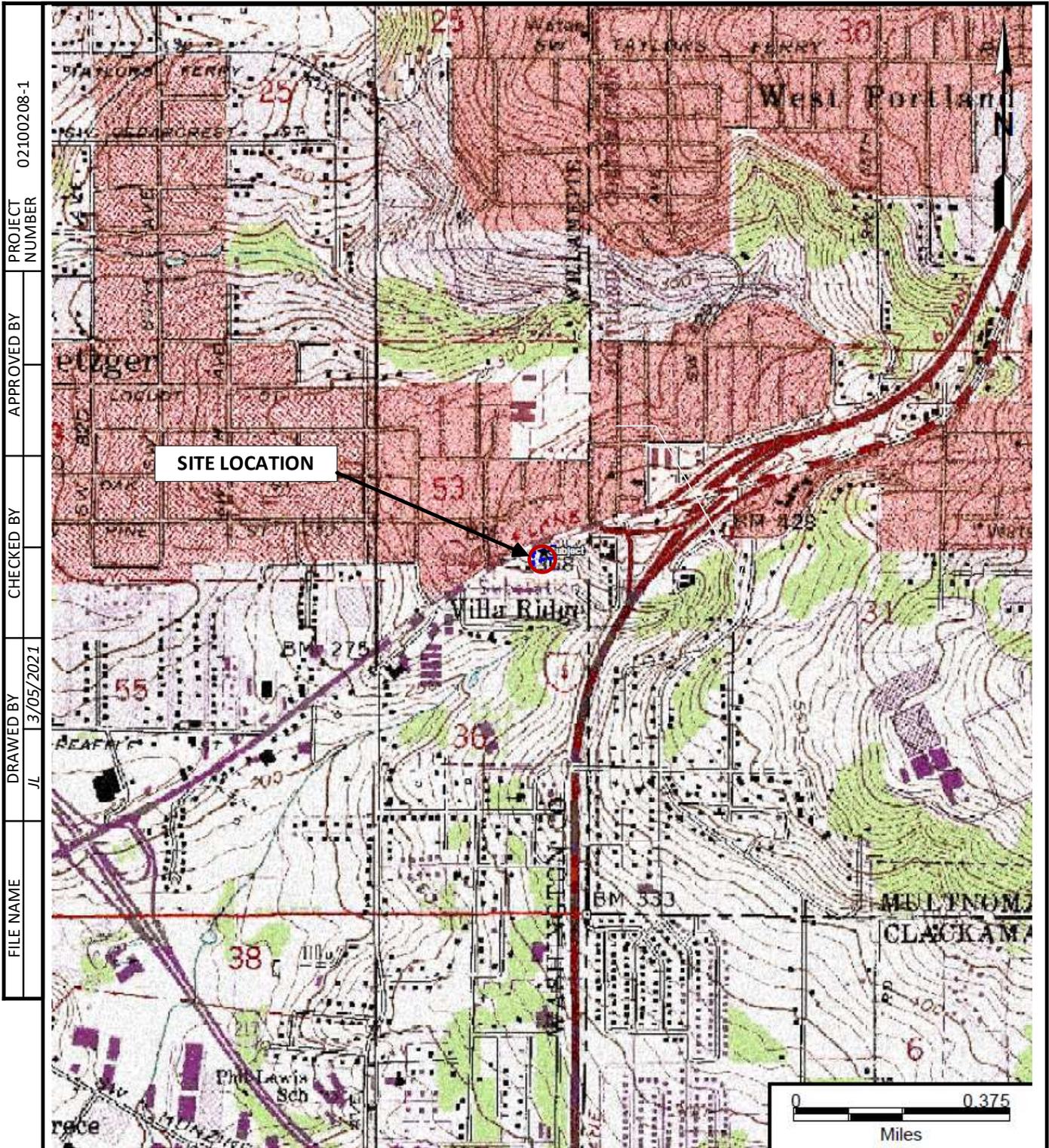
ENVITECHNOLOGY

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9805 NE 116<sup>th</sup> St Suite 300 Kirkland WA 98032

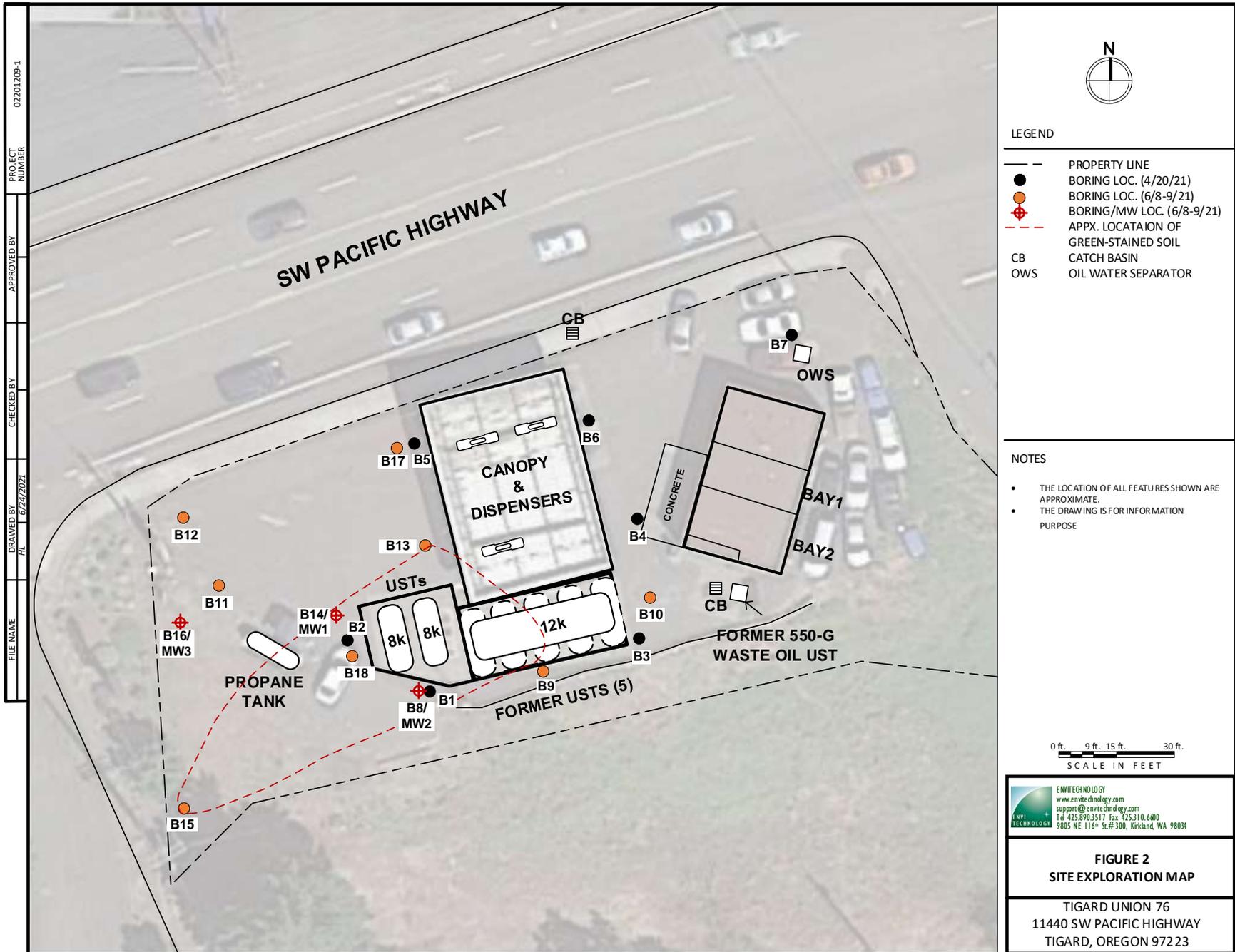


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LONGITUDE -122.7448620



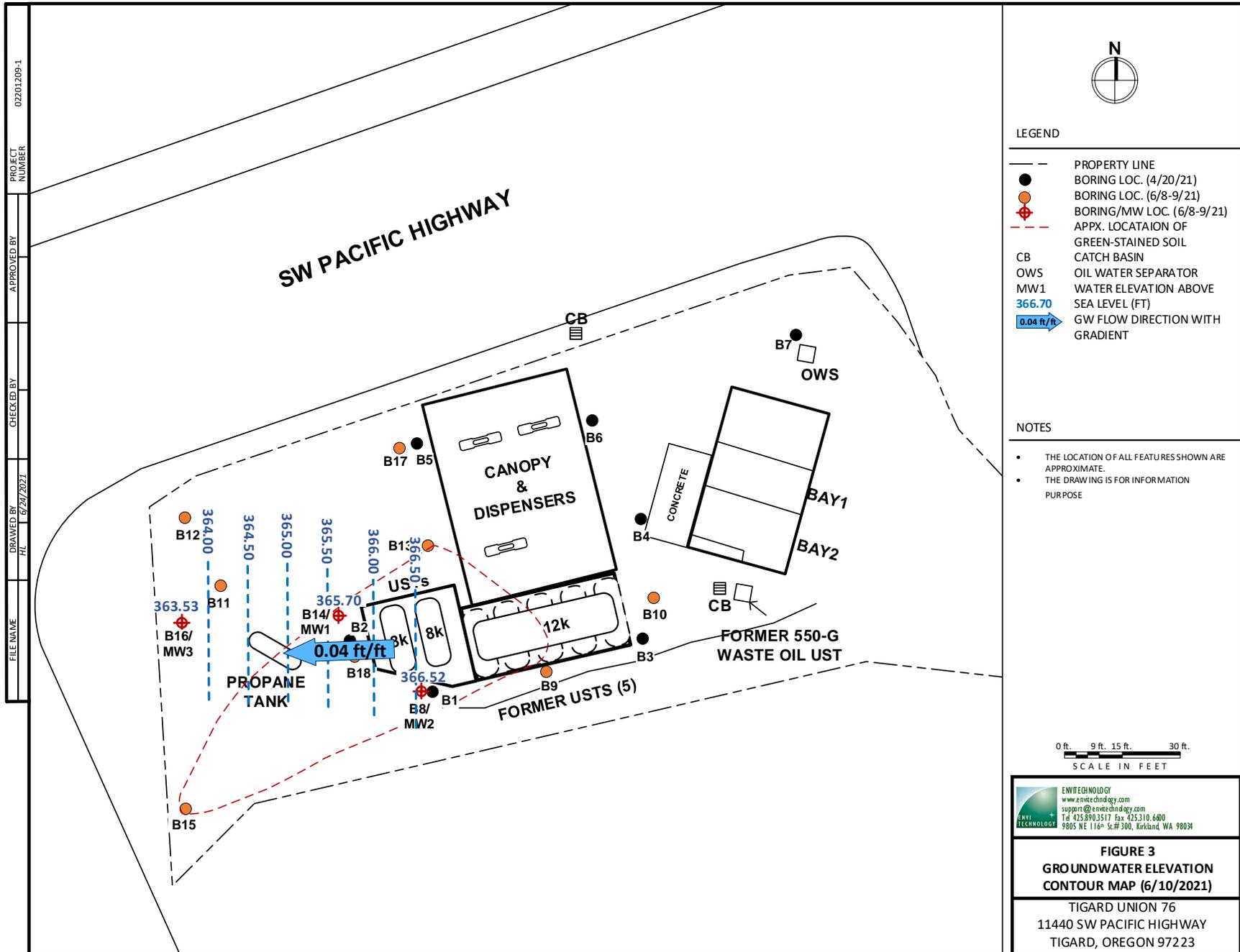
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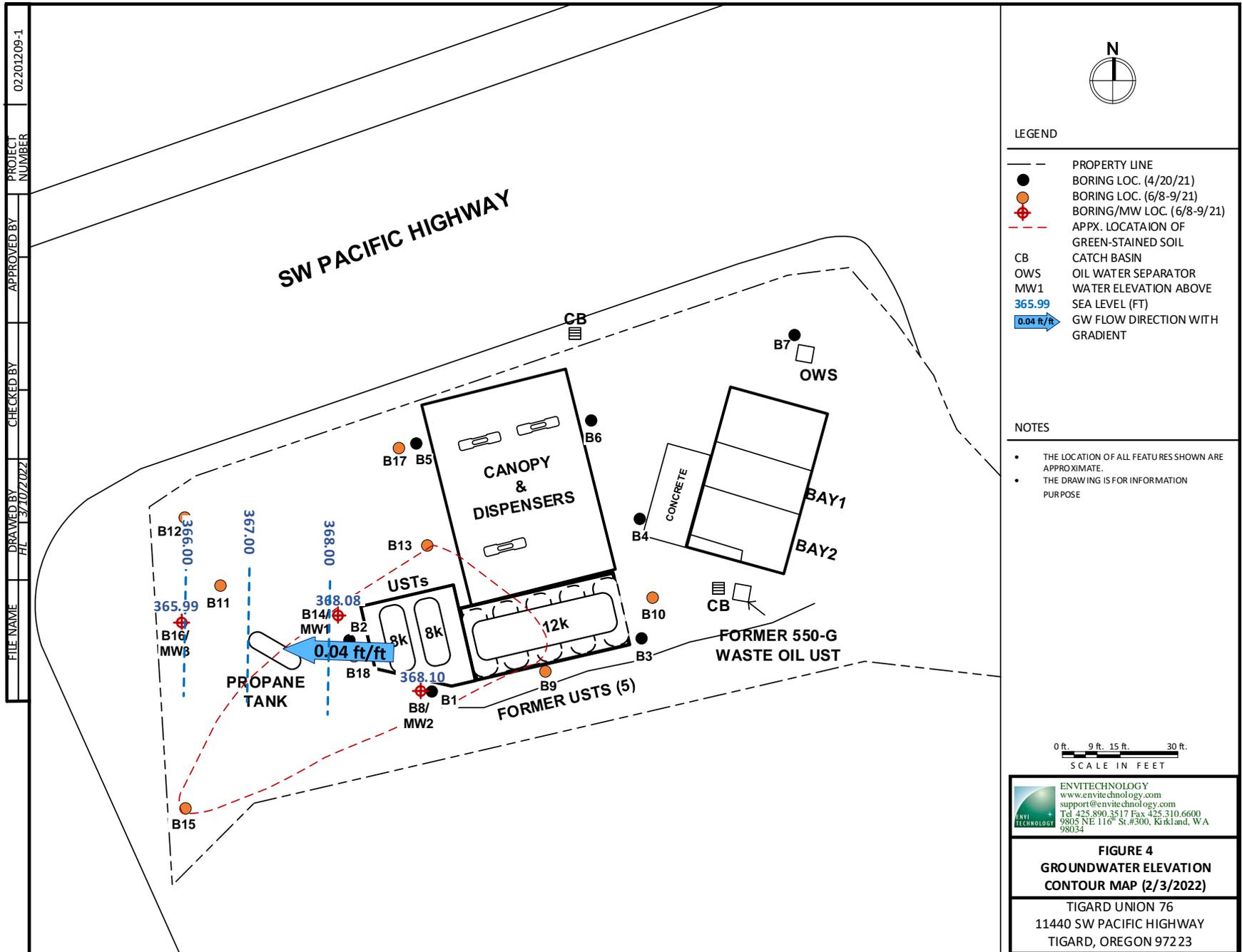
**FIGURE 1**  
**SITE LOCATION MAP**  
TIGARD UNION 76  
11440 SOUTHWEST PACIFIC HIGHWAY  
TIGARD, OREGON 97223





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## APPENDICES

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### Appendix 1. Laboratory Report



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## **APPENDIX 1. LABORATORY REPORT**

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

Wednesday, February 16, 2022

Jake Lee  
Envitechnology  
9805 Ne 116th Street, Suite 300  
Kirkland, WA 98034

RE: A2B0133 - Tigard Union 76 - [none]

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 A2B0133, which was received by the laboratory on 2/3/2022 at 1:52:00PM.

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

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

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Cooler Receipt Information

(See Cooler Receipt Form for details)

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

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

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---

Philip Nerenberg, Lab Director



**ANALYTICAL REPORT**

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ORELAP ID: OR100062

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: Jake Lee	<b>Report ID:</b> A2B0133 - 02 16 22 1637
--	--	--

**ANALYTICAL REPORT FOR SAMPLES**

**SAMPLE INFORMATION**

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW2-2/3/22	A2B0133-01	Water	02/03/22 11:20	02/03/22 13:52
MW1-2/3/22	A2B0133-02	Water	02/03/22 12:00	02/03/22 13:52
MW3-2/3/22	A2B0133-03	Water	02/03/22 12:50	02/03/22 13:52

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Philip Nerenberg, Lab Director



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--	---	---

**ANALYTICAL SAMPLE RESULTS**

**Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW2-2/3/22 (A2B0133-01)</b>			<b>Matrix: Water</b>			<b>Batch: 22B0533</b>		
Diesel	ND	---	0.0792	mg/L	1	02/15/22 22:25	NWTPH-Dx LL	
Oil	ND	---	0.158	mg/L	1	02/15/22 22:25	NWTPH-Dx LL	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 88 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>02/15/22 22:25</i>	<i>NWTPH-Dx LL</i>
<b>MW1-2/3/22 (A2B0133-02)</b>			<b>Matrix: Water</b>			<b>Batch: 22B0533</b>		
Diesel	ND	---	0.0755	mg/L	1	02/15/22 22:45	NWTPH-Dx LL	
Oil	ND	---	0.151	mg/L	1	02/15/22 22:45	NWTPH-Dx LL	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 91 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>02/15/22 22:45</i>	<i>NWTPH-Dx LL</i>
<b>MW3-2/3/22 (A2B0133-03)</b>			<b>Matrix: Water</b>			<b>Batch: 22B0533</b>		
Diesel	ND	---	0.0784	mg/L	1	02/15/22 23:05	NWTPH-Dx LL	
Oil	ND	---	0.157	mg/L	1	02/15/22 23:05	NWTPH-Dx LL	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>02/15/22 23:05</i>	<i>NWTPH-Dx LL</i>

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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>MW2-2/3/22 (A2B0133-01)</b>				<b>Matrix: Water</b>		<b>Batch: 22B0335</b>		
Gasoline Range Organics	ND	---	0.100	mg/L	1	02/09/22 16:44	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 96 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>02/09/22 16:44</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>104 %</i>	<i>50-150 %</i>	<i>1</i>	<i>02/09/22 16:44</i>	<i>NWTPH-Gx (MS)</i>	
<b>MW1-2/3/22 (A2B0133-02)</b>				<b>Matrix: Water</b>		<b>Batch: 22B0335</b>		
Gasoline Range Organics	ND	---	0.100	mg/L	1	02/09/22 17:11	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 95 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>02/09/22 17:11</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>103 %</i>	<i>50-150 %</i>	<i>1</i>	<i>02/09/22 17:11</i>	<i>NWTPH-Gx (MS)</i>	
<b>MW3-2/3/22 (A2B0133-03)</b>				<b>Matrix: Water</b>		<b>Batch: 22B0335</b>		
Gasoline Range Organics	ND	---	0.100	mg/L	1	02/09/22 17:38	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 94 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>02/09/22 17:38</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>103 %</i>	<i>50-150 %</i>	<i>1</i>	<i>02/09/22 17:38</i>	<i>NWTPH-Gx (MS)</i>	

Apex Laboratories

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

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<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> <b>A2B0133 - 02 16 22 1637</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>Matrix: Water</b>			<b>Batch: 22B0335</b>		
<b>MW2-2/3/22 (A2B0133-01)</b>								
Acetone	ND	---	20.0	ug/L	1	02/09/22 16:44	EPA 8260D	
Acrylonitrile	ND	---	2.00	ug/L	1	02/09/22 16:44	EPA 8260D	
Benzene	ND	---	0.200	ug/L	1	02/09/22 16:44	EPA 8260D	
Bromobenzene	ND	---	0.500	ug/L	1	02/09/22 16:44	EPA 8260D	
Bromochloromethane	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
Bromodichloromethane	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
Bromoform	ND	---	2.00	ug/L	1	02/09/22 16:44	EPA 8260D	
Bromomethane	ND	---	5.00	ug/L	1	02/09/22 16:44	EPA 8260D	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	02/09/22 16:44	EPA 8260D	
n-Butylbenzene	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
sec-Butylbenzene	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
tert-Butylbenzene	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
Carbon disulfide	ND	---	10.0	ug/L	1	02/09/22 16:44	EPA 8260D	
Carbon tetrachloride	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
Chlorobenzene	ND	---	0.500	ug/L	1	02/09/22 16:44	EPA 8260D	
Chloroethane	ND	---	5.00	ug/L	1	02/09/22 16:44	EPA 8260D	
Chloroform	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
<b>Chloromethane</b>	<b>68.1</b>	---	5.00	ug/L	1	02/09/22 16:44	EPA 8260D	
2-Chlorotoluene	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
4-Chlorotoluene	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
Dibromochloromethane	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	02/09/22 16:44	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	02/09/22 16:44	EPA 8260D	
Dibromomethane	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	02/09/22 16:44	EPA 8260D	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	02/09/22 16:44	EPA 8260D	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	02/09/22 16:44	EPA 8260D	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	02/09/22 16:44	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	02/09/22 16:44	EPA 8260D	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	02/09/22 16:44	EPA 8260D	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	02/09/22 16:44	EPA 8260D	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	02/09/22 16:44	EPA 8260D	

Apex Laboratories

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> <b>A2B0133 - 02 16 22 1637</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>Matrix: Water</b>			<b>Batch: 22B0335</b>		
<b>MW2-2/3/22 (A2B0133-01)</b>								
1,2-Dichloropropane	ND	---	0.500	ug/L	1	02/09/22 16:44	EPA 8260D	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
Ethylbenzene	ND	---	0.500	ug/L	1	02/09/22 16:44	EPA 8260D	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	02/09/22 16:44	EPA 8260D	
2-Hexanone	ND	---	10.0	ug/L	1	02/09/22 16:44	EPA 8260D	
Isopropylbenzene	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
Methylene chloride	ND	---	10.0	ug/L	1	02/09/22 16:44	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	10.0	ug/L	1	02/09/22 16:44	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
Naphthalene	ND	---	2.00	ug/L	1	02/09/22 16:44	EPA 8260D	
n-Propylbenzene	ND	---	0.500	ug/L	1	02/09/22 16:44	EPA 8260D	
Styrene	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	02/09/22 16:44	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	02/09/22 16:44	EPA 8260D	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	02/09/22 16:44	EPA 8260D	
Toluene	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	02/09/22 16:44	EPA 8260D	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	02/09/22 16:44	EPA 8260D	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	02/09/22 16:44	EPA 8260D	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	02/09/22 16:44	EPA 8260D	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	02/09/22 16:44	EPA 8260D	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	02/09/22 16:44	EPA 8260D	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
Vinyl chloride	ND	---	0.400	ug/L	1	02/09/22 16:44	EPA 8260D	
m,p-Xylene	ND	---	1.00	ug/L	1	02/09/22 16:44	EPA 8260D	
o-Xylene	ND	---	0.500	ug/L	1	02/09/22 16:44	EPA 8260D	

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> <b>A2B0133 - 02 16 22 1637</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>Matrix: Water</b>			<b>Batch: 22B0335</b>		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 113 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>02/09/22 16:44</i>	<i>EPA 8260D</i>	
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>	<i>80-120 %</i>	<i>1</i>	<i>02/09/22 16:44</i>	<i>EPA 8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>	<i>80-120 %</i>	<i>1</i>	<i>02/09/22 16:44</i>	<i>EPA 8260D</i>	
			<b>Matrix: Water</b>			<b>Batch: 22B0335</b>		
Acetone	ND	---	20.0	ug/L	1	02/09/22 17:11	EPA 8260D	
Acrylonitrile	ND	---	2.00	ug/L	1	02/09/22 17:11	EPA 8260D	
Benzene	ND	---	0.200	ug/L	1	02/09/22 17:11	EPA 8260D	
Bromobenzene	ND	---	0.500	ug/L	1	02/09/22 17:11	EPA 8260D	
Bromochloromethane	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
Bromodichloromethane	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
Bromoform	ND	---	2.00	ug/L	1	02/09/22 17:11	EPA 8260D	
Bromomethane	ND	---	5.00	ug/L	1	02/09/22 17:11	EPA 8260D	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	02/09/22 17:11	EPA 8260D	
n-Butylbenzene	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
sec-Butylbenzene	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
tert-Butylbenzene	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
Carbon disulfide	ND	---	10.0	ug/L	1	02/09/22 17:11	EPA 8260D	
Carbon tetrachloride	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
Chlorobenzene	ND	---	0.500	ug/L	1	02/09/22 17:11	EPA 8260D	
Chloroethane	ND	---	5.00	ug/L	1	02/09/22 17:11	EPA 8260D	
Chloroform	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
<b>Chloromethane</b>	<b>82.0</b>	---	5.00	ug/L	1	02/09/22 17:11	EPA 8260D	
2-Chlorotoluene	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
4-Chlorotoluene	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
Dibromochloromethane	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	02/09/22 17:11	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	02/09/22 17:11	EPA 8260D	
Dibromomethane	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	02/09/22 17:11	EPA 8260D	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	02/09/22 17:11	EPA 8260D	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	02/09/22 17:11	EPA 8260D	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	02/09/22 17:11	EPA 8260D	

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> <b>A2B0133 - 02 16 22 1637</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>MW1-2/3/22 (A2B0133-02)</b>				<b>Matrix: Water</b>		<b>Batch: 22B0335</b>		
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	02/09/22 17:11	EPA 8260D	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	02/09/22 17:11	EPA 8260D	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	02/09/22 17:11	EPA 8260D	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	02/09/22 17:11	EPA 8260D	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	02/09/22 17:11	EPA 8260D	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
Ethylbenzene	ND	---	0.500	ug/L	1	02/09/22 17:11	EPA 8260D	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	02/09/22 17:11	EPA 8260D	
2-Hexanone	ND	---	10.0	ug/L	1	02/09/22 17:11	EPA 8260D	
Isopropylbenzene	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
Methylene chloride	ND	---	10.0	ug/L	1	02/09/22 17:11	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	10.0	ug/L	1	02/09/22 17:11	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
Naphthalene	ND	---	2.00	ug/L	1	02/09/22 17:11	EPA 8260D	
n-Propylbenzene	ND	---	0.500	ug/L	1	02/09/22 17:11	EPA 8260D	
Styrene	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	02/09/22 17:11	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	02/09/22 17:11	EPA 8260D	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	02/09/22 17:11	EPA 8260D	
Toluene	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	02/09/22 17:11	EPA 8260D	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	02/09/22 17:11	EPA 8260D	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	02/09/22 17:11	EPA 8260D	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	02/09/22 17:11	EPA 8260D	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	02/09/22 17:11	EPA 8260D	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	02/09/22 17:11	EPA 8260D	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> <b>A2B0133 - 02 16 22 1637</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>Matrix: Water</b>			<b>Batch: 22B0335</b>		
<b>MW1-2/3/22 (A2B0133-02)</b>								
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
Vinyl chloride	ND	---	0.400	ug/L	1	02/09/22 17:11	EPA 8260D	
m,p-Xylene	ND	---	1.00	ug/L	1	02/09/22 17:11	EPA 8260D	
o-Xylene	ND	---	0.500	ug/L	1	02/09/22 17:11	EPA 8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 111 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>02/09/22 17:11</i>	<i>EPA 8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>1</i>	<i>02/09/22 17:11</i>	<i>EPA 8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>105 %</i>		<i>80-120 %</i>		<i>1</i>	<i>02/09/22 17:11</i>	<i>EPA 8260D</i>
			<b>Matrix: Water</b>			<b>Batch: 22B0335</b>		
<b>MW3-2/3/22 (A2B0133-03)</b>								
Acetone	ND	---	20.0	ug/L	1	02/09/22 17:38	EPA 8260D	
Acrylonitrile	ND	---	2.00	ug/L	1	02/09/22 17:38	EPA 8260D	
Benzene	ND	---	0.200	ug/L	1	02/09/22 17:38	EPA 8260D	
Bromobenzene	ND	---	0.500	ug/L	1	02/09/22 17:38	EPA 8260D	
Bromochloromethane	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
Bromodichloromethane	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
Bromoform	ND	---	2.00	ug/L	1	02/09/22 17:38	EPA 8260D	
Bromomethane	ND	---	5.00	ug/L	1	02/09/22 17:38	EPA 8260D	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	02/09/22 17:38	EPA 8260D	
n-Butylbenzene	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
sec-Butylbenzene	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
tert-Butylbenzene	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
Carbon disulfide	ND	---	10.0	ug/L	1	02/09/22 17:38	EPA 8260D	
Carbon tetrachloride	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
Chlorobenzene	ND	---	0.500	ug/L	1	02/09/22 17:38	EPA 8260D	
Chloroethane	ND	---	5.00	ug/L	1	02/09/22 17:38	EPA 8260D	
Chloroform	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
Chloromethane	ND	---	5.00	ug/L	1	02/09/22 17:38	EPA 8260D	
2-Chlorotoluene	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
4-Chlorotoluene	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
Dibromochloromethane	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	02/09/22 17:38	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	02/09/22 17:38	EPA 8260D	
Dibromomethane	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	02/09/22 17:38	EPA 8260D	

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> <b>A2B0133 - 02 16 22 1637</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>Matrix: Water</b>			<b>Batch: 22B0335</b>		
<b>MW3-2/3/22 (A2B0133-03)</b>								
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	02/09/22 17:38	EPA 8260D	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	02/09/22 17:38	EPA 8260D	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	02/09/22 17:38	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	02/09/22 17:38	EPA 8260D	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	02/09/22 17:38	EPA 8260D	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	02/09/22 17:38	EPA 8260D	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	02/09/22 17:38	EPA 8260D	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	02/09/22 17:38	EPA 8260D	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
Ethylbenzene	ND	---	0.500	ug/L	1	02/09/22 17:38	EPA 8260D	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	02/09/22 17:38	EPA 8260D	
2-Hexanone	ND	---	10.0	ug/L	1	02/09/22 17:38	EPA 8260D	
Isopropylbenzene	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
Methylene chloride	ND	---	10.0	ug/L	1	02/09/22 17:38	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	02/09/22 17:38	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
Naphthalene	ND	---	2.00	ug/L	1	02/09/22 17:38	EPA 8260D	
n-Propylbenzene	ND	---	0.500	ug/L	1	02/09/22 17:38	EPA 8260D	
Styrene	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	02/09/22 17:38	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	02/09/22 17:38	EPA 8260D	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	02/09/22 17:38	EPA 8260D	
Toluene	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	02/09/22 17:38	EPA 8260D	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	02/09/22 17:38	EPA 8260D	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	02/09/22 17:38	EPA 8260D	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	02/09/22 17:38	EPA 8260D	

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> <b>A2B0133 - 02 16 22 1637</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>MW3-2/3/22 (A2B0133-03)</b>			<b>Matrix: Water</b>			<b>Batch: 22B0335</b>		
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	02/09/22 17:38	EPA 8260D	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	02/09/22 17:38	EPA 8260D	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
Vinyl chloride	ND	---	0.400	ug/L	1	02/09/22 17:38	EPA 8260D	
m,p-Xylene	ND	---	1.00	ug/L	1	02/09/22 17:38	EPA 8260D	
o-Xylene	ND	---	0.500	ug/L	1	02/09/22 17:38	EPA 8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 111 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>02/09/22 17:38</i>	<i>EPA 8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>1</i>	<i>02/09/22 17:38</i>	<i>EPA 8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>		<i>1</i>	<i>02/09/22 17:38</i>	<i>EPA 8260D</i>

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Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> <b>A2B0133 - 02 16 22 1637</b>
--	---	---

**ANALYTICAL SAMPLE RESULTS**

**Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
				<b>Matrix: Water</b>				
						<b>Batch: 22B0243</b>		
<b>MW2-2/3/22 (A2B0133-01)</b>								
Acenaphthene	ND	---	0.0381	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
Acenaphthylene	ND	---	0.0381	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
Anthracene	ND	---	0.0381	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
Benz(a)anthracene	ND	---	0.0381	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
Benzo(a)pyrene	ND	---	0.0381	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	---	0.0381	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	---	0.0381	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	---	0.0381	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
Chrysene	ND	---	0.0381	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	---	0.0381	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
Fluoranthene	ND	---	0.0381	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
Fluorene	ND	---	0.0381	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	---	0.0381	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
1-Methylnaphthalene	ND	---	0.0762	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
2-Methylnaphthalene	ND	---	0.0762	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
Naphthalene	ND	---	0.0762	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
Phenanthrene	ND	---	0.0381	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
Pyrene	ND	---	0.0381	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
Dibenzofuran	ND	---	0.0381	ug/L	1	02/07/22 18:43	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 60 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>02/07/22 18:43</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>88 %</i>		<i>50-134 %</i>		<i>1</i>	<i>02/07/22 18:43</i>	<i>EPA 8270E SIM</i>

				<b>Matrix: Water</b>				
						<b>Batch: 22B0243</b>		
<b>MW1-2/3/22 (A2B0133-02)</b>								
Acenaphthene	ND	---	0.0377	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
Acenaphthylene	ND	---	0.0377	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
Anthracene	ND	---	0.0377	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
Benz(a)anthracene	ND	---	0.0377	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
Benzo(a)pyrene	ND	---	0.0377	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	---	0.0377	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	---	0.0377	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	---	0.0377	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
Chrysene	ND	---	0.0377	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	---	0.0377	ug/L	1	02/07/22 19:08	EPA 8270E SIM	

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503-718-2323  
ORELAP ID: OR100062

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> A2B0133 - 02 16 22 1637
--	---	--

**ANALYTICAL SAMPLE RESULTS**

**Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW1-2/3/22 (A2B0133-02)</b>				<b>Matrix: Water</b>		<b>Batch: 22B0243</b>		
Fluoranthene	ND	---	0.0377	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
Fluorene	ND	---	0.0377	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	---	0.0377	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
1-Methylnaphthalene	ND	---	0.0755	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
2-Methylnaphthalene	ND	---	0.0755	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
Naphthalene	ND	---	0.0755	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
Phenanthrene	ND	---	0.0377	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
Pyrene	ND	---	0.0377	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
Dibenzofuran	ND	---	0.0377	ug/L	1	02/07/22 19:08	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 66 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>02/07/22 19:08</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>87 %</i>		<i>50-134 %</i>		<i>1</i>	<i>02/07/22 19:08</i>	<i>EPA 8270E SIM</i>
<b>MW3-2/3/22 (A2B0133-03)</b>				<b>Matrix: Water</b>		<b>Batch: 22B0243</b>		
Acenaphthene	ND	---	0.0381	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
Acenaphthylene	ND	---	0.0381	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
Anthracene	ND	---	0.0381	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
Benz(a)anthracene	ND	---	0.0381	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
Benzo(a)pyrene	ND	---	0.0381	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	---	0.0381	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	---	0.0381	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	---	0.0381	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
Chrysene	ND	---	0.0381	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	---	0.0381	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
Fluoranthene	ND	---	0.0381	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
Fluorene	ND	---	0.0381	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	---	0.0381	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
1-Methylnaphthalene	ND	---	0.0762	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
2-Methylnaphthalene	ND	---	0.0762	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
Naphthalene	ND	---	0.0762	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
Phenanthrene	ND	---	0.0381	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
Pyrene	ND	---	0.0381	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
Dibenzofuran	ND	---	0.0381	ug/L	1	02/07/22 19:33	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 61 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>02/07/22 19:33</i>	<i>EPA 8270E SIM</i>

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<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> <b>A2B0133 - 02 16 22 1637</b>
--	---	---

**ANALYTICAL SAMPLE RESULTS**

**Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW3-2/3/22 (A2B0133-03)</b>				<b>Matrix: Water</b>		<b>Batch: 22B0243</b>		
<i>Surrogate: p-Terphenyl-d14 (Surr)</i>		<i>Recovery: 86 %</i>		<i>Limits: 50-134 %</i>		<i>1</i>	<i>02/07/22 19:33</i>	<i>EPA 8270E SIM</i>

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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>MW2-2/3/22 (A2B0133-01)</b>				<b>Matrix: Water</b>				
Batch: 22B0359								
Lead	ND	---	0.200	ug/L	1	02/14/22 20:25	EPA 6020B	
<b>MW1-2/3/22 (A2B0133-02)</b>				<b>Matrix: Water</b>				
Batch: 22B0359								
Lead	ND	---	0.200	ug/L	1	02/14/22 20:30	EPA 6020B	
<b>MW3-2/3/22 (A2B0133-03)</b>				<b>Matrix: Water</b>				
Batch: 22B0435								
Lead	ND	---	0.200	ug/L	1	02/14/22 21:51	EPA 6020B	

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<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> <b>A2B0133 - 02 16 22 1637</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 22B0533 - EPA 3510C (Fuels/Acid Ext.)</b>						<b>Water</b>						
<b>Blank (22B0533-BLK1)</b>			Prepared: 02/15/22 07:05 Analyzed: 02/15/22 21:24									
<u>NWTPH-Dx LL</u>												
Diesel	ND	---	0.0727	mg/L	1	---	---	---	---	---	---	
Oil	ND	---	0.145	mg/L	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 93 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<b>LCS (22B0533-BS1)</b>			Prepared: 02/15/22 07:05 Analyzed: 02/15/22 21:44									
<u>NWTPH-Dx LL</u>												
Diesel	0.394	---	0.0800	mg/L	1	0.500	---	79	36-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 94 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<b>LCS Dup (22B0533-BSD1)</b>			Prepared: 02/15/22 07:05 Analyzed: 02/15/22 22:04									
<u>NWTPH-Dx LL</u>												
Diesel	0.387	---	0.0800	mg/L	1	0.500	---	77	36-132%	2	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 91 %</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 22B0335 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (22B0335-BLK1)</b>			Prepared: 02/09/22 07:30 Analyzed: 02/09/22 13:10									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 95 %</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>						
<b>LCS (22B0335-BS2)</b>			Prepared: 02/09/22 07:30 Analyzed: 02/09/22 11:49									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	0.458	---	0.100	mg/L	1	0.500	---	92	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 98 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>99 %</i>		<i>50-150 %</i>		<i>"</i>						
<b>Duplicate (22B0335-DUP1)</b>			Prepared: 02/09/22 09:00 Analyzed: 02/09/22 14:57									
<u>QC Source Sample: Non-SDG (A2B0158-05)</u>												
Gasoline Range Organics	ND	---	5.00	mg/L	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 94 %</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 (22B0335-DUP2)</b>			Prepared: 02/09/22 09:00 Analyzed: 02/09/22 20:18									
<u>QC Source Sample: Non-SDG (A2B0140-06)</u>												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 95 %</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>						

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ORELAP ID: OR100062

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> A2B0133 - 02 16 22 1637
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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 22B0335 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (22B0335-BLK1)</b>			Prepared: 02/09/22 07:30 Analyzed: 02/09/22 13:10									
<b>EPA 8260D</b>												
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	---	2.00	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**

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<b>Envitechnology</b>	Project: <b>Tigard Union 76</b>	
9805 Ne 116th Street, Suite 300	Project Number: [none]	<b>Report ID:</b>
Kirkland, WA 98034	Project Manager: Jake Lee	A2B0133 - 02 16 22 1637

**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 22B0335 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (22B0335-BLK1)</b>			Prepared: 02/09/22 07:30 Analyzed: 02/09/22 13:10									
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: 111 %      Limits: 80-120 %      Dilution: 1x

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> <b>A2B0133 - 02 16 22 1637</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 22B0335 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (22B0335-BLK1)</b>						Prepared: 02/09/22 07:30 Analyzed: 02/09/22 13:10						
<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>105 %</i>		<i>80-120 %</i>		<i>"</i>						
<b>LCS (22B0335-BS1)</b>						Prepared: 02/09/22 07:30 Analyzed: 02/09/22 11:13						
<b>EPA 8260D</b>												
Acetone	50.8	---	20.0	ug/L	1	40.0	---	127	80-120%	---	---	Q-56
Acrylonitrile	19.2	---	2.00	ug/L	1	20.0	---	96	80-120%	---	---	
Benzene	19.5	---	0.200	ug/L	1	20.0	---	97	80-120%	---	---	
Bromobenzene	19.3	---	0.500	ug/L	1	20.0	---	96	80-120%	---	---	
Bromochloromethane	21.9	---	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
Bromodichloromethane	22.3	---	1.00	ug/L	1	20.0	---	111	80-120%	---	---	
Bromoform	26.0	---	2.00	ug/L	1	20.0	---	130	80-120%	---	---	Q-56
Bromomethane	16.9	---	5.00	ug/L	1	20.0	---	84	80-120%	---	---	
2-Butanone (MEK)	43.5	---	10.0	ug/L	1	40.0	---	109	80-120%	---	---	
n-Butylbenzene	20.8	---	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
sec-Butylbenzene	20.9	---	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
tert-Butylbenzene	18.7	---	1.00	ug/L	1	20.0	---	93	80-120%	---	---	
Carbon disulfide	22.4	---	10.0	ug/L	1	20.0	---	112	80-120%	---	---	
Carbon tetrachloride	28.2	---	1.00	ug/L	1	20.0	---	141	80-120%	---	---	Q-56
Chlorobenzene	18.7	---	0.500	ug/L	1	20.0	---	93	80-120%	---	---	
Chloroethane	13.2	---	5.00	ug/L	1	20.0	---	66	80-120%	---	---	Q-55
Chloroform	20.0	---	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
Chloromethane	20.6	---	5.00	ug/L	1	20.0	---	103	80-120%	---	---	
2-Chlorotoluene	19.6	---	1.00	ug/L	1	20.0	---	98	80-120%	---	---	
4-Chlorotoluene	18.8	---	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
Dibromochloromethane	26.5	---	1.00	ug/L	1	20.0	---	133	80-120%	---	---	Q-56
1,2-Dibromo-3-chloropropane	18.8	---	5.00	ug/L	1	20.0	---	94	80-120%	---	---	
1,2-Dibromoethane (EDB)	19.1	---	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
Dibromomethane	21.4	---	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
1,2-Dichlorobenzene	20.2	---	0.500	ug/L	1	20.0	---	101	80-120%	---	---	
1,3-Dichlorobenzene	20.4	---	0.500	ug/L	1	20.0	---	102	80-120%	---	---	
1,4-Dichlorobenzene	20.0	---	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
Dichlorodifluoromethane	23.0	---	1.00	ug/L	1	20.0	---	115	80-120%	---	---	
1,1-Dichloroethane	19.9	---	0.400	ug/L	1	20.0	---	99	80-120%	---	---	

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> A2B0133 - 02 16 22 1637
--	---	--

**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 22B0335 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (22B0335-BS1)</b>			Prepared: 02/09/22 07:30 Analyzed: 02/09/22 11:13									
1,2-Dichloroethane (EDC)	18.1	---	0.400	ug/L	1	20.0	---	91	80-120%	---	---	
1,1-Dichloroethene	20.3	---	0.400	ug/L	1	20.0	---	102	80-120%	---	---	
cis-1,2-Dichloroethene	19.5	---	0.400	ug/L	1	20.0	---	98	80-120%	---	---	
trans-1,2-Dichloroethene	20.9	---	0.400	ug/L	1	20.0	---	104	80-120%	---	---	
1,2-Dichloropropane	20.2	---	0.500	ug/L	1	20.0	---	101	80-120%	---	---	
1,3-Dichloropropane	18.0	---	1.00	ug/L	1	20.0	---	90	80-120%	---	---	
2,2-Dichloropropane	19.4	---	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
1,1-Dichloropropene	21.3	---	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
cis-1,3-Dichloropropene	19.3	---	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
trans-1,3-Dichloropropene	18.3	---	1.00	ug/L	1	20.0	---	92	80-120%	---	---	
Ethylbenzene	18.8	---	0.500	ug/L	1	20.0	---	94	80-120%	---	---	
Hexachlorobutadiene	24.6	---	5.00	ug/L	1	20.0	---	<b>123</b>	<b>80-120%</b>	---	---	Q-56
2-Hexanone	33.9	---	10.0	ug/L	1	40.0	---	85	80-120%	---	---	
Isopropylbenzene	18.5	---	1.00	ug/L	1	20.0	---	93	80-120%	---	---	
4-Isopropyltoluene	21.0	---	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
Methylene chloride	20.8	---	10.0	ug/L	1	20.0	---	104	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	30.7	---	10.0	ug/L	1	40.0	---	<b>77</b>	<b>80-120%</b>	---	---	Q-55
Methyl tert-butyl ether (MTBE)	18.2	---	1.00	ug/L	1	20.0	---	91	80-120%	---	---	
Naphthalene	14.9	---	2.00	ug/L	1	20.0	---	<b>74</b>	<b>80-120%</b>	---	---	Q-55
n-Propylbenzene	18.1	---	0.500	ug/L	1	20.0	---	91	80-120%	---	---	
Styrene	19.1	---	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
1,1,1,2-Tetrachloroethane	24.3	---	0.400	ug/L	1	20.0	---	<b>122</b>	<b>80-120%</b>	---	---	Q-56
1,1,2,2-Tetrachloroethane	19.1	---	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
Tetrachloroethene (PCE)	21.7	---	0.400	ug/L	1	20.0	---	109	80-120%	---	---	
Toluene	18.6	---	1.00	ug/L	1	20.0	---	93	80-120%	---	---	
1,2,3-Trichlorobenzene	18.8	---	2.00	ug/L	1	20.0	---	94	80-120%	---	---	
1,2,4-Trichlorobenzene	19.3	---	2.00	ug/L	1	20.0	---	96	80-120%	---	---	
1,1,1-Trichloroethane	20.7	---	0.400	ug/L	1	20.0	---	104	80-120%	---	---	
1,1,2-Trichloroethane	19.7	---	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Trichloroethene (TCE)	22.5	---	0.400	ug/L	1	20.0	---	112	80-120%	---	---	
Trichlorofluoromethane	22.2	---	2.00	ug/L	1	20.0	---	111	80-120%	---	---	
1,2,3-Trichloropropane	17.9	---	1.00	ug/L	1	20.0	---	89	80-120%	---	---	
1,2,4-Trimethylbenzene	19.3	---	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
1,3,5-Trimethylbenzene	19.4	---	1.00	ug/L	1	20.0	---	97	80-120%	---	---	

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b>	Project: <b>Tigard Union 76</b>	
9805 Ne 116th Street, Suite 300	Project Number: [none]	<b>Report ID:</b>
Kirkland, WA 98034	Project Manager: Jake Lee	A2B0133 - 02 16 22 1637

**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 22B0335 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (22B0335-BS1)</b>			Prepared: 02/09/22 07:30 Analyzed: 02/09/22 11:13									
Vinyl chloride	16.9	---	0.400	ug/L	1	20.0	---	84	80-120%	---	---	
m,p-Xylene	36.3	---	1.00	ug/L	1	40.0	---	91	80-120%	---	---	
o-Xylene	17.5	---	0.500	ug/L	1	20.0	---	88	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 109 %</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>97 %</i>		<i>80-120 %</i>		<i>"</i>						

<b>Duplicate (22B0335-DUP1)</b>						Prepared: 02/09/22 09:00 Analyzed: 02/09/22 14:57						
<b>QC Source Sample: Non-SDG (A2B0158-05)</b>												
Acetone	ND	---	1000	ug/L	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	100	ug/L	50	---	ND	---	---	---	30%	
Benzene	ND	---	10.0	ug/L	50	---	7.20	---	---	***	30%	
Bromobenzene	ND	---	25.0	ug/L	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
Bromoform	ND	---	100	ug/L	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	250	ug/L	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	500	ug/L	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	500	ug/L	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	25.0	ug/L	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	250	ug/L	50	---	ND	---	---	---	30%	
Chloroform	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
Chloromethane	ND	---	250	ug/L	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	250	ug/L	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	25.0	ug/L	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	25.0	ug/L	50	---	ND	---	---	---	30%	

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: Jake Lee	<b>Report ID:</b> A2B0133 - 02 16 22 1637
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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 22B0335 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (22B0335-DUP1)</b>			Prepared: 02/09/22 09:00 Analyzed: 02/09/22 14:57									
<b>QC Source Sample: Non-SDG (A2B0158-05)</b>												
1,3-Dichlorobenzene	ND	---	25.0	ug/L	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	25.0	ug/L	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	20.0	ug/L	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	20.0	ug/L	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	20.0	ug/L	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	20.0	ug/L	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	20.0	ug/L	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	25.0	ug/L	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	25.0	ug/L	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	250	ug/L	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	500	ug/L	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	500	ug/L	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	500	ug/L	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	100	ug/L	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	25.0	ug/L	50	---	ND	---	---	---	30%	
Styrene	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	20.0	ug/L	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	25.0	ug/L	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	<b>257</b>	---	20.0	ug/L	50	---	228	---	---	12	30%	
Toluene	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	100	ug/L	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	100	ug/L	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	20.0	ug/L	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	25.0	ug/L	50	---	ND	---	---	---	30%	

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> <b>A2B0133 - 02 16 22 1637</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 22B0335 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (22B0335-DUP1)</b>			Prepared: 02/09/22 09:00 Analyzed: 02/09/22 14:57									
<b>QC Source Sample: Non-SDG (A2B0158-05)</b>												
Trichloroethene (TCE)	20.8	---	20.0	ug/L	50	---	19.4	---	---	7	30%	
Trichlorofluoromethane	ND	---	100	ug/L	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	20.0	ug/L	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	50.0	ug/L	50	---	ND	---	---	---	30%	
o-Xylene	ND	---	25.0	ug/L	50	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 111 %</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>102 %</i>		<i>80-120 %</i>		<i>"</i>						

<b>Duplicate (22B0335-DUP2)</b>			Prepared: 02/09/22 09:00 Analyzed: 02/09/22 20:18									
<b>QC Source Sample: Non-SDG (A2B0140-06)</b>												
Acetone	ND	---	20.0	ug/L	1	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
Benzene	ND	---	0.200	ug/L	1	---	ND	---	---	---	30%	
Bromobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromoform	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
Bromomethane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Chloroethane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
Chloroform	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Chloromethane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b>	Project: <b>Tigard Union 76</b>	
9805 Ne 116th Street, Suite 300	Project Number: [none]	<b>Report ID:</b>
Kirkland, WA 98034	Project Manager: Jake Lee	A2B0133 - 02 16 22 1637

**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 22B0335 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (22B0335-DUP2)</b>			Prepared: 02/09/22 09:00 Analyzed: 02/09/22 20:18									
<b>QC Source Sample: Non-SDG (A2B0140-06)</b>												
4-Chlorotoluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Dibromomethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Hexanone	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Methylene chloride	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Naphthalene	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Styrene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> A2B0133 - 02 16 22 1637
--	---	--

**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 22B0335 - EPA 5030B</b>												
<b>Water</b>												
<b>Duplicate (22B0335-DUP2)</b>			Prepared: 02/09/22 09:00 Analyzed: 02/09/22 20:18									
<b>QC Source Sample: Non-SDG (A2B0140-06)</b>												
Tetrachloroethene (PCE)	0.604	---	0.400	ug/L	1	---	0.279	---	---	74	30%	Q-05
Toluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
o-Xylene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 113 %</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>103 %</i>		<i>80-120 %</i>		<i>"</i>						

<b>Matrix Spike (22B0335-MS1)</b>			Prepared: 02/09/22 09:00 Analyzed: 02/09/22 18:04									
<b>QC Source Sample: MW3-2/3/22 (A2B0133-03)</b>												
<b>EPA 8260D</b>												
Acetone	35.2	---	20.0	ug/L	1	40.0	ND	88	39-160%	---	---	Q-54e
Acrylonitrile	20.4	---	2.00	ug/L	1	20.0	ND	102	63-135%	---	---	
Benzene	20.9	---	0.200	ug/L	1	20.0	ND	105	79-120%	---	---	
Bromobenzene	19.9	---	0.500	ug/L	1	20.0	ND	100	80-120%	---	---	
Bromochloromethane	23.0	---	1.00	ug/L	1	20.0	ND	115	78-123%	---	---	
Bromodichloromethane	23.8	---	1.00	ug/L	1	20.0	ND	119	79-125%	---	---	
Bromoform	26.4	---	2.00	ug/L	1	20.0	ND	132	66-130%	---	---	Q-54
Bromomethane	18.1	---	5.00	ug/L	1	20.0	ND	90	53-141%	---	---	
2-Butanone (MEK)	33.2	---	10.0	ug/L	1	40.0	ND	83	56-143%	---	---	
n-Butylbenzene	20.5	---	1.00	ug/L	1	20.0	ND	102	75-128%	---	---	
sec-Butylbenzene	21.4	---	1.00	ug/L	1	20.0	ND	107	77-126%	---	---	
tert-Butylbenzene	19.0	---	1.00	ug/L	1	20.0	ND	95	78-124%	---	---	

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	Report ID: <b>A2B0133 - 02 16 22 1637</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 22B0335 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (22B0335-MS1)</b>						Prepared: 02/09/22 09:00 Analyzed: 02/09/22 18:04						
<b>QC Source Sample: MW3-2/3/22 (A2B0133-03)</b>												
Carbon disulfide	26.8	---	10.0	ug/L	1	20.0	ND	134	64-133%	---	---	Q-01
Carbon tetrachloride	30.3	---	1.00	ug/L	1	20.0	ND	152	72-136%	---	---	Q-54c
Chlorobenzene	19.4	---	0.500	ug/L	1	20.0	ND	97	80-120%	---	---	
Chloroethane	15.6	---	5.00	ug/L	1	20.0	ND	78	60-138%	---	---	Q-54f
Chloroform	21.3	---	1.00	ug/L	1	20.0	ND	107	79-124%	---	---	
Chloromethane	46.9	---	5.00	ug/L	1	20.0	ND	235	50-139%	---	---	Q-01
2-Chlorotoluene	20.2	---	1.00	ug/L	1	20.0	ND	101	79-122%	---	---	
4-Chlorotoluene	19.1	---	1.00	ug/L	1	20.0	ND	95	78-122%	---	---	
Dibromochloromethane	27.5	---	1.00	ug/L	1	20.0	ND	138	74-126%	---	---	Q-54a
1,2-Dibromo-3-chloropropane	18.9	---	5.00	ug/L	1	20.0	ND	94	62-128%	---	---	
1,2-Dibromoethane (EDB)	19.7	---	0.500	ug/L	1	20.0	ND	99	77-121%	---	---	
Dibromomethane	22.2	---	1.00	ug/L	1	20.0	ND	111	79-123%	---	---	
1,2-Dichlorobenzene	20.4	---	0.500	ug/L	1	20.0	ND	102	80-120%	---	---	
1,3-Dichlorobenzene	20.5	---	0.500	ug/L	1	20.0	ND	103	80-120%	---	---	
1,4-Dichlorobenzene	20.2	---	0.500	ug/L	1	20.0	ND	101	79-120%	---	---	
Dichlorodifluoromethane	24.7	---	1.00	ug/L	1	20.0	ND	124	32-152%	---	---	
1,1-Dichloroethane	21.2	---	0.400	ug/L	1	20.0	ND	106	77-125%	---	---	
1,2-Dichloroethane (EDC)	19.0	---	0.400	ug/L	1	20.0	ND	95	73-128%	---	---	
1,1-Dichloroethene	22.3	---	0.400	ug/L	1	20.0	ND	112	71-131%	---	---	
cis-1,2-Dichloroethene	20.5	---	0.400	ug/L	1	20.0	ND	103	78-123%	---	---	
trans-1,2-Dichloroethene	22.3	---	0.400	ug/L	1	20.0	ND	111	75-124%	---	---	
1,2-Dichloropropane	21.0	---	0.500	ug/L	1	20.0	ND	105	78-122%	---	---	
1,3-Dichloropropane	18.5	---	1.00	ug/L	1	20.0	ND	92	80-120%	---	---	
2,2-Dichloropropane	18.7	---	1.00	ug/L	1	20.0	ND	94	60-139%	---	---	
1,1-Dichloropropene	22.6	---	1.00	ug/L	1	20.0	ND	113	79-125%	---	---	
cis-1,3-Dichloropropene	18.2	---	1.00	ug/L	1	20.0	ND	91	75-124%	---	---	
trans-1,3-Dichloropropene	18.5	---	1.00	ug/L	1	20.0	ND	93	73-127%	---	---	
Ethylbenzene	19.3	---	0.500	ug/L	1	20.0	ND	96	79-121%	---	---	
Hexachlorobutadiene	23.4	---	5.00	ug/L	1	20.0	ND	117	66-134%	---	---	Q-54d
2-Hexanone	29.8	---	10.0	ug/L	1	40.0	ND	74	57-139%	---	---	
Isopropylbenzene	19.2	---	1.00	ug/L	1	20.0	ND	96	72-131%	---	---	
4-Isopropyltoluene	20.9	---	1.00	ug/L	1	20.0	ND	105	77-127%	---	---	
Methylene chloride	21.6	---	10.0	ug/L	1	20.0	ND	108	74-124%	---	---	

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: Jake Lee	<b>Report ID:</b> A2B0133 - 02 16 22 1637
--	--	--

**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 22B0335 - EPA 5030B</b>												
<b>Water</b>												
<b>Matrix Spike (22B0335-MS1)</b>			Prepared: 02/09/22 09:00 Analyzed: 02/09/22 18:04									
<b>QC Source Sample: MW3-2/3/22 (A2B0133-03)</b>												
4-Methyl-2-pentanone (MiBK)	31.9	---	10.0	ug/L	1	40.0	ND	80	67-130%	---	---	Q-54g
Methyl tert-butyl ether (MTBE)	18.8	---	1.00	ug/L	1	20.0	ND	94	71-124%	---	---	
Naphthalene	14.8	---	2.00	ug/L	1	20.0	ND	74	61-128%	---	---	Q-54h
n-Propylbenzene	19.1	---	0.500	ug/L	1	20.0	ND	96	76-126%	---	---	
Styrene	19.5	---	1.00	ug/L	1	20.0	ND	97	78-123%	---	---	
1,1,1,2-Tetrachloroethane	25.7	---	0.400	ug/L	1	20.0	ND	<b>128</b>	<b>78-124%</b>	---	---	Q-54b
1,1,2,2-Tetrachloroethane	19.7	---	0.500	ug/L	1	20.0	ND	99	71-121%	---	---	
Tetrachloroethene (PCE)	22.6	---	0.400	ug/L	1	20.0	ND	113	74-129%	---	---	
Toluene	19.5	---	1.00	ug/L	1	20.0	ND	97	80-121%	---	---	
1,2,3-Trichlorobenzene	18.6	---	2.00	ug/L	1	20.0	ND	93	69-129%	---	---	
1,2,4-Trichlorobenzene	18.3	---	2.00	ug/L	1	20.0	ND	92	69-130%	---	---	
1,1,1-Trichloroethane	22.8	---	0.400	ug/L	1	20.0	ND	114	74-131%	---	---	
1,1,2-Trichloroethane	20.8	---	0.500	ug/L	1	20.0	ND	104	80-120%	---	---	
Trichloroethene (TCE)	23.4	---	0.400	ug/L	1	20.0	ND	117	79-123%	---	---	
Trichlorofluoromethane	24.8	---	2.00	ug/L	1	20.0	ND	124	65-141%	---	---	
1,2,3-Trichloropropane	19.0	---	1.00	ug/L	1	20.0	ND	95	73-122%	---	---	
1,2,4-Trimethylbenzene	19.4	---	1.00	ug/L	1	20.0	ND	97	76-124%	---	---	
1,3,5-Trimethylbenzene	20.1	---	1.00	ug/L	1	20.0	ND	101	75-124%	---	---	
Vinyl chloride	18.4	---	0.400	ug/L	1	20.0	ND	92	58-137%	---	---	
m,p-Xylene	38.1	---	1.00	ug/L	1	40.0	ND	95	80-121%	---	---	
o-Xylene	18.0	---	0.500	ug/L	1	20.0	ND	90	78-122%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 109 %</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>97 %</i>		<i>80-120 %</i>		<i>"</i>						

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b>	Project: <b>Tigard Union 76</b>	
9805 Ne 116th Street, Suite 300	Project Number: [none]	<b>Report ID:</b>
Kirkland, WA 98034	Project Manager: Jake Lee	A2B0133 - 02 16 22 1637

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 22B0243 - EPA 3510C (Acid Extraction)</b>						<b>Water</b>						
<b>Blank (22B0243-BLK1)</b>						Prepared: 02/07/22 07:14 Analyzed: 02/07/22 17:02						
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	---	0.0118	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	0.0118	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	---	0.0118	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	0.0118	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	0.0118	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	0.0118	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	0.0118	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	0.0118	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	---	0.0118	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	0.0118	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	---	0.0118	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	---	0.0118	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	0.0118	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	0.0235	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	0.0235	ug/L	1	---	---	---	---	---	---	
Naphthalene	<b>0.0289</b>	---	0.0235	ug/L	1	---	---	---	---	---	---	B-02 B
Phenanthrene	ND	---	0.0118	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	---	0.0118	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	---	0.0118	ug/L	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 75 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>91 %</i>		<i>50-134 %</i>		<i>"</i>						

<b>LCS (22B0243-BS1)</b>						Prepared: 02/07/22 07:14 Analyzed: 02/07/22 17:28						
<u>EPA 8270E SIM</u>												
Acenaphthene	2.85	---	0.0200	ug/L	1	4.00	---	71	47-122%	---	---	
Acenaphthylene	2.88	---	0.0200	ug/L	1	4.00	---	72	41-130%	---	---	
Anthracene	2.92	---	0.0200	ug/L	1	4.00	---	73	57-123%	---	---	
Benz(a)anthracene	3.13	---	0.0200	ug/L	1	4.00	---	78	58-125%	---	---	
Benzo(a)pyrene	3.26	---	0.0200	ug/L	1	4.00	---	81	54-128%	---	---	
Benzo(b)fluoranthene	3.37	---	0.0200	ug/L	1	4.00	---	84	53-131%	---	---	
Benzo(k)fluoranthene	3.43	---	0.0200	ug/L	1	4.00	---	86	57-129%	---	---	
Benzo(g,h,i)perylene	2.70	---	0.0200	ug/L	1	4.00	---	67	50-134%	---	---	
Chrysene	3.03	---	0.0200	ug/L	1	4.00	---	76	59-123%	---	---	

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

**Apex Laboratories, LLC**

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

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	Report ID: <b>A2B0133 - 02 16 22 1637</b>
--	---	--

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 22B0243 - EPA 3510C (Acid Extraction)</b>						<b>Water</b>						
<b>LCS (22B0243-BS1)</b>			Prepared: 02/07/22 07:14 Analyzed: 02/07/22 17:28									
Dibenz(a,h)anthracene	3.33	---	0.0200	ug/L	1	4.00	---	83	51-134%	---	---	
Fluoranthene	3.05	---	0.0200	ug/L	1	4.00	---	76	57-128%	---	---	
Fluorene	2.83	---	0.0200	ug/L	1	4.00	---	71	52-124%	---	---	
Indeno(1,2,3-cd)pyrene	2.73	---	0.0200	ug/L	1	4.00	---	68	52-134%	---	---	
1-Methylnaphthalene	2.75	---	0.0400	ug/L	1	4.00	---	69	41-120%	---	---	
2-Methylnaphthalene	2.63	---	0.0400	ug/L	1	4.00	---	66	40-121%	---	---	B-02
Naphthalene	2.70	---	0.0400	ug/L	1	4.00	---	68	40-121%	---	---	B
Phenanthrene	2.86	---	0.0200	ug/L	1	4.00	---	72	59-120%	---	---	
Pyrene	2.97	---	0.0200	ug/L	1	4.00	---	74	57-126%	---	---	
Dibenzofuran	2.83	---	0.0200	ug/L	1	4.00	---	71	53-120%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 73 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>88 %</i>		<i>50-134 %</i>		<i>"</i>						

<b>LCS Dup (22B0243-BSD1)</b>						Prepared: 02/07/22 07:14 Analyzed: 02/07/22 17:53						<b>Q-19</b>
<b>EPA 8270E SIM</b>												
Acenaphthene	2.90	---	0.0200	ug/L	1	4.00	---	72	47-122%	2	30%	
Acenaphthylene	2.91	---	0.0200	ug/L	1	4.00	---	73	41-130%	1	30%	
Anthracene	2.99	---	0.0200	ug/L	1	4.00	---	75	57-123%	2	30%	
Benz(a)anthracene	3.22	---	0.0200	ug/L	1	4.00	---	80	58-125%	3	30%	
Benzo(a)pyrene	3.30	---	0.0200	ug/L	1	4.00	---	83	54-128%	1	30%	
Benzo(b)fluoranthene	3.67	---	0.0200	ug/L	1	4.00	---	92	53-131%	8	30%	
Benzo(k)fluoranthene	3.56	---	0.0200	ug/L	1	4.00	---	89	57-129%	4	30%	
Benzo(g,h,i)perylene	2.78	---	0.0200	ug/L	1	4.00	---	69	50-134%	3	30%	
Chrysene	3.12	---	0.0200	ug/L	1	4.00	---	78	59-123%	3	30%	
Dibenz(a,h)anthracene	3.40	---	0.0200	ug/L	1	4.00	---	85	51-134%	2	30%	
Fluoranthene	3.15	---	0.0200	ug/L	1	4.00	---	79	57-128%	3	30%	
Fluorene	2.95	---	0.0200	ug/L	1	4.00	---	74	52-124%	4	30%	
Indeno(1,2,3-cd)pyrene	2.92	---	0.0200	ug/L	1	4.00	---	73	52-134%	7	30%	
1-Methylnaphthalene	2.61	---	0.0400	ug/L	1	4.00	---	65	41-120%	5	30%	
2-Methylnaphthalene	2.54	---	0.0400	ug/L	1	4.00	---	64	40-121%	3	30%	B-02
Naphthalene	2.70	---	0.0400	ug/L	1	4.00	---	68	40-121%	0.07	30%	B
Phenanthrene	2.97	---	0.0200	ug/L	1	4.00	---	74	59-120%	4	30%	
Pyrene	3.08	---	0.0200	ug/L	1	4.00	---	77	57-126%	4	30%	
Dibenzofuran	2.93	---	0.0200	ug/L	1	4.00	---	73	53-120%	3	30%	

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Philip Nerenberg, Lab Director



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ORELAP ID: OR100062

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> A2B0133 - 02 16 22 1637
--	---	--

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
<b>Batch 22B0243 - EPA 3510C (Acid Extraction)</b>						<b>Water</b>							
<b>LCS Dup (22B0243-BSD1)</b>			Prepared: 02/07/22 07:14 Analyzed: 02/07/22 17:53						<b>Q-19</b>				
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 72 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>							
<i>p-Terphenyl-d14 (Surr)</i>		<i>86 %</i>		<i>50-134 %</i>		<i>"</i>							

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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 22B0359 - EPA 3015A</b>						<b>Water</b>						
<b>Blank (22B0359-BLK1)</b>			Prepared: 02/09/22 12:12 Analyzed: 02/14/22 19:28									
<u>EPA 6020B</u>												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
<b>LCS (22B0359-BS1)</b>			Prepared: 02/09/22 12:12 Analyzed: 02/14/22 19:33									
<u>EPA 6020B</u>												
Lead	53.7	---	0.200	ug/L	1	55.6	---	97	80-120%	---	---	
<b>Duplicate (22B0359-DUP1)</b>			Prepared: 02/09/22 12:12 Analyzed: 02/14/22 19:42									
<u>QC Source Sample: Non-SDG (A2B0105-01)</u>												
Lead	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	
<b>Matrix Spike (22B0359-MS1)</b>			Prepared: 02/09/22 12:12 Analyzed: 02/14/22 19:47									
<u>QC Source Sample: Non-SDG (A2B0105-01)</u>												
<u>EPA 6020B</u>												
Lead	54.2	---	0.200	ug/L	1	55.6	ND	98	75-125%	---	---	

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<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> <b>A2B0133 - 02 16 22 1637</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 22B0435 - EPA 3015A</b>						<b>Water</b>						
<b>Blank (22B0435-BLK1)</b>			Prepared: 02/11/22 09:34 Analyzed: 02/14/22 21:37									
<u>EPA 6020B</u>												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
<b>LCS (22B0435-BS1)</b>			Prepared: 02/11/22 09:34 Analyzed: 02/14/22 21:41									
<u>EPA 6020B</u>												
Lead	53.3	---	0.200	ug/L	1	55.6	---	96	80-120%	---	---	
<b>Duplicate (22B0435-DUP1)</b>			Prepared: 02/11/22 09:34 Analyzed: 02/14/22 22:58									
<u>QC Source Sample: Non-SDG (A2B0224-02)</u>												
Lead	<b>1.81</b>	---	0.200	ug/L	1	---	1.80	---	---	0.6	20%	
<b>Matrix Spike (22B0435-MS1)</b>			Prepared: 02/11/22 09:34 Analyzed: 02/14/22 23:02									
<u>QC Source Sample: Non-SDG (A2B0224-02)</u>												
<u>EPA 6020B</u>												
Lead	53.6	---	0.200	ug/L	1	55.6	1.80	93	75-125%	---	---	

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<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	Report ID: <b>A2B0133 - 02 16 22 1637</b>
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**SAMPLE PREPARATION INFORMATION**

**Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

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

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 22B0533</u>							
A2B0133-01	Water	NWTPH-Dx LL	02/03/22 11:20	02/15/22 07:05	1010mL/2mL	1000mL/2mL	0.99
A2B0133-02	Water	NWTPH-Dx LL	02/03/22 12:00	02/15/22 07:05	1060mL/2mL	1000mL/2mL	0.94
A2B0133-03	Water	NWTPH-Dx LL	02/03/22 12:50	02/15/22 07:05	1020mL/2mL	1000mL/2mL	0.98

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

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 22B0335</u>							
A2B0133-01	Water	NWTPH-Gx (MS)	02/03/22 11:20	02/09/22 09:00	5mL/5mL	5mL/5mL	1.00
A2B0133-02	Water	NWTPH-Gx (MS)	02/03/22 12:00	02/09/22 09:00	5mL/5mL	5mL/5mL	1.00
A2B0133-03	Water	NWTPH-Gx (MS)	02/03/22 12:50	02/09/22 09:00	5mL/5mL	5mL/5mL	1.00

**Volatile Organic Compounds by EPA 8260D**

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 22B0335</u>							
A2B0133-01	Water	EPA 8260D	02/03/22 11:20	02/09/22 09:00	5mL/5mL	5mL/5mL	1.00
A2B0133-02	Water	EPA 8260D	02/03/22 12:00	02/09/22 09:00	5mL/5mL	5mL/5mL	1.00
A2B0133-03	Water	EPA 8260D	02/03/22 12:50	02/09/22 09:00	5mL/5mL	5mL/5mL	1.00

**Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)**

Prep: EPA 3510C (Acid Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 22B0243</u>							
A2B0133-01	Water	EPA 8270E SIM	02/03/22 11:20	02/07/22 07:14	1050mL/2mL	1000mL/2mL	0.95
A2B0133-02	Water	EPA 8270E SIM	02/03/22 12:00	02/07/22 07:14	1060mL/2mL	1000mL/2mL	0.94
A2B0133-03	Water	EPA 8270E SIM	02/03/22 12:50	02/07/22 07:14	1050mL/2mL	1000mL/2mL	0.95

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

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 22B0359</u>							

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ANALYTICAL REPORT

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503-718-2323  
ORELAP ID: OR100062

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> <b>A2B0133 - 02 16 22 1637</b>
--	---	---

**SAMPLE PREPARATION INFORMATION**

Total Metals by EPA 6020B (ICPMS)

<u>Prep: EPA 3015A</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
A2B0133-01	Water	EPA 6020B	02/03/22 11:20	02/09/22 12:12	45mL/50mL	45mL/50mL	1.00
A2B0133-02	Water	EPA 6020B	02/03/22 12:00	02/09/22 12:12	45mL/50mL	45mL/50mL	1.00
<u>Batch: 22B0435</u>							
A2B0133-03	Water	EPA 6020B	02/03/22 12:50	02/11/22 09:34	45mL/50mL	45mL/50mL	1.00

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ANALYTICAL REPORT

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503-718-2323  
ORELAP ID: OR100062

Envitechnology  
9805 Ne 116th Street, Suite 300  
Kirkland, WA 98034

Project: Tigard Union 76  
Project Number: [none]  
Project Manager: Jake Lee

Report ID:  
A2B0133 - 02 16 22 1637

QUALIFIER DEFINITIONS

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

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- B** Analyte detected in an associated blank at a level above the MRL. (See Notes and Conventions below.)
- B-02** Analyte detected in an associated blank at a level between one-half the MRL and the MRL. (See Notes and Conventions below.)
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +10%. 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 +13%. 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 +2%. 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 +21%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +3%. 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 +7%. The results are reported as Estimated Values.
- Q-54f** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -14%. The results are reported as Estimated Values.
- Q-54g** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -3%. The results are reported as Estimated Values.
- Q-54h** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -6%. The results are reported as Estimated Values.
- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260

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503-718-2323  
ORELAP ID: OR100062

<b>Envitechnology</b> 9805 Ne 116th Street, Suite 300 Kirkland, WA 98034	Project: <b>Tigard Union 76</b> Project Number: [none] Project Manager: <b>Jake Lee</b>	<b>Report ID:</b> <b>A2B0133 - 02 16 22 1637</b>
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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'.

**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).

**Blanks:**

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to 1/2 the Reporting Limit (RL).  
-For Blank hits falling between 1/2 the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.  
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.  
For further details, please request a copy of this document.

Apex Laboratories

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

Philip Nerenberg, Lab Director



ANALYTICAL REPORT

Apex Laboratories, LLC

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

Table with 3 columns: Envitechnology (9805 Ne 116th Street, Suite 300, Kirkland, WA 98034), Project: Tigard Union 76 (Project Number: [none], Project Manager: Jake Lee), Report ID: A2B0133 - 02 16 22 1637

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

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

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

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

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

Soil and Sediment Samples:

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

Sampling and Preservation Notes:

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

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

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

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

Apex Laboratories

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Philip Nerenberg (signature)

Philip Nerenberg, Lab Director



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LABORATORY ACCREDITATION INFORMATION

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

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

Apex Laboratories

Table with 6 columns: Matrix, Analysis, TNI\_ID, Analyte, TNI\_ID, Accreditation

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

Secondary Accreditations

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

Subcontract Laboratory Accreditations

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

Field Testing Parameters

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

Apex Laboratories

Philip Nerenberg (signature)

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ANALYTICAL REPORT

**Apex Laboratories, LLC**

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**APEX LABS COOLER RECEIPT FORM**

Client: Envi Technology Element WO#: A2B0133

Project/Project #: Tigard 76

**Delivery Info:**  
 Date/time received: 2/3/22 @ 1352 By: JS  
 Delivered by: Apex  Client  ESS  FedEx  UPS  Swift  Senvoy  SDS  Other

**Cooler Inspection** Date/time inspected: 2/3/22 @ 1356 By: JS

Chain of Custody included? Yes  No  Custody seals? Yes  No

Signed/dated by client? Yes  No

Signed/dated by Apex? Yes  No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>2.3</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition:	<u>good</u>						

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

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

Out of temperature samples form initiated? Yes/No \_\_\_\_\_

**Sample Inspection:** Date/time inspected: 2/3/22 @ 17:10 By: KAM

All samples intact? Yes  No  Comments: \_\_\_\_\_

Bottle labels/COCs agree? Yes  No  Comments: \_\_\_\_\_

COC/container discrepancies form initiated? Yes  No

Containers/volumes received appropriate for analysis? Yes  No  Comments: \_\_\_\_\_

Do VOA vials have visible headspace? Yes  No  NA

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

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

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

**Additional information:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Labeled by: KAM                      Witness: MAS                      Cooler Inspected by: KAM

Philip Nerenberg