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September 10, 2024

Ms. Rebecca Digiustino
Project Manager
Oregon Department of Environmental Quality
Northwest Region Cleanup Program
700 NE Multnomah Street, Suite 600
Portland, OR 97232

RE: Site Summary Report and Closure Request
Cardlock and Bulk Fuel Facility
6750 SW 110th Court
Beaverton, Oregon

Dear Ms. Digiustino:

At the request of Bretthauer Oil Co. (Bretthauer), Feige & Associates, Inc. (FAI) has prepared this Site Summary and Closure Request letter report for the Cardlock and Bulk Fuel Facility, located at 6750 SW 110th Court in Beaverton, Oregon (site). A site location map is presented in the attached Figure 1.

The purpose of this letter is to provide notification to DEQ regarding previously unreported residual diesel fuel which was discovered in shallow soil during facility upgrade activities. In addition, methyl tert-butyl ether (MTBE) which has been observed in on site groundwater monitoring wells and soil borings during both historic and recent site investigation activities. Therefore, we are requesting consultation and review of this matter with DEQ.

This letter includes a site description and site background, a summary of historic investigation and remedial activities at the site, a summary and analysis of soil sampling results and remedial activities undertaken during the 2023 fuel dispenser and associated piping upgrades at the site, an analysis of results from recent site assessment activities conducted by GeoEngineers in 2023, and an analysis of the soil and groundwater data as it relates to historic documented fuel releases at the site.

In addition, the goal of this letter is also to provide the basis for closure of the site and a request to obtain a no further action (NFA) determination. This is based on the extent of contamination and a screening of soil and groundwater sample results which demonstrates no exceedances of applicable DEQ Risk Based Concentrations.

Site Description

The site is located at 6750 SW 110th Court in Beaverton, Oregon (Figure 1). The site is located on the east corner of the cul-de-sac in an area of commercial and industrial properties. The topography at the site is flat and lies at an elevation of approximately 187 feet above mean sea level (msl). The regional topography in the vicinity of the site slopes gently to the east. Fanno Creek is located adjacent to the east property boundary of the site.

The site is currently operated as a card lock petroleum fueling station and bulk fuel facility and has retained the same general configuration and function since 1989. The card lock fuel

dispensers and islands are located under a canopy within the west-central portion of the site. The bulk fuel loading rack area is located within the east-central portion of the site. The site contains five (5) fuel underground storage tanks (UST). The USTs include three (3) 12,000-gallon gasoline USTs, one (1) 15,000-gallon diesel UST, and one (1) 4,000-gallon spill tank. The USTs nest is located within the central portion of the site. The west and central portion of the site, which contain the card lock and bulk fuel facility are primarily asphalt paved driveways with a landscaped perimeter. The east portion of the site is undeveloped land located adjacent to Fanno Creek. The developed and undeveloped portions of the site are separated by an 8-foot chain link fence with barbed wire.

Site location and topographic features are presented on Figure 1. A map showing site features is presented as Figure 2.

Historic Environmental Investigations and Remedial Activities

A review of site related documents indicates that previous environmental investigations and remedial activities were conducted at the site from 1989 through 2017.

Site Investigation, Remedial Activities, and DEQ No Further Action (1989-1990)

The site was initially developed in 1975 as a fueling facility and contained four 10,000-gallon fuel USTs and a 2,000-gallon oil/water separator. The location of the original USTs nest was in the same general location as the current. In 1989 the USTs were removed, and the site was redeveloped to its current configuration.

During the 1989 UST removal activities, 1,400 cubic yards of impacted soil were excavated and removed from the site. Soil samples collected from the excavation did not contain petroleum hydrocarbons or benzene, toluene, ethylbenzene, and xylenes (BTEX) at concentrations exceeding DEQ applicable cleanup levels. A groundwater sample collected from the excavation contained benzene exceeding the applicable DEQ cleanup level.

Three groundwater monitoring wells (W-1 through W-3) were installed at the site in 1990. Soil samples collected during well installation did not identify detectable concentrations of petroleum hydrocarbons. Groundwater sampling of the wells did not identify detectable concentrations of petroleum hydrocarbons or BTEX.

Based on these results of the investigation and remedial activities, DEQ issued a no further action (NFA) determination for the site in November 1990. Further details regarding the environmental investigation and remediation activities may be referenced in DEQ LUST File #34-89-0175.

A summary of historic soil and groundwater analytical results from this investigation are presented on the attached Table 1 and 2. Historic soil and groundwater analytical results and sample locations are presented on the attached Figures 3 and 4.

Due Diligence Site Investigation (1997)

As part of a property transaction, a subsurface investigation was conducted at the site in 1997. The investigation included installation of four soil borings (SB1 through SB4) and collection of groundwater samples from the three groundwater monitoring wells (W-1 through W-3).

The results of the soil investigation indicated that shallow soil in boring SB4, located south of the bulk fuel loading rack, was impacted with gasoline-range hydrocarbons at concentrations below applicable DEQ risk-based concentrations (RBCs). Analysis of groundwater samples collected from the wells detected methyl tert-butyl ether (MTBE) at a concentration of 94.6 micrograms per liter ($\mu\text{g/L}$) in W-2 and 65.3 $\mu\text{g/L}$ in W-3 which exceed current RBCs for MTBE in groundwater. Petroleum hydrocarbons (gasoline and diesel) or BTEX were not detected above the laboratory method reporting limit (mrl) in any of the groundwater samples collected from the wells.

A report prepared by Noll Environmental (Noll) entitled *Results of Due Diligence Assessment Activities*, dated May 22, 1998, details these activities. The report was submitted to DEQ and indicated as be received by Northwest Region on May 27, 1998. It does not appear that DEQ provided a response to the report. However, since the report was filed under LUST #34-89-0175, we assume the presence of MTBE in groundwater was not of concern and was attributed to the previous release and NFA for the site.

A summary of historic soil and groundwater analytical results from this investigation are presented on the attached Table 1 and 2. Historic soil and groundwater analytical results and sample locations are presented on the attached Figures 3, 4, and 5.

Groundwater Monitoring Well Sampling (2017)

In conjunction with a Phase I Environmental Site Assessment being prepared for the site, Evergreen Environmental Management (EEM) sampled the three groundwater monitoring wells (W-1 through W-3) on June 30, 2017.

Results of the sampling did not detect gasoline, diesel, or BTEX above the laboratory mrl. We should note that MTBE was not analyzed during this sampling event.

A summary of historic groundwater analytical results from this investigation are presented on the attached Table 2. Historic groundwater analytical results and sample locations are presented on the attached Figure 4.

Facility Upgrade Activities – May 2023

In May 2023, 4C's Environmental, Inc. (4C's) performed facility upgrade work activities which included the installation of new fuel dispensers and associated piping. As part of these activities compliance soil sampling was conducted and a remedial soil excavation was performed. The associated environmental activities and results are discussed in detail below.

Soil Sampling Activities

During the site upgrade activities, soil samples were collected from beneath each of the former fuel dispensers. Results from laboratory analysis of soil samples are summarized in the attached Table 1. Soil sample locations are presented in the attached Figure 3. Copies of the chain-of-custody and the associated laboratory analytical report A3E1088 are enclosed in Appendix B.

On May 5, 2023 4C's collected 5 soil samples (B1 – B5) from directly under each of the former fuel dispenser locations. The soil samples were each collected at a depth of 3 feet below ground surface (bgs).

The soil samples were submitted to Apex Labs in Tigard, OR (Apex) for initial analysis for Petroleum Hydrocarbon Identification by Northwest Method NWTPH-HCID. Based on the results of NWTPH-HCID analysis, sample B5 was further quantified for analysis of diesel and oil range hydrocarbons by Northwest Method NWTPH-Dx. No other soil samples indicated the presence of petroleum hydrocarbons.

Lab analysis of soil sample B5 indicated that diesel range hydrocarbons were detected in the sample at 4,690 milligrams per kilogram (mg/kg). Oil range hydrocarbons were not detected above the mrl in sample B5.

A release was not reported to DEQ. However, based on the site conditions and the very limited amount of contaminated soil that was encountered, at the time it was believed this was residual contamination and related to the previous release (LUST #34-89-0175).

Remedial Excavation

Based on the results of the sample analysis, a remedial excavation was conducted directly under the former dispenser at the location of sample B5 and (See Figure 2). Approximately 3.4 tons of petroleum contaminated soil was excavated and transported for disposal.

FAI was not on site to observe the remedial excavations. We understand the excavation was located directly under the former dispenser at sample location B5 and excavation depths were based on the sample analysis discussed above. We also understand that confirmation samples were not collected from the base and/or sidewalls of the excavation. However, based on the amount of material that was disposed, a significant amount of petroleum contaminated soil was removed from this area.

GeoEngineers Phase II ESA – June 2023

In June 2023, GeoEngineers conducted a soil and groundwater assessment at the site. The investigation included the installation of 5 Geoprobe soil borings (B-2 through B-6) and 1 hand auger soil boring (HA) in and around the pump island, USTs nest, and bulk fuel loading rack areas. The soil borings were completed to depths of between 5 feet and 25 feet bgs and soil and groundwater samples were collected. In addition, a groundwater sample was collected for analysis from the existing monitoring well W-2. A summary of petroleum hydrocarbon and VOC laboratory results for soil and groundwater from this investigation is presented on the attached Table 1 and 2. The boring locations with soil and groundwater analytical results are presented on the attached Figures 3, 4, and 5. For reference, a copy of GeoEngineers *Phase II Environmental Site Assessment* report, dated August 31, 2023, is attached in Appendix A.

According to GeoEngineers, subsurface materials included either concrete or soil top cover and then base rock fill to up to 3 feet bgs. The soil top cover or fill materials were underlain by alternating layers of native silt and clay to the depths explored. Groundwater was encountered in Geoprobe borings B-2 through B-6 at depths between 5.24 feet and 6.10 feet bgs.

GeoEngineers submitted select soil samples from the borings for laboratory analysis of petroleum hydrocarbons (gasoline, diesel, oil), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and RCRA 8 metals. Results indicated only elevated concentrations of diesel detected at 564 mg/kg at 1.5-2.5 feet bgs in the

hand auger boring (HA). In addition, elevated levels of arsenic (AS) and chromium (Cr) were detected in a number of borings.

Groundwater samples from borings B-3, B-4, and B-6 and from monitoring well W-2 were submitted for analysis of petroleum hydrocarbons, VOCs, PAHs, PCBs, and RCRA 8 metals. Results indicated only elevated concentrations of MTBE detected in B-4 at 19.0 µg/L, B-6 at 9.27 µg/L, and W-2 at 5.58 µg/L. Only MTBE concentrations in the sample from boring B-4 exceeded DEQ RBCs for groundwater ingestion. No other petroleum hydrocarbons, VOCs, PAHs, or PCBs were detected above the laboratory mrl.

Elevated levels of metals that exceeded the DEQ RBCs for groundwater ingestion included As in B-3, B-4, B-6, and W-2; Cr in B-3, B-4, and B-6; and lead (Pb) in B-3 and B-4.

GeoEngineers assessment concluded the following:

- Concentrations of diesel identified in soil at shallow depth in the hand auger boring were below RBCs and does not pose a significant risk to human health.
- Elevated concentrations of metals in soil samples were indicative of background levels.
- Detected concentrations of metals in groundwater samples were likely elevated due to the entrainment of sediment in the samples.
- Since the site is not expected to have residential use in the future, therefore, MTBE in groundwater is not expected to pose a risk to human health or the environment.

Analysis of Current Soil and Groundwater Conditions

Based on the results of the historic and more recent investigation activities in 2023, FAIs analysis of the current soil and groundwater conditions at the site includes the following:

Soil Impacts

- Soil impacts at the site that have exceeded DEQ RBCs is confined to shallow diesel in soil that was identified under a fuel dispenser during facility upgrades in May 2023.
 - It appears that a significant amount of shallow diesel impacted soil was removed from under the former dispenser during remedial excavations activities associated with facility upgrades in 2023.
 - Confirmation soil samples were not collected from the remedial excavation in 2023. However, the non-detect results from confirmation sample B4, collected by 4C's in May 2023, and the non-detect results from sample B-2, collected by GeoEngineers in June 2023, confirms that any remaining impacted soil would be confined to the area directly under the dispenser island and a majority of those soils have been removed. Furthermore, any remaining soil impacts are likely not significant, confined to the far north portion of the existing fueling area, and inaccessible based on the current site operations.

Groundwater Impacts

- Groundwater samples collected from monitoring wells and soil borings at the site indicate elevated concentrations of MTBE.

- Groundwater samples collected by GeoEngineers in 2023 indicated elevated concentrations of As, Cr, and Pb. However, FAI concurs that entrained sediment in the samples is the likely cause. In addition, As and Cr would not be associated with either past or present site operations as a fueling facility. Furthermore, there is no evidence that leaded gasoline was ever stored or handled at the facility.
- Petroleum hydrocarbons (gas and diesel) or VOC constituents, including BTEX, have not been detected in samples collected monitoring wells or soil borings at the site.
- Groundwater flow direction has been measured generally to the east and toward Fanno Creek, which lies adjacent to the east property boundary of the site.
- The MTBE plume has not been delineated in the downgradient direction; however, based on the presence of the adjacent wetland and Fanno Creek, further investigation is not possible. The following can therefore be assumed:
 - The MTBE plume appears to be naturally attenuating. Concentrations of MTBE in monitoring well W-2 decreased more than 94% from 1997 (94.6 µg/L) to 2023 (5.58 µg/L).
 - Based on the absence of MTBE in upgradient borings and monitoring well W-1, this indicates that the release was from an on-site source and is not associated with an upgradient and off-site source.
 - MTBE is highly soluble and moves quickly through groundwater. However, it is uncommon for MTBE to be detected without the presence of reportable quantities of other VOCs so near to a source area. Therefore, we are assuming that the tight clay/silt subsurface soils are impeding groundwater flow and preventing any significant migration of the plume. This may be evidenced by the non-existence of less soluble BTEX constituents, which appear to have been confined to the area of the historic UST remedial excavation. MTBE in groundwater at the site has been detected in wells and borings that are only located directly outside and adjacent to the former remedial excavation footprint and current USTs nest.
 - The furthest downgradient extent of the shallow groundwater plume would be Fanno Creek, which lies approximately 100 feet east of monitoring wells W-2 and W-3.

Risk Screening

A Risk Assessment is beyond the scope of this letter. However, for the purpose of evaluation, we believe the following applies:

- Residential exposure is incomplete since no residential use occurs at the site.
- Occupational exposure is complete. However, we should note that the facility employs no regular on-site personnel and contains no occupied structures.
- Based on the current and likely future use of the site as a card lock and bulk fuel facility, vapor intrusion risk is not complete since there are no occupied structures on or in the vicinity of the site.

- Groundwater use does not occur at the site. Water at the site and in the vicinity of the site is supplied by the City of Beaverton, OR. In addition, future groundwater use is unlikely due to the availability of municipal supplies.
- Due to the proximity of Fanno Creek, surface water quality via groundwater discharge would potentially be applicable to the site.

Based on these assumptions, we anticipate that the applicable DEQ RBCs would include soil ingestion, dermal contact, and inhalation for occupational, construction, and excavation worker receptor scenarios; soil and groundwater volatilization to outdoor air in an occupational scenario; and groundwater exposure within an excavation scenario.

A screening of soil and groundwater sample results from the site indicates no exceedances of the applicable DEQ RBCs. Sample results compared to the applicable DEQ RBCs are presented on the attached Table 1 and Table 2.

Regarding the surface water pathway for groundwater contaminant discharge, the potential for this to be complete is greatly mitigated by the clay/silt soils at the site which prevent substantial migration of the MTBE plume. In addition, the United States Environmental Protection Agency (EPA) does not provide ambient water quality criteria for MTBE due to the extremely high concentrations that would be required to be harmful for aquatic life. Therefore, we do not believe the surface water pathway would be applicable at the site.

Summary and Conclusions

The site was initially developed in 1975 as a fueling facility. In 1989, the original USTs were removed, and the site was redeveloped to its current configuration. During these activities petroleum impacts to soil and groundwater were encountered. Further investigation and remediation activities were conducted at the site and a NFA was issued by DEQ in 1990.

During facility upgrade work in 2023, diesel impacts to shallow soil within the fueling area were encountered and remediated. These activities were not previously reported to DEQ. Remediation included 3.4 tons of petroleum contaminated soil excavated from under a former fuel dispenser location. Confirmation samples were not collected, however any remaining residual petroleum impacts to soil appear to be limited in extent and delineated to the area near the north portion of the fueling island.

In 1997 and 2023, additional groundwater investigation at the site identified elevated concentrations of MTBE in both groundwater monitoring wells and soil borings. The MTBE plume has not been delineated due to the presence of natural barriers. However, since 1997 concentrations of MTBE have decreased markedly, and subsurface conditions are likely to prevent any significant migration of the plume.

A screening of soil and groundwater sample results from the site indicates no exceedances of the applicable DEQ RBCs.

Recommendations

Based on the work performed by GeoEngineers and 4C's, FAI does not recommend any additional investigation or remediation related to the release and presence of petroleum hydrocarbons in soil and groundwater that have been identified at the site. In addition, to fulfill

the conditions of a property transaction, FAI requests that DEQ issue a letter of NFA designation for the site.

FAI's recommendation and request is based on the following:

- A screening of historic soil and groundwater sample results from the site indicates no exceedances of the applicable DEQ RBCs.
- A majority of the diesel impacted soil that was encountered in the area of the fueling island during facility upgrades in 2023 was remediated. Any residual impacts to soil appear to be limited in extent and are delineated to the area near the north portion of the fueling island.
- The MTBE groundwater plume is limited in extent, generally delineated, and appears to be confined to within the site boundaries. In addition, groundwater data indicates that the release occurred more than 27 years ago, is not on-going, and concentrations are attenuating.

If you have any questions, please call our office at (503) 543-9700.

Prepared by:



John A. Wyatt, RG
Associate

Date: 9/10/24



Expires: 11/30/2024



Hans P. Feige, RG
Senior Geologist

Date: 9-10-24



Expires 11/30/24

Enclosures:

Table 1 – Summary of Select Soil Sample Analytical Results

Table 2 – Summary of Select Groundwater Analytical Results

Figure 1 – Site Location Map

Figure 2 – Site Features Map

Figure 3 – Historic Investigation Soil Sample Results 1990-2023

Figure 4 – Historic Groundwater TPH/BTEX Results 1990-2023

Figure 5 – Historic Groundwater MTBE Results 1997 and 2023

Appendix A – Phase II Environmental Site Assessment – GeoEngineers August 31, 2023

Appendix B – Chain-of-Custody and Analytical Results – Laboratory Report A3E1088

cc: Alex Bretthauer – Fuel Cloud
Kevin Bretthauer – Fuel Cloud
Chris W. Breemer – GeoEngineers, Inc.

Table 1
Summary of Select Soil Analytical Results

Sample ID	Sample Date	Sample Depth (ft)	Total Petroleum Hydrocarbons (mg/kg)	Gasoline-Range Hydrocarbons NWTPH-Gx (mg/kg)	Diesel-Range Hydrocarbons NWTPH-Dx (mg/kg)	Oil-Range Hydrocarbons NWTPH-Dx (mg/kg)	Select VOCs - EPA 8260C (mg/kg)				
							Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
Samples Collected by GeoEngineers											
B-2	6/15/2023	6-7	-	<8.41	<27.9	<55.8	<0.0168	<0.0841	<0.0421	<0.0841	<0.0841
B-3	6/15/2023	8-9	-	<6.83	<23.7	<47.4	<0.0137	<0.0683	<0.0342	<0.0683	<0.0683
B-4	6/15/2023	19-20	-	<20.3	<44.1	<88.2	<0.0405	<0.203	<0.101	<0.203	<0.203
B-5	6/15/2023	5-6	-	<8.03	<27.3	<54.6	<0.016	<0.0803	<0.0402	<0.0803	<0.0803
B-6	6/15/2023	5-6	-	<6.67	<24.8	<49.5	<0.0133	<0.0667	<0.0333	<0.0667	<0.0667
HA	6/15/2023	1.5-2.5	-	<6.55	564	<42.6	<0.0131	<0.0655	<0.0328	<0.0655	<0.0655
Samples Collected by 4C's*											
B1	5/5/2023	3	-	ND	ND	ND	-	-	-	-	-
B2	5/5/2023	3	-	ND	ND	ND	-	-	-	-	-
B3	5/5/2023	3	-	ND	ND	ND	-	-	-	-	-
B4	5/5/2023	3	-	ND	ND	ND	-	-	-	-	-
B5 ^a	5/5/2023	3	-	ND	4,690	ND	-	-	-	-	-
Samples Collected by Noll											
SB1	10/3/1997	5	-	ND	ND	ND	ND	ND	ND	ND	-
SB2	10/3/1997	5	-	ND	ND	ND	ND	ND	ND	ND	-
SB3	10/3/1997	5	-	ND	ND	ND	ND	ND	ND	ND	-
SB4	10/3/1997	5	-	12.7	ND	ND	ND	ND	ND	ND	-
Samples Collected by Brown And Caldwell											
W-1-1	2/23/1990	5	<5	-	-	-	-	-	-	-	-
W-1-1	2/23/1990	10	<5	-	-	-	-	-	-	-	-
W-2-1	2/23/1990	5	<5	-	-	-	-	-	-	-	-
W-2-4	2/23/1990	20	8	-	-	-	-	-	-	-	-
W-3-1	2/23/1990	5	<5	-	-	-	-	-	-	-	-
W-3-4	2/23/1990	20	<5	-	-	-	-	-	-	-	-
RBCss(Occ)			-	20,000	14,000	36,000	50	88,000	250	25,000	1,100
RBCss (Con)			-	9,700	4,600	11,000	380	28,000	1,700	20,000	12,000
RBCss (Exc)			-	NE	NE	NE	11,000	770,000	49,000	560,000	320,000
RBCso (Occ)			-	69,000	NE	NE	37	NE	NE	NE	1,500

Notes:

- = not applicable or not analyzed

mg/kg = milligrams per kilogram

^a - Soil sample was collected prior to cleanup excavations. Based on the anticipated depth of the excavations, we are assuming that all soil exceeding applicable RBC's was removed.

< - compound was not detected at or above the laboratory method reporting limit

Bold = Compound was detected above laboratory reporting limits.

RBCss (Occ) = Oregon Department of Environmental Quality (DEQ) Risk-Based Concentration (RBC) for Ingestion, dermal contact, and inhalation with an occupational receptor (Table dated June 2023).

RBCss (Con) = DEQ RBC for ingestion, dermal contact, and inhalation with a construction worker receptor (Table dated June 2023).

RBCss (Exc) = DEQ RBC for ingestion, dermal contact, and inhalation with an excavation worker receptor (Table dated June 2023).

RBCso (Occ) = DEQ RBC for volatilization to outdoor air with an occupational receptor (Table dated June 2023).

NE - RBC is not established for this compound

Table 2
Summary of Select Groundwater Analytical Results

Sample ID	Sample Date	Total Petroleum Hydrocarbons (ug/L)	Gasoline-Range Hydrocarbons NWTPh-Gx (ug/L)	Diesel-Range Hydrocarbons NWTPh-Dx (ug/L)	Oil-Range Hydrocarbons NWTPh-Dx (ug/L)	Select VOCs - EPA 8260C (ug/L)				
						Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
Samples Collected by GeoEngineers										
B-3	6/15/2023	-	<100	<83.3	<167	<0.200	<1.00	<0.500	<1.00	<1.00
B-4	6/15/2023	-	<100	<81.6	<163	<0.200	<1.00	<0.500	<1.00	19.0
B-6	6/15/2023	-	<100	<80.8	<162	<0.200	<1.00	<0.500	<1.00	9.27
W-2	6/15/2023	-	<100	<76.2	<152	<0.200	<1.00	<0.500	<1.00	5.58
Samples Collected by EEM										
MW-1	6/30/2017	-	<100	<189	<377	<0.200	<1.00	<0.500	<1.50	-
MW-2	6/30/2017	-	<100	<187	<374	<0.200	<1.00	<0.500	<1.50	-
MW-3	6/30/2017	-	<100	<185	<370	<0.200	<1.00	<0.500	<1.50	-
Samples Collected by Noll										
W-1	10/3/1997	-	ND	ND	ND	ND	ND	ND	ND	ND
W-2	10/3/1997	-	ND	ND	ND	ND	ND	ND	ND	94.6
W-3	10/3/1997	-	ND	ND	ND	ND	ND	ND	ND	65.3
Samples Collected by Brown and Caldwell										
W-1	7/13/2023	<500	-	-	-	<1.00	<1.00	<1.00	<1.00	-
W-2	7/14/2023	<500	-	-	-	<1.00	<1.00	<1.00	<1.00	-
W-3	7/14/2023	<500	-	-	-	<1.00	<1.00	<1.00	<1.00	-
RBCwe		-	14,000	NE	NE	1,800	220,000	4,500	23,000	63,000
RBCwo		-	NE	NE	NE	14,000	NE	43,000	NE	1,500,000

Notes:

- = not applicable or not analyzed

ug/kg = micrograms per liter

ND = compound was not detected at or above the laboratory method reporting limit

< - compound was not detected at or above the laboratory method reporting limit

Bold = Compound was detected above laboratory reporting limits.

RBC_{we} = Oregon Department of Environmental Quality (DEQ) Risk-Based Concentration (RBC) for groundwater in excavation (Table dated June 2023).

RBC_{wo} = DEQ RBC for groundwater volatilization to outdoor air with an occupational receptor (Table dated June 2023).

NE - RBC is not established for this compound



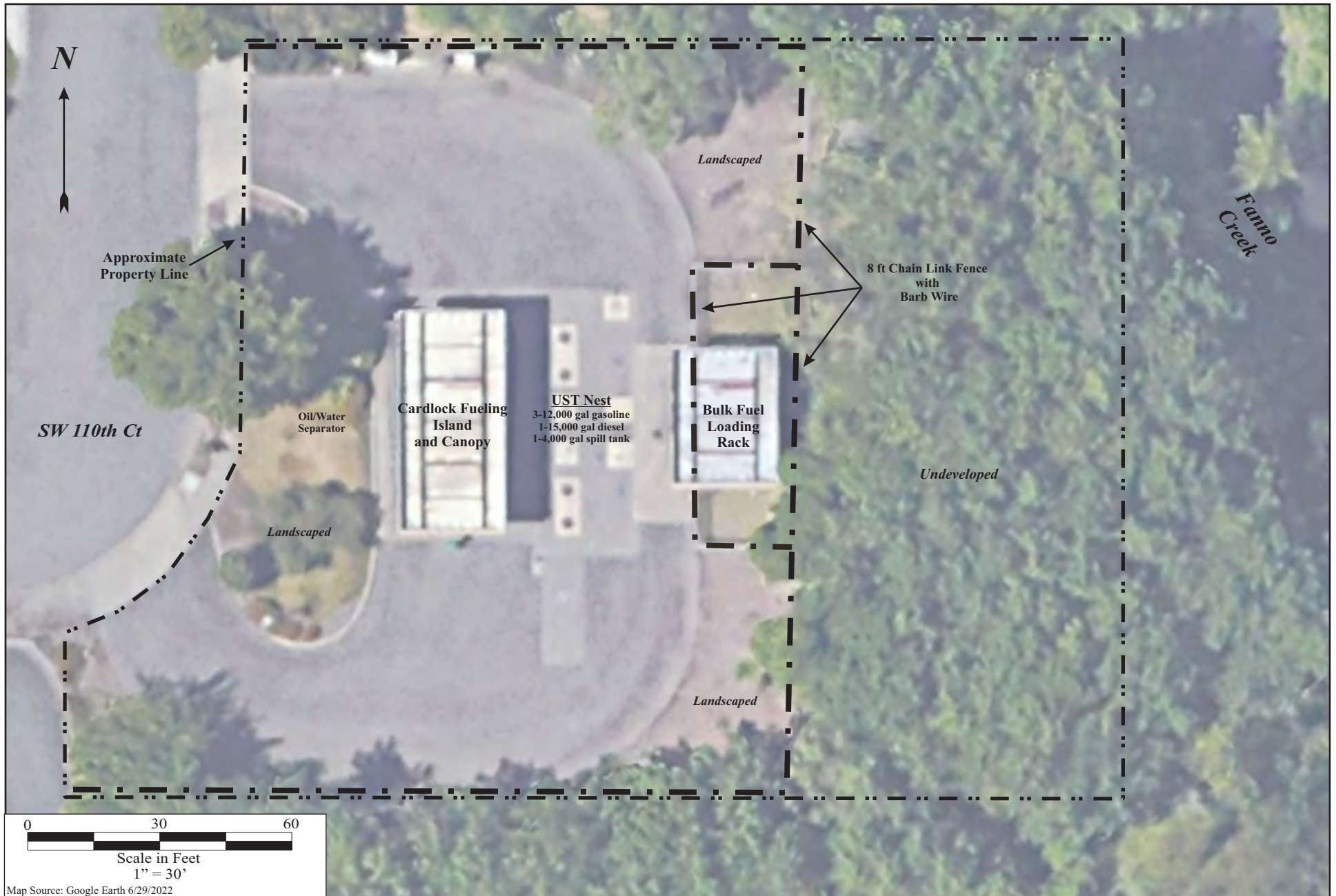
Feige & Associates, Inc.

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Brethauer Bulk Plant and Cardlock
6750 SW 110th Ct.
Beaverton, OR

Site Location Map

Figure 1

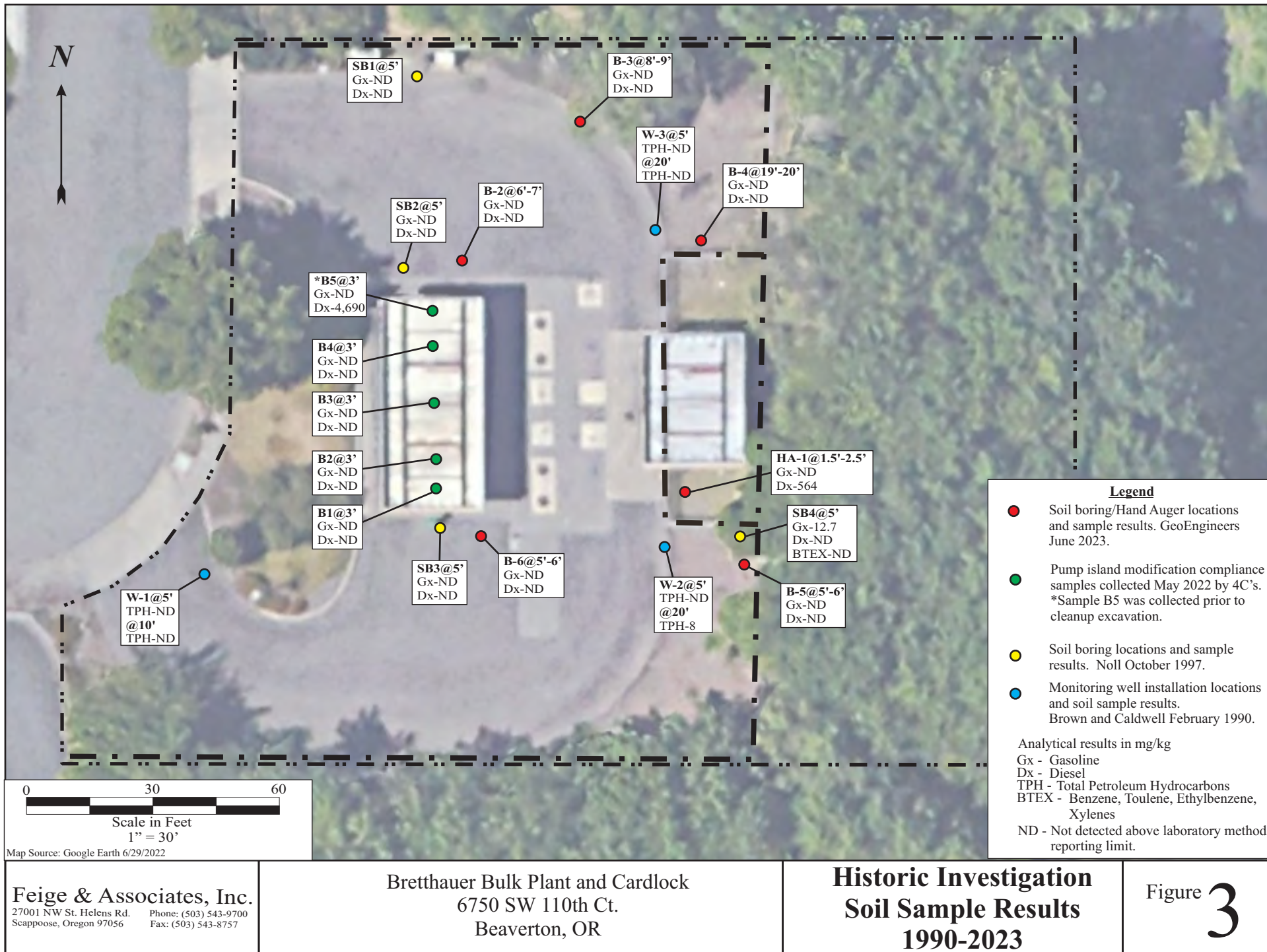


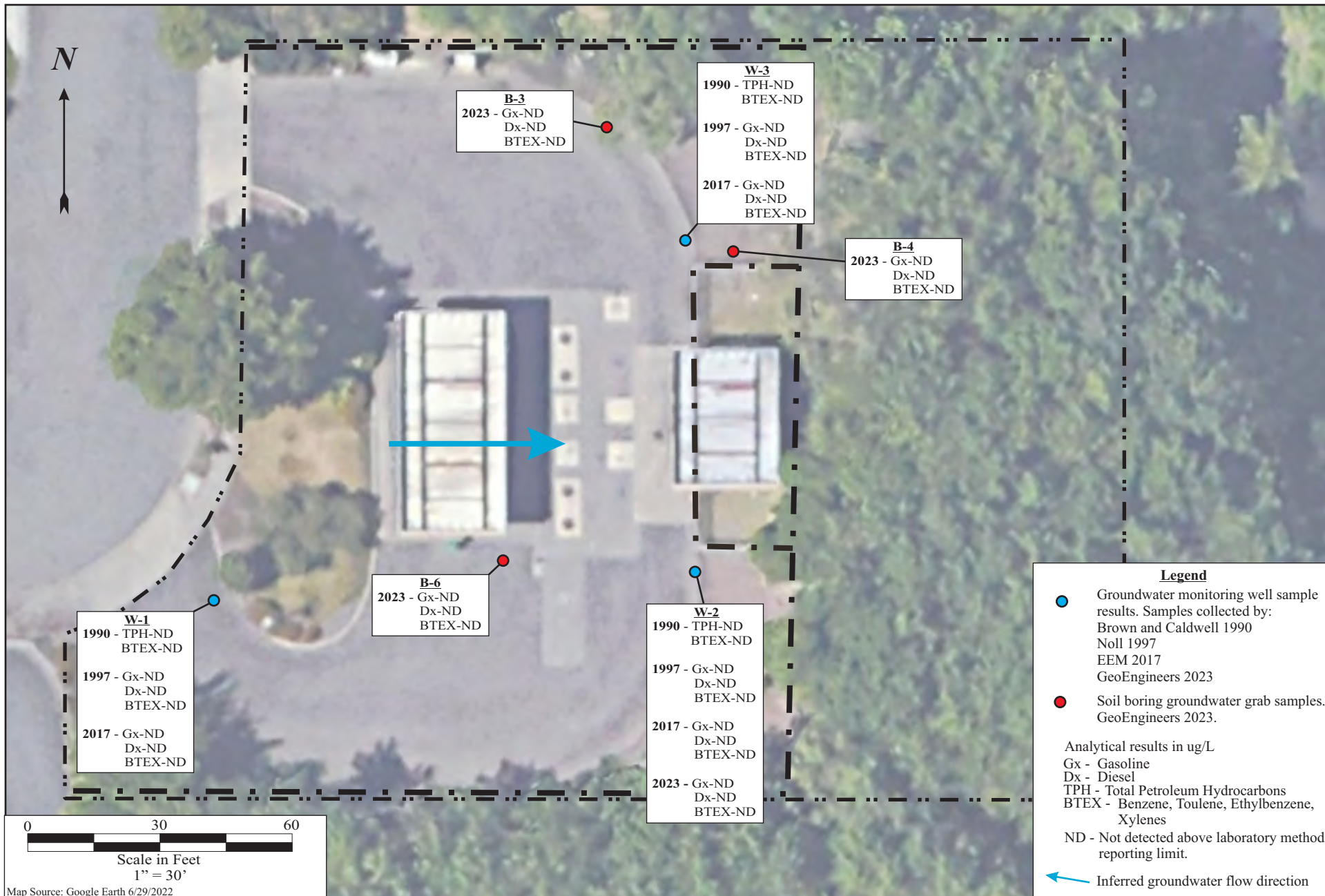
Feige & Associates, Inc.
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Bretthauer Bulk Plant and Cardlock
6750 SW 110th Ct.
Beaverton, OR

Site Features Map

Figure **2**







Feige & Associates, Inc.
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Bretthauer Bulk Plant and Cardlock
 6750 SW 110th Ct.
 Beaverton, OR

Historic Groundwater MTBE Results 1997 and 2023

Figure **5**

Appendix A

Phase II Environmental Site Assessment
GeoEngineers - August 31, 2023

Phase II Environmental Site Assessment

Beaverton Cardlock and Bulk Plant
6750 SW 110th Court
Beaverton, Oregon

for

**Jubitz Corporation and
Bretthauer Oil Company**

August 31, 2023

Phase II Environmental Site Assessment

Beaverton Cardlock and Bulk Plant
6750 SW 110th Court
Beaverton, Oregon

for

**Jubitz Corporation and
Bretthauer Oil Company, Inc.**

August 31, 2023



5820 South Kelly Avenue, Suite B
Portland, Oregon 97239
503.906.6577

Phase II Environmental Site Assessment

Beaverton Cardlock and Bulk Plant 6750 SW 110th Court Beaverton, Oregon

File No. 26794-001-01

August 31, 2023

Prepared for:

Jubitz Corporation
33 NE Middlefield Road
Portland, Oregon 97211

and

Bretthauer Oil Company
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1.0 INTRODUCTION

GeoEngineers, Inc. (GeoEngineers) prepared this report to document the results of a Phase II Environmental Site Assessment (ESA) that was performed on June 15, 2023 at the property addressed as 6750 SW 110th Court, Beaverton, Oregon (the Site; Vicinity Map, Figure 1). The Site is currently occupied by a cardlock and for fuel loading rack facility. This Phase II ESA was performed to evaluate recognized environmental conditions (RECs) that were identified in a Phase I ESA that was prepared by GeoEngineers June 15, 2023. The Phase II ESA was performed at the request of Jubitz Corporation (Jubitz) and Bretthauer Oil Company (Bretthauer) in accordance with GeoEngineers proposal dated June 1, 2023.

1.1. Recognized Environmental Conditions

The RECs identified in the June 15, 2023 draft Phase I ESA report were:

- The current cardlock facility was built in 1989. The facility includes fueling areas, a loading rack, and one 15,000-gallon diesel underground storage tank (UST), three 12,000-gallon gasoline USTs, and one 4,000-gallon spill tank. A subsurface assessment was conducted in 1997 in connection with Tosco's acquisition of the subject property from Union Oil. The 1997 investigation included completion of four soil borings at the site and collection of groundwater samples from three groundwater monitoring wells. The results of soil and groundwater sampling indicated that soil in the southeast portion of the Site was impacted with gasoline-range hydrocarbons at concentrations below applicable Oregon Department of Environmental Quality (DEQ) risk-based concentrations (RBCs), and that groundwater samples from the two monitoring wells along the east side of the facility paved area contain methyl tert-butyl ether (MTBE) at concentrations up to 94.6 micrograms per liter (µg/L), which exceed the RBCs for MTBE in groundwater. The subject property groundwater monitoring wells were resampled in 2017. Petroleum hydrocarbons and benzene, toluene, ethylbenzene, and xylenes (BTEX) were not detected in the 2017 groundwater samples, however, the 2017 samples were not analyzed for MTBE. During May 2023 facility renovation activities, gasoline-impacted soil was encountered underneath a fuel dispenser. Approximately 3.4 tons of petroleum-contaminated soil were removed from the affected dispenser area and transported for permitted disposal.

The facility's operations (bulk fuel storage and distribution) over a 30-year period, including documented releases of petroleum hydrocarbons was identified as a REC.

One historical recognized environmental condition (HREC) was identified for the subject property:

- The subject property was first developed as a cardlock facility in 1975 by Unocal Oil Company. The original subject property USTs included four steel 10,000-gallon fuel USTs and a 2,000-gallon steel oil/water separator. The first generation of the subject property USTs was removed in 1989. Elevated hydrocarbon concentrations were identified in soil in the vicinity of the removed USTs. Approximately 1,400 cubic yards of impacted soil were excavated and removed from the Site. Soil samples from the limits of the excavation did not contain petroleum mixtures or BTEX concentrations that exceeded DEQ applicable cleanup levels, however, a groundwater sample from one location contained benzene at a concentration that exceeded the applicable DEQ cleanup level. Follow-up subsurface assessment activities did not identify detectable concentrations of petroleum hydrocarbon in soil and groundwater samples analyzed. Based on these results, DEQ issued a "no further action" determination for the subject property in November 1990. The USTs removed in 1989 are therefore considered an HREC for the subject property because the historical release has been addressed to the satisfaction of DEQ.

2.0 SITE DESCRIPTION AND BACKGROUND

2.1. Site Description

The Site consists of one Washington County parcel (1S122AD00400) that is currently developed with a cardlock and fuel loading rack facility that was built in 1989 and has been operated since then by Bretthauer. The site is shown relative to surrounding physical features in Vicinity Map, Figure 1 and Site Plan, Figure 2. The approximate locations of the Phase II ESA exploration locations in relation to existing buildings are shown in Figure 2.

2.2. Background

GeoEngineers reviewed the reports that are listed in Section 9.

3.0 SCOPE OF SERVICES

Our specific scope of services for this Phase II ESA included the following:

1. Prepared a Health and Safety Plan for our representatives.
2. Coordinated access to the property to perform the subsurface investigation activities.
3. Subcontracted a private underground utility locate company and notified the utility notification center to check for potential underground utilities near the exploration locations prior to beginning subsurface exploratory work.
4. Advanced five soil borings using direct-push drilling and hand-auger methods at the approximate locations shown on Figure 2. Groundwater was encountered in all five direct-push boring locations.
5. Collected continuous core soil samples during direct-push drilling at 5-foot intervals and field screened discrete-depth soil samples using water sheen and headspace vapor measurements to assess the possible presence of petroleum hydrocarbon and volatile-related contaminants. Field screening procedures are described in Appendix A.
6. Submitted six soil samples from the borings to a subcontracted chemical analytical laboratory, Apex Laboratories, Inc. (Apex) in Tigard, Oregon, for chemical analytical testing.
7. Collected grab groundwater samples from three direct-push boring locations and from one previously constructed monitoring well.
8. Submitted four groundwater samples for chemical analyses.
9. Containerized investigation-derived waste (IDW) from the drilling and sampling activities into two drums that were left on site. The drums will be profiled and transported off site for permitted disposal.
10. Evaluated the data relative to applicable DEQ RBCs.
11. Prepared this report.

4.0 FIELD INVESTIGATION

4.1. Soil Borings

Five direct-push borings (B-2 through B-6) and one hand auger boring (HA) were completed at the Site on June 15, 2023. The direct-push borings were advanced to depths between 20 and 25 feet below ground surface (bgs). The hand auger boring was advanced to 5 feet bgs. Boring locations are shown in Figure 2 and are described below.

4.1.1. Exploration Locations and Rationale

The boring locations are shown in Figure 2 and described below.

BORING	AREA AND DESCRIPTION
B-2	Adjacent and north of fueling area
B-3	North end of Site
B-4	Adjacent and north of fuel loading rack
B-5	Adjacent and south of fuel loading rack
B-6	Adjacent and south of fueling area
HA	Adjacent and south of concrete staining observed at south side of fuel loading rack

4.1.2. Drilling Procedures

The explorations were completed using Geoprobe 7822DT direct-push drilling equipment, owned and operated by Holt Services, Inc. Drilling equipment was decontaminated prior to use and in between each boring location. Explorations were terminated at depths of 20 to 25 feet bgs.

The borings were completed in accordance with the Oregon Groundwater Law (Oregon Revised Statutes [ORS] Chapter 537) and the Rules for Construction and Maintenance of Monitoring Wells and Other Holes in Oregon (Oregon Administrative Rules [OAR] Chapter 690, Division 240).

A GeoEngineers field representative was present during the investigation activities to observe and document drilling and sample collection procedures, obtain field samples, perform field screening activities, select and prepare samples for laboratory analysis, and prepare lithologic logs for each boring. The exploration logs, including field screening results are included in Appendix A.

Following completion of the soil boring activities, the borings were backfilled with 3/8-inch bentonite chips to within 6 inches of the ground surface. The upper portion of each boring was patched to match the surrounding surface.

4.1.3. Soil Sampling

Soil explorations were completed using 2.25-inch diameter sampling equipment and a 3-inch diameter hand auger. Soil cores from the direct-push explorations were collected continuously in 5-foot increments. The soils were described using the Unified Soil Classification System (USCS) and screened for potential impacts based on visual and/or olfactory observations and headspace vapor measurements using a

photo-ionization detector (PID) calibrated to isobutylene. The explorations were logged and field screened in accordance with Standard Operating Procedures (SOPs) included in Appendix A. Subsurface conditions and field screening results are presented on exploration logs included in Appendix A. Soil samples for possible laboratory analysis were collected from depths ranging from just below the ground surface to 20 feet bgs. Soil samples were placed in new laboratory-supplied sample containers and stored in an iced cooler under chain-of-custody control.

4.1.4. Field Screening Results

As indicated on exploration logs in Appendix A, field indications of contamination were observed in just one boring “HA.” This boring was advanced just south of the fuel loading rack in the soil adjacent to the southern edge of the concrete pad. Soil in this boring exhibited headspace vapor concentrations of 5 parts-per-million (ppm) at depths from 1–2 feet bgs.

4.2. Investigation-Derived Waste

Investigation-derived waste (IDW), consisting of soil cuttings and decontamination water, were placed in a labeled 55-gallon drum and stored on site. Following profiling of the IDW, the drum will be transported to a licensed facility for disposal.

5.0 LABORATORY ANALYTICAL PROGRAM

Six soil samples and four groundwater samples were submitted to Apex, an Oregon Environmental Laboratory Accreditation Program (ORELAP) certified laboratory, for one or more of the following chemical analyses:

- Gasoline-range hydrocarbons by Northwest Method NWTPH-Gx;
- Diesel- and oil-range hydrocarbons by Northwest Method NWTPH-Dx with silica gel cleanup;
- Volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Method 8260B;
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270D-SIM;
- Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) by EPA 6000/7000 series methods; and/or
- Polychlorinated biphenyls (PCBs) by EPA Method 8082.

The laboratory reports, including a data quality review, are included in Appendix B.

6.0 RESULTS AND DISCUSSION

The following sections describe soil and groundwater conditions encountered during the site assessment, the screening levels used to evaluate the soil and groundwater data and include a discussion of the soil and groundwater analytical results.

6.1. Soil and Groundwater Conditions

In general, the soils encountered in the borings consisted of sand and gravel fill to depths of 1 to 2 feet bgs. The fill material is underlain by silts with various amounts of clay to the depths explored. Groundwater was observed in soils at all direct-push borings at depths ranging between 5.24 and 6.10 feet bgs.

6.2. Screening Levels

To provide a framework for evaluating the significance of findings, Site data were compared to risk-based concentrations (RBCs), which are screening levels established by the Oregon Department of Environmental Quality (DEQ). The screening levels discussed below are listed along with the analytical data in Tables 1 through 7.

Because these screening levels are based on several conservative assumptions (e.g., duration and type of exposure), exceeding one of the screening levels does not necessarily indicate that remediation is required. Rather, the exceedance of a screening level may indicate that additional investigation and evaluation, including consideration of site specific information (e.g., current and future land uses) may be necessary to determine if remediation or other actions are necessary. In many cases, it is not possible to determine whether unacceptable risks to human health and the environment are present, and require further action, until a risk assessment, including evaluation of current and reasonably likely land and water uses, is complete.

To evaluate potential risks to human health, GeoEngineers identified potentially complete exposure pathways at the Site for soil and groundwater. Potentially complete pathways are listed below. Incomplete pathways and the rationale for the incomplete determination are listed in the following table.

POTENTIALLY COMPLETE HUMAN EXPOSURE PATHWAYS

Media	Potentially Complete Pathway
Soil	Occupational, construction worker, and excavation worker exposure via soil ingestion, dermal contact, and ingestion.
Groundwater	Occupational exposure via vapor intrusion from groundwater to indoor air.
	Construction worker and excavation worker exposure via groundwater in excavations.
Soil Gas	Commercial exposure via vapor intrusion to indoor air.

INCOMPLETE HUMAN EXPOSURE PATHWAYS

Media	Incomplete Pathway	Rationale ¹
Soil	Residential and urban residential soil ingestion, dermal contact, and ingestion.	Residential uses do not occur at the Site and are unlikely in the future.
	All leaching to groundwater scenarios	Groundwater use does not occur at the Site and is unlikely in the future due to the availability of municipal supplies.
Groundwater	All groundwater ingestion and inhalation from tap water scenarios	Groundwater use does not occur at the Site and is unlikely in the future due to the availability of municipal supplies.
	Residential exposure via vapor intrusion from groundwater to indoor air.	Residential uses do not occur at the Site and are unlikely in the future.
Soil Gas	Residential exposure via vapor intrusion to indoor air.	Residential uses do not occur at the Site and are unlikely in the future.

The following discussion of soil, groundwater, and soil gas analytical data considers human health risks based on the potentially complete exposure pathways listed above. Regardless of the Site-specific potential for exposure, Tables 1 - 7 list RBCs for all pathways (potentially complete and incomplete).

6.3. Soil Testing Results

The analytical results for petroleum hydrocarbons, VOCs, PAHs, PCBs, and metals in Site soil are presented in Tables 1 through 4, respectively. The analytical results for petroleum hydrocarbons, VOCs, PAHs, PCBs, and dissolved metals in Site groundwater are presented in Tables 5 through 7, respectively. Analytical results are discussed below.

6.3.1. Total Petroleum Hydrocarbons

Six soil samples were submitted for laboratory analysis of gasoline-, diesel-, and oil-range hydrocarbons. Diesel-range hydrocarbons were detected in only one sample, HA (2), at a concentration of 564 milligrams per kilogram (mg/kg). The detected concentration of diesel-range hydrocarbons is lower than RBCs for residential and occupational exposure scenarios.

6.3.2. Metals

Three soil samples were submitted for analysis of metals. The following metals were detected in soil: arsenic, barium, chromium, lead, selenium, and silver. Arsenic was detected at concentrations ranging from 3.04 to 4.52 mg/kg. Barium was detected at concentrations ranging from 160 to 241 mg/kg. Chromium was detected at concentrations ranging from 43.3 to 55.5 mg/kg. Lead was detected at concentrations ranging from 4.86 to 11.8 mg/kg. Selenium was detected in boring B-4 at a concentration of 4.28 mg/kg. None of the detected concentrations of metals in soil exceed applicable RBCs for occupational,

¹ In addition to the rationale presented in the table, DEQ's 2002 no further action determination for the Site includes restrictions on future uses of the Site, including: (1) the current use and development of the property, including the configuration of paved surfaces, remain unchanged; (2) domestic use water used on the property continue to be supplied by the public water system; and (3) construction workers be informed that exposure to petroleum is a possibility prior to any excavation on the property.

construction worker, or excavation worker exposure scenarios, or the detected concentrations are less than naturally occurring default background concentrations.

6.3.3. Volatile Organic Compounds

Six soil samples were submitted for analysis of VOCs. VOCs were not detected in soil at concentrations that exceed the method detection limits.

6.3.4. Polychlorinated Biphenyls

One soil sample was submitted for analysis of PCBs. PCBs were not detected in the soil sample.

6.3.5. Polycyclic Aromatic Hydrocarbons

Four soil samples were submitted for analysis of PAHs. Pyrene and 2-methylnaphthalene were detected in soil in the hand auger boring HA at concentrations of 0.0109 mg/kg and 0.0166 mg/kg, respectively. None of the detected concentrations of PAHs in soil exceed applicable RBCs for occupational, construction worker, or excavation worker exposure scenarios.

6.4. Groundwater Testing Results

Groundwater samples were collected from three soil borings (B-3, B-4, B-6) and one groundwater monitoring well (W-2). Groundwater chemical analytical data are listed in Tables 5 through 7.

6.4.1. Total Petroleum Hydrocarbons

Four groundwater samples were submitted for laboratory analysis of gasoline-, diesel-, and oil-range hydrocarbons. Gasoline-, diesel-, and oil-range hydrocarbons were not detected in any groundwater samples.

6.4.2. Metals

Four groundwater samples were submitted for analysis of total metals. The following metals were detected in groundwater: arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Arsenic was detected in all samples at concentrations ranging from 5.81 to 28.5 µg/L. Barium was detected in all samples at concentrations ranging from 114 to 808 µg/L. Cadmium was detected in B-3, B-4, and B-6 at concentrations ranging from 0.376 to 3.76 µg/L. Chromium was detected at concentrations ranging from 43.7 to 106 µg/L. Lead was detected in all groundwater samples at concentrations ranging from 0.372 to 24.4 µg/L. Mercury was detected in groundwater from boring B-4 at a concentration of 0.140 µg/L. Selenium was detected at concentrations ranging from 1.34 to 15.1 µg/L. Silver was detected in borings B-4 and B-6 at concentrations of 0.449 and 0.228 µg/L, respectively. The detected concentrations of metals in the groundwater samples are likely elevated due to the entrainment of sediment in the groundwater samples. The detected concentrations of metals in groundwater do not exceed RBCs for applicable occupational, construction worker, or excavation worker exposure scenarios.

6.4.3. Polychlorinated Biphenyls

Two groundwater samples were submitted for analysis of PCBs. PCBs were not detected in groundwater samples.

6.4.4. Volatile Organic Compounds

Four groundwater samples were submitted for analysis of VOCs. MTBE was detected in samples from B-4, B-6, and W-2 at concentrations ranging from 9.27 to 19.0 µg/L. The detected concentrations of MTBE in groundwater do not exceed RBCs for applicable occupational, construction worker, or excavation worker exposure scenarios.

6.4.5. Polycyclic Aromatic Hydrocarbons

Four groundwater samples were submitted for analysis of PAHs. PAHs were not detected above method detection limits in any groundwater samples.

7.0 CONCLUSIONS

Overall, the results from explorations and laboratory testing completed during the Phase II ESA indicate that current and historical operations have resulted in the release of petroleum hydrocarbon mixtures and VOCs to soil and groundwater at the Site. Our conclusions, including an assessment of human health risks, are summarized below.

- Soil south of the fuel loading rack (represented by boring HA) contains diesel-range hydrocarbons. The detected concentration (564 mg/kg) is lower than DEQ RBCs for residential and occupational exposure scenarios, indicating that the diesel-range hydrocarbons at that location do not pose a significant risk to human health.
- Soil in borings B-2, B-4, and B-5 exhibits concentrations of arsenic that exceed the DEQ RBC for occupational soil ingestion, dermal contact and inhalation. However, the expected DEQ background concentration of arsenic in soil for this region is 18 mg/kg, suggesting that the arsenic concentrations at the Site are naturally present and are not an indication of environmental contamination. The arsenic in soil currently poses little current risk to human health because it is covered by asphalt-concrete pavement.
- All of the soil samples collected during this investigation exhibited concentrations of chromium that exceed occupational DEQ RBCs for soil ingestion, dermal contact and inhalation. In addition, concentrations in boring B-2 at 6–7 feet also exceeded the RBC for construction workers for soil ingestion, dermal contact, and inhalation. However, the detected concentrations of chromium are lower than the DEQ default background concentration for chromium in soil, indicating that the chromium levels present in Site soil are not an indication of contamination. The chromium in soil also poses little current risk to human health because it is covered by asphalt-concrete pavement.
- Selenium concentrations in boring B-4 exceed DEQ background levels for the region. However, there are currently no established RBCs for selenium that are applicable to the Site.
- In groundwater, arsenic, chromium, and lead each exceeded one or more RBCs for groundwater ingestion and inhalation from tap water in one or more borings. However, groundwater is not used or accessed at the Site, and is not expected to be used or accessed in the future. Because the exposure pathway is incomplete, metals in groundwater at the Site are not considered a risk to human health or the environment.
- MTBE was detected in groundwater samples from B-4, B-6, and W-2. MTBE concentrations in the sample from B-4 exceed the residential groundwater RBCs for ingestion and inhalation from tap water.

The Site is not expected to have residential use in the future, therefore, MTBE in groundwater at the Site is not expected to pose a risk to human health or the environment.

8.0 LIMITATIONS

We have prepared this report for the exclusive use by Jubitz Corporation and Bretthauer for the Beaverton Cardlock and Bulk Plant property located on 6750 SW 110th Court in Beaverton, Oregon. Jubitz Corporation and Bretthauer may distribute copies of this report to authorized agents and regulatory agencies as may be required for the project.

Within the limitations of scope, schedule, and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. The conclusions and opinions presented in this report are based on our professional knowledge, judgment, and experience. No warranty, express or implied, applies to this report.

Please refer to Appendix C titled “Report Limitations and Guidelines for Use” for additional information pertaining to the use of this report.

9.0 REFERENCES

Bretthauer Oil Company, 2022. Oil Spill Prevention & Response Plan. February 23, 2022.

Bretthauer UST System Testing Data. 2019, 2020, 2021, and 2022.

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DEQ, 1990. Letter RE: UST-Washington County, Unocal 0129A. November 19, 1990.

DEQ, 2021. Field Citation for UST Violations. October 2020.

Evergreen Environmental Management, LLC (EEM), 2017. Phase One Environmental Site Assessment for the Bretthauer Oil Company Property, 6750 SW 110th Avenue, Beaverton, Oregon. July 24, 2017.

Noll Environmental, 1998. Results of Due Diligence Assessment Activities, Tosco (Former 76 Products Company) Bulk Plant No. 0038. February 9, 1998

Table 1
Soil Chemical Analytical Results¹—Petroleum Hydrocarbons and Metals
 Beaverton Cardlock
 Beaverton, Oregon

Sample Location	Sample Identification	Date	Sample Depth (feet bgs)	Gasoline-Range Hydrocarbons NWTPH-Gx ² (mg/kg)	Diesel-Range Hydrocarbons NWTPH-Dx ³ (mg/kg)	Oil-Range Hydrocarbons NWTPH-Dx ³ (mg/kg)	Metals ⁴ (mg/kg)							
							Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
B-2	B-2 (6-7)	6/15/2023	6-7	< 8.41	< 27.9	< 55.8	3.04	241	< 0.295	55.5	11.8	< 0.118	< 1.47	< 0.295
B-3	B-3 (8-9)	6/15/2023	8-9	< 6.83	< 23.7	< 47.4	–	–	–	–	–	–	–	–
B-4	B-4 (19-20)	6/15/2023	19-20	< 20.3	< 44.1	< 88.2	4.52	160	< 0.478	43.3	4.86	< 0.191	4.28	< 0.478
B-5	B-5 (5-6)	6/15/2023	5-6	< 8.03	< 27.3	< 54.6	3.24	197	< 0.288	47.8	9.50	< 0.115	< 1.44	< 0.288
B-6	B-6 (5-6)	6/15/2023	5-6	< 6.67	< 24.8	< 49.5	–	–	–	–	–	–	–	–
HA	HA (2)	6/15/2023	1.5-2.5	< 6.55	564	< 42.6	–	–	–	–	–	–	–	–
Potentially Applicable DEQ Risk-Based Concentrations⁵														
Soil Ingestion, Dermal Contact and Inhalation														
Residential				1,200	1,100	2,800	0.43	15,000	78	0.30	400	23	NE	390
Urban Residential				2,500	2,200	5,700	1.0	31,000	160	0.67	400	47	NE	780
Occupational				20,000	14,000	36,000	1.9	220,000	1,100	6.3	800	350	NE	5,800
Construction Worker				9,700	4,600 ⁶	11,000 ⁷	15	69,000	350	49	800	110	NE	1,800
Excavation Worker				NE	NE	NE	420	NE	9,700	1,400	800	2,900	NE	49,000
Soil Leaching to Groundwater														
Residential				31	9,500	NE	NE	NE	NE	NE	30	NE	NE	NE
Urban Residential				31	9,500	NE	NE	NE	NE	NE	30	NE	NE	NE
Occupational				130	NE	NE	NE	NE	NE	NE	30	NE	NE	NE
Oregon DEQ Background Metals Concentrations in Soil⁸				NA	NA	NA	18	730	1.6	100	28	0.07	0.68	0.33

Notes:

¹ Chemical analyses were performed by Apex Laboratories in Tigard, Oregon.

² Gasoline-range hydrocarbon analysis by Northwest Method NWTPH-Gx.

³ Diesel and lube oil hydrocarbons analyzed by Northwest Method NWTPH-Dx.

⁴ Resource Conservation and Recovery Act (RCRA) metals analyzed by EPA Method 6020B.

⁵ Oregon Department of Environmental Quality (DEQ) Risk Based Decision Making for the Remediation of Petroleum-Contaminated Sites, revised June 2023. Chromium RBCs are for Chromium VI.

⁶ Result is for generic diesel/heating oil.

⁷ Result is for generic mineral/insulating oil.

⁸ Oregon Department of Environmental Quality (DEQ) 2013. Oregon Background Metals Concentrations In Soil, Table 4, South Willamette Valley.

NE = Not Established; NA = not applicable (no detections)

mg/kg = milligrams per kilogram; bgs = below ground surface; ppm = parts per million

– = Not Analyzed;

<0.28 indicates analyte not detected above the method reporting limit.

Bold indicates the analyte was detected above laboratory detection limit (MDL).

Table 2
Soil Chemical Analytical Results—Volatile Organic Compounds
Beaverton Cardlock
Beaverton, Oregon

Sample Location	B-2		B-3		B-4		B-5		B-6		Truck Rack	Potentially Applicable DEQ Risk-Based Concentrations (mg/kg)							
Sample ID	B-2 (6-7)		B-3 (8-9)		B-4 (19-20)		B-5 (5-6)		B-6 (5-6)		HA (2)	Soil Ingestion, Dermal Contact, and Inhalation					Soil Leaching to Groundwater		
Sample Date	6/15/2023		6/15/2023		6/15/2023		6/15/2023		6/15/2023		6/15/2023								
Sample Depth (feet bgs)	6-7		8-9		19-20		5-6		5-6		1.5-2.5								
Analyte	Concentrations in mg/kg											Residential	Urban Residential	Occupational	Construction Worker	Excavation Worker	Residential	Urban Residential	Occupational
Acetone	< 1.68		< 1.37		< 4.05		< 1.61		< 1.33		< 1.31	--	--	--	--	--	--	--	--
Acrylonitrile	< 0.168		< 0.137		< 0.405		< 0.161		< 0.133		< 0.131	0.86	2.5	4.0	40	1,100	0.00036	0.0016	0.0017
Benzene	< 0.0168		< 0.0137		< 0.0405		< 0.016		< 0.0133		< 0.0131	8.2	24	37	380	11,000	0.023	0.10	0.10
Bromobenzene	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	--	--	--	--	--	--	--	--
Bromochloromethane	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	3.4	12	15	230	6,300	0.002	0.0091	0.0088
Bromodichloromethane	< 0.0840		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	--	--	--	--	--	--	--	--
Bromoform	< 0.168		< 0.137		< 0.405		< 0.161		< 0.133		< 0.131	57	170	260	2,700	74,000	0.046	0.20	0.22
Bromomethane	< 0.841		< 0.683		< 2.03		< 0.803		< 0.667		< 0.655	46	92	750	370	10,000	0.083	0.30	0.40
2-Butanone (MEK)	< 0.841		< 0.683		< 2.03		< 0.803		< 0.667		< 0.655	--	--	--	--	--	--	--	--
n-Butylbenzene	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	--	--	--	--	--	--	--	--
sec-Butylbenzene	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	--	--	--	--	--	--	--	--
tert-Butylbenzene	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	--	--	--	--	--	--	--	--
Carbon disulfide	< 0.841		< 0.683		< 2.03		< 0.803		< 0.667		< 0.655	--	--	--	--	--	--	--	--
Carbon tetrachloride	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	7.5	21	34	320	8,900	0.013	0.055	0.058
Chlorobenzene	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	530	1,100	8,700	4,700	130,000	5.8	22	27
Chloroethane	< 0.841		< 0.683		< 2.03		< 0.803		< 0.667		< 0.655	160,000	320,000	>Max	>Max	>Max	310	1,100	1,300
Chloroform	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	5.8	22	26	410	11,000	0.0034	0.016	0.015
Chloromethane	< 0.421		< 0.342		< 1.01		< 0.402		< 0.333		< 0.328	1,400	2,900	25,000	25,000	700,000	2.2	7.9	9.1
2-Chlorotoluene	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	--	--	--	--	--	--	--	--
4-Chlorotoluene	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	--	--	--	--	--	--	--	--
Dibromochloromethane	< 0.168		< 0.137		< 0.405		< 0.161		< 0.133		< 0.131	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	< 0.421		< 0.342		< 1.01		< 0.402		< 0.333		< 0.328	--	--	--	--	--	--	--	--
1,2-Dibromoethane	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	0.16	0.53	0.73	9.0	250	0.00012	0.00056	0.00056
Dibromomethane	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	2,200	4,400	36,000	20,000	560,000	36	140	160
1,3-Dichlorobenzene	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	14	62	64	1,300	36,000	0.057	0.27	0.25
Dichlorodifluoromethane	< 0.168		< 0.137		< 0.405		< 0.161		< 0.133		< 0.131	--	--	--	--	--	--	--	--
1,1-Dichloroethane	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	58	190	260	3,200	89,000	0.04	0.20	0.20
1,2-Dichloroethane	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	3.6	12	16	200	5,600	0.0028	0.013	0.013
1,1-Dichloroethene	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	1,800	3,500	29,000	13,000	370,000	6.70	25	32
cis-1,2-Dichloroethene	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	160	310	2,300	710	20,000	0.63	2.4	4.5
trans-1,2-Dichloroethene	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	1,600	3,100	23,000	7,100	200,000	7.0	27	51
1,2-Dichloropropane	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	--	--	--	--	--	--	--	--
1,1-Dichloropropene	< 0.0421		< 0.0342		< 0.203		< 0.0803		< 0.0667		< 0.0655	--	--	--	--	--	--	--	--
1,3-Dichloropropane	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	--	--	--	--	--	--	--	--

Please refer to notes at end of table.

Table 2
Soil Chemical Analytical Results—Volatile Organic Compounds
Beaverton Cardlock
Beaverton, Oregon

Sample Location	B-2		B-3		B-4		B-5		B-6		Truck Rack	Potentially Applicable DEQ Risk-Based Concentrations (mg/kg)								
Sample ID	B-2 (6-7)		B-3 (8-9)		B-4 (19-20)		B-5 (5-6)		B-6 (5-6)		HA (2)	Soil Ingestion, Dermal Contact, and Inhalation					Soil Leaching to Groundwater			
Sample Date	6/15/2023		6/15/2023		6/15/2023		6/15/2023		6/15/2023		6/15/2023									
Sample Depth (feet bgs)	6-7		8-9		19-20		5-6		5-6		1.5-2.5									
Analyte	Concentrations in mg/kg											Residential	Urban Residential	Occupational	Construction Worker	Excavation Worker	Residential	Urban Residential	Occupational	
2,2-Dichloropropane	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	–	–	–	–	–	–	–	–	
Ethylbenzene	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	34	110	150	1,700	49,000	0.22	0.94	0.90	
Hexachlorobutadiene	< 0.168		< 0.137		< 0.405		< 0.161		< 0.133		< 0.131	–	–	–	–	–	–	–	–	
2-Hexanone	< 0.841		< 0.683		< 2.03		< 0.803		< 0.667		< 0.655	–	–	–	–	–	–	–	–	
Isopropylbenzene	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	3,500	7,000	57,000	27,000	750,000	96	>Max	>Max	
4-Isopropyltoluene	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	–	–	–	–	–	–	–	–	
Methylene chloride	< 0.841		< 0.683		< 2.03		< 0.803		< 0.667		< 0.655	76	110	1,600	2,100	58,000	0.14	0.44	2.40	
4-Methyl-2-pentanone (MIBK)	< 0.841		< 0.683		< 2.03		< 0.803		< 0.667		< 0.655	–	–	–	–	–	–	–	–	
Methyl tert-butyl ether	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	250	730	1,100	12,000	320,000	0.11	0.50	0.54	
Naphthalene	< 0.168		< 0.137		< 0.405		< 0.161		< 0.133		< 0.131	5.3	25	23	580	16,000	0.077	0.37	0.34	
n-Propylbenzene	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	–	–	–	–	–	–	–	–	
Styrene	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	7,900	16,000	130,000	56,000	>Max	170	640	800	
1,1,1,2-Tetrachloroethane	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	–	–	–	–	–	–	–	–	
1,1,2,2-Tetrachloroethane	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	–	–	–	–	–	–	–	–	
Tetrachloroethene	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	220	540	1,000	1,800	50,000	0.46	1.90	1.9	
Toluene	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	5,800	12,000	88,000	28,000	770,000	84	340	490	
1,2,3-Trichlorobenzene	< 0.421		< 0.342		< 1.01		< 0.402		< 0.333		< 0.328	–	–	–	–	–	–	–	–	
1,2,4-Trichlorobenzene	< 0.421		< 0.342		< 1.01		< 0.402		< 0.333		< 0.328	–	–	–	–	–	–	–	–	
1,1,1-Trichloroethane	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	53,000	110,000	870,000	470,000	>Max	190	710	880	
1,1,2-Trichloroethane	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	3.2	6.3	26	54	1,500	0.006	0.029	0.029	
Trichloroethene	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	6.7	17	51	470	13,000	0.013	0.053	0.087	
Trichlorofluoromethane	< 0.168		< 0.137		< 0.405		< 0.161		< 0.133		< 0.131	7,600	15,000	130,000	69,000	>Max	61	230	280	
1,2,3-Trichloropropane	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	–	–	–	–	–	–	–	–	
1,2,4-Trimethylbenzene	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	430	860	6,900	2,900	81,000	10	43	48	
1,3,5-Trimethylbenzene	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	430	860	6,900	2,900	81,000	11	45	53	
Vinyl chloride	< 0.0421		< 0.0342		< 0.101		< 0.0402		< 0.0333		< 0.0328	0.36	0.80	4.4	34	950	0.0006	0.0014	0.01	
Xylenes, total	< 0.0841		< 0.0683		< 0.203		< 0.0803		< 0.0667		< 0.0655	1,400	2,900	25,000	20,000	560,000	23	87	100	

Notes:

¹ Chemical analyses were performed by Apex Laboratories in Tigard, Oregon. Volatile Organic Compounds (VOCs) analysis by United States Environmental Protection Agency (EPA) Method 8260D.

² Oregon Department of Environmental Quality (DEQ) Risk Based Decision Making for the Remediation of Petroleum-Contaminated Sites, revised May 2018. Chromium RBCs are for Chromium VI.

< = constituent was not detected at a concentration greater than laboratory reporting limit shown

– = not analyzed or not established

mg/kg = milligrams per kilogram; bgs = below ground surface

Bold = Analyte was detected above the laboratory method detection limit.

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

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

Table 3
Soil Chemical Analytical Results¹—Polychlorinated Biphenyls
Beaverton Cardlock
Beaverton, Oregon

Sample Location	Sample ID	Sample Date	Sample Depth (feet bgs)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs
				Concentration in mg/kg							
B-4	B-4 (19-20)	6/15/2023	19-20	<0.0214	<0.0214	<0.0214	<0.0214	<0.0214	<0.0214	<0.0214	<0.0214
Potentially Applicable DEQ Risk-Based Concentrations ² (mg/kg)											
Soil Ingestion, Dermal Contact, Inhalation			Residential	--	--	--	--	--	--	--	0.23
			Urban Residential	--	--	--	--	--	--	--	0.33
			Occupational	--	--	--	--	--	--	--	0.59
			Construction Worker	--	--	--	--	--	--	--	4.9
			Excavation Worker	--	--	--	--	--	--	--	140
Soil Leaching to Groundwater			Residential	--	--	--	--	--	--	--	0.24
			Urban Residential	--	--	--	--	--	--	--	1.1
			Occupational	--	--	--	--	--	--	--	1.1

Notes:

¹ Chemical analyses were performed by Apex Laboratories in Tigard, Oregon. PCB Aroclors analysis by United States Environmental Protection Agency (EPA) Method 8082.

² Oregon Department of Environmental Quality (DEQ) Risk Based Decision Making for the Remediation of Petroleum-Contaminated Sites, revised June 2023. Chromium RBCs are for Chromium VI.

< = constituent was not detected at a concentration greater than laboratory reporting limit shown

-- = not analyzed or not established

mg/kg = milligrams per kilogram; bgs = below ground surface

Bold = Analyte was detected above the laboratory method detection limit.

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

Table 4
Soil Chemical Analytical Results¹—Polycyclic Aromatic Hydrocarbons
Beaverton Cardlock
Beaverton, Oregon

Sample Location	Sample ID	Sample Date	Sample Depth (feet bgs)	PAHs ² (mg/kg)											
				Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Crysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene
B-2	B-2 (6-7)	6/15/2023	6-7	< 0.014	< 0.014	< 0.014	< 0.014	< 0.014	< 0.014	< 0.014	< 0.014	< 0.014	< 0.014	< 0.014	< 0.014
B-4	B-4 (19-20)	6/15/2023	19-20	< 0.022	< 0.022	< 0.022	< 0.022	< 0.022	< 0.022	< 0.022	< 0.022	< 0.022	< 0.022	< 0.022	< 0.022
B-5	B-5 (5-6)	6/15/2023	5-6	< 0.0129	< 0.0129	< 0.0129	< 0.0129	< 0.0129	< 0.0129	< 0.0129	< 0.0129	< 0.0129	< 0.0129	< 0.0129	< 0.0129
Truck Rack	HA (2)	6/15/2023	1.5-2.5	< 0.0145 R-02	< 0.0103	< 0.0103	< 0.0103	< 0.0103	< 0.0103	< 0.0103	< 0.0103	< 0.0114 R-02	< 0.0103	< 0.0103	< 0.0103
Potentially Applicable DEQ Risk-Based Concentrations ²															
Soil Ingestion, Dermal Contact and Inhalation															
Residential				4,700	NE	23,000	1.1	0.11	1.1	11	NE	NE	NE	2,400	3,100
Urban Residential				9,400	NE	47,000	2.5	0.25	2.5	25	NE	NE	NE	4,800	6,300
Occupational				70,000	NE	350,000	21	2.1	21	210	NE	NE	NE	30,000	47,000
Construction Worker				21,000	NE	110,000	170	17	170	1,700	NE	NE	NE	10,000	14,000
Excavation Worker				590,000	NE	NE	4,800	490	4,900	49,000	NE	NE	NE	280,000	390,000
Soil Leaching to Groundwater															
Residential				NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Urban Residential				NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Occupational				NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Oregon DEQ Clean Fill Determinations ³				NE	120	6.8	0.73	0.11	1.1	11	25	3.1	0.11	10	3.7

Please refer to notes at end of table.

Table 4
Soil Chemical Analytical Results¹ - Polycyclic Aromatic Hydrocarbons
Newberg Cardlock and Warehouse
Newberg, Oregon

Sample Location	Sample ID	Sample Date	Sample Depth (feet bgs)	PAHs ² (mg/kg)						
				Indeno(1,2,3-CD)pyrene	Naphthalene	Phenanthrene	Pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Dibenzofuran
B-2	B-2 (6-7)	6/15/2023	6-7	< 0.014	< 0.014	< 0.014	< 0.014	< 0.014	< 0.014	< 0.014
B-4	B-4 (19-20)	6/15/2023	19-20	< 0.022	< 0.022	< 0.022	< 0.022	< 0.022	< 0.022	< 0.022
B-5	B-5 (5-6)	6/15/2023	5-6	< 0.0129	< 0.0129	< 0.0129	< 0.0129	< 0.0129	< 0.0129	< 0.0129
Truck Rack	HA (2)	6/15/2023	1.5-2.5	< 0.0103	< 0.0103	< 0.0103	0.0109	< 0.0103	0.0166	< 0.444 R-02
Potentially Applicable DEQ Risk-Based Concentrations ²										
Soil Ingestion, Dermal Contact and Inhalation										
Residential				1.1	5.3	NE	1,800	NE	NE	NE
Urban Residential				2.5	25	NE	3,600	NE	NE	NE
Occupational				21	23	NE	23,000	NE	NE	NE
Construction Worker				170	580	NE	7,500	NE	NE	NE
Excavation Worker				4,900	16,000	NE	210,000	NE	NE	NE
Soil Leaching to Groundwater										
Residential				NE	0.077	NE	NE	NE	NE	NE
Urban Residential				NE	0.37	NE	NE	NE	NE	NE
Occupational				NE	0.34	NE	NE	NE	NE	NE
Oregon DEQ Clean Fill Determinations ³				1.1	0.077	5.5	10	0.36	11	NE

Notes:

¹ Chemical analyses were performed by Apex Laboratories in Tigard, Oregon. Polycyclic Aromatic Hydrocarbons analyzed by EPA Method 8270E. See laboratory report for full list of analytes.

² Oregon Department of Environmental Quality (DEQ) Risk Based Decision Making for the Remediation of Petroleum-Contaminated Sites, revised June 2023.

³ DEQ 2019. Clean Fill Determinations. Oregon DEQ Materials Management, Portland, Oregon, February 2019.

mg/kg = milligrams per kilogram; – = Not Analyzed, bgs = below ground surface; NE = Not Established; ppm = parts per million

<0.0109 indicates analyte not detected above the method reporting limit.

Bold indicates the analyte was detected above laboratory method reporting limit (MRL).

Table 5
Groundwater Chemical Analytical Results
Petroleum Hydrocarbons, Metals and PCBs
Beaverton Cardlock
Beaverton, Oregon

Sample Location	Sample ID	Date	Gasoline-Range Hydrocarbons NWTPH-Gx (µg/L)	Diesel-Range Hydrocarbons NWTPH-Dx (µg/L)	Residual-Range Hydrocarbons NWTPH-Dx (µg/L)	Metals (µg/L)								Total Polychlorinated Biphenyls (µg/L)
						Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	
B-3	B-3 (GW)	6/15/2023	< 100	< 83.3	< 167	17.8	734	0.376	90.1	18.0	< 0.0800	1.34	< 0.200	–
B-4	B-4 (GW)	6/15/2023	< 100	< 81.6	< 163	28.5	808	3.76	106	24.4	0.140	15.1	0.449	< 0.103
B-6	B-6 (GW)	6/15/2023	< 100	< 80.8	< 162	13.0	500	0.766	43.7	8.15	< 0.0800	4.89	0.228	< 0.104
W-2	W-2 (1)	6/15/2023	< 100	< 76.2	< 152	5.81	114	< 0.200	< 2.00	0.372	< 0.0800	< 1.00	< 0.200	–
Potentially Applicable DEQ Risk-Based Concentrations														
Groundwater Ingestion and Inhalation from Tap Water														
Residential			110	100	300	0.052	4,000	20	0.05	15	6.0	NE	100	0.0060
Urban Residential			110	100	300	0.21	15,000	73	0.16	15	22	NE	370	0.028
Occupational			450	430	1,300	0.31	33,000	160	0.90	15	49	NE	820	0.028
Groundwater to Indoor Air														
Residential			NE	NE	NE	NE	NE	NE	NE	NE	2.6	NE	NE	0.029
Occupational			NE	NE	NE	NE	NE	NE	NE	NE	11	NE	NE	1.3
Groundwater in Excavation														
Construction and Excavation Worker			14,000	NE	NE	6,300	NE	130,000	9,400	NE	NE	NE	1,100,000	30

Notes:

Chemical analyses were performed by Apex Laboratories in Tigard, Oregon.

Gasoline analyzed by Northwest Method NWTPH-Gx. Diesel- and oil-range hydrocarbons by Northwest Method NWTPH-Dx.

Polychlorinated biphenyls (PCBS) by EPA Method 8082. The listed result in the maximum reporting limit for the Aroclors. Refer to chemical analytical report in Appendix B for complete list of method analytes and detection limits.

Oregon Department of Environmental Quality (DEQ) Risk Based Decision Making for the Remediation of Petroleum-Contaminated Sites, revised June 2023.

µg/L = micrograms per liter, -- = Not Analyzed, bgs = below ground surface; NE = Not Established; ND = Not Detected

J = The identification of the analyte is acceptable; the reported value is an estimate.

<100 indicates analyte not detected above the method detection limit.

Bold indicates the analyte was detected above laboratory method reporting limit (MRL).

NE = Not established.

Table 6
Groundwater Chemical Analytical Results
Volatile Organic Compounds
Beaverton Cardlock
Beaverton, Oregon

Sample ID	B-3 (GW)	B-4 (GW)	B-6 (GW)	W-2 (GW)	DEQ Risk-Based Concentrations (µg/L) ⁶					
Sample Date	6/15/2023	6/15/2023	6/15/2023	6/15/2023	Groundwater Ingestion and Inhalationfrom			Groundwater to Indoor Air		Groundwater in
Screened Interval (feet bgs)	5-20	5-20	5-2	Unknown	Tapwater					Excavation
Volatile Organic Compounds by EPA Method 8260B (µg/L)					Res.	Urb. Res.	Occ.	Res.	Occ.	Const. and Exc. Worker
1,1,1,2-Tetrachloroethane	<0.400	<0.400	<0.400	<0.400	--	--	--	8	36	--
1,1,1-Trichloroethane	<0.400	<0.400	<0.400	<0.400	8,000	30,000	37,000	13,000	53,000	1,100,000
1,1,2,2-Tetrachloroethane	<0.500	<0.500	<0.500	<0.500	--	--	--	6.8	30	--
1,1,2-Trichloroethane	<0.500	<0.500	<0.500	<0.500	0.28	1.30	1.30	10	44	49
1,1-Dichloroethane	<0.400	<0.400	<0.400	<0.400	2.8	13	13	13	55	10,000
1,1-Dichloroethene	<0.400	<0.400	<0.400	<0.400	--	--	--	--	--	--
1,1-Dichloroethene	<1.00	<1.00	<1.00	<1.00	280	1,100	1,400	300	890	44,000
1,2,3-Trichlorobenzene	<2.00	<2.00	<2.00	<2.00	--	--	--	--	--	--
1,2,3-Trichloropropane	<1.00	<1.00	<1.00	<1.00	--	--	--	47	200	--
1,2,4-Trichlorobenzene	<2.00	<2.00	<2.00	<2.00	--	--	--	--	--	--
1,2,4-Trimethylbenzene	<1.00	<1.00	<1.00	<1.00	54	230	250	560	2,400	6,300
1,2-Dibromo-3-Chloropropane	<5.00	<5.00	<5.00	<5.00	--	--	--	0.07	0.81	--
1,2-Dibromoethane	<0.500	<0.500	<0.500	<0.500	--	--	0.03	0.34	1.5	27
1,2-Dichlorobenzene	<0.500	<0.500	<0.500	<0.500	300	1,200	1,400	--	--	37,000
1,2-Dichloroethane	<0.400	<0.400	<0.400	<0.400	0.17	0.78	0.8	4.0	18	630
1,2-Dichloropropane	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--
1,3,5-Trimethylbenzene	<1.00	<1.00	<1.00	<1.00	59	240	280	400	1,700	7,500
1,3-Dichlorobenzene	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--
1,3-Dichloropropane	<1.00	<1.00	<1.00	<1.00	--	--	--	--	--	--
1,4-Dichlorobenzene	<0.500	<0.500	<0.500	<0.500	0.48	2.3	2.1	5.8	25	1,500
1,2-Dichloropropane	<1.00	<1.00	<1.00	<1.00	--	--	--	12	52	--
2-Butanone (MEK)	<10.0	<10.0	<10.0	<10.0	--	--	--	170,000	12,000,000	--
2-Chlorotoluene	<1.00	<1.00	<1.00	<1.00	--	--	--	--	--	--
2-Hexanone	<10.0	<10.0	<10.0	<10.0	--	--	--	--	--	--
4-Chlorotoluene	<1.00	<1.00	<1.00	<1.00	--	--	--	--	--	--
p-Isopropyltoluene	<1.00	<1.00	<1.00	<1.00	--	--	--	--	--	--
4-Methyl-2-pentanone (MIBK)	<10.0	<10.0	<10.0	<10.0	--	--	--	1,100,000	4,600,000	--
Acetone	<20.0	<20.0	<20.0	<20.0	--	--	--	2,100,000	--	--
Acrylonitrile	<2.00	<2.00	<2.00	<2.00	0.05	0.23	0.3	13	58	250
Benzene	<0.200	<0.200	<0.200	<0.200	0.46	2.0	2.1	2.8	12	1,800
Bromobenzene	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--
Bromochloromethane	<1.00	<1.00	<1.00	<1.00	--	--	--	--	--	--
Bromodichloromethane	<1.00	<1.00	<1.00	<1.00	0.13	0.62	0.6	--	--	450
Bromoform	<1.00	<1.00	<1.00	<1.00	3.3	15	16	250	1,100	14,000
Bromomethane	<5.00	<5.00	<5.00	<5.00	7.5	28	36	25	110	1,200
Carbon disulfide	<10.0	<10.0	<10.0	<10.0	--	--	--	1,900	8,200	--
Carbon tetrachloride	<1.00	<1.00	<1.00	<1.00	0.46	2	2.1	0.7	3.1	1,800
Chlorobenzene	<0.500	<0.500	<0.500	<0.500	77	290	350	810	3,400	10,000
Chloroethane	<5.00	<5.00	<5.00	<5.00	21,000	76,000	88,000	14,000	57,000	2,400,000

Please refer to notes at end of table.

Table 6
Groundwater Chemical Analytical Results
Volatile Organic Compounds
Beaverton Cardlock
Beaverton, Oregon

Sample ID	B-3	B-4	B-6	W-2	Potentially Applicable DEQ Risk-Based Concentrations (µg/L)					
Sample Date	6/15/2023	6/15/2023	6/15/2023	6/15/2023	Groundwater Ingestion and Inhalationfrom Tapwater			Groundwater to Indoor Air		Groundwater in Excavation
Screened Interval (feet bgs)	5-20	5-20	5-2	Unknown						
Volatile Organic Compounds by EPA Method 8260B (µg/L)					Res.	Urb. Res.	Occ.	Res.	Occ.	Const. and Exc. Worker
Chloroform	<1.00	<1.00	<1.00	<1.00	0.22	1.0	1.0	1.4	5.9	720
Chloromethane	<5.00	<5.00	<5.00	<5.00	190	690	790	350	1,500	22,000
cis-1,2-Dichloroethene	<0.400	<0.400	<0.400	<0.400	36	140	260	--	--	18,000
cis-1,3-Dichloropropene	<1.00	<1.00	<1.00	<1.00	--	--	--	--	--	--
Chlorodibromomethane	<1.00	<1.00	<1.00	<1.00	0.17	0.77	0.76	--	--	610
Dibromomethane	<1.00	<1.00	<1.00	<1.00	--	--	--	--	--	--
Dichlorodifluoromethane	<1.00	<1.00	<1.00	<1.00	--	--	--	--	--	--
Ethylbenzene	<0.500	<0.500	<0.500	<0.500	1.5	6.7	6.4	7.1	31	4,500
Hexachloro-1,3-butadiene	<5.00	<5.00	<5.00	<5.00	--	--	--	0.7	3.3	--
Isopropylbenzene	<1.00	<1.00	<1.00	<1.00	440	1,800	2,000	2,200	9,100	51,000
Xylenes, Total	<1.00	<1.00	<1.00	<1.00	190	710	830	780	3,300	23,000
Methyl tert-butyl ether	<1.00	19.0	9.27	5.58	14	64	68	740	3,200	63,000
Methylene Chloride	<10.0	<10.0	<10.0	<10.0	11	37	200	1,200	15,000	79,000
Naphthalene	<2.00	<2.00	<2.00	<2.00	0.17	0.78	0.72	11	50	500
n-Butylbenzene	<1.00	<1.00	<1.00	<1.00	--	--	--	--	--	--
n-Propylbenzene	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--
Xylenes, Total	<0.500	<0.500	<0.500	<0.500	190	710	830	780	3,300	23,000
sec-Butylbenzene	<1.00	<1.00	<1.00	<1.00	--	--	--	--	--	--
Styrene	<1.00	<1.00	<1.00	<1.00	1,200	4,600	5,700	20,000	84,000	170,000
tert-Butylbenzene	<1.00	<1.00	<1.00	<1.00	--	--	--	--	--	--
Tetrachloroethene	<0.400	<0.400	<0.400	<0.400	12	49	48	29	130	5,600
Toluene	<1.00	<1.00	<1.00	<1.00	1,100	4,400	6,300	36,000	150,000	220,000
trans-1,2-Dichloroethene	<0.400	<0.400	<0.400	<0.400	360	1,400	2,600	180	750	180,000
trans-1,3-Dichloropropene	<1.00	<1.00	<1.00	<1.00	--	--	--	--	--	--
Trichloroethene	<0.400	<0.400	<0.400	<0.400	0.49	2.0	3.3	2.1	13	430
Trichlorofluoromethane	<2.00	<2.00	<2.00	<2.00	1,100	4,200	5,200	--	--	160,000
Vinyl chloride	<0.400	<0.400	<0.400	<0.400	0.027	0.066	0.5	0.2	3.3	960

Notes:

< = constituent was not detected at a concentration greater than laboratory reporting limit shown.

-- = not applicable or not established

Oregon Department of Environmental Quality Risk Based Concentrations (RBCs), Updated June 2023.

µg/L = micrograms per liter

Shaded values exceed one or more DEQ Risk-Based Concentrations.

bgs = below ground surface

Res. = Residential

Urb. Res. = Urban Residential

Occ. = Occupational

Const. = Construction worker

Exc. = Excavation worker

Bold = Analyte was detected above the laboratory method detection limit.

The groundwater to indoor air RBC is the minimum of the chronic and acute RBCs published by DEQ.

Table 7
Groundwater Chemical Analytical Results
Polycyclic Aromatic Hydrocarbons
 Beaverton Cardlock
 Beaverton, Oregon

Sample ID	B-3 (GW)	B-4 (GW)	B-6 (GW)	W-2 (GW)	Potentially Applicable DEQ Risk-Based Concentrations (µg/L)					
Sample Date	6/15/2023	6/15/2023	6/15/2023	6/15/2023	Groundwater Ingestion and Inhalation from Tapwater			Groundwater to Indoor Air		Groundwater in Exc.
Screened Interval (Feet bgs)	5-20	5-20	5-2	Unknown						Exc.
Polycyclic Aromatic Hydrocarbons by EPA 8270S-SIM (µg/L)					Res.	Urb. Res.	Occ.	Res.	Occ.	Const. and Exc. Worker
Anthracene	<0.0372	<0.0366	<0.0403	<0.0355	-	-	-	-	-	-
Acenaphthene	<0.0372	<0.0366	<0.0403	<0.0355	510	2400	2500	-	-	-
Acenaphthylene	<0.0372	<0.0366	<0.0403	<0.0355	-	-	-	-	-	-
Benzo(a)Anthracene	<0.0186	<0.0183	<0.0202	<0.0178	0.03	0.11	0.38	190	2300	-
Benzo(a)Pyrene	<0.0186	<0.0183	<0.0202	<0.0178	0.025	0.08	0.47	-	-	-
Benzo(b)Fluoranthene	<0.0186	<0.0183	<0.0202	<0.0178	0.25	0.8	-	-	-	-
Benzo(g,h,i)Perylene	<0.0372	<0.0366	<0.0403	<0.0355	-	-	-	-	-	-
Benzo(k)Fluoranthene	<0.0186	<0.0183	<0.0202	<0.0178	-	-	-	-	-	-
Chrysene	<0.0186	<0.0183	<0.0202	<0.0178	-	-	-	-	-	-
Carbazole	<0.0372	<0.0366	<0.0403	<0.0355	-	-	-	-	-	-
Dibenz(a,h)Anthracene	<0.0186	<0.0183	<0.0202	<0.0178	0.025	0.08	0.47	-	-	-
Dibenzofuran	<0.0372	<0.0366	<0.0403	<0.0355	-	-	-	-	-	-
Fluoranthene	<0.0372	<0.0366	<0.0403	<0.0355	-	-	-	-	-	-
Fluorene	<0.0372	<0.0366	<0.0403	<0.0355	280	1400	1300	-	-	-
Indeno(1,2,3-cd)Pyrene	<0.0186	<0.0183	<0.0202	<0.0178	-	-	-	-	-	-
Naphthalene	<0.0743	<0.0731	<0.0806	<0.0711	0.17	0.78	0.72	11	50	500
Phenanthrene	<0.0743	<0.0731	<0.0806	<0.0711	-	-	-	-	-	-
Pyrene	<0.0372	<0.0366	<0.0403	<0.0355	110	-	-	-	-	-
1-Methylnaphthalene	<0.0743	<0.0731	<0.0806	<0.0711	-	-	-	-	-	-
2-Methylnaphthalene	<0.0743	<0.0731	<0.0806	<0.0711	-	-	-	-	-	-

Notes:

< = constituent was not detected at a concentration greater than laboratory reporting limit shown.

- = not applicable or not established

J = concentration is less than the reporting limit but greater than the laboratory detection limit. The reported value is an estimate.

B = The same analyte was found in the associated laboratory blank sample.

Oregon Department of Environmental Quality Risk Based Concentrations (RBCs), Updated June 2023.

Shaded values exceed one or more DEQ Risk-Based Concentrations.

µg/L = micrograms per liter

bgs = below ground surface

Res. = Residential

Urb. Res. = Urban Residential

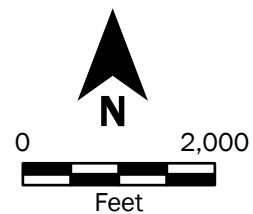
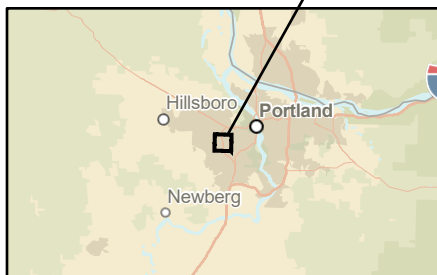
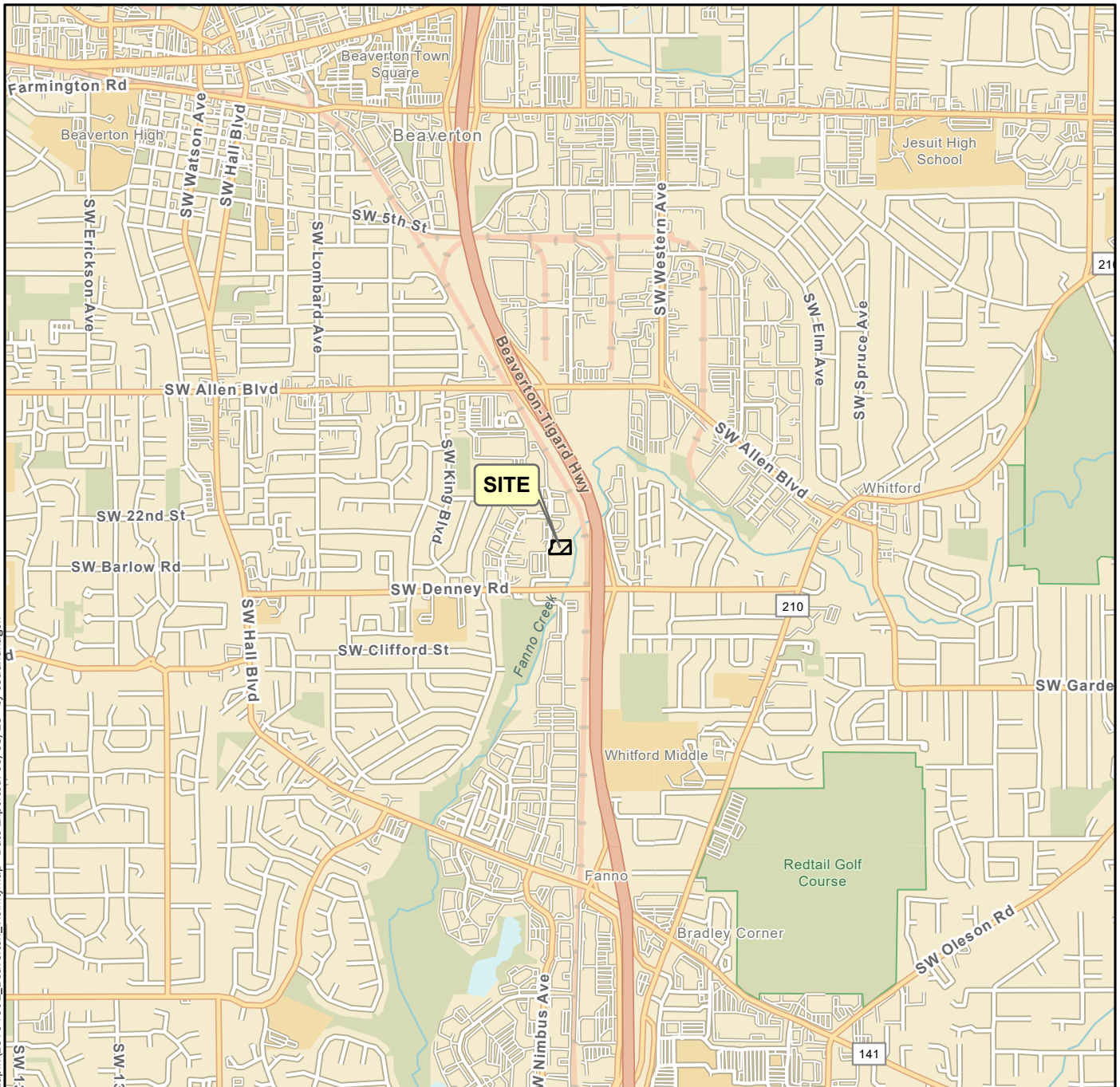
Occ. = Occupational

Const. = Construction worker

Exc. = Excavation worker

Bold = Analyte was detected above the laboratory method detection limit.

The groundwater to indoor air RBC is the minimum of the chronic and acute RBCs published by DEQ.



Vicinity Map

Beaverton Cardlock
6750 SW 110th Ct. Beaverton, OR 97008

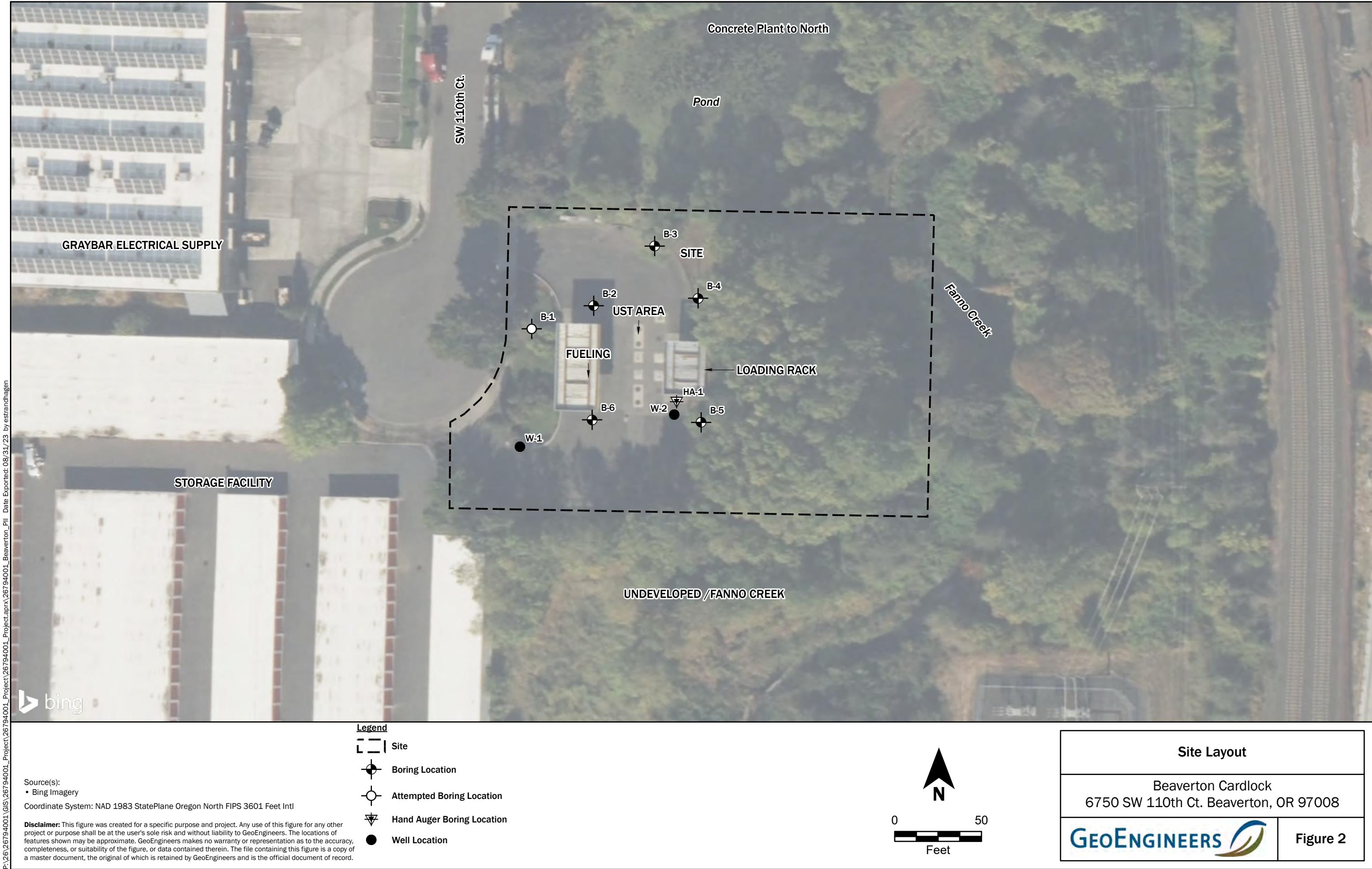


Figure 1

Source(s):
• ESRI

Coordinate System: NAD 1983 UTM Zone 10N

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.



APPENDIX A

Field Procedures and Boring Logs

APPENDIX A

FIELD PROCEDURES AND BORING LOGS

Underground Utility Locate

An underground utility locate was conducted within the area of the proposed boring locations to identify any subsurface utilities and/or potential underground physical hazards prior to beginning drilling activities. An underground utility check consisting of contacting a local utility alert service and a private utility locating service was also performed. Services performed included ground penetrating radar (GPR) location, and conductible location.

Soil Sampling

Soil borings were advanced using direct-push drilling equipment operated by Holt Drilling. Soil samples were collected in clean, plastic 1.5-inch diameter disposable liners during direct-push drilling activities.

A GeoEngineers representative classified the soil encountered in each of the borings. Soil in the explorations was visually classified in general accordance with ASTM International (ASTM) D2488-00.

Non-dedicated sampling equipment was decontaminated before each sampling attempt with an Alconox® solution wash and a distilled water rinse. Soil samples were obtained for field screening and possible chemical analysis. Soil samples obtained during the exploration activities were collected from the sampler with a new laboratory-supplied syringe and plunger (by EPA Method 5035), stainless-steel knife and/or spoon, or new nitrile gloves. A portion of each sample was placed in laboratory-prepared sample jars for chemical analysis.

Samples submitted for chemical analysis are shown on the boring logs. Soil samples collected during direct-push drilling activities were placed in a cooler with ice for transport to Apex following standard chain-of-custody procedures.

Groundwater Sample Collection and Handling

Groundwater samples were obtained from selected borings from a temporary polyvinyl chloride (PVC) well screen using a peristaltic pump with high-density polyethylene tubing at low-flow sampling rates. The groundwater was pumped at approximately 0.5 liter per minute until the water purged relatively clear, after which samples were collected at a flow rate of approximately 0.5 liter per minute (low-flow). The groundwater sample from the established monitoring well (W-2) was collected using a low-flow sampling procedure. The well was purged at a flow rate of 0.2 liter per minute, and parameters were allowed to stabilize before a sample was collected. Purging generated wastewater, which was drummed and temporarily stored on the property pending off-site disposal.

The groundwater samples were transferred directly from the tubing outlet to laboratory-prepared sample containers. New nitrile gloves were worn when collecting the groundwater sample. The sample containers were filled completely and placed in a cooler with ice pending transport to the analytical laboratory. Sample labels were completed and chain-of-custody procedures were followed in transporting the sample to the laboratory.

Field Screening of Soil Samples

Soil samples obtained from the borings were screened in the field for evidence of contamination using: (1) visual examination; (2) sheen screening; and (3) a photoionization detector (PID). The results of headspace and sheen screening are included on the boring logs and in Table 1 for soil samples tested by chemical analysis.

Visual screening consists of inspecting the soil for stains indicative of petroleum-related contamination. Visual screening is generally more effective when contamination is related to heavy petroleum hydrocarbons, such as motor oil or hydraulic oil, or when hydrocarbon concentrations are high. Sheen screening and headspace vapor screening are more sensitive methods that have been effective in detecting contamination at concentrations less than regulatory cleanup guidelines. Sheen screening involves placing soil in a pan of water and observing the water surface for signs of sheen. Sheen classifications are as follows:

- No Sheen (NS): No visible sheen on water surface.
- Slight Sheen (SS): Light, colorless, dull sheen; spread is irregular, not rapid; sheen dissipates rapidly. Natural organic matter in the soil may produce a slight sheen.
- Moderate Sheen (MS): Light to heavy sheen; may have some color/iridescence; spread is irregular to flowing, may be rapid; few remaining areas of no sheen on water surface.
- Heavy Sheen (HS): Heavy sheen with color/iridescence; spread is rapid; entire water surface may be covered with sheen.

Headspace vapor screening involves placing a portion of the soil sample in a plastic sample bag or clean 4-ounce jar covered with aluminum foil. Air is captured in the bag or jar and the bag or jar is shaken to expose the soil to the trapped air. The probe of a PID is inserted in the bag or used to puncture the aluminum foil covering the jar and the instrument measures the concentration of combustible vapor in the air removed from the sample headspace. The PID measures concentrations in parts per million (ppm) and is calibrated to isobutylene. The PID is designed to quantify combustible gas and organic vapor concentrations up to 2,500 ppm. Field screening results are site-specific and vary with soil type, soil moisture content, temperature and type of contaminant.

Soil Logging

The field representative visually classified the soil in accordance with ASTM Method D2488 and recorded soil descriptions and other relevant field screening details (e.g., staining, debris, odor etc.) in the field log. ASTM Method D2488 is the visual-manual soil description method that corresponds to laboratory ASTM Method D2487 (Unified Soil Classification System [USCS] method). The boring logs are presented in this appendix.

Sample Nomenclature

Soil samples collected from the borings were identified using the following identification system: B# (start depth-end depth), where B# is the boring number, and start depth-end depth is the depth interval at which

the specific sample was collected (e.g., B1 [7–8]) was collected from boring location B-1 between 7 and 8 feet bgs).

Boring Backfilling

The borings were backfilled with bentonite and restored to match the surrounding surface (concrete or asphalt) in accordance with applicable regulations for borehole abandonment.

Investigation-Derived Waste

IDW was transferred to a steel drum stored at the Site pending pickup and disposal coordination for disposal at a permitted off-site disposal facility.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
		(LITTLE OR NO FINES)		GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
		GRAVELS WITH FINES		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
		(APPRECIABLE AMOUNT OF FINES)		GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS	CLEAN SANDS		SW	WELL-GRADED SANDS, GRAVELLY SANDS
		(LITTLE OR NO FINES)		SP	POORLY-GRADED SANDS, GRAVELLY SAND
SANDS WITH FINES			SM	SILTY SANDS, SAND - SILT MIXTURES	
(APPRECIABLE AMOUNT OF FINES)			SC	CLAYEY SANDS, SAND - CLAY MIXTURES	
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

Sampler Symbol Descriptions

	2.4-inch I.D. split barrel / Dames & Moore (D&M)
	Standard Penetration Test (SPT)
	Shelby tube
	Piston
	Direct-Push
	Bulk or grab
	Continuous Coring

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

"P" indicates sampler pushed using the weight of the drill rig.

"WOH" indicates sampler pushed using the weight of the hammer.

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

ADDITIONAL MATERIAL SYMBOLS

SYMBOLS		TYPICAL DESCRIPTIONS
GRAPH	LETTER	
	AC	Asphalt Concrete
	CC	Cement Concrete
	CR	Crushed Rock/Quarry Spalls
	SOD	Sod/Forest Duff
	TS	Topsoil

Groundwater Contact



Measured groundwater level in exploration, well, or piezometer



Measured free product in well or piezometer

Graphic Log Contact



Distinct contact between soil strata



Approximate contact between soil strata

Material Description Contact



Contact between geologic units



Contact between soil of the same geologic unit

Laboratory / Field Tests

%F	Percent fines
%G	Percent gravel
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DD	Dry density
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
Mohs	Mohs hardness scale
OC	Organic content
PM	Permeability or hydraulic conductivity
PI	Plasticity index
PL	Point load test
PP	Pocket penetrometer
SA	Sieve analysis
TX	Triaxial compression
UC	Unconfined compression
UU	Unconsolidated undrained triaxial compression
VS	Vane shear

Sheen Classification

NS	No Visible Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen

Key to Exploration Logs



Figure A-1

Drilled	Start	End	Total Depth (ft)	2	Logged By	SJR	Driller	Holt Services, Inc.	Drilling Method	Direct Push	
Surface Elevation (ft) Vertical Datum					Undetermined			Hammer Data		Drilling Equipment Geoprobe 7822DT	
Latitude Longitude					System Datum			Groundwater not observed at time of exploration			
Notes:											

Elevation (feet)	Depth (feet)	FIELD DATA				Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
		Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0						ML	Gray silt with trace sand (medium stiff, dry)				
										<1	
Hand auger refusal 1 foot west and 2 feet north of original location; three cases of hand auger refusal; refusal at 30 inches											
Note: See Figure A-1 for explanation of symbols. Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .											

Log of Boring B-1	
	Project: Beaverton Turnkey Phase II Project Location: Beaverton, Oregon Project Number: 26794-001-00
Figure A-2 Sheet 1 of 1	

Date: 8/2/23 Path: P:\26794\GINT\26794001.GINT\26794001.GPJ DBLlibrary\Library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\GEB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start	End	Total Depth (ft)	20	Logged By	SJR	Driller	Holt Services, Inc.	Drilling Method	Direct Push	
Surface Elevation (ft) Vertical Datum					Undetermined			Hammer Data		Drilling Equipment Geoprobe 7822DT	
Latitude Longitude					System Datum			Groundwater not observed at time of exploration			
Notes:											

Elevation (feet)	Depth (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
		Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0		24						CR	Base rock			
								ML	Gray silt (stiff, moist)			
5		31						ML	Gray silt (medium stiff)		<1	
10		60									<1	
15		48						CL	Black clay (stiff, moist)		<1	
								ML	Gray silt (medium stiff, wet)		<1	
								ML	Gray silt, low elasticity (medium stiff, moist)			
								ML	Gray silt (medium stiff, wet)		<1	
20												

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring B-2



Project: Beaverton Turnkey Phase II
Project Location: Beaverton, Oregon
Project Number: 26794-001-00

Figure A-3
Sheet 1 of 1

Drilled	Start	End	Total Depth (ft)	20	Logged By	SJR	Driller	Holt Services, Inc.	Drilling Method	Direct Push	
Surface Elevation (ft) Vertical Datum					Undetermined			Hammer Data		Drilling Equipment Geoprobe 7822DT	
Latitude Longitude					System Datum			Groundwater not observed at time of exploration			
Notes:											

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	60						AC	Approximately 6 inches of asphalt concrete pavement			
							GP	Approximately 1 foot of base rock			
							ML	Brown silt (medium dense, moist) Hand cleared to 5 feet			
5	45						ML	Gray silt with trace clay (medium stiff, moist)		<1	
										<1	
										<1	
10	60									<1	
							ML	Dark gray silt (stiff, moist)		<1	
								Becomes medium stiff		<1	
15	60									<1	
										<1	
20										<1	

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring B-3



Project: Beaverton Turnkey Phase II
Project Location: Beaverton, Oregon
Project Number: 26794-001-00

Figure A-4
Sheet 1 of 1

Drilled	Start 6/15/2023	End 6/15/2023	Total Depth (ft)	25	Logged By Checked By	SJR	Driller	Holt Services, Inc.	Drilling Method	Direct Push		
Surface Elevation (ft) Vertical Datum					Undetermined			Hammer Data		Drilling Equipment		Geoprobe 7822DT
Latitude Longitude					System Datum			Groundwater not observed at time of exploration				
Notes:												

Elevation (feet)	Depth (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
		Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0		60							Hand cleared to 5 feet			
5		39						ML	Dark gray silt (medium stiff, moist)	NS	<1	
											<1	
											<1	
10		46									<1	
											<1	
15		60						CL	Dark gray to black silty clay (dense, moist)		<1	
								ML	Gray silt		<1	
								ML	Dark gray to black silt			
20		60						ML	Light gray silt (soft, wet)		<1	
											<1	
25												

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring B-4



Project: Beaverton Turnkey Phase II
Project Location: Beaverton, Oregon
Project Number: 26794-001-00

Figure A-5
Sheet 1 of 1

Drilled	Start	End	Total Depth (ft)	20	Logged By	SJR	Driller	Holt Services, Inc.	Drilling Method	Direct Push	
Surface Elevation (ft)					Undetermined			Hammer Data		Drilling Equipment	
Vertical Datum										Geoprobe 7822DT	
Latitude					System Datum			Groundwater not observed at time of exploration			
Longitude											
Notes:											

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	35						GP	Base rock, sand			
							CL	Clay (stiff, dry)		<1	
5	43						ML	Silt (stiff)		<1	
							CL	Clay (stiff, wet)		1.4	
10	60						ML	Silt (medium stiff, moist)		<1	
							CL	Clay (medium stiff)		<1	
15	60						CL	Black clay mixed with silt (stiff, wet)		<1	
										<1	
20										1.1	

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring B-5



Project: Beaverton Turnkey Phase II
Project Location: Beaverton, Oregon
Project Number: 26794-001-00

Figure A-6
Sheet 1 of 1

Drilled	Start	End	Total Depth (ft)	20	Logged By	SJR	Driller	Holt Services, Inc.	Drilling Method	Direct Push		
Surface Elevation (ft)					Undetermined			Hammer Data		Drilling Equipment		Geoprobe 7822DT
Latitude					Longitude			System Datum		Groundwater not observed at time of exploration		
Notes:												

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	60						AC	Approximately 6 inches of asphalt concrete pavement			
							CR	Approximately 1 foot of base rock			
							ML	Gray silt			
5	48						CL	Transitions to mostly clay at 5 feet	NS	<1	
							CL	Wet layer		1.9	
							CL	Clay		<1	
10	60						ML	Sandy silt		<1	
							CL	Black clay, some silt (dense, moist)		<1	
15	60						ML	Clayey silt (medium stiff)		<1	
20										<1	

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring B-6



Project: Beaverton Turnkey Phase II
Project Location: Beaverton, Oregon
Project Number: 26794-001-00

Figure A-7
Sheet 1 of 1

Date Excavated	Total Depth (ft) 5	Logged By SJR Checked By	Excavator Holt Services, Inc. Equipment Hand Auger	Groundwater not observed Caving not observed
Surface Elevation (ft) Vertical Datum	Undetermined	Latitude Longitude	Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE		Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
		Testing Sample	Sample Name Testing						
	1	HA (2)			GP	Sand/gravel			
					GM	Silt/sand/gravel	NS	5.2	
	2				GP	Gravel	NS	5.7	
	3				ML	Clay/silt	NS	<1	
	4				ML	Clay/silt	NS	<1	
	5						NS	<1	

Notes: See Figure A-1 for explanation of symbols.

The depths on the hand-augered boring logs are based on an average of measurements across the hand-auger and should be considered accurate to ½ foot.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Hand Auger HA



Project: Beaverton Turnkey Phase II
Project Location: Beaverton, Oregon
Project Number: 26794-001-00

Figure A-8
Sheet 1 of 1

APPENDIX B

Chemical Analytical Laboratory Reports

APPENDIX B

CHEMICAL ANALYTICAL LABORATORY REPORTS

Analytical Methods

Chain-of-custody procedures were followed during the transport of the soil samples collected during direct-push drilling activities to the analytical laboratory. The samples were held in cold storage pending extraction and/or analysis.

The analytical results, analytical method references and laboratory quality control (QC) records are included in this appendix. The analytical results are also summarized in the text and tables of this report.

Analytical Data Review

The analytical laboratories maintain an internal quality assurance program as documented in their respective laboratory quality assurance manuals. The laboratories use a combination of blanks, surrogate recoveries, duplicates, matrix spike recoveries, matrix spike duplicate recoveries, laboratory control spike recoveries and laboratory control spike duplicate recoveries to evaluate the validity of the analytical results. The laboratories also use data quality goals for individual chemicals or groups of chemicals based on the long-term performance of the test methods. Data quality goals were included in the laboratory reports. The laboratories compared each group of samples with the existing data quality goals and noted any exceptions in the laboratory report. Data quality exceptions documented by the accredited laboratories were reviewed by GeoEngineers and are addressed in the data quality exception section of this appendix.

Analytical Data Review Summary

Following data quality exceptions were noted in the laboratory reports during our review.

- In QC batch 23F0713 (report A3F1237), the matrix spike (MS) recovery percentage (using the non-source QC sample) was outside acceptable limits for chloroethane, 1,1,1,2-tetrachloroethane, and trichlorofluoromethane. No associated sample data were detected; therefore, no sample data were flagged as a result.
- In QC batch 23F0647 (report A3F1239), the MS recovery percentage (using the non-source QC sample) was outside acceptable limits for chloroethane and trichlorofluoromethane. No associated sample data were detected; therefore, no sample data were flagged as a result.
- In QC batch 23F0648 (report A3F1239), the MS recovery percentage (using the non-source QC sample) was outside acceptable limits for n-propylbenzene. No associated sample data were detected, therefore; no data were flagged as a result.
- In QC batch 23F0706 (report A3F1239), the MS recovery percentage (using the non-source QC sample) was outside acceptable limits for acenaphthene, fluorene, 1-methylnaphthalene, 2-methylnaphthalene, phenanthrene, and dibenzofuran. No sample data were flagged as a result.
- In some cases, the surrogate recovery was either estimated or not available due to sample dilution due to matrix interference.

Based on our data quality review, it is our opinion that the laboratory data qualifier listed for the sample above is not significant with respect to the use of the data for characterization purposes. The samples/results were considered of acceptable quality for their intended use in this report.



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Monday, June 26, 2023

Ian Maguire

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

RE: A3F1237 - Beaverton Phs. II - [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 A3F1237, which was received by the laboratory on 6/16/2023 at 1:55:00PM.

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

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

Cooler Receipt Information

(See Cooler Receipt Form for details)

Default Cooler 3.5 degC

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

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



Apex Laboratories

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200
Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W-2 (1)	A3F1237-01	Water	06/16/23 13:00	06/16/23 13:55

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4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

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
W-2 (1) (A3F1237-01)				Matrix: Water		Batch: 23F0874		
Diesel	ND	---	0.0762	mg/L	1	06/23/23 21:27	NWTPH-Dx LL	
Oil	ND	---	0.152	mg/L	1	06/23/23 21:27	NWTPH-Dx LL	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 69 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>06/23/23 21:27</i>	<i>NWTPH-Dx LL</i>	

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Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

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
W-2 (1) (A3F1237-01)				Matrix: Water		Batch: 23F0713		
Gasoline Range Organics	ND	---	0.100	mg/L	1	06/20/23 20:10	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 98 %	Limits: 50-150 %	1	06/20/23 20:10	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			109 %	50-150 %	1	06/20/23 20:10	NWTPH-Gx (MS)	

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Tigard, OR 97223
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ORELAP ID: OR100062**GeoEngineers**4000 Kruse Way Place, Bldg 3 Suite 200
Lake Oswego, OR 97035Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

ANALYTICAL SAMPLE RESULTS**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
W-2 (1) (A3F1237-01)		Matrix: Water			Batch: 23F0713			
Acetone	ND	---	20.0	ug/L	1	06/20/23 20:10	EPA 8260D	
Acrylonitrile	ND	---	2.00	ug/L	1	06/20/23 20:10	EPA 8260D	
Benzene	ND	---	0.200	ug/L	1	06/20/23 20:10	EPA 8260D	
Bromobenzene	ND	---	0.500	ug/L	1	06/20/23 20:10	EPA 8260D	
Bromochloromethane	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
Bromodichloromethane	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
Bromoform	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
Bromomethane	ND	---	5.00	ug/L	1	06/20/23 20:10	EPA 8260D	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	06/20/23 20:10	EPA 8260D	
n-Butylbenzene	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
sec-Butylbenzene	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
tert-Butylbenzene	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
Carbon disulfide	ND	---	10.0	ug/L	1	06/20/23 20:10	EPA 8260D	
Carbon tetrachloride	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
Chlorobenzene	ND	---	0.500	ug/L	1	06/20/23 20:10	EPA 8260D	
Chloroethane	ND	---	5.00	ug/L	1	06/20/23 20:10	EPA 8260D	
Chloroform	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
Chloromethane	ND	---	5.00	ug/L	1	06/20/23 20:10	EPA 8260D	
2-Chlorotoluene	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
4-Chlorotoluene	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
Dibromochloromethane	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	06/20/23 20:10	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	06/20/23 20:10	EPA 8260D	
Dibromomethane	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	06/20/23 20:10	EPA 8260D	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	06/20/23 20:10	EPA 8260D	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	06/20/23 20:10	EPA 8260D	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	06/20/23 20:10	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	06/20/23 20:10	EPA 8260D	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	06/20/23 20:10	EPA 8260D	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	06/20/23 20:10	EPA 8260D	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	06/20/23 20:10	EPA 8260D	

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ANALYTICAL REPORT

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4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
W-2 (1) (A3F1237-01)		Matrix: Water			Batch: 23F0713			
1,2-Dichloropropane	ND	---	0.500	ug/L	1	06/20/23 20:10	EPA 8260D	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
Ethylbenzene	ND	---	0.500	ug/L	1	06/20/23 20:10	EPA 8260D	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	06/20/23 20:10	EPA 8260D	
2-Hexanone	ND	---	10.0	ug/L	1	06/20/23 20:10	EPA 8260D	
Isopropylbenzene	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
Methylene chloride	ND	---	10.0	ug/L	1	06/20/23 20:10	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	10.0	ug/L	1	06/20/23 20:10	EPA 8260D	
Methyl tert-butyl ether (MTBE)	5.58	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
Naphthalene	ND	---	2.00	ug/L	1	06/20/23 20:10	EPA 8260D	
n-Propylbenzene	ND	---	0.500	ug/L	1	06/20/23 20:10	EPA 8260D	
Styrene	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	06/20/23 20:10	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	06/20/23 20:10	EPA 8260D	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	06/20/23 20:10	EPA 8260D	
Toluene	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	06/20/23 20:10	EPA 8260D	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	06/20/23 20:10	EPA 8260D	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	06/20/23 20:10	EPA 8260D	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	06/20/23 20:10	EPA 8260D	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	06/20/23 20:10	EPA 8260D	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	06/20/23 20:10	EPA 8260D	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
Vinyl chloride	ND	---	0.400	ug/L	1	06/20/23 20:10	EPA 8260D	
m,p-Xylene	ND	---	1.00	ug/L	1	06/20/23 20:10	EPA 8260D	
o-Xylene	ND	---	0.500	ug/L	1	06/20/23 20:10	EPA 8260D	

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Page 6 of 32



ANALYTICAL REPORT

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Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
W-2 (1) (A3F1237-01)				Matrix: Water		Batch: 23F0713		
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	110 %	Limits:	80-120 %	1	06/20/23 20:10	EPA 8260D
Toluene-d8 (Surr)			103 %		80-120 %	1	06/20/23 20:10	EPA 8260D
4-Bromofluorobenzene (Surr)			108 %		80-120 %	1	06/20/23 20:10	EPA 8260D

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
W-2 (1) (A3F1237-01)		Matrix: Water			Batch: 23F0693			
Acenaphthene	ND	---	0.0355	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Acenaphthylene	ND	---	0.0355	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Anthracene	ND	---	0.0355	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Benz(a)anthracene	ND	---	0.0178	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Benzo(a)pyrene	ND	---	0.0178	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	---	0.0178	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	---	0.0178	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	---	0.0355	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Chrysene	ND	---	0.0178	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	---	0.0178	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Fluoranthene	ND	---	0.0355	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Fluorene	ND	---	0.0355	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	---	0.0178	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
1-Methylnaphthalene	ND	---	0.0711	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
2-Methylnaphthalene	ND	---	0.0711	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Naphthalene	ND	---	0.0711	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Phenanthrene	ND	---	0.0711	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Pyrene	ND	---	0.0355	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Carbazole	ND	---	0.0355	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Dibenzofuran	ND	---	0.0355	ug/L	1	06/20/23 18:20	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		Recovery:	81 %	Limits:	78-134 %	1	06/20/23 18:20	EPA 8270E LVI
Benzo(a)pyrene-d12 (Surr)			103 %		80-132 %	1	06/20/23 18:20	EPA 8270E LVI

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Project Number: [none]

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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
W-2 (1) (A3F1237-01)				Matrix: Water				
Batch: 23F0682								
Arsenic	5.81	---	1.00	ug/L	1	06/19/23 22:03	EPA 6020B	
Barium	114	---	2.00	ug/L	1	06/19/23 22:03	EPA 6020B	
Cadmium	ND	---	0.200	ug/L	1	06/19/23 22:03	EPA 6020B	
Chromium	ND	---	2.00	ug/L	1	06/19/23 22:03	EPA 6020B	
Lead	0.372	---	0.200	ug/L	1	06/19/23 22:03	EPA 6020B	
Mercury	ND	---	0.0800	ug/L	1	06/19/23 22:03	EPA 6020B	
Selenium	ND	---	1.00	ug/L	1	06/19/23 22:03	EPA 6020B	
Silver	ND	---	0.200	ug/L	1	06/19/23 22:03	EPA 6020B	

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QUALITY CONTROL (QC) SAMPLE RESULTS**Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0874 - EPA 3510C (Fuels/Acid Ext.)						Water						
Blank (23F0874-BLK1)			Prepared: 06/23/23 11:03		Analyzed: 06/23/23 20:17							
NWTPH-Dx LL												
Diesel	ND	---	0.0800	mg/L	1	---	---	---	---	---	---	
Oil	ND	---	0.160	mg/L	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 81 %		Limits: 50-150 %		Dilution: 1x						
LCS (23F0874-BS1)			Prepared: 06/23/23 11:03		Analyzed: 06/23/23 20:40							
NWTPH-Dx LL												
Diesel	0.310	---	0.0800	mg/L	1	0.500	---	62	36-132%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 88 %		Limits: 50-150 %		Dilution: 1x						
LCS Dup (23F0874-BSD1)			Prepared: 06/23/23 11:03		Analyzed: 06/23/23 21:03							Q-19
NWTPH-Dx LL												
Diesel	0.309	---	0.0800	mg/L	1	0.500	---	62	36-132%	0.5	30%	
Surr: o-Terphenyl (Surr)		Recovery: 86 %		Limits: 50-150 %		Dilution: 1x						

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Project Number: [none]

Project Manager: Ian Maguire

Report ID:

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QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0713 - EPA 5030C						Water						
Blank (23F0713-BLK1)			Prepared: 06/20/23 10:01 Analyzed: 06/20/23 12:51									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 94 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		107 %		50-150 %		"						
LCS (23F0713-BS2)			Prepared: 06/20/23 10:01 Analyzed: 06/20/23 12:24									
NWTPH-Gx (MS)												
Gasoline Range Organics	0.472	---	0.100	mg/L	1	0.500	---	94	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 96 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		102 %		50-150 %		"						
Duplicate (23F0713-DUP1)			Prepared: 06/20/23 10:01 Analyzed: 06/20/23 19:42									
QC Source Sample: Non-SDG (A3F1280-01)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 98 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		110 %		50-150 %		"						

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Project Number: [none]

Project Manager: Ian Maguire

Report ID:

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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
Batch 23F0713 - EPA 5030C						Water						
Blank (23F0713-BLK1)			Prepared: 06/20/23 10:01		Analyzed: 06/20/23 12:51							
EPA 8260D												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	

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ANALYTICAL REPORT

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Project: **Beaverton Phs. II**

Project Number: [none]

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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
Batch 23F0713 - EPA 5030C						Water						
Blank (23F0713-BLK1)			Prepared: 06/20/23 10:01		Analyzed: 06/20/23 12:51							
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	---	0.200	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: 108 %		Limits: 80-120 %		Dilution: 1x						

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Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0713 - EPA 5030C						Water						
Blank (23F0713-BLK1)			Prepared: 06/20/23 10:01		Analyzed: 06/20/23 12:51							
Surr: Toluene-d8 (Surr)		Recovery: 104 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		106 %		80-120 %		"						
LCS (23F0713-BS1)			Prepared: 06/20/23 10:01		Analyzed: 06/20/23 11:52							
EPA 8260D												
Acetone	38.2	---	20.0	ug/L	1	40.0	---	95	80-120%	---	---	ICV-01, Q-56
Acrylonitrile	21.7	---	2.00	ug/L	1	20.0	---	109	80-120%	---	---	
Benzene	20.5	---	0.200	ug/L	1	20.0	---	102	80-120%	---	---	
Bromobenzene	19.9	---	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
Bromochloromethane	22.8	---	1.00	ug/L	1	20.0	---	114	80-120%	---	---	
Bromodichloromethane	23.5	---	1.00	ug/L	1	20.0	---	118	80-120%	---	---	
Bromoform	20.7	---	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
Bromomethane	23.9	---	5.00	ug/L	1	20.0	---	120	80-120%	---	---	
2-Butanone (MEK)	43.6	---	10.0	ug/L	1	40.0	---	109	80-120%	---	---	
n-Butylbenzene	20.2	---	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
sec-Butylbenzene	19.2	---	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
tert-Butylbenzene	17.6	---	1.00	ug/L	1	20.0	---	88	80-120%	---	---	
Carbon disulfide	20.2	---	10.0	ug/L	1	20.0	---	101	80-120%	---	---	
Carbon tetrachloride	20.7	---	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
Chlorobenzene	19.8	---	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
Chloroethane	32.3	---	5.00	ug/L	1	20.0	---	161	80-120%	---	---	
Chloroform	21.2	---	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
Chloromethane	18.9	---	5.00	ug/L	1	20.0	---	95	80-120%	---	---	
2-Chlorotoluene	18.8	---	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
4-Chlorotoluene	19.2	---	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
Dibromochloromethane	20.0	---	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
1,2-Dibromo-3-chloropropane	18.4	---	5.00	ug/L	1	20.0	---	92	80-120%	---	---	
1,2-Dibromoethane (EDB)	20.1	---	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
Dibromomethane	22.2	---	1.00	ug/L	1	20.0	---	111	80-120%	---	---	
1,2-Dichlorobenzene	20.1	---	0.500	ug/L	1	20.0	---	101	80-120%	---	---	
1,3-Dichlorobenzene	20.1	---	0.500	ug/L	1	20.0	---	101	80-120%	---	---	
1,4-Dichlorobenzene	19.0	---	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
Dichlorodifluoromethane	18.1	---	1.00	ug/L	1	20.0	---	90	80-120%	---	---	
1,1-Dichloroethane	21.1	---	0.400	ug/L	1	20.0	---	106	80-120%	---	---	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

Page 14 of 32



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0713 - EPA 5030C						Water						
LCS (23F0713-BS1)			Prepared: 06/20/23 10:01		Analyzed: 06/20/23 11:52							
1,2-Dichloroethane (EDC)	21.5	---	0.400	ug/L	1	20.0	---	108	80-120%	---	---	
1,1-Dichloroethene	19.8	---	0.400	ug/L	1	20.0	---	99	80-120%	---	---	
cis-1,2-Dichloroethene	20.4	---	0.400	ug/L	1	20.0	---	102	80-120%	---	---	
trans-1,2-Dichloroethene	19.9	---	0.400	ug/L	1	20.0	---	100	80-120%	---	---	
1,2-Dichloropropane	21.2	---	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
1,3-Dichloropropane	19.9	---	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
2,2-Dichloropropane	21.1	---	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
1,1-Dichloropropene	20.1	---	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
cis-1,3-Dichloropropene	21.0	---	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
trans-1,3-Dichloropropene	20.2	---	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
Ethylbenzene	19.8	---	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
Hexachlorobutadiene	21.9	---	5.00	ug/L	1	20.0	---	110	80-120%	---	---	
2-Hexanone	41.2	---	10.0	ug/L	1	40.0	---	103	80-120%	---	---	
Isopropylbenzene	18.8	---	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
4-Isopropyltoluene	19.4	---	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
Methylene chloride	20.7	---	10.0	ug/L	1	20.0	---	104	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	41.0	---	10.0	ug/L	1	40.0	---	103	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	17.5	---	1.00	ug/L	1	20.0	---	88	80-120%	---	---	
Naphthalene	13.8	---	2.00	ug/L	1	20.0	---	69	80-120%	---	---	Q-55
n-Propylbenzene	19.4	---	0.500	ug/L	1	20.0	---	97	80-120%	---	---	
Styrene	20.0	---	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
1,1,1,2-Tetrachloroethane	23.9	---	0.400	ug/L	1	20.0	---	119	80-120%	---	---	
1,1,2,2-Tetrachloroethane	21.7	---	0.500	ug/L	1	20.0	---	109	80-120%	---	---	
Tetrachloroethene (PCE)	19.2	---	0.400	ug/L	1	20.0	---	96	80-120%	---	---	
Toluene	19.1	---	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
1,2,3-Trichlorobenzene	18.6	---	2.00	ug/L	1	20.0	---	93	80-120%	---	---	
1,2,4-Trichlorobenzene	19.1	---	2.00	ug/L	1	20.0	---	96	80-120%	---	---	
1,1,1-Trichloroethane	20.8	---	0.400	ug/L	1	20.0	---	104	80-120%	---	---	
1,1,2-Trichloroethane	20.5	---	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
Trichloroethene (TCE)	19.8	---	0.400	ug/L	1	20.0	---	99	80-120%	---	---	
Trichlorofluoromethane	28.6	---	2.00	ug/L	1	20.0	---	143	80-120%	---	---	Q-56
1,2,3-Trichloropropane	20.0	---	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
1,2,4-Trimethylbenzene	20.4	---	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
1,3,5-Trimethylbenzene	20.1	---	1.00	ug/L	1	20.0	---	100	80-120%	---	---	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

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Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0713 - EPA 5030C						Water						
LCS (23F0713-BS1)			Prepared: 06/20/23 10:01		Analyzed: 06/20/23 11:52							
Vinyl chloride	20.6	---	0.200	ug/L	1	20.0	---	103	80-120%	---	---	
m,p-Xylene	39.3	---	1.00	ug/L	1	40.0	---	98	80-120%	---	---	
o-Xylene	18.0	---	0.500	ug/L	1	20.0	---	90	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 104 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		99 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		96 %		80-120 %		"						

Duplicate (23F0713-DUP1)

Prepared: 06/20/23 10:01 Analyzed: 06/20/23 19:42

QC Source Sample: Non-SDG (A3F1280-01)

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	---	1.00	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	2.38	---	1.00	ug/L	1	---	2.24	---	---	6	30%
Chloromethane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%
2-Chlorotoluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%
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%

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323

ORELAP ID: OR100062

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Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0713 - EPA 5030C						Water						
Duplicate (23F0713-DUP1)			Prepared: 06/20/23 10:01		Analyzed: 06/20/23 19:42							
QC Source Sample: Non-SDG (A3F1280-01)												
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%	
Tetrachloroethene (PCE)	ND	---	0.600	ug/L	1	---	ND	---	---	---	30%	R-06
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%	

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ANALYTICAL REPORT

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Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	Limits	RPD	RPD Limit	Notes
Batch 23F0713 - EPA 5030C						Water						
Duplicate (23F0713-DUP1)			Prepared: 06/20/23 10:01		Analyzed: 06/20/23 19:42							
QC Source Sample: Non-SDG (A3F1280-01)												
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	---	0.200	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%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 110 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		104 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		109 %		80-120 %		"						
Matrix Spike (23F0713-MS1)						Prepared: 06/20/23 10:01 Analyzed: 06/20/23 14:13					V-01, V-13	
QC Source Sample: Non-SDG (A3F1282-01)												
EPA 8260D												
Acetone	287	---	100	ug/L	5	200	ND	98	39-160%	---	---	
Acrylonitrile	114	---	10.0	ug/L	5	100	ND	114	63-135%	---	---	
Benzene	110	---	1.00	ug/L	5	100	ND	110	79-120%	---	---	
Bromobenzene	104	---	2.50	ug/L	5	100	ND	104	80-120%	---	---	
Bromochloromethane	118	---	5.00	ug/L	5	100	ND	118	78-123%	---	---	
Bromodichloromethane	124	---	5.00	ug/L	5	100	ND	124	79-125%	---	---	
Bromoform	109	---	5.00	ug/L	5	100	ND	109	66-130%	---	---	
Bromomethane	135	---	25.0	ug/L	5	100	ND	135	53-141%	---	---	
2-Butanone (MEK)	243	---	50.0	ug/L	5	200	ND	122	56-143%	---	---	
n-Butylbenzene	113	---	5.00	ug/L	5	100	ND	113	75-128%	---	---	
sec-Butylbenzene	106	---	5.00	ug/L	5	100	ND	106	77-126%	---	---	
tert-Butylbenzene	96.4	---	5.00	ug/L	5	100	ND	96	78-124%	---	---	
Carbon disulfide	112	---	50.0	ug/L	5	100	ND	112	64-133%	---	---	
Carbon tetrachloride	115	---	5.00	ug/L	5	100	ND	115	72-136%	---	---	
Chlorobenzene	103	---	2.50	ug/L	5	100	ND	103	80-120%	---	---	
Chloroethane	172	---	25.0	ug/L	5	100	ND	172	60-138%	---	---	ICV-01, Q-54a
Chloroform	125	---	5.00	ug/L	5	100	12.6	112	79-124%	---	---	

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Project Number: [none]

Project Manager: Ian Maguire

Report ID:

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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
Batch 23F0713 - EPA 5030C						Water						
Matrix Spike (23F0713-MS1)			Prepared: 06/20/23 10:01		Analyzed: 06/20/23 14:13		V-01, V-13					
QC Source Sample: Non-SDG (A3F1282-01)												
Chloromethane	100	---	25.0	ug/L	5	100	ND	100	50-139%	---	---	
2-Chlorotoluene	99.4	---	5.00	ug/L	5	100	ND	99	79-122%	---	---	
4-Chlorotoluene	101	---	5.00	ug/L	5	100	ND	101	78-122%	---	---	
Dibromochloromethane	105	---	5.00	ug/L	5	100	ND	105	74-126%	---	---	
1,2-Dibromo-3-chloropropane	101	---	25.0	ug/L	5	100	ND	101	62-128%	---	---	
1,2-Dibromoethane (EDB)	104	---	2.50	ug/L	5	100	ND	104	77-121%	---	---	
Dibromomethane	115	---	5.00	ug/L	5	100	ND	115	79-123%	---	---	
1,2-Dichlorobenzene	105	---	2.50	ug/L	5	100	ND	105	80-120%	---	---	
1,3-Dichlorobenzene	105	---	2.50	ug/L	5	100	ND	105	80-120%	---	---	
1,4-Dichlorobenzene	99.2	---	2.50	ug/L	5	100	ND	99	79-120%	---	---	
Dichlorodifluoromethane	106	---	5.00	ug/L	5	100	ND	106	32-152%	---	---	
1,1-Dichloroethane	115	---	2.00	ug/L	5	100	ND	115	77-125%	---	---	
1,2-Dichloroethane (EDC)	112	---	2.00	ug/L	5	100	ND	112	73-128%	---	---	
1,1-Dichloroethene	113	---	2.00	ug/L	5	100	ND	113	71-131%	---	---	
cis-1,2-Dichloroethene	109	---	2.00	ug/L	5	100	ND	109	78-123%	---	---	
trans-1,2-Dichloroethene	109	---	2.00	ug/L	5	100	ND	109	75-124%	---	---	
1,2-Dichloropropane	111	---	2.50	ug/L	5	100	ND	111	78-122%	---	---	
1,3-Dichloropropane	103	---	5.00	ug/L	5	100	ND	103	80-120%	---	---	
2,2-Dichloropropane	117	---	5.00	ug/L	5	100	ND	117	60-139%	---	---	
1,1-Dichloropropene	111	---	5.00	ug/L	5	100	ND	111	79-125%	---	---	
cis-1,3-Dichloropropene	110	---	5.00	ug/L	5	100	ND	110	75-124%	---	---	
trans-1,3-Dichloropropene	106	---	5.00	ug/L	5	100	ND	106	73-127%	---	---	
Ethylbenzene	106	---	2.50	ug/L	5	100	ND	106	79-121%	---	---	
Hexachlorobutadiene	128	---	25.0	ug/L	5	100	ND	128	66-134%	---	---	
2-Hexanone	224	---	50.0	ug/L	5	200	ND	112	57-139%	---	---	
Isopropylbenzene	101	---	5.00	ug/L	5	100	ND	101	72-131%	---	---	
4-Isopropyltoluene	105	---	5.00	ug/L	5	100	ND	105	77-127%	---	---	
Methylene chloride	107	---	50.0	ug/L	5	100	ND	107	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	224	---	50.0	ug/L	5	200	ND	112	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	91.8	---	5.00	ug/L	5	100	ND	92	71-124%	---	---	
Naphthalene	73.4	---	10.0	ug/L	5	100	ND	73	61-128%	---	---	Q-54b
n-Propylbenzene	105	---	2.50	ug/L	5	100	ND	105	76-126%	---	---	
Styrene	105	---	5.00	ug/L	5	100	ND	105	78-123%	---	---	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0713 - EPA 5030C						Water						
Matrix Spike (23F0713-MS1)			Prepared: 06/20/23 10:01			Analyzed: 06/20/23 14:13					V-01, V-13	
QC Source Sample: Non-SDG (A3F1282-01)												
1,1,1,2-Tetrachloroethane	128	---	2.00	ug/L	5	100	ND	128	78-124%	---	---	Q-01
1,1,2,2-Tetrachloroethane	113	---	2.50	ug/L	5	100	ND	113	71-121%	---	---	
Tetrachloroethene (PCE)	105	---	2.00	ug/L	5	100	ND	105	74-129%	---	---	
Toluene	102	---	5.00	ug/L	5	100	ND	102	80-121%	---	---	
1,2,3-Trichlorobenzene	99.6	---	10.0	ug/L	5	100	ND	100	69-129%	---	---	
1,2,4-Trichlorobenzene	101	---	10.0	ug/L	5	100	ND	101	69-130%	---	---	
1,1,1-Trichloroethane	113	---	2.00	ug/L	5	100	ND	113	74-131%	---	---	
1,1,2-Trichloroethane	106	---	2.50	ug/L	5	100	ND	106	80-120%	---	---	
Trichloroethene (TCE)	109	---	2.00	ug/L	5	100	ND	109	79-123%	---	---	
Trichlorofluoromethane	163	---	10.0	ug/L	5	100	ND	163	65-141%	---	---	Q-54
1,2,3-Trichloropropane	106	---	5.00	ug/L	5	100	ND	106	73-122%	---	---	
1,2,4-Trimethylbenzene	109	---	5.00	ug/L	5	100	ND	109	76-124%	---	---	
1,3,5-Trimethylbenzene	107	---	5.00	ug/L	5	100	ND	107	75-124%	---	---	
Vinyl chloride	115	---	1.00	ug/L	5	100	ND	115	58-137%	---	---	
m,p-Xylene	211	---	5.00	ug/L	5	200	ND	106	80-121%	---	---	
o-Xylene	97.0	---	2.50	ug/L	5	100	ND	97	78-122%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 104 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		99 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		96 %		80-120 %		"						

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

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Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0693 - EPA 3511 (Bottle Extraction)						Water						
Blank (23F0693-BLK1)			Prepared: 06/20/23 07:45		Analyzed: 06/20/23 14:31							
EPA 8270E LVI												
Acenaphthene	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	---	0.0160	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	0.0160	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	0.0160	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	0.0640	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	0.0640	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	0.0640	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	---	0.0640	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Carbazole	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Surr: Acenaphthylene-d8 (Surr)		Recovery: 84 %		Limits: 78-134 %		Dilution: 1x						
Benzo(a)pyrene-d12 (Surr)		100 %		80-132 %		"						

LCS (23F0693-BS1)

Prepared: 06/20/23 07:45 Analyzed: 06/20/23 15:04

EPA 8270E LVI												
Acenaphthene	1.55	---	0.0320	ug/L	1	1.60	---	97	80-120%	---	---	
Acenaphthylene	1.40	---	0.0320	ug/L	1	1.60	---	88	80-124%	---	---	
Anthracene	1.51	---	0.0320	ug/L	1	1.60	---	94	80-123%	---	---	
Benz(a)anthracene	1.50	---	0.0160	ug/L	1	1.60	---	94	80-122%	---	---	
Benzo(a)pyrene	1.53	---	0.0160	ug/L	1	1.60	---	96	80-129%	---	---	
Benzo(b)fluoranthene	1.63	---	0.0160	ug/L	1	1.60	---	102	80-124%	---	---	
Benzo(k)fluoranthene	1.52	---	0.0160	ug/L	1	1.60	---	95	80-125%	---	---	
Benzo(g,h,i)perylene	1.76	---	0.0320	ug/L	1	1.60	---	110	80-120%	---	---	

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0693 - EPA 3511 (Bottle Extraction)						Water						
LCS (23F0693-BS1)			Prepared: 06/20/23 07:45		Analyzed: 06/20/23 15:04							
Chrysene	1.54	---	0.0160	ug/L	1	1.60	---	96	80-120%	---	---	
Dibenz(a,h)anthracene	1.49	---	0.0160	ug/L	1	1.60	---	93	80-120%	---	---	
Fluoranthene	1.62	---	0.0320	ug/L	1	1.60	---	101	80-126%	---	---	
Fluorene	1.58	---	0.0320	ug/L	1	1.60	---	99	77-127%	---	---	
Indeno(1,2,3-cd)pyrene	1.51	---	0.0160	ug/L	1	1.60	---	95	80-121%	---	---	
1-Methylnaphthalene	1.48	---	0.0640	ug/L	1	1.60	---	92	53-148%	---	---	
2-Methylnaphthalene	1.45	---	0.0640	ug/L	1	1.60	---	90	48-150%	---	---	
Naphthalene	1.54	---	0.0640	ug/L	1	1.60	---	96	78-120%	---	---	
Phenanthrene	1.48	---	0.0640	ug/L	1	1.60	---	92	80-120%	---	---	
Pyrene	1.62	---	0.0320	ug/L	1	1.60	---	101	80-125%	---	---	
Carbazole	1.52	---	0.0320	ug/L	1	1.60	---	95	65-141%	---	---	
Dibenzofuran	1.41	---	0.0320	ug/L	1	1.60	---	88	76-121%	---	---	
Surr: Acenaphthylene-d8 (Surr)		Recovery: 84 %		Limits: 78-134 %		Dilution: 1x						
Benzo(a)pyrene-d12 (Surr)		102 %		80-132 %		"						

LCS Dup (23F0693-BS1)			Prepared: 06/20/23 07:45 Analyzed: 06/20/23 15:37								Q-19	
EPA 8270E LVI												
Acenaphthene	1.56	---	0.0320	ug/L	1	1.60	---	98	80-120%	1	30%	
Acenaphthylene	1.45	---	0.0320	ug/L	1	1.60	---	91	80-124%	3	30%	
Anthracene	1.53	---	0.0320	ug/L	1	1.60	---	96	80-123%	2	30%	
Benz(a)anthracene	1.53	---	0.0160	ug/L	1	1.60	---	95	80-122%	2	30%	
Benzo(a)pyrene	1.59	---	0.0160	ug/L	1	1.60	---	100	80-129%	4	30%	
Benzo(b)fluoranthene	1.63	---	0.0160	ug/L	1	1.60	---	102	80-124%	0.4	30%	
Benzo(k)fluoranthene	1.56	---	0.0160	ug/L	1	1.60	---	97	80-125%	3	30%	
Benzo(g,h,i)perylene	1.72	---	0.0320	ug/L	1	1.60	---	107	80-120%	3	30%	
Chrysene	1.54	---	0.0160	ug/L	1	1.60	---	96	80-120%	0.2	30%	
Dibenz(a,h)anthracene	1.53	---	0.0160	ug/L	1	1.60	---	96	80-120%	3	30%	
Fluoranthene	1.66	---	0.0320	ug/L	1	1.60	---	104	80-126%	3	30%	
Fluorene	1.65	---	0.0320	ug/L	1	1.60	---	103	77-127%	5	30%	
Indeno(1,2,3-cd)pyrene	1.56	---	0.0160	ug/L	1	1.60	---	97	80-121%	3	30%	
1-Methylnaphthalene	1.56	---	0.0640	ug/L	1	1.60	---	98	53-148%	6	30%	
2-Methylnaphthalene	1.56	---	0.0640	ug/L	1	1.60	---	97	48-150%	7	30%	
Naphthalene	1.55	---	0.0640	ug/L	1	1.60	---	97	78-120%	0.8	30%	
Phenanthrene	1.50	---	0.0640	ug/L	1	1.60	---	94	80-120%	1	30%	

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ANALYTICAL REPORT

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Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0693 - EPA 3511 (Bottle Extraction)						Water						
LCS Dup (23F0693-BSD1)			Prepared: 06/20/23 07:45 Analyzed: 06/20/23 15:37								Q-19	
Pyrene	1.66	---	0.0320	ug/L	1	1.60	---	104	80-125%	3	30%	
Carbazole	1.57	---	0.0320	ug/L	1	1.60	---	98	65-141%	3	30%	
Dibenzofuran	1.47	---	0.0320	ug/L	1	1.60	---	92	76-121%	4	30%	
Surr: Acenaphthylene-d8 (Surr)		Recovery: 84 %		Limits: 78-134 %		Dilution: 1x						
Benzo(a)pyrene-d12 (Surr)		103 %		80-132 %		"						

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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
Batch 23F0682 - EPA 3015A						Water						
Blank (23F0682-BLK1)			Prepared: 06/19/23 15:45		Analyzed: 06/19/23 21:48							
EPA 6020B												
Arsenic	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Barium	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Chromium	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Mercury	ND	---	0.0800	ug/L	1	---	---	---	---	---	---	
Selenium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (23F0682-BS1)			Prepared: 06/19/23 15:45		Analyzed: 06/19/23 21:53							
EPA 6020B												
Arsenic	55.4	---	1.00	ug/L	1	55.6	---	100	80-120%	---	---	
Barium	61.9	---	2.00	ug/L	1	55.6	---	111	80-120%	---	---	
Cadmium	55.3	---	0.200	ug/L	1	55.6	---	99	80-120%	---	---	
Chromium	55.6	---	2.00	ug/L	1	55.6	---	100	80-120%	---	---	
Lead	59.2	---	0.200	ug/L	1	55.6	---	107	80-120%	---	---	
Mercury	1.08	---	0.0800	ug/L	1	1.11	---	97	80-120%	---	---	
Selenium	29.0	---	1.00	ug/L	1	27.8	---	104	80-120%	---	---	
Silver	27.4	---	0.200	ug/L	1	27.8	---	99	80-120%	---	---	
Duplicate (23F0682-DUP1)			Prepared: 06/19/23 15:45		Analyzed: 06/19/23 22:08							
QC Source Sample: W-2 (1) (A3F1237-01)												
EPA 6020B												
Arsenic	5.72	---	1.00	ug/L	1	---	5.81	---	---	2	20%	
Barium	111	---	2.00	ug/L	1	---	114	---	---	2	20%	
Cadmium	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	
Chromium	ND	---	2.00	ug/L	1	---	1.77	---	---	***	20%	
Lead	0.364	---	0.200	ug/L	1	---	0.372	---	---	2	20%	
Mercury	ND	---	0.0800	ug/L	1	---	ND	---	---	---	20%	
Selenium	ND	---	1.00	ug/L	1	---	ND	---	---	---	20%	
Silver	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	
Matrix Spike (23F0682-MS1)			Prepared: 06/19/23 15:45		Analyzed: 06/19/23 22:13							

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Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0682 - EPA 3015A						Water						
Matrix Spike (23F0682-MS1)			Prepared: 06/19/23 15:45 Analyzed: 06/19/23 22:13									
QC Source Sample: W-2 (1) (A3F1237-01)												
EPA 6020B												
Arsenic	61.9	---	1.00	ug/L	1	55.6	5.81	101	75-125%	---	---	
Barium	173	---	2.00	ug/L	1	55.6	114	108	75-125%	---	---	
Cadmium	55.9	---	0.200	ug/L	1	55.6	ND	101	75-125%	---	---	
Chromium	57.1	---	2.00	ug/L	1	55.6	1.77	100	75-125%	---	---	
Lead	58.4	---	0.200	ug/L	1	55.6	0.372	104	75-125%	---	---	
Mercury	1.07	---	0.0800	ug/L	1	1.11	ND	96	75-125%	---	---	
Selenium	29.7	---	1.00	ug/L	1	27.8	ND	107	75-125%	---	---	
Silver	27.4	---	0.200	ug/L	1	27.8	ND	99	75-125%	---	---	

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

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Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

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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
Batch: 23F0874							
A3F1237-01	Water	NWTPH-Dx LL	06/16/23 13:00	06/23/23 11:06	1050mL/2mL	1000mL/2mL	0.95

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

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23F0713							
A3F1237-01	Water	NWTPH-Gx (MS)	06/16/23 13:00	06/20/23 13:13	5mL/5mL	5mL/5mL	1.00

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23F0713							
A3F1237-01	Water	EPA 8260D	06/16/23 13:00	06/20/23 13:13	5mL/5mL	5mL/5mL	1.00

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Prep: EPA 3511 (Bottle Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23F0693							
A3F1237-01	Water	EPA 8270E LVI	06/16/23 13:00	06/20/23 07:45	112.58mL/5mL	125mL/5mL	1.11

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23F0682							
A3F1237-01	Water	EPA 6020B	06/16/23 13:00	06/19/23 15:45	45mL/50mL	45mL/50mL	1.00

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Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

QUALIFIER DEFINITIONS

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

Apex Laboratories

- ICV-01** Estimated Result. Initial Calibration Verification (ICV) failed high. There is no effect on non-detect results.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +23%. 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 +41%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -11%. The results are reported as Estimated Values.
- Q-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
- R-06** Reporting level raised due to possible carryover from a previous sample.
- V-01** Sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).
- V-13** Reporting levels raised due to dilution necessary for analysis due to sample foaming in sparge vessel.

Apex Laboratories

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).

If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

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

Reporting Conventions:

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

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

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

See Percent Solids section for details of dry weight analysis.

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

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

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

QC Source:

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

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

Miscellaneous Notes:

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

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

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Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: **Ian Maguire**

Report ID:

A3F1237 - 06 26 23 1644

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

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

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

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

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

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

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

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

Soil and Sediment Samples:

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

Sampling and Preservation Notes:

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

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

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

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

Apex Laboratories

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) -

EPA ID: OR01039

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

Apex Laboratories

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

Secondary Accreditations

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

Subcontract Laboratory Accreditations

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

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

Field Testing Parameters

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

Apex Laboratories

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

APEX LABS		CHAIN OF CUSTODY		Lab # <u>A3F1237</u> COC # <u>of</u>	
Company: <u>GeoEngineers</u>		Project Mgr: <u>Ian Maguire</u>		Project Name: <u>Beaverton Phs II</u>	
Address: <u>5870 Sully Ave, Portland, OR 97239</u>		Phone: <u></u>		Email: <u>ian@geoengineers.com</u>	
Sampled by: <u>Sam Russell</u>		Project #: <u></u>		PO # <u></u>	
Site Location: <u>OR</u>		ANALYSIS REQUEST		Frozen Archive	
State: <u>OR</u>		Priority Metals (13)		Hold Sample	
County: <u></u>		RCRA Metals (8)			
SAMPLE ID: <u>W-2 (1)</u>		8081 Pesticides			
DATE: <u>6/16/23</u>		8082 PCBs			
TIME: <u>1300 W</u>		8270 Semi-Vols Full List			
MATRIX: <u></u>		8270 SIM PAHs			
# OF CONTAINERS: <u>8</u>		8260 VOCs Full List			
NWTPH-HCID		8260 Halo VOCs			
NWTPH-Dx		8260 RBDM VOCs			
NWTPH-Gx		8260 BTEX			
Standard Turn Around Time (TAT) = 10 Business Days		1 Day		3 Day	
TAT Requested (circle)		2 Day		Other: <u></u>	
5 Day		Standard		Other: <u></u>	
SAMPLES ARE HELD FOR 30 DAYS		RECEIVED BY:		RECEIVED BY:	
Signature: <u>Sam Russell</u>		Signature: <u>Ian Maguire</u>		Signature: <u></u>	
Date: <u>6/16/23</u>		Date: <u>6/16/23</u>		Date: <u></u>	
Printed Name: <u>Sam Russell</u>		Printed Name: <u>Ian Maguire</u>		Printed Name: <u></u>	
Time: <u>1354</u>		Time: <u>1355</u>		Time: <u></u>	
Company: <u>GeoEngineers</u>		Company: <u>Apex</u>		Company: <u></u>	

Apex Laboratories

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ANALYTICAL REPORT

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1237 - 06 26 23 1644

APEX LABS COOLER RECEIPT FORMClient: GeoEngineers Element WO#: A3F1237Project/Project #: Beaverton Phs II**Delivery Info:**Date/time received: 6/16/23 @ 1355 By: AJMDelivered by: Apex ☒ Client ☐ ESS ☐ FedEx ☐ UPS ☐ Radio ☐ Morgan ☐ SDS ☐ Evergreen ☐ Other ☐**Cooler Inspection** Date/time inspected: 6/16/23 @ 1359 By: AJMChain of Custody included? Yes ☒ No ☐Signed/dated by client? Yes ☒ No ☐

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>3.5</u>						
Custody seals? (Y/N)	<u>N</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition (In/Out):	<u>In</u>						

Cooler out of temp? (Y/N) Possible reason why: Green dots applied to out of temperature samples? Yes ☒ No ☐Out of temperature samples form initiated? Yes ☒ No ☐**Sample Inspection:** Date/time inspected: 6/16/23 @ 14:19 By: AAWAll 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: AAWWitness: DJSCooler Inspected by: AAW

Form Y-003 R-00

Apex Laboratories

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CABri

Cameron O'Brien For Darrell Auvi, Client Services Manager

Page 32 of 32



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Monday, June 26, 2023

Ian Maguire

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

RE: A3F1239 - Beaverton Phs. II - [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 A3F1239, which was received by the laboratory on 6/15/2023 at 5:30:00PM.

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

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

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1 4.7 degC

Cooler #2 1.9 degC

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

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



Apex Laboratories

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-4 (19-20)	A3F1239-01	Soil	06/15/23 12:50	06/15/23 17:30
B-2 (6-7)	A3F1239-02	Soil	06/15/23 15:30	06/15/23 17:30
B-3 (8-9)	A3F1239-03	Soil	06/15/23 13:50	06/15/23 17:30
B-5 (5-6)	A3F1239-04	Soil	06/15/23 15:00	06/15/23 17:30
B-6 (5-6)	A3F1239-05	Soil	06/15/23 14:30	06/15/23 17:30
HA (2)	A3F1239-06	Soil	06/15/23 16:00	06/15/23 17:30
B-4 (GW)	A3F1239-07	Water	06/15/23 13:30	06/15/23 17:30
B-3 (GW)	A3F1239-08	Water	06/15/23 14:45	06/15/23 17:30
B-6 (GW)	A3F1239-09	Water	06/15/23 15:30	06/15/23 17:30

Apex Laboratories

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

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-4 (19-20) (A3F1239-01)				Matrix: Soil		Batch: 23F0772		
Diesel	ND	---	44.1	mg/kg dry	1	06/22/23 01:26	NWTPH-Dx	
Oil	ND	---	88.2	mg/kg dry	1	06/22/23 01:26	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 80 %		Limits: 50-150 %	1	06/22/23 01:26	NWTPH-Dx	
B-2 (6-7) (A3F1239-02)				Matrix: Soil		Batch: 23F0772		
Diesel	ND	---	27.9	mg/kg dry	1	06/22/23 01:49	NWTPH-Dx	
Oil	ND	---	55.8	mg/kg dry	1	06/22/23 01:49	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 79 %		Limits: 50-150 %	1	06/22/23 01:49	NWTPH-Dx	
B-3 (8-9) (A3F1239-03)				Matrix: Soil		Batch: 23F0772		
Diesel	ND	---	23.7	mg/kg dry	1	06/21/23 21:08	NWTPH-Dx	
Oil	ND	---	47.4	mg/kg dry	1	06/21/23 21:08	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 75 %		Limits: 50-150 %	1	06/21/23 21:08	NWTPH-Dx	
B-5 (5-6) (A3F1239-04)				Matrix: Soil		Batch: 23F0772		
Diesel	ND	---	27.3	mg/kg dry	1	06/21/23 21:31	NWTPH-Dx	
Oil	ND	---	54.6	mg/kg dry	1	06/21/23 21:31	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 73 %		Limits: 50-150 %	1	06/21/23 21:31	NWTPH-Dx	
B-6 (5-6) (A3F1239-05)				Matrix: Soil		Batch: 23F0772		
Diesel	ND	---	24.8	mg/kg dry	1	06/21/23 21:55	NWTPH-Dx	
Oil	ND	---	49.5	mg/kg dry	1	06/21/23 21:55	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 78 %		Limits: 50-150 %	1	06/21/23 21:55	NWTPH-Dx	
HA (2) (A3F1239-06)				Matrix: Soil		Batch: 23F0772		
Diesel	564	---	21.3	mg/kg dry	1	06/21/23 22:18	NWTPH-Dx	F-13
Oil	ND	---	42.6	mg/kg dry	1	06/21/23 22:18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 85 %		Limits: 50-150 %	1	06/21/23 22:18	NWTPH-Dx	
B-4 (GW) (A3F1239-07)				Matrix: Water		Batch: 23F0798		
Diesel	ND	---	0.0816	mg/L	1	06/23/23 05:32	NWTPH-Dx LL	
Oil	ND	---	0.163	mg/L	1	06/23/23 05:32	NWTPH-Dx LL	
Surrogate: o-Terphenyl (Surr)		Recovery: 85 %		Limits: 50-150 %	1	06/23/23 05:32	NWTPH-Dx LL	

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

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-3 (GW) (A3F1239-08)		Matrix: Water			Batch: 23F0798			
Diesel	ND	---	0.0833	mg/L	1	06/23/23 05:55	NWTPH-Dx LL	
Oil	ND	---	0.167	mg/L	1	06/23/23 05:55	NWTPH-Dx LL	
Surrogate: o-Terphenyl (Surr)		Recovery: 80 %		Limits: 50-150 %	1	06/23/23 05:55	NWTPH-Dx LL	
B-6 (GW) (A3F1239-09)		Matrix: Water			Batch: 23F0798			
Diesel	ND	---	0.0808	mg/L	1	06/23/23 06:19	NWTPH-Dx LL	
Oil	ND	---	0.162	mg/L	1	06/23/23 06:19	NWTPH-Dx LL	
Surrogate: o-Terphenyl (Surr)		Recovery: 91 %		Limits: 50-150 %	1	06/23/23 06:19	NWTPH-Dx LL	

Apex Laboratories

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062GeoEngineers4000 Kruse Way Place, Bldg 3 Suite 200
Lake Oswego, OR 97035Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

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-4 (19-20) (A3F1239-01)		Matrix: Soil		Batch: 23F0647				
Gasoline Range Organics	ND	---	20.3	mg/kg dry	50	06/19/23 11:15	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	103 %	Limits: 50-150 %	1	06/19/23 11:15	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			106 %	50-150 %	1	06/19/23 11:15	NWTPH-Gx (MS)	
B-2 (6-7) (A3F1239-02)		Matrix: Soil		Batch: 23F0647				
Gasoline Range Organics	ND	---	8.41	mg/kg dry	50	06/19/23 15:55	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	103 %	Limits: 50-150 %	1	06/19/23 15:55	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			103 %	50-150 %	1	06/19/23 15:55	NWTPH-Gx (MS)	
B-3 (8-9) (A3F1239-03)		Matrix: Soil		Batch: 23F0647				
Gasoline Range Organics	ND	---	6.83	mg/kg dry	50	06/19/23 16:21	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	106 %	Limits: 50-150 %	1	06/19/23 16:21	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			104 %	50-150 %	1	06/19/23 16:21	NWTPH-Gx (MS)	
B-5 (5-6) (A3F1239-04)		Matrix: Soil		Batch: 23F0647				
Gasoline Range Organics	ND	---	8.03	mg/kg dry	50	06/19/23 16:46	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	105 %	Limits: 50-150 %	1	06/19/23 16:46	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			105 %	50-150 %	1	06/19/23 16:46	NWTPH-Gx (MS)	
B-6 (5-6) (A3F1239-05)		Matrix: Soil		Batch: 23F0647				
Gasoline Range Organics	ND	---	6.67	mg/kg dry	50	06/19/23 17:11	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	104 %	Limits: 50-150 %	1	06/19/23 17:11	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			105 %	50-150 %	1	06/19/23 17:11	NWTPH-Gx (MS)	
HA (2) (A3F1239-06)		Matrix: Soil		Batch: 23F0647				
Gasoline Range Organics	ND	---	6.55	mg/kg dry	50	06/19/23 17:37	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	106 %	Limits: 50-150 %	1	06/19/23 17:37	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			107 %	50-150 %	1	06/19/23 17:37	NWTPH-Gx (MS)	
B-4 (GW) (A3F1239-07)		Matrix: Water		Batch: 23F0648				
Gasoline Range Organics	ND	---	0.100	mg/L	1	06/19/23 16:09	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	96 %	Limits: 50-150 %	1	06/19/23 16:09	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			107 %	50-150 %	1	06/19/23 16:09	NWTPH-Gx (MS)	

Apex Laboratories

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

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-3 (GW) (A3F1239-08)		Matrix: Water			Batch: 23F0648			
Gasoline Range Organics	ND	---	0.100	mg/L	1	06/19/23 17:03	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 97 %	Limits: 50-150 %	1	06/19/23 17:03	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			108 %	50-150 %	1	06/19/23 17:03	NWTPH-Gx (MS)	
B-6 (GW) (A3F1239-09)		Matrix: Water			Batch: 23F0648			
Gasoline Range Organics	ND	---	0.100	mg/L	1	06/19/23 17:30	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 97 %	Limits: 50-150 %	1	06/19/23 17:30	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			107 %	50-150 %	1	06/19/23 17:30	NWTPH-Gx (MS)	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-4 (19-20) (A3F1239-01)				Matrix: Soil		Batch: 23F0647		
Acetone	ND	---	4050	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Acrylonitrile	ND	---	405	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Benzene	ND	---	40.5	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Bromobenzene	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Bromochloromethane	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Bromodichloromethane	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Bromoform	ND	---	405	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Bromomethane	ND	---	2030	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
2-Butanone (MEK)	ND	---	2030	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
n-Butylbenzene	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
sec-Butylbenzene	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
tert-Butylbenzene	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Carbon disulfide	ND	---	2030	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Carbon tetrachloride	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Chlorobenzene	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Chloroethane	ND	---	2030	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Chloroform	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Chloromethane	ND	---	1010	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
2-Chlorotoluene	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
4-Chlorotoluene	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Dibromochloromethane	ND	---	405	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	1010	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Dibromomethane	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,2-Dichlorobenzene	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,3-Dichlorobenzene	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,4-Dichlorobenzene	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Dichlorodifluoromethane	ND	---	405	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,1-Dichloroethane	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,1-Dichloroethene	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-4 (19-20) (A3F1239-01)				Matrix: Soil		Batch: 23F0647		
1,2-Dichloropropane	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,3-Dichloropropane	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
2,2-Dichloropropane	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,1-Dichloropropene	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Ethylbenzene	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Hexachlorobutadiene	ND	---	405	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
2-Hexanone	ND	---	2030	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Isopropylbenzene	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
4-Isopropyltoluene	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Methylene chloride	ND	---	2030	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	2030	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Naphthalene	ND	---	405	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
n-Propylbenzene	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Styrene	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Toluene	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	1010	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	1010	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,1,1-Trichloroethane	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,1,2-Trichloroethane	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Trichloroethene (TCE)	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Trichlorofluoromethane	ND	---	405	ug/kg dry	50	06/19/23 11:15	5035A/8260D	Q-52
1,2,3-Trichloropropane	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
Vinyl chloride	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
m,p-Xylene	ND	---	203	ug/kg dry	50	06/19/23 11:15	5035A/8260D	
o-Xylene	ND	---	101	ug/kg dry	50	06/19/23 11:15	5035A/8260D	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

Page 8 of 89



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-4 (19-20) (A3F1239-01)		Matrix: Soil			Batch: 23F0647			
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	101 %	<i>Limits:</i>	80-120 %	1	06/19/23 11:15	5035A/8260D
<i>Toluene-d8 (Surr)</i>			100 %		80-120 %	1	06/19/23 11:15	5035A/8260D
<i>4-Bromofluorobenzene (Surr)</i>			95 %		79-120 %	1	06/19/23 11:15	5035A/8260D
B-2 (6-7) (A3F1239-02)		Matrix: Soil			Batch: 23F0647			
Acetone	ND	---	1680	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Acrylonitrile	ND	---	168	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Benzene	ND	---	16.8	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Bromobenzene	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Bromochloromethane	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Bromodichloromethane	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Bromoform	ND	---	168	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Bromomethane	ND	---	841	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
2-Butanone (MEK)	ND	---	841	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
n-Butylbenzene	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
sec-Butylbenzene	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
tert-Butylbenzene	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Carbon disulfide	ND	---	841	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Carbon tetrachloride	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Chlorobenzene	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Chloroethane	ND	---	841	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Chloroform	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Chloromethane	ND	---	421	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
2-Chlorotoluene	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
4-Chlorotoluene	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Dibromochloromethane	ND	---	168	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	421	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Dibromomethane	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
1,2-Dichlorobenzene	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
1,3-Dichlorobenzene	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
1,4-Dichlorobenzene	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Dichlorodifluoromethane	ND	---	168	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
1,1-Dichloroethane	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-2 (6-7) (A3F1239-02)				Matrix: Soil		Batch: 23F0647		
1,2-Dichloroethane (EDC)	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
1,1-Dichloroethene	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
1,2-Dichloropropane	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
1,3-Dichloropropane	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
2,2-Dichloropropane	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
1,1-Dichloropropene	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Ethylbenzene	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Hexachlorobutadiene	ND	---	168	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
2-Hexanone	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Isopropylbenzene	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
4-Isopropyltoluene	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Methylene chloride	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Naphthalene	ND	---	168	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
n-Propylbenzene	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Styrene	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Toluene	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
1,1,1-Trichloroethane	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
1,1,2-Trichloroethane	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Trichloroethene (TCE)	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Trichlorofluoromethane	ND	---	168	ug/kg dry	50	06/19/23 15:55	5035A/8260D	Q-52
1,2,3-Trichloropropane	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-2 (6-7) (A3F1239-02)		Matrix: Soil			Batch: 23F0647			
1,3,5-Trimethylbenzene	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
Vinyl chloride	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
m,p-Xylene	ND	---	84.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
o-Xylene	ND	---	42.1	ug/kg dry	50	06/19/23 15:55	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>		<i>97 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>06/19/23 15:55</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>				<i>99 %</i>	<i>80-120 %</i>	<i>1</i>	<i>06/19/23 15:55</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>				<i>95 %</i>	<i>79-120 %</i>	<i>1</i>	<i>06/19/23 15:55</i>	<i>5035A/8260D</i>
B-3 (8-9) (A3F1239-03)		Matrix: Soil			Batch: 23F0647			
Acetone	ND	---	1370	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Acrylonitrile	ND	---	137	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Benzene	ND	---	13.7	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Bromobenzene	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Bromochloromethane	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Bromodichloromethane	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Bromoform	ND	---	137	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Bromomethane	ND	---	683	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
2-Butanone (MEK)	ND	---	683	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
n-Butylbenzene	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
sec-Butylbenzene	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
tert-Butylbenzene	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Carbon disulfide	ND	---	683	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Carbon tetrachloride	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Chlorobenzene	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Chloroethane	ND	---	683	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Chloroform	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Chloromethane	ND	---	342	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
2-Chlorotoluene	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
4-Chlorotoluene	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Dibromochloromethane	ND	---	137	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	342	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Dibromomethane	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-3 (8-9) (A3F1239-03)				Matrix: Soil		Batch: 23F0647		
1,2-Dichlorobenzene	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
1,3-Dichlorobenzene	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
1,4-Dichlorobenzene	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Dichlorodifluoromethane	ND	---	137	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
1,1-Dichloroethane	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
1,1-Dichloroethene	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
1,2-Dichloropropane	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
1,3-Dichloropropane	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
2,2-Dichloropropane	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
1,1-Dichloropropene	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Ethylbenzene	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Hexachlorobutadiene	ND	---	137	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
2-Hexanone	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Isopropylbenzene	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
4-Isopropyltoluene	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Methylene chloride	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Naphthalene	ND	---	137	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
n-Propylbenzene	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Styrene	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Toluene	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
1,1,1-Trichloroethane	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

Page 12 of 89



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-3 (8-9) (A3F1239-03)		Matrix: Soil		Batch: 23F0647				
1,1,2-Trichloroethane	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Trichloroethene (TCE)	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Trichlorofluoromethane	ND	---	137	ug/kg dry	50	06/19/23 16:21	5035A/8260D	Q-52
1,2,3-Trichloropropane	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
Vinyl chloride	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
m,p-Xylene	ND	---	68.3	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
o-Xylene	ND	---	34.2	ug/kg dry	50	06/19/23 16:21	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	99 %	<i>Limits:</i>	80-120 %	1	06/19/23 16:21	5035A/8260D
<i>Toluene-d8 (Surr)</i>			99 %		80-120 %	1	06/19/23 16:21	5035A/8260D
<i>4-Bromofluorobenzene (Surr)</i>			96 %		79-120 %	1	06/19/23 16:21	5035A/8260D
B-5 (5-6) (A3F1239-04)		Matrix: Soil		Batch: 23F0647				
Acetone	ND	---	1610	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Acrylonitrile	ND	---	161	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Benzene	ND	---	16.1	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Bromobenzene	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Bromochloromethane	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Bromodichloromethane	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Bromoform	ND	---	161	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Bromomethane	ND	---	803	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
2-Butanone (MEK)	ND	---	803	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
n-Butylbenzene	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
sec-Butylbenzene	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
tert-Butylbenzene	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Carbon disulfide	ND	---	803	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Carbon tetrachloride	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Chlorobenzene	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Chloroethane	ND	---	803	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Chloroform	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Chloromethane	ND	---	402	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
2-Chlorotoluene	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-5 (5-6) (A3F1239-04)				Matrix: Soil		Batch: 23F0647		
4-Chlorotoluene	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Dibromochloromethane	ND	---	161	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	402	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Dibromomethane	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,2-Dichlorobenzene	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,3-Dichlorobenzene	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,4-Dichlorobenzene	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Dichlorodifluoromethane	ND	---	161	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,1-Dichloroethane	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,1-Dichloroethene	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,2-Dichloropropane	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,3-Dichloropropane	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
2,2-Dichloropropane	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,1-Dichloropropene	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Ethylbenzene	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Hexachlorobutadiene	ND	---	161	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
2-Hexanone	ND	---	803	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Isopropylbenzene	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
4-Isopropyltoluene	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Methylene chloride	ND	---	803	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	803	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Naphthalene	ND	---	161	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
n-Propylbenzene	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Styrene	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-5 (5-6) (A3F1239-04)		Matrix: Soil			Batch: 23F0647			
Tetrachloroethene (PCE)	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Toluene	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	402	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	402	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,1,1-Trichloroethane	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,1,2-Trichloroethane	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Trichloroethene (TCE)	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Trichlorofluoromethane	ND	---	161	ug/kg dry	50	06/19/23 16:46	5035A/8260D	Q-52
1,2,3-Trichloropropane	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
Vinyl chloride	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
m,p-Xylene	ND	---	80.3	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
o-Xylene	ND	---	40.2	ug/kg dry	50	06/19/23 16:46	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>06/19/23 16:46</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>	<i>1</i>	<i>06/19/23 16:46</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>95 %</i>		<i>79-120 %</i>	<i>1</i>	<i>06/19/23 16:46</i>	<i>5035A/8260D</i>	
B-6 (5-6) (A3F1239-05)		Matrix: Soil			Batch: 23F0647			
Acetone	ND	---	1330	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Acrylonitrile	ND	---	133	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Benzene	ND	---	13.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Bromobenzene	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Bromochloromethane	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Bromodichloromethane	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Bromoform	ND	---	133	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Bromomethane	ND	---	667	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
2-Butanone (MEK)	ND	---	667	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
n-Butylbenzene	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
sec-Butylbenzene	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
tert-Butylbenzene	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Carbon disulfide	ND	---	667	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Carbon tetrachloride	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 (5-6) (A3F1239-05)				Matrix: Soil		Batch: 23F0647		
Chlorobenzene	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Chloroethane	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Chloroform	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Chloromethane	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
2-Chlorotoluene	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
4-Chlorotoluene	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Dibromochloromethane	ND	---	133	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Dibromomethane	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,2-Dichlorobenzene	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,3-Dichlorobenzene	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,4-Dichlorobenzene	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Dichlorodifluoromethane	ND	---	133	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,1-Dichloroethane	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,1-Dichloroethene	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,2-Dichloropropane	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,3-Dichloropropane	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
2,2-Dichloropropane	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,1-Dichloropropene	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Ethylbenzene	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Hexachlorobutadiene	ND	---	133	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
2-Hexanone	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Isopropylbenzene	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
4-Isopropyltoluene	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Methylene chloride	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

Page 16 of 89



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 (5-6) (A3F1239-05)		Matrix: Soil			Batch: 23F0647			
Naphthalene	ND	---	133	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
n-Propylbenzene	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Styrene	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Toluene	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	333	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	333	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,1,1-Trichloroethane	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,1,2-Trichloroethane	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Trichloroethene (TCE)	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Trichlorofluoromethane	ND	---	133	ug/kg dry	50	06/19/23 17:11	5035A/8260D	Q-52
1,2,3-Trichloropropane	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Vinyl chloride	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
m,p-Xylene	ND	---	66.7	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
o-Xylene	ND	---	33.3	ug/kg dry	50	06/19/23 17:11	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 99 %		Limits: 80-120 %	1	06/19/23 17:11	5035A/8260D	
Toluene-d8 (Surr)		101 %		80-120 %	1	06/19/23 17:11	5035A/8260D	
4-Bromofluorobenzene (Surr)		94 %		79-120 %	1	06/19/23 17:11	5035A/8260D	

HA (2) (A3F1239-06)**Matrix: Soil****Batch: 23F0647**

Acetone	ND	---	1310	ug/kg dry	50	06/19/23 17:37	5035A/8260D
Acrylonitrile	ND	---	131	ug/kg dry	50	06/19/23 17:37	5035A/8260D
Benzene	ND	---	13.1	ug/kg dry	50	06/19/23 17:37	5035A/8260D
Bromobenzene	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D
Bromochloromethane	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D
Bromodichloromethane	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D
Bromoform	ND	---	131	ug/kg dry	50	06/19/23 17:37	5035A/8260D
Bromomethane	ND	---	655	ug/kg dry	50	06/19/23 17:37	5035A/8260D
2-Butanone (MEK)	ND	---	655	ug/kg dry	50	06/19/23 17:37	5035A/8260D

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HA (2) (A3F1239-06)				Matrix: Soil		Batch: 23F0647		
n-Butylbenzene	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
sec-Butylbenzene	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
tert-Butylbenzene	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Carbon disulfide	ND	---	655	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Carbon tetrachloride	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Chlorobenzene	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Chloroethane	ND	---	655	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Chloroform	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Chloromethane	ND	---	328	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
2-Chlorotoluene	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
4-Chlorotoluene	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Dibromochloromethane	ND	---	131	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	328	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Dibromomethane	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,2-Dichlorobenzene	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,3-Dichlorobenzene	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,4-Dichlorobenzene	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Dichlorodifluoromethane	ND	---	131	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,1-Dichloroethane	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,1-Dichloroethene	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,2-Dichloropropane	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,3-Dichloropropane	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
2,2-Dichloropropane	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,1-Dichloropropene	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Ethylbenzene	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Hexachlorobutadiene	ND	---	131	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
2-Hexanone	ND	---	655	ug/kg dry	50	06/19/23 17:37	5035A/8260D	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HA (2) (A3F1239-06)		Matrix: Soil			Batch: 23F0647			
Isopropylbenzene	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
4-Isopropyltoluene	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Methylene chloride	ND	---	655	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	655	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Naphthalene	ND	---	131	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
n-Propylbenzene	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Styrene	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Toluene	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	328	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	328	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,1,1-Trichloroethane	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,1,2-Trichloroethane	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Trichloroethene (TCE)	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Trichlorofluoromethane	ND	---	131	ug/kg dry	50	06/19/23 17:37	5035A/8260D	Q-52
1,2,3-Trichloropropane	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Vinyl chloride	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
m,p-Xylene	ND	---	65.5	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
o-Xylene	ND	---	32.8	ug/kg dry	50	06/19/23 17:37	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	101 %	Limits:	80-120 %	1	06/19/23 17:37	5035A/8260D
Toluene-d8 (Surr)			100 %		80-120 %	1	06/19/23 17:37	5035A/8260D
4-Bromofluorobenzene (Surr)			94 %		79-120 %	1	06/19/23 17:37	5035A/8260D

B-4 (GW) (A3F1239-07)**Matrix: Water****Batch: 23F0648**

Acetone	ND	---	20.0	ug/L	1	06/19/23 16:09	EPA 8260D
Acrylonitrile	ND	---	2.00	ug/L	1	06/19/23 16:09	EPA 8260D
Benzene	ND	---	0.200	ug/L	1	06/19/23 16:09	EPA 8260D
Bromobenzene	ND	---	0.500	ug/L	1	06/19/23 16:09	EPA 8260D

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062GeoEngineers4000 Kruse Way Place, Bldg 3 Suite 200
Lake Oswego, OR 97035Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-4 (GW) (A3F1239-07)		Matrix: Water			Batch: 23F0648			
Bromochloromethane	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
Bromodichloromethane	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
Bromoform	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
Bromomethane	ND	---	5.00	ug/L	1	06/19/23 16:09	EPA 8260D	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	06/19/23 16:09	EPA 8260D	
n-Butylbenzene	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
sec-Butylbenzene	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
tert-Butylbenzene	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
Carbon disulfide	ND	---	10.0	ug/L	1	06/19/23 16:09	EPA 8260D	
Carbon tetrachloride	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
Chlorobenzene	ND	---	0.500	ug/L	1	06/19/23 16:09	EPA 8260D	
Chloroethane	ND	---	5.00	ug/L	1	06/19/23 16:09	EPA 8260D	
Chloroform	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
Chloromethane	ND	---	5.00	ug/L	1	06/19/23 16:09	EPA 8260D	
2-Chlorotoluene	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
4-Chlorotoluene	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
Dibromochloromethane	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	06/19/23 16:09	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	06/19/23 16:09	EPA 8260D	
Dibromomethane	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	06/19/23 16:09	EPA 8260D	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	06/19/23 16:09	EPA 8260D	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	06/19/23 16:09	EPA 8260D	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	06/19/23 16:09	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	06/19/23 16:09	EPA 8260D	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	06/19/23 16:09	EPA 8260D	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	06/19/23 16:09	EPA 8260D	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	06/19/23 16:09	EPA 8260D	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	06/19/23 16:09	EPA 8260D	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-4 (GW) (A3F1239-07)		Matrix: Water			Batch: 23F0648			
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
Ethylbenzene	ND	---	0.500	ug/L	1	06/19/23 16:09	EPA 8260D	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	06/19/23 16:09	EPA 8260D	
2-Hexanone	ND	---	10.0	ug/L	1	06/19/23 16:09	EPA 8260D	
Isopropylbenzene	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
Methylene chloride	ND	---	10.0	ug/L	1	06/19/23 16:09	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	06/19/23 16:09	EPA 8260D	
Methyl tert-butyl ether (MTBE)	19.0	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
Naphthalene	ND	---	2.00	ug/L	1	06/19/23 16:09	EPA 8260D	
n-Propylbenzene	ND	---	0.500	ug/L	1	06/19/23 16:09	EPA 8260D	
Styrene	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	06/19/23 16:09	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	06/19/23 16:09	EPA 8260D	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	06/19/23 16:09	EPA 8260D	
Toluene	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	06/19/23 16:09	EPA 8260D	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	06/19/23 16:09	EPA 8260D	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	06/19/23 16:09	EPA 8260D	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	06/19/23 16:09	EPA 8260D	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	06/19/23 16:09	EPA 8260D	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	06/19/23 16:09	EPA 8260D	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
Vinyl chloride	ND	---	0.400	ug/L	1	06/19/23 16:09	EPA 8260D	
m,p-Xylene	ND	---	1.00	ug/L	1	06/19/23 16:09	EPA 8260D	
o-Xylene	ND	---	0.500	ug/L	1	06/19/23 16:09	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	106 %	Limits:	80-120 %	1	06/19/23 16:09	EPA 8260D
Toluene-d8 (Surr)			103 %		80-120 %	1	06/19/23 16:09	EPA 8260D
4-Bromofluorobenzene (Surr)			106 %		80-120 %	1	06/19/23 16:09	EPA 8260D

Apex Laboratories

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Cameron O'Brien For Darrell Auvil, Client Services Manager

Page 21 of 89

**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**GeoEngineers**4000 Kruse Way Place, Bldg 3 Suite 200
Lake Oswego, OR 97035Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-3 (GW) (A3F1239-08)		Matrix: Water			Batch: 23F0648			
Acetone	ND	---	20.0	ug/L	1	06/19/23 17:03	EPA 8260D	
Acrylonitrile	ND	---	2.00	ug/L	1	06/19/23 17:03	EPA 8260D	
Benzene	ND	---	0.200	ug/L	1	06/19/23 17:03	EPA 8260D	
Bromobenzene	ND	---	0.500	ug/L	1	06/19/23 17:03	EPA 8260D	
Bromochloromethane	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
Bromodichloromethane	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
Bromoform	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
Bromomethane	ND	---	5.00	ug/L	1	06/19/23 17:03	EPA 8260D	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	06/19/23 17:03	EPA 8260D	
n-Butylbenzene	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
sec-Butylbenzene	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
tert-Butylbenzene	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
Carbon disulfide	ND	---	10.0	ug/L	1	06/19/23 17:03	EPA 8260D	
Carbon tetrachloride	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
Chlorobenzene	ND	---	0.500	ug/L	1	06/19/23 17:03	EPA 8260D	
Chloroethane	ND	---	5.00	ug/L	1	06/19/23 17:03	EPA 8260D	
Chloroform	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
Chloromethane	ND	---	5.00	ug/L	1	06/19/23 17:03	EPA 8260D	
2-Chlorotoluene	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
4-Chlorotoluene	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
Dibromochloromethane	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	06/19/23 17:03	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	06/19/23 17:03	EPA 8260D	
Dibromomethane	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	06/19/23 17:03	EPA 8260D	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	06/19/23 17:03	EPA 8260D	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	06/19/23 17:03	EPA 8260D	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	06/19/23 17:03	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	06/19/23 17:03	EPA 8260D	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	06/19/23 17:03	EPA 8260D	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	06/19/23 17:03	EPA 8260D	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	06/19/23 17:03	EPA 8260D	

Apex Laboratories

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-3 (GW) (A3F1239-08)				Matrix: Water		Batch: 23F0648		
1,2-Dichloropropane	ND	---	0.500	ug/L	1	06/19/23 17:03	EPA 8260D	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
Ethylbenzene	ND	---	0.500	ug/L	1	06/19/23 17:03	EPA 8260D	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	06/19/23 17:03	EPA 8260D	
2-Hexanone	ND	---	10.0	ug/L	1	06/19/23 17:03	EPA 8260D	
Isopropylbenzene	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
Methylene chloride	ND	---	10.0	ug/L	1	06/19/23 17:03	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	10.0	ug/L	1	06/19/23 17:03	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
Naphthalene	ND	---	2.00	ug/L	1	06/19/23 17:03	EPA 8260D	
n-Propylbenzene	ND	---	0.500	ug/L	1	06/19/23 17:03	EPA 8260D	
Styrene	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	06/19/23 17:03	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	06/19/23 17:03	EPA 8260D	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	06/19/23 17:03	EPA 8260D	
Toluene	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	06/19/23 17:03	EPA 8260D	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	06/19/23 17:03	EPA 8260D	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	06/19/23 17:03	EPA 8260D	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	06/19/23 17:03	EPA 8260D	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	06/19/23 17:03	EPA 8260D	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	06/19/23 17:03	EPA 8260D	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
Vinyl chloride	ND	---	0.400	ug/L	1	06/19/23 17:03	EPA 8260D	
m,p-Xylene	ND	---	1.00	ug/L	1	06/19/23 17:03	EPA 8260D	
o-Xylene	ND	---	0.500	ug/L	1	06/19/23 17:03	EPA 8260D	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-3 (GW) (A3F1239-08)		Matrix: Water			Batch: 23F0648			
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 108 %	Limits: 80-120 %	1	06/19/23 17:03	EPA 8260D		
Toluene-d8 (Surr)		104 %	80-120 %	1	06/19/23 17:03	EPA 8260D		
4-Bromofluorobenzene (Surr)		106 %	80-120 %	1	06/19/23 17:03	EPA 8260D		
B-6 (GW) (A3F1239-09)		Matrix: Water			Batch: 23F0648			
Acetone	ND	---	20.0	ug/L	1	06/19/23 17:30	EPA 8260D	
Acrylonitrile	ND	---	2.00	ug/L	1	06/19/23 17:30	EPA 8260D	
Benzene	ND	---	0.200	ug/L	1	06/19/23 17:30	EPA 8260D	
Bromobenzene	ND	---	0.500	ug/L	1	06/19/23 17:30	EPA 8260D	
Bromochloromethane	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
Bromodichloromethane	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
Bromoform	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
Bromomethane	ND	---	5.00	ug/L	1	06/19/23 17:30	EPA 8260D	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	06/19/23 17:30	EPA 8260D	
n-Butylbenzene	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
sec-Butylbenzene	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
tert-Butylbenzene	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
Carbon disulfide	ND	---	10.0	ug/L	1	06/19/23 17:30	EPA 8260D	
Carbon tetrachloride	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
Chlorobenzene	ND	---	0.500	ug/L	1	06/19/23 17:30	EPA 8260D	
Chloroethane	ND	---	5.00	ug/L	1	06/19/23 17:30	EPA 8260D	
Chloroform	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
Chloromethane	ND	---	5.00	ug/L	1	06/19/23 17:30	EPA 8260D	
2-Chlorotoluene	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
4-Chlorotoluene	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
Dibromochloromethane	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	06/19/23 17:30	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	06/19/23 17:30	EPA 8260D	
Dibromomethane	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	06/19/23 17:30	EPA 8260D	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	06/19/23 17:30	EPA 8260D	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	06/19/23 17:30	EPA 8260D	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	06/19/23 17:30	EPA 8260D	

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 (GW) (A3F1239-09)		Matrix: Water			Batch: 23F0648			
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	06/19/23 17:30	EPA 8260D	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	06/19/23 17:30	EPA 8260D	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	06/19/23 17:30	EPA 8260D	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	06/19/23 17:30	EPA 8260D	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	06/19/23 17:30	EPA 8260D	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
Ethylbenzene	ND	---	0.500	ug/L	1	06/19/23 17:30	EPA 8260D	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	06/19/23 17:30	EPA 8260D	
2-Hexanone	ND	---	10.0	ug/L	1	06/19/23 17:30	EPA 8260D	
Isopropylbenzene	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
Methylene chloride	ND	---	10.0	ug/L	1	06/19/23 17:30	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	10.0	ug/L	1	06/19/23 17:30	EPA 8260D	
Methyl tert-butyl ether (MTBE)	9.27	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
Naphthalene	ND	---	2.00	ug/L	1	06/19/23 17:30	EPA 8260D	
n-Propylbenzene	ND	---	0.500	ug/L	1	06/19/23 17:30	EPA 8260D	
Styrene	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	06/19/23 17:30	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	06/19/23 17:30	EPA 8260D	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	06/19/23 17:30	EPA 8260D	
Toluene	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	06/19/23 17:30	EPA 8260D	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	06/19/23 17:30	EPA 8260D	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	06/19/23 17:30	EPA 8260D	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	06/19/23 17:30	EPA 8260D	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	06/19/23 17:30	EPA 8260D	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	06/19/23 17:30	EPA 8260D	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 (GW) (A3F1239-09)		Matrix: Water			Batch: 23F0648			
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
Vinyl chloride	ND	---	0.400	ug/L	1	06/19/23 17:30	EPA 8260D	
m,p-Xylene	ND	---	1.00	ug/L	1	06/19/23 17:30	EPA 8260D	
o-Xylene	ND	---	0.500	ug/L	1	06/19/23 17:30	EPA 8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>107 %</i>	<i>Limits:</i>	<i>80-120 %</i>	<i>1</i>	<i>06/19/23 17:30</i>	<i>EPA 8260D</i>
<i>Toluene-d8 (Surr)</i>			<i>104 %</i>		<i>80-120 %</i>	<i>1</i>	<i>06/19/23 17:30</i>	<i>EPA 8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>			<i>106 %</i>		<i>80-120 %</i>	<i>1</i>	<i>06/19/23 17:30</i>	<i>EPA 8260D</i>

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-4 (19-20) (A3F1239-01)				Matrix: Soil		Batch: 23F0754		C-07
Aroclor 1016	ND	---	21.4	ug/kg dry	1	06/21/23 22:34	EPA 8082A	
Aroclor 1221	ND	---	21.4	ug/kg dry	1	06/21/23 22:34	EPA 8082A	
Aroclor 1232	ND	---	21.4	ug/kg dry	1	06/21/23 22:34	EPA 8082A	
Aroclor 1242	ND	---	21.4	ug/kg dry	1	06/21/23 22:34	EPA 8082A	
Aroclor 1248	ND	---	21.4	ug/kg dry	1	06/21/23 22:34	EPA 8082A	
Aroclor 1254	ND	---	21.4	ug/kg dry	1	06/21/23 22:34	EPA 8082A	
Aroclor 1260	ND	---	21.4	ug/kg dry	1	06/21/23 22:34	EPA 8082A	
Surrogate: Decachlorobiphenyl (Surr)			Recovery: 101 %	Limits: 60-125 %	1	06/21/23 22:34	EPA 8082A	
B-4 (GW) (A3F1239-07)				Matrix: Water		Batch: 23F0845		C-07
Aroclor 1016	ND	---	0.103	ug/L	1	06/23/23 14:55	EPA 8082A	
Aroclor 1221	ND	---	0.103	ug/L	1	06/23/23 14:55	EPA 8082A	
Aroclor 1232	ND	---	0.103	ug/L	1	06/23/23 14:55	EPA 8082A	
Aroclor 1242	ND	---	0.103	ug/L	1	06/23/23 14:55	EPA 8082A	
Aroclor 1248	ND	---	0.103	ug/L	1	06/23/23 14:55	EPA 8082A	
Aroclor 1254	ND	---	0.103	ug/L	1	06/23/23 14:55	EPA 8082A	
Aroclor 1260	ND	---	0.103	ug/L	1	06/23/23 14:55	EPA 8082A	
Surrogate: Decachlorobiphenyl (Surr)			Recovery: 82 %	Limits: 40-135 %	1	06/23/23 14:55	EPA 8082A	
B-6 (GW) (A3F1239-09)				Matrix: Water		Batch: 23F0845		C-07
Aroclor 1016	ND	---	0.104	ug/L	1	06/23/23 15:14	EPA 8082A	
Aroclor 1221	ND	---	0.104	ug/L	1	06/23/23 15:14	EPA 8082A	
Aroclor 1232	ND	---	0.104	ug/L	1	06/23/23 15:14	EPA 8082A	
Aroclor 1242	ND	---	0.104	ug/L	1	06/23/23 15:14	EPA 8082A	
Aroclor 1248	ND	---	0.104	ug/L	1	06/23/23 15:14	EPA 8082A	
Aroclor 1254	ND	---	0.104	ug/L	1	06/23/23 15:14	EPA 8082A	
Aroclor 1260	ND	---	0.104	ug/L	1	06/23/23 15:14	EPA 8082A	
Surrogate: Decachlorobiphenyl (Surr)			Recovery: 89 %	Limits: 40-135 %	1	06/23/23 15:14	EPA 8082A	

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ANALYTICAL REPORT

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503-718-2323

ORELAP ID: OR100062

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4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

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-4 (19-20) (A3F1239-01)				Matrix: Soil		Batch: 23F0706		
Acenaphthene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
Acenaphthylene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
Anthracene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
Benz(a)anthracene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
Benzo(a)pyrene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
Chrysene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
Fluoranthene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
Fluorene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
1-Methylnaphthalene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
2-Methylnaphthalene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
Naphthalene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
Phenanthrene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
Pyrene	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
Dibenzofuran	ND	---	22.0	ug/kg dry	1	06/21/23 04:31	EPA 8270E SIM	
Surrogate: 2-Fluorobiphenyl (Surr)		Recovery: 80 %		Limits: 44-120 %	1	06/21/23 04:31	EPA 8270E SIM	
p-Terphenyl-d14 (Surr)		81 %		54-127 %	1	06/21/23 04:31	EPA 8270E SIM	

B-2 (6-7) (A3F1239-02)**Matrix: Soil****Batch: 23F0706**

Acenaphthene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM
Acenaphthylene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM
Anthracene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM
Benz(a)anthracene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM
Benzo(a)pyrene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM
Benzo(b)fluoranthene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM
Benzo(k)fluoranthene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM
Benzo(g,h,i)perylene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM
Chrysene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM
Dibenz(a,h)anthracene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

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Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

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-2 (6-7) (A3F1239-02)		Matrix: Soil			Batch: 23F0706			
Fluoranthene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM	
Fluorene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM	
1-Methylnaphthalene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM	
2-Methylnaphthalene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM	
Naphthalene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM	
Phenanthrene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM	
Pyrene	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM	
Dibenzofuran	ND	---	14.0	ug/kg dry	1	06/21/23 09:26	EPA 8270E SIM	
Surrogate: 2-Fluorobiphenyl (Surr)		Recovery: 81 %		Limits: 44-120 %	1	06/21/23 09:26	EPA 8270E SIM	
p-Terphenyl-d14 (Surr)		78 %		54-127 %	1	06/21/23 09:26	EPA 8270E SIM	
B-5 (5-6) (A3F1239-04)		Matrix: Soil			Batch: 23F0706			
Acenaphthene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
Acenaphthylene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
Anthracene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
Benz(a)anthracene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
Benzo(a)pyrene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
Chrysene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
Fluoranthene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
Fluorene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
1-Methylnaphthalene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
2-Methylnaphthalene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
Naphthalene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
Phenanthrene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
Pyrene	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
Dibenzofuran	ND	---	12.9	ug/kg dry	1	06/21/23 09:52	EPA 8270E SIM	
Surrogate: 2-Fluorobiphenyl (Surr)		Recovery: 86 %		Limits: 44-120 %	1	06/21/23 09:52	EPA 8270E SIM	

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ANALYTICAL REPORT

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Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

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-5 (5-6) (A3F1239-04)				Matrix: Soil		Batch: 23F0706		
<i>Surrogate: p-Terphenyl-d14 (Surr)</i>		<i>Recovery: 85 %</i>	<i>Limits: 54-127 %</i>	<i>1</i>	<i>06/21/23 09:52</i>	<i>EPA 8270E SIM</i>		
HA (2) (A3F1239-06)				Matrix: Soil		Batch: 23F0706		
Acenaphthene	ND	---	14.5	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	R-02
Acenaphthylene	ND	---	10.3	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	
Anthracene	ND	---	10.3	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	
Benz(a)anthracene	ND	---	10.3	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	
Benzo(a)pyrene	ND	---	10.3	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	---	10.3	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	---	10.3	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	---	10.3	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	
Chrysene	ND	---	11.4	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	R-02
Dibenz(a,h)anthracene	ND	---	10.3	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	
Fluoranthene	ND	---	10.3	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	
Fluorene	ND	---	10.3	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	---	10.3	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	
1-Methylnaphthalene	ND	---	10.3	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	
2-Methylnaphthalene	16.6	---	10.3	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	
Naphthalene	ND	---	10.3	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	
Phenanthrene	ND	---	10.3	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	
Pyrene	10.9	---	10.3	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	
Dibenzofuran	ND	---	444	ug/kg dry	1	06/21/23 10:17	EPA 8270E SIM	R-02
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 95 %</i>	<i>Limits: 44-120 %</i>	<i>1</i>	<i>06/21/23 10:17</i>	<i>EPA 8270E SIM</i>		
<i>p-Terphenyl-d14 (Surr)</i>		<i>91 %</i>	<i>54-127 %</i>	<i>1</i>	<i>06/21/23 10:17</i>	<i>EPA 8270E SIM</i>		

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ANALYTICAL REPORT

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Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-4 (GW) (A3F1239-07)		Matrix: Water			Batch: 23F0693			
Acenaphthene	ND	---	0.0366	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Acenaphthylene	ND	---	0.0366	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Anthracene	ND	---	0.0366	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Benz(a)anthracene	ND	---	0.0183	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Benzo(a)pyrene	ND	---	0.0183	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	---	0.0183	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	---	0.0183	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	---	0.0366	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Chrysene	ND	---	0.0183	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	---	0.0183	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Fluoranthene	ND	---	0.0366	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Fluorene	ND	---	0.0366	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	---	0.0183	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
1-Methylnaphthalene	ND	---	0.0731	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
2-Methylnaphthalene	ND	---	0.0731	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Naphthalene	ND	---	0.0731	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Phenanthrene	ND	---	0.0731	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Pyrene	ND	---	0.0366	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Carbazole	ND	---	0.0366	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Dibenzofuran	ND	---	0.0366	ug/L	1	06/20/23 18:52	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		Recovery: 82 %		Limits: 78-134 %	1	06/20/23 18:52	EPA 8270E LVI	
Benzo(a)pyrene-d12 (Surr)		105 %		80-132 %	1	06/20/23 18:52	EPA 8270E LVI	

B-3 (GW) (A3F1239-08)**Matrix: Water****Batch: 23F0693**

Acenaphthene	ND	---	0.0372	ug/L	1	06/20/23 19:25	EPA 8270E LVI
Acenaphthylene	ND	---	0.0372	ug/L	1	06/20/23 19:25	EPA 8270E LVI
Anthracene	ND	---	0.0372	ug/L	1	06/20/23 19:25	EPA 8270E LVI
Benz(a)anthracene	ND	---	0.0186	ug/L	1	06/20/23 19:25	EPA 8270E LVI
Benzo(a)pyrene	ND	---	0.0186	ug/L	1	06/20/23 19:25	EPA 8270E LVI
Benzo(b)fluoranthene	ND	---	0.0186	ug/L	1	06/20/23 19:25	EPA 8270E LVI
Benzo(k)fluoranthene	ND	---	0.0186	ug/L	1	06/20/23 19:25	EPA 8270E LVI
Benzo(g,h,i)perylene	ND	---	0.0372	ug/L	1	06/20/23 19:25	EPA 8270E LVI
Chrysene	ND	---	0.0186	ug/L	1	06/20/23 19:25	EPA 8270E LVI

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ANALYTICAL REPORT

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Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-3 (GW) (A3F1239-08)			Matrix: Water		Batch: 23F0693			
Dibenz(a,h)anthracene	ND	---	0.0186	ug/L	1	06/20/23 19:25	EPA 8270E LVI	
Fluoranthene	ND	---	0.0372	ug/L	1	06/20/23 19:25	EPA 8270E LVI	
Fluorene	ND	---	0.0372	ug/L	1	06/20/23 19:25	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	---	0.0186	ug/L	1	06/20/23 19:25	EPA 8270E LVI	
1-Methylnaphthalene	ND	---	0.0743	ug/L	1	06/20/23 19:25	EPA 8270E LVI	
2-Methylnaphthalene	ND	---	0.0743	ug/L	1	06/20/23 19:25	EPA 8270E LVI	
Naphthalene	ND	---	0.0743	ug/L	1	06/20/23 19:25	EPA 8270E LVI	
Phenanthrene	ND	---	0.0743	ug/L	1	06/20/23 19:25	EPA 8270E LVI	
Pyrene	ND	---	0.0372	ug/L	1	06/20/23 19:25	EPA 8270E LVI	
Carbazole	ND	---	0.0372	ug/L	1	06/20/23 19:25	EPA 8270E LVI	
Dibenzofuran	ND	---	0.0372	ug/L	1	06/20/23 19:25	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		Recovery: 83 %		Limits: 78-134 %	1	06/20/23 19:25	EPA 8270E LVI	
Benzo(a)pyrene-d12 (Surr)		107 %		80-132 %	1	06/20/23 19:25	EPA 8270E LVI	
B-6 (GW) (A3F1239-09)			Matrix: Water		Batch: 23F0693			
Acenaphthene	ND	---	0.0403	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
Acenaphthylene	ND	---	0.0403	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
Anthracene	ND	---	0.0403	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
Benz(a)anthracene	ND	---	0.0202	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
Benzo(a)pyrene	ND	---	0.0202	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	---	0.0202	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	---	0.0202	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	---	0.0403	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
Chrysene	ND	---	0.0202	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	---	0.0202	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
Fluoranthene	ND	---	0.0403	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
Fluorene	ND	---	0.0403	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	---	0.0202	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
1-Methylnaphthalene	ND	---	0.0806	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
2-Methylnaphthalene	ND	---	0.0806	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
Naphthalene	ND	---	0.0806	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
Phenanthrene	ND	---	0.0806	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
Pyrene	ND	---	0.0403	ug/L	1	06/20/23 19:57	EPA 8270E LVI	

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ANALYTICAL REPORT

Apex Laboratories, LLC

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

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200
Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 (GW) (A3F1239-09)				Matrix: Water		Batch: 23F0693		
Carbazole	ND	---	0.0403	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
Dibenzofuran	ND	---	0.0403	ug/L	1	06/20/23 19:57	EPA 8270E LVI	
<i>Surrogate: Acenaphthylene-d8 (Surr)</i>			<i>Recovery: 81 %</i>	<i>Limits: 78-134 %</i>	<i>1</i>	<i>06/20/23 19:57</i>	<i>EPA 8270E LVI</i>	
<i>Benzo(a)pyrene-d12 (Surr)</i>			<i>105 %</i>	<i>80-132 %</i>	<i>1</i>	<i>06/20/23 19:57</i>	<i>EPA 8270E LVI</i>	

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

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Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS**Total Metals by EPA 6020B (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-4 (19-20) (A3F1239-01RE1) Matrix: Soil								
Batch: 23F0688								
Arsenic	4.52	---	2.39	mg/kg dry	10	06/20/23 20:31	EPA 6020B	
Barium	160	---	2.39	mg/kg dry	10	06/20/23 20:31	EPA 6020B	
Cadmium	ND	---	0.478	mg/kg dry	10	06/20/23 20:31	EPA 6020B	
Chromium	43.3	---	2.39	mg/kg dry	10	06/20/23 20:31	EPA 6020B	
Lead	4.86	---	0.478	mg/kg dry	10	06/20/23 20:31	EPA 6020B	
Mercury	ND	---	0.191	mg/kg dry	10	06/20/23 20:31	EPA 6020B	
Selenium	4.28	---	2.39	mg/kg dry	10	06/20/23 20:31	EPA 6020B	
Silver	ND	---	0.478	mg/kg dry	10	06/20/23 20:31	EPA 6020B	
B-2 (6-7) (A3F1239-02RE1) Matrix: Soil								
Batch: 23F0688								
Arsenic	3.04	---	1.47	mg/kg dry	10	06/20/23 20:36	EPA 6020B	
Barium	241	---	1.47	mg/kg dry	10	06/20/23 20:36	EPA 6020B	
Cadmium	ND	---	0.295	mg/kg dry	10	06/20/23 20:36	EPA 6020B	
Chromium	55.5	---	1.47	mg/kg dry	10	06/20/23 20:36	EPA 6020B	
Lead	11.8	---	0.295	mg/kg dry	10	06/20/23 20:36	EPA 6020B	
Mercury	ND	---	0.118	mg/kg dry	10	06/20/23 20:36	EPA 6020B	
Selenium	ND	---	1.47	mg/kg dry	10	06/20/23 20:36	EPA 6020B	
Silver	ND	---	0.295	mg/kg dry	10	06/20/23 20:36	EPA 6020B	
B-5 (5-6) (A3F1239-04RE1) Matrix: Soil								
Batch: 23F0688								
Arsenic	3.24	---	1.44	mg/kg dry	10	06/20/23 20:41	EPA 6020B	
Barium	197	---	1.44	mg/kg dry	10	06/20/23 20:41	EPA 6020B	
Cadmium	ND	---	0.288	mg/kg dry	10	06/20/23 20:41	EPA 6020B	
Chromium	47.8	---	1.44	mg/kg dry	10	06/20/23 20:41	EPA 6020B	
Lead	9.50	---	0.288	mg/kg dry	10	06/20/23 20:41	EPA 6020B	
Mercury	ND	---	0.115	mg/kg dry	10	06/20/23 20:41	EPA 6020B	
Selenium	ND	---	1.44	mg/kg dry	10	06/20/23 20:41	EPA 6020B	
Silver	ND	---	0.288	mg/kg dry	10	06/20/23 20:41	EPA 6020B	
HA (2) (A3F1239-06) Matrix: Soil								
Batch: 23F0688								

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ANALYTICAL REPORT

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ORELAP ID: OR100062

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Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HA (2) (A3F1239-06)				Matrix: Soil				
Arsenic	1.34	---	1.16	mg/kg dry	10	06/20/23 20:46	EPA 6020B	
Barium	75.8	---	1.16	mg/kg dry	10	06/20/23 20:46	EPA 6020B	
Cadmium	ND	---	0.232	mg/kg dry	10	06/20/23 20:46	EPA 6020B	
Chromium	10.5	---	1.16	mg/kg dry	10	06/20/23 20:46	EPA 6020B	
Lead	6.39	---	0.232	mg/kg dry	10	06/20/23 20:46	EPA 6020B	
Mercury	ND	---	0.0927	mg/kg dry	10	06/20/23 20:46	EPA 6020B	
Selenium	ND	---	1.16	mg/kg dry	10	06/20/23 20:46	EPA 6020B	
Silver	ND	---	0.232	mg/kg dry	10	06/20/23 20:46	EPA 6020B	
B-4 (GW) (A3F1239-07)				Matrix: Water				
Batch: 23F0682								
Arsenic	28.5	---	1.00	ug/L	1	06/19/23 22:19	EPA 6020B	
Barium	808	---	2.00	ug/L	1	06/19/23 22:19	EPA 6020B	
Cadmium	3.76	---	0.200	ug/L	1	06/19/23 22:19	EPA 6020B	
Chromium	106	---	2.00	ug/L	1	06/19/23 22:19	EPA 6020B	
Lead	24.4	---	0.200	ug/L	1	06/19/23 22:19	EPA 6020B	
Mercury	0.140	---	0.0800	ug/L	1	06/19/23 22:19	EPA 6020B	
Selenium	15.1	---	1.00	ug/L	1	06/19/23 22:19	EPA 6020B	
Silver	0.449	---	0.200	ug/L	1	06/19/23 22:19	EPA 6020B	
B-3 (GW) (A3F1239-08)				Matrix: Water				
Batch: 23F0682								
Arsenic	17.8	---	1.00	ug/L	1	06/19/23 22:24	EPA 6020B	
Barium	734	---	2.00	ug/L	1	06/19/23 22:24	EPA 6020B	
Cadmium	0.376	---	0.200	ug/L	1	06/19/23 22:24	EPA 6020B	
Chromium	90.1	---	2.00	ug/L	1	06/19/23 22:24	EPA 6020B	
Lead	18.0	---	0.200	ug/L	1	06/19/23 22:24	EPA 6020B	
Mercury	ND	---	0.0800	ug/L	1	06/19/23 22:24	EPA 6020B	
Selenium	1.34	---	1.00	ug/L	1	06/19/23 22:24	EPA 6020B	
Silver	ND	---	0.200	ug/L	1	06/19/23 22:24	EPA 6020B	
B-6 (GW) (A3F1239-09)				Matrix: Water				
Batch: 23F0682								
Arsenic	13.0	---	1.00	ug/L	1	06/19/23 22:29	EPA 6020B	

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ANALYTICAL REPORT

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Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 (GW) (A3F1239-09)		Matrix: Water						
Barium	500	---	2.00	ug/L	1	06/19/23 22:29	EPA 6020B	
Cadmium	0.766	---	0.200	ug/L	1	06/19/23 22:29	EPA 6020B	
Chromium	43.7	---	2.00	ug/L	1	06/19/23 22:29	EPA 6020B	
Lead	8.15	---	0.200	ug/L	1	06/19/23 22:29	EPA 6020B	
Mercury	ND	---	0.0800	ug/L	1	06/19/23 22:29	EPA 6020B	
Selenium	4.89	---	1.00	ug/L	1	06/19/23 22:29	EPA 6020B	
Silver	0.228	---	0.200	ug/L	1	06/19/23 22:29	EPA 6020B	

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-4 (19-20) (A3F1239-01)				Matrix: Soil		Batch: 23F0651		
% Solids	45.1	---	1.00	%	1	06/20/23 06:22	EPA 8000D	
B-2 (6-7) (A3F1239-02)				Matrix: Soil		Batch: 23F0651		
% Solids	71.3	---	1.00	%	1	06/20/23 06:22	EPA 8000D	
B-3 (8-9) (A3F1239-03)				Matrix: Soil		Batch: 23F0651		
% Solids	76.8	---	1.00	%	1	06/20/23 06:22	EPA 8000D	
B-5 (5-6) (A3F1239-04)				Matrix: Soil		Batch: 23F0651		
% Solids	71.7	---	1.00	%	1	06/20/23 06:22	EPA 8000D	
B-6 (5-6) (A3F1239-05)				Matrix: Soil		Batch: 23F0651		
% Solids	74.7	---	1.00	%	1	06/20/23 06:22	EPA 8000D	
HA (2) (A3F1239-06)				Matrix: Soil		Batch: 23F0651		
% Solids	90.4	---	1.00	%	1	06/20/23 06:22	EPA 8000D	

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Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0772 - EPA 3546 (Fuels)						Soil						
Blank (23F0772-BLK1)			Prepared: 06/21/23 11:03		Analyzed: 06/21/23 21:08							
NWTPH-Dx												
Diesel	ND	---	20.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	40.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 83 %		Limits: 50-150 %		Dilution: 1x						
LCS (23F0772-BS1)			Prepared: 06/21/23 11:03		Analyzed: 06/21/23 21:31							
NWTPH-Dx												
Diesel	117	---	20.0	mg/kg wet	1	125	---	94	38-132%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 87 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (23F0772-DUP1)			Prepared: 06/21/23 11:03		Analyzed: 06/21/23 22:18							
QC Source Sample: Non-SDG (A3F1214-01)												
Diesel	ND	---	23.9	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	121	---	47.7	mg/kg dry	1	---	88.9	---	---	31	30%	Q-05
Surr: o-Terphenyl (Surr)		Recovery: 82 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (23F0772-DUP2)			Prepared: 06/21/23 11:03		Analyzed: 06/22/23 01:02							
QC Source Sample: Non-SDG (A3F1303-06)												
Diesel	ND	---	23.6	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	---	47.2	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 78 %		Limits: 50-150 %		Dilution: 1x						
Batch 23F0798 - EPA 3510C (Fuels/Acid Ext.)						Water						
Blank (23F0798-BLK1)			Prepared: 06/22/23 07:10		Analyzed: 06/22/23 22:07							
NWTPH-Dx LL												
Diesel	ND	---	0.0800	mg/L	1	---	---	---	---	---	---	
Oil	ND	---	0.160	mg/L	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 56 %		Limits: 50-150 %		Dilution: 1x						
LCS (23F0798-BS1)			Prepared: 06/22/23 07:10		Analyzed: 06/22/23 22:30							
NWTPH-Dx LL												
Diesel	0.351	---	0.0800	mg/L	1	0.500	---	70	36-132%	---	---	

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Project:

Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS**Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0798 - EPA 3510C (Fuels/Acid Ext.)						Water						
LCS (23F0798-BS1)			Prepared: 06/22/23 07:10		Analyzed: 06/22/23 22:30							
Surr: o-Terphenyl (Surr)		Recovery: 84 %		Limits: 50-150 %		Dilution: 1x						
LCS Dup (23F0798-BSD1)			Prepared: 06/22/23 07:10		Analyzed: 06/22/23 22:53							Q-19
NWTPH-Dx LL												
Diesel	0.276	---	0.0800	mg/L	1	0.500	---	55	36-132%	24	30%	
Surr: o-Terphenyl (Surr)		Recovery: 63 %		Limits: 50-150 %		Dilution: 1x						

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

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Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS**Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0647 - EPA 5035A						Soil						
Blank (23F0647-BLK1)			Prepared: 06/19/23 08:22 Analyzed: 06/19/23 10:49									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	5.00	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 102 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		106 %		50-150 %		"						
LCS (23F0647-BS2)			Prepared: 06/19/23 08:22 Analyzed: 06/19/23 10:19									
NWTPH-Gx (MS)												
Gasoline Range Organics	20.8	---	5.00	mg/kg wet	50	25.0	---	83	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 100 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		105 %		50-150 %		"						
Duplicate (23F0647-DUP1)			Prepared: 06/15/23 12:50 Analyzed: 06/19/23 11:40									
QC Source Sample: B-4 (19-20) (A3F1239-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	20.3	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 105 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		107 %		50-150 %		"						
Duplicate (23F0647-DUP2)			Prepared: 06/15/23 10:30 Analyzed: 06/19/23 15:29									
QC Source Sample: Non-SDG (A3F1242-02)												
Gasoline Range Organics	ND	---	6.59	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 106 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		104 %		50-150 %		"						

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0648 - EPA 5030C						Water						
Blank (23F0648-BLK1)			Prepared: 06/19/23 08:30 Analyzed: 06/19/23 11:32									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 94 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		106 %		50-150 %		"						
LCS (23F0648-BS2)			Prepared: 06/19/23 08:30 Analyzed: 06/19/23 11:05									
NWTPH-Gx (MS)												
Gasoline Range Organics	0.497	---	0.100	mg/L	1	0.500	---	99	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 94 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		103 %		50-150 %		"						
Duplicate (23F0648-DUP1)			Prepared: 06/19/23 11:30 Analyzed: 06/19/23 12:28									
QC Source Sample: Non-SDG (A3F1209-01)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 96 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		108 %		50-150 %		"						
Duplicate (23F0648-DUP2)			Prepared: 06/19/23 11:30 Analyzed: 06/19/23 16:36									
QC Source Sample: B-4 (GW) (A3F1239-07)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 97 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		108 %		50-150 %		"						

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0647 - EPA 5035A						Soil						
Blank (23F0647-BLK1)			Prepared: 06/19/23 08:22		Analyzed: 06/19/23 10:49							
5035A/8260D												
Acetone	ND	---	1000	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	100	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	10.0	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	---	100	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	---	500	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	500	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	500	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	---	500	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	---	250	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	100	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	250	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	100	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0647 - EPA 5035A						Soil						
Blank (23F0647-BLK1)						Prepared: 06/19/23 08:22 Analyzed: 06/19/23 10:49						
1,2-Dichloropropane	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	100	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	---	500	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	---	500	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	500	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	100	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	250	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	250	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	100	ug/kg wet	50	---	---	---	---	---	---	Q-52
1,2,3-Trichloropropane	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	50.0	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	---	25.0	ug/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr) Recovery: 101 % Limits: 80-120 % Dilution: 1x												

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0647 - EPA 5035A						Soil						
Blank (23F0647-BLK1)			Prepared: 06/19/23 08:22 Analyzed: 06/19/23 10:49									
Surr: Toluene-d8 (Surr)		Recovery: 102 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		96 %		79-120 %		"						
LCS (23F0647-BS1)			Prepared: 06/19/23 08:22 Analyzed: 06/19/23 09:54									
5035A/8260D												
Acetone	1900	---	1000	ug/kg wet	50	2000	---	95	80-120%	---	---	
Acrylonitrile	996	---	100	ug/kg wet	50	1000	---	100	80-120%	---	---	
Benzene	978	---	10.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
Bromobenzene	920	---	25.0	ug/kg wet	50	1000	---	92	80-120%	---	---	
Bromochloromethane	1020	---	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Bromodichloromethane	1090	---	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Bromoform	1070	---	100	ug/kg wet	50	1000	---	107	80-120%	---	---	
Bromomethane	1070	---	500	ug/kg wet	50	1000	---	107	80-120%	---	---	
2-Butanone (MEK)	1880	---	500	ug/kg wet	50	2000	---	94	80-120%	---	---	
n-Butylbenzene	892	---	50.0	ug/kg wet	50	1000	---	89	80-120%	---	---	
sec-Butylbenzene	942	---	50.0	ug/kg wet	50	1000	---	94	80-120%	---	---	
tert-Butylbenzene	893	---	50.0	ug/kg wet	50	1000	---	89	80-120%	---	---	
Carbon disulfide	940	---	500	ug/kg wet	50	1000	---	94	80-120%	---	---	
Carbon tetrachloride	1110	---	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Chlorobenzene	971	---	25.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
Chloroethane	1180	---	500	ug/kg wet	50	1000	---	118	80-120%	---	---	
Chloroform	976	---	50.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
Chloromethane	918	---	250	ug/kg wet	50	1000	---	92	80-120%	---	---	
2-Chlorotoluene	916	---	50.0	ug/kg wet	50	1000	---	92	80-120%	---	---	
4-Chlorotoluene	925	---	50.0	ug/kg wet	50	1000	---	92	80-120%	---	---	
Dibromochloromethane	1200	---	100	ug/kg wet	50	1000	---	120	80-120%	---	---	
1,2-Dibromo-3-chloropropane	997	---	250	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,2-Dibromoethane (EDB)	963	---	50.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
Dibromomethane	1040	---	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
1,2-Dichlorobenzene	945	---	25.0	ug/kg wet	50	1000	---	94	80-120%	---	---	
1,3-Dichlorobenzene	952	---	25.0	ug/kg wet	50	1000	---	95	80-120%	---	---	
1,4-Dichlorobenzene	923	---	25.0	ug/kg wet	50	1000	---	92	80-120%	---	---	
Dichlorodifluoromethane	1020	---	100	ug/kg wet	50	1000	---	102	80-120%	---	---	
1,1-Dichloroethane	997	---	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	

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

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0647 - EPA 5035A						Soil						
LCS (23F0647-BS1)						Prepared: 06/19/23 08:22 Analyzed: 06/19/23 09:54						
1,2-Dichloroethane (EDC)	1000	---	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,1-Dichloroethene	986	---	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
cis-1,2-Dichloroethene	972	---	25.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
trans-1,2-Dichloroethene	955	---	25.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
1,2-Dichloropropane	974	---	25.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
1,3-Dichloropropane	972	---	50.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
2,2-Dichloropropane	922	---	50.0	ug/kg wet	50	1000	---	92	80-120%	---	---	
1,1-Dichloropropene	980	---	50.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
cis-1,3-Dichloropropene	1000	---	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
trans-1,3-Dichloropropene	994	---	50.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Ethylbenzene	915	---	25.0	ug/kg wet	50	1000	---	92	80-120%	---	---	
Hexachlorobutadiene	898	---	100	ug/kg wet	50	1000	---	90	80-120%	---	---	
2-Hexanone	1610	---	500	ug/kg wet	50	2000	---	80	80-120%	---	---	
Isopropylbenzene	912	---	50.0	ug/kg wet	50	1000	---	91	80-120%	---	---	
4-Isopropyltoluene	929	---	50.0	ug/kg wet	50	1000	---	93	80-120%	---	---	
Methylene chloride	1040	---	500	ug/kg wet	50	1000	---	104	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	1730	---	500	ug/kg wet	50	2000	---	86	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	886	---	50.0	ug/kg wet	50	1000	---	89	80-120%	---	---	
Naphthalene	865	---	100	ug/kg wet	50	1000	---	86	80-120%	---	---	
n-Propylbenzene	938	---	25.0	ug/kg wet	50	1000	---	94	80-120%	---	---	
Styrene	912	---	50.0	ug/kg wet	50	1000	---	91	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1100	---	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
1,1,2,2-Tetrachloroethane	882	---	50.0	ug/kg wet	50	1000	---	88	80-120%	---	---	
Tetrachloroethene (PCE)	950	---	25.0	ug/kg wet	50	1000	---	95	80-120%	---	---	
Toluene	910	---	50.0	ug/kg wet	50	1000	---	91	80-120%	---	---	
1,2,3-Trichlorobenzene	892	---	250	ug/kg wet	50	1000	---	89	80-120%	---	---	
1,2,4-Trichlorobenzene	832	---	250	ug/kg wet	50	1000	---	83	80-120%	---	---	
1,1,1-Trichloroethane	1050	---	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
1,1,2-Trichloroethane	1000	---	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Trichloroethene (TCE)	1050	---	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Trichlorofluoromethane	786	---	100	ug/kg wet	50	1000	---	79	80-120%	---	---	Q-52
1,2,3-Trichloropropane	972	---	50.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
1,2,4-Trimethylbenzene	910	---	50.0	ug/kg wet	50	1000	---	91	80-120%	---	---	
1,3,5-Trimethylbenzene	944	---	50.0	ug/kg wet	50	1000	---	94	80-120%	---	---	

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ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0647 - EPA 5035A						Soil						
LCS (23F0647-BS1)			Prepared: 06/19/23 08:22 Analyzed: 06/19/23 09:54									
Vinyl chloride	1040	---	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
m,p-Xylene	1810	---	50.0	ug/kg wet	50	2000	---	90	80-120%	---	---	
o-Xylene	869	---	25.0	ug/kg wet	50	1000	---	87	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 99 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		102 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		93 %		79-120 %		"						

Duplicate (23F0647-DUP1)

Prepared: 06/15/23 12:50 Analyzed: 06/19/23 11:40

QC Source Sample: B-4 (19-20) (A3F1239-01)**5035A/8260D**

Acetone	ND	---	4050	ug/kg dry	50	---	ND	---	---	---	30%
Acrylonitrile	ND	---	405	ug/kg dry	50	---	ND	---	---	---	30%
Benzene	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%
Bromobenzene	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%
Bromochloromethane	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%
Bromodichloromethane	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%
Bromoform	ND	---	405	ug/kg dry	50	---	ND	---	---	---	30%
Bromomethane	ND	---	2030	ug/kg dry	50	---	ND	---	---	---	30%
2-Butanone (MEK)	ND	---	2030	ug/kg dry	50	---	ND	---	---	---	30%
n-Butylbenzene	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%
sec-Butylbenzene	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%
tert-Butylbenzene	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%
Carbon disulfide	ND	---	2030	ug/kg dry	50	---	ND	---	---	---	30%
Carbon tetrachloride	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%
Chlorobenzene	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%
Chloroethane	ND	---	2030	ug/kg dry	50	---	ND	---	---	---	30%
Chloroform	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%
Chloromethane	ND	---	1010	ug/kg dry	50	---	ND	---	---	---	30%
2-Chlorotoluene	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%
4-Chlorotoluene	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%
Dibromochloromethane	ND	---	405	ug/kg dry	50	---	ND	---	---	---	30%
1,2-Dibromo-3-chloropropane	ND	---	1010	ug/kg dry	50	---	ND	---	---	---	30%
1,2-Dibromoethane (EDB)	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%
Dibromomethane	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0647 - EPA 5035A						Soil						
Duplicate (23F0647-DUP1)			Prepared: 06/15/23 12:50		Analyzed: 06/19/23 11:40							
QC Source Sample: B-4 (19-20) (A3F1239-01)												
1,2-Dichlorobenzene	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	405	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	405	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	2030	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	2030	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	2030	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	405	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	1010	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	1010	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

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6700 S.W. Sandburg Street

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503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0647 - EPA 5035A						Soil						
Duplicate (23F0647-DUP1)			Prepared: 06/15/23 12:50		Analyzed: 06/19/23 11:40							
QC Source Sample: B-4 (19-20) (A3F1239-01)												
1,1,2-Trichloroethane	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	Q-52
Trichloroethene (TCE)	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	405	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	203	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	---	101	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 101 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		94 %		79-120 %		"						
Duplicate (23F0647-DUP2)			Prepared: 06/15/23 10:30		Analyzed: 06/19/23 15:29							
QC Source Sample: Non-SDG (A3F1242-02)												
Acetone	ND	---	1320	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	132	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	---	13.2	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	---	132	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	659	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	659	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	659	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	659	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	---	330	ug/kg dry	50	---	ND	---	---	---	30%	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323

ORELAP ID: OR100062

GeoEngineers

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Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0647 - EPA 5035A						Soil						
Duplicate (23F0647-DUP2)			Prepared: 06/15/23 10:30 Analyzed: 06/19/23 15:29									
QC Source Sample: Non-SDG (A3F1242-02)												
2-Chlorotoluene	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	132	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	330	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	132	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	132	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	659	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	659	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	659	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	132	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0647 - EPA 5035A						Soil						
Duplicate (23F0647-DUP2)			Prepared: 06/15/23 10:30		Analyzed: 06/19/23 15:29							
QC Source Sample: Non-SDG (A3F1242-02)												
1,1,2,2-Tetrachloroethane	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	Q-52
Tetrachloroethene (PCE)	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	330	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	330	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	132	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	65.9	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	---	33.0	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 98 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		99 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		96 %		79-120 %		"						

Matrix Spike (23F0647-MS1)

Prepared: 06/15/23 13:40 Analyzed: 06/19/23 13:48

QC Source Sample: Non-SDG (A3F1227-11)**5035A/8260D**

Acetone	2580	---	1290	ug/kg dry	50	2580	ND	100	36-164%	---	---
Acrylonitrile	1360	---	129	ug/kg dry	50	1290	ND	106	65-134%	---	---
Benzene	1380	---	12.9	ug/kg dry	50	1290	ND	107	77-121%	---	---
Bromobenzene	1250	---	32.2	ug/kg dry	50	1290	ND	97	78-121%	---	---
Bromochloromethane	1430	---	64.4	ug/kg dry	50	1290	ND	111	78-125%	---	---
Bromodichloromethane	1430	---	64.4	ug/kg dry	50	1290	ND	111	75-127%	---	---
Bromoform	1310	---	129	ug/kg dry	50	1290	ND	102	67-132%	---	---
Bromomethane	1580	---	644	ug/kg dry	50	1290	ND	122	53-143%	---	---
2-Butanone (MEK)	2640	---	644	ug/kg dry	50	2580	ND	102	51-148%	---	---
n-Butylbenzene	1390	---	64.4	ug/kg dry	50	1290	ND	108	70-128%	---	---
sec-Butylbenzene	1380	---	64.4	ug/kg dry	50	1290	ND	107	73-126%	---	---

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ANALYTICAL REPORT

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Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0647 - EPA 5035A						Soil						
Matrix Spike (23F0647-MS1)			Prepared: 06/15/23 13:40		Analyzed: 06/19/23 13:48							
QC Source Sample: Non-SDG (A3F1227-11)												
tert-Butylbenzene	1290	---	64.4	ug/kg dry	50	1290	ND	100	73-125%	---	---	Q-01
Carbon disulfide	1320	---	644	ug/kg dry	50	1290	ND	102	63-132%	---	---	
Carbon tetrachloride	1530	---	64.4	ug/kg dry	50	1290	ND	119	70-135%	---	---	
Chlorobenzene	1320	---	32.2	ug/kg dry	50	1290	ND	102	79-120%	---	---	
Chloroethane	1900	---	644	ug/kg dry	50	1290	ND	148	59-139%	---	---	
Chloroform	1350	---	64.4	ug/kg dry	50	1290	ND	105	78-123%	---	---	
Chloromethane	1270	---	322	ug/kg dry	50	1290	ND	99	50-136%	---	---	
2-Chlorotoluene	1290	---	64.4	ug/kg dry	50	1290	ND	100	75-122%	---	---	
4-Chlorotoluene	1300	---	64.4	ug/kg dry	50	1290	ND	101	72-124%	---	---	
Dibromochloromethane	1510	---	129	ug/kg dry	50	1290	ND	117	74-126%	---	---	
1,2-Dibromo-3-chloropropane	1340	---	322	ug/kg dry	50	1290	ND	104	61-132%	---	---	
1,2-Dibromoethane (EDB)	1300	---	64.4	ug/kg dry	50	1290	ND	101	78-122%	---	---	
Dibromomethane	1390	---	64.4	ug/kg dry	50	1290	ND	108	78-125%	---	---	
1,2-Dichlorobenzene	1290	---	32.2	ug/kg dry	50	1290	ND	100	78-121%	---	---	
1,3-Dichlorobenzene	1310	---	32.2	ug/kg dry	50	1290	ND	102	77-121%	---	---	
1,4-Dichlorobenzene	1260	---	32.2	ug/kg dry	50	1290	ND	98	75-120%	---	---	
Dichlorodifluoromethane	1460	---	129	ug/kg dry	50	1290	ND	113	29-149%	---	---	
1,1-Dichloroethane	1410	---	32.2	ug/kg dry	50	1290	ND	109	76-125%	---	---	
1,2-Dichloroethane (EDC)	1400	---	32.2	ug/kg dry	50	1290	ND	108	73-128%	---	---	
1,1-Dichloroethene	1440	---	32.2	ug/kg dry	50	1290	ND	112	70-131%	---	---	
cis-1,2-Dichloroethene	1370	---	32.2	ug/kg dry	50	1290	ND	106	77-123%	---	---	
trans-1,2-Dichloroethene	1370	---	32.2	ug/kg dry	50	1290	ND	106	74-125%	---	---	
1,2-Dichloropropane	1350	---	32.2	ug/kg dry	50	1290	ND	105	76-123%	---	---	
1,3-Dichloropropane	1320	---	64.4	ug/kg dry	50	1290	ND	103	77-121%	---	---	
2,2-Dichloropropane	1320	---	64.4	ug/kg dry	50	1290	ND	103	67-133%	---	---	
1,1-Dichloropropene	1410	---	64.4	ug/kg dry	50	1290	ND	110	76-125%	---	---	
cis-1,3-Dichloropropene	1330	---	64.4	ug/kg dry	50	1290	ND	103	74-126%	---	---	
trans-1,3-Dichloropropene	1290	---	64.4	ug/kg dry	50	1290	ND	100	71-130%	---	---	
Ethylbenzene	1270	---	32.2	ug/kg dry	50	1290	ND	99	76-122%	---	---	
Hexachlorobutadiene	1390	---	129	ug/kg dry	50	1290	ND	107	61-135%	---	---	
2-Hexanone	2280	---	644	ug/kg dry	50	2580	ND	88	53-145%	---	---	
Isopropylbenzene	1320	---	64.4	ug/kg dry	50	1290	ND	102	68-134%	---	---	
4-Isopropyltoluene	1360	---	64.4	ug/kg dry	50	1290	ND	105	73-127%	---	---	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0647 - EPA 5035A						Soil						
Matrix Spike (23F0647-MS1)				Prepared: 06/15/23 13:40		Analyzed: 06/19/23 13:48						
QC Source Sample: Non-SDG (A3F1227-11)												
Methylene chloride	1380	---	644	ug/kg dry	50	1290	ND	107	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	2510	---	644	ug/kg dry	50	2580	ND	97	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1210	---	64.4	ug/kg dry	50	1290	ND	94	73-125%	---	---	
Naphthalene	1410	---	129	ug/kg dry	50	1290	ND	109	62-129%	---	---	
n-Propylbenzene	1330	---	32.2	ug/kg dry	50	1290	ND	103	73-125%	---	---	
Styrene	1280	---	64.4	ug/kg dry	50	1290	ND	100	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1450	---	32.2	ug/kg dry	50	1290	ND	113	78-125%	---	---	
1,1,2,2-Tetrachloroethane	1220	---	64.4	ug/kg dry	50	1290	ND	89	70-124%	---	---	
Tetrachloroethene (PCE)	1340	---	32.2	ug/kg dry	50	1290	ND	104	73-128%	---	---	
Toluene	1260	---	64.4	ug/kg dry	50	1290	ND	98	77-121%	---	---	
1,2,3-Trichlorobenzene	1300	---	322	ug/kg dry	50	1290	ND	101	66-130%	---	---	
1,2,4-Trichlorobenzene	1270	---	322	ug/kg dry	50	1290	ND	99	67-129%	---	---	
1,1,1-Trichloroethane	1480	---	32.2	ug/kg dry	50	1290	ND	115	73-130%	---	---	
1,1,2-Trichloroethane	1340	---	32.2	ug/kg dry	50	1290	ND	104	78-121%	---	---	
Trichloroethene (TCE)	1460	---	32.2	ug/kg dry	50	1290	ND	113	77-123%	---	---	
Trichlorofluoromethane	4500	---	129	ug/kg dry	50	1290	ND	349	62-140%	---	---	Q-52
1,2,3-Trichloropropane	1280	---	64.4	ug/kg dry	50	1290	ND	99	73-125%	---	---	
1,2,4-Trimethylbenzene	1270	---	64.4	ug/kg dry	50	1290	ND	98	75-123%	---	---	
1,3,5-Trimethylbenzene	1300	---	64.4	ug/kg dry	50	1290	ND	101	73-124%	---	---	
Vinyl chloride	1540	---	32.2	ug/kg dry	50	1290	ND	119	56-135%	---	---	
m,p-Xylene	2500	---	64.4	ug/kg dry	50	2580	ND	97	77-124%	---	---	
o-Xylene	1240	---	32.2	ug/kg dry	50	1290	ND	96	77-123%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 99 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		94 %		79-120 %		"						

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS**Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0648 - EPA 5030C						Water						
Blank (23F0648-BLK1)			Prepared: 06/19/23 08:30		Analyzed: 06/19/23 11:32							
EPA 8260D												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0648 - EPA 5030C						Water						
Blank (23F0648-BLK1)			Prepared: 06/19/23 08:30		Analyzed: 06/19/23 11:32							
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: 106 %		Limits: 80-120 %		Dilution: 1x						

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0648 - EPA 5030C						Water						
Blank (23F0648-BLK1)			Prepared: 06/19/23 08:30		Analyzed: 06/19/23 11:32							
Surr: Toluene-d8 (Surr)		Recovery: 104 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		108 %		80-120 %		"						
LCS (23F0648-BS1)			Prepared: 06/19/23 08:30		Analyzed: 06/19/23 10:28							
EPA 8260D												
Acetone	38.7	---	20.0	ug/L	1	40.0	---	97	80-120%	---	---	
Acrylonitrile	21.7	---	2.00	ug/L	1	20.0	---	108	80-120%	---	---	
Benzene	20.4	---	0.200	ug/L	1	20.0	---	102	80-120%	---	---	
Bromobenzene	19.9	---	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
Bromochloromethane	22.7	---	1.00	ug/L	1	20.0	---	114	80-120%	---	---	
Bromodichloromethane	23.7	---	1.00	ug/L	1	20.0	---	118	80-120%	---	---	
Bromoform	21.4	---	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
Bromomethane	26.5	---	5.00	ug/L	1	20.0	---	133	80-120%	---	---	Q-56
2-Butanone (MEK)	44.1	---	10.0	ug/L	1	40.0	---	110	80-120%	---	---	
n-Butylbenzene	20.3	---	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
sec-Butylbenzene	19.2	---	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
tert-Butylbenzene	17.8	---	1.00	ug/L	1	20.0	---	89	80-120%	---	---	
Carbon disulfide	20.3	---	10.0	ug/L	1	20.0	---	102	80-120%	---	---	
Carbon tetrachloride	20.7	---	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
Chlorobenzene	19.8	---	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
Chloroethane	28.6	---	5.00	ug/L	1	20.0	---	143	80-120%	---	---	ICV-01, Q-56
Chloroform	21.1	---	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
Chloromethane	19.8	---	5.00	ug/L	1	20.0	---	99	80-120%	---	---	
2-Chlorotoluene	19.0	---	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
4-Chlorotoluene	19.4	---	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
Dibromochloromethane	20.5	---	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
1,2-Dibromo-3-chloropropane	19.8	---	5.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,2-Dibromoethane (EDB)	20.5	---	0.500	ug/L	1	20.0	---	102	80-120%	---	---	
Dibromomethane	21.9	---	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
1,2-Dichlorobenzene	20.1	---	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
1,3-Dichlorobenzene	20.2	---	0.500	ug/L	1	20.0	---	101	80-120%	---	---	
1,4-Dichlorobenzene	19.2	---	0.500	ug/L	1	20.0	---	96	80-120%	---	---	
Dichlorodifluoromethane	18.1	---	1.00	ug/L	1	20.0	---	91	80-120%	---	---	
1,1-Dichloroethane	21.5	---	0.400	ug/L	1	20.0	---	108	80-120%	---	---	

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ANALYTICAL REPORT

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503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0648 - EPA 5030C						Water						
LCS (23F0648-BS1)			Prepared: 06/19/23 08:30		Analyzed: 06/19/23 10:28							
1,2-Dichloroethane (EDC)	21.2	---	0.400	ug/L	1	20.0	---	106	80-120%	---	---	
1,1-Dichloroethene	20.1	---	0.400	ug/L	1	20.0	---	101	80-120%	---	---	
cis-1,2-Dichloroethene	20.4	---	0.400	ug/L	1	20.0	---	102	80-120%	---	---	
trans-1,2-Dichloroethene	20.5	---	0.400	ug/L	1	20.0	---	102	80-120%	---	---	
1,2-Dichloropropane	21.2	---	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
1,3-Dichloropropane	20.2	---	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
2,2-Dichloropropane	21.2	---	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
1,1-Dichloropropene	19.9	---	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
cis-1,3-Dichloropropene	21.4	---	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
trans-1,3-Dichloropropene	20.7	---	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
Ethylbenzene	19.9	---	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
Hexachlorobutadiene	21.7	---	5.00	ug/L	1	20.0	---	109	80-120%	---	---	
2-Hexanone	42.9	---	10.0	ug/L	1	40.0	---	107	80-120%	---	---	
Isopropylbenzene	19.1	---	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
4-Isopropyltoluene	19.7	---	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
Methylene chloride	21.1	---	10.0	ug/L	1	20.0	---	105	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	42.9	---	10.0	ug/L	1	40.0	---	107	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	17.9	---	1.00	ug/L	1	20.0	---	90	80-120%	---	---	
Naphthalene	14.8	---	2.00	ug/L	1	20.0	---	74	80-120%	---	---	Q-55
n-Propylbenzene	19.5	---	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Styrene	19.9	---	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,1,1,2-Tetrachloroethane	24.7	---	0.400	ug/L	1	20.0	---	124	80-120%	---	---	Q-56
1,1,2,2-Tetrachloroethane	22.1	---	0.500	ug/L	1	20.0	---	111	80-120%	---	---	
Tetrachloroethene (PCE)	19.0	---	0.400	ug/L	1	20.0	---	95	80-120%	---	---	
Toluene	19.4	---	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
1,2,3-Trichlorobenzene	18.8	---	2.00	ug/L	1	20.0	---	94	80-120%	---	---	
1,2,4-Trichlorobenzene	19.6	---	2.00	ug/L	1	20.0	---	98	80-120%	---	---	
1,1,1-Trichloroethane	20.7	---	0.400	ug/L	1	20.0	---	104	80-120%	---	---	
1,1,2-Trichloroethane	20.6	---	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
Trichloroethene (TCE)	19.7	---	0.400	ug/L	1	20.0	---	98	80-120%	---	---	
Trichlorofluoromethane	27.3	---	2.00	ug/L	1	20.0	---	137	80-120%	---	---	Q-56
1,2,3-Trichloropropane	20.1	---	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
1,2,4-Trimethylbenzene	20.8	---	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
1,3,5-Trimethylbenzene	20.3	---	1.00	ug/L	1	20.0	---	101	80-120%	---	---	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0648 - EPA 5030C						Water						
LCS (23F0648-BS1)			Prepared: 06/19/23 08:30		Analyzed: 06/19/23 10:28							
Vinyl chloride	20.6	---	0.400	ug/L	1	20.0	---	103	80-120%	---	---	
m,p-Xylene	40.0	---	1.00	ug/L	1	40.0	---	100	80-120%	---	---	
o-Xylene	18.6	---	0.500	ug/L	1	20.0	---	93	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 103 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		99 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		96 %		80-120 %		"						

Duplicate (23F0648-DUP1)

Prepared: 06/19/23 11:30 Analyzed: 06/19/23 12:28

QC Source Sample: Non-SDG (A3F1209-01)

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	---	1.00	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%
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%

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

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503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0648 - EPA 5030C						Water						
Duplicate (23F0648-DUP1)			Prepared: 06/19/23 11:30		Analyzed: 06/19/23 12:28							
QC Source Sample: Non-SDG (A3F1209-01)												
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%	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
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%	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

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ORELAP ID: OR100062

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4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0648 - EPA 5030C						Water						
Duplicate (23F0648-DUP1)			Prepared: 06/19/23 11:30 Analyzed: 06/19/23 12:28									
QC Source Sample: Non-SDG (A3F1209-01)												
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%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		104 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		108 %		80-120 %		"						

Duplicate (23F0648-DUP2)

Prepared: 06/19/23 11:30 Analyzed: 06/19/23 16:36

QC Source Sample: B-4 (GW) (A3F1239-07)**EPA 8260D**

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	---	1.00	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%	

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0648 - EPA 5030C						Water						
Duplicate (23F0648-DUP2)			Prepared: 06/19/23 11:30		Analyzed: 06/19/23 16:36							
QC Source Sample: B-4 (GW) (A3F1239-07)												
2-Chlorotoluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
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)	18.7	---	1.00	ug/L	1	---	19.0	---	---	1	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%	

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ANALYTICAL REPORT

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4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0648 - EPA 5030C						Water						
Duplicate (23F0648-DUP2)			Prepared: 06/19/23 11:30		Analyzed: 06/19/23 16:36							
QC Source Sample: B-4 (GW) (A3F1239-07)												
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
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%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 107 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		103 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		108 %		80-120 %		"						

Matrix Spike (23F0648-MS1)

Prepared: 06/19/23 11:30 Analyzed: 06/19/23 21:35

QC Source Sample: Non-SDG (A3F1222-08)

EPA 8260D

Acetone	60.6	---	20.0	ug/L	1	40.0	ND	118	39-160%	---	---	
Acrylonitrile	29.7	---	2.00	ug/L	1	20.0	ND	100	63-135%	---	---	
Benzene	37.0	---	0.200	ug/L	1	20.0	20.0	85	79-120%	---	---	
Bromobenzene	20.2	---	0.500	ug/L	1	20.0	ND	101	80-120%	---	---	
Bromochloromethane	20.7	---	1.00	ug/L	1	20.0	ND	104	78-123%	---	---	
Bromodichloromethane	22.7	---	1.00	ug/L	1	20.0	ND	114	79-125%	---	---	
Bromoform	20.0	---	1.00	ug/L	1	20.0	ND	100	66-130%	---	---	
Bromomethane	13.4	---	5.00	ug/L	1	20.0	ND	67	53-141%	---	---	Q-54
2-Butanone (MEK)	65.8	---	10.0	ug/L	1	40.0	ND	129	56-143%	---	---	
n-Butylbenzene	22.7	---	1.00	ug/L	1	20.0	3.65	95	75-128%	---	---	
sec-Butylbenzene	20.9	---	1.00	ug/L	1	20.0	2.55	92	77-126%	---	---	

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Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0648 - EPA 5030C						Water						
Matrix Spike (23F0648-MS1)			Prepared: 06/19/23 11:30		Analyzed: 06/19/23 21:35							
QC Source Sample: Non-SDG (A3F1222-08)												
tert-Butylbenzene	17.9	---	1.00	ug/L	1	20.0	ND	90	78-124%	---	---	ICV-01, Q-54b
Carbon disulfide	20.4	---	10.0	ug/L	1	20.0	ND	102	64-133%	---	---	
Carbon tetrachloride	21.0	---	1.00	ug/L	1	20.0	ND	105	72-136%	---	---	
Chlorobenzene	19.9	---	0.500	ug/L	1	20.0	ND	99	80-120%	---	---	
Chloroethane	21.3	---	5.00	ug/L	1	20.0	ND	106	60-138%	---	---	
Chloroform	21.3	---	1.00	ug/L	1	20.0	ND	106	79-124%	---	---	
Chloromethane	17.9	---	5.00	ug/L	1	20.0	ND	89	50-139%	---	---	
2-Chlorotoluene	19.5	---	1.00	ug/L	1	20.0	ND	97	79-122%	---	---	
4-Chlorotoluene	18.8	---	1.00	ug/L	1	20.0	ND	94	78-122%	---	---	
Dibromochloromethane	20.0	---	1.00	ug/L	1	20.0	ND	100	74-126%	---	---	
1,2-Dibromo-3-chloropropane	20.5	---	5.00	ug/L	1	20.0	ND	103	62-128%	---	---	
1,2-Dibromoethane (EDB)	21.3	---	0.500	ug/L	1	20.0	ND	106	77-121%	---	---	
Dibromomethane	22.7	---	1.00	ug/L	1	20.0	ND	110	79-123%	---	---	
1,2-Dichlorobenzene	20.2	---	0.500	ug/L	1	20.0	ND	101	80-120%	---	---	
1,3-Dichlorobenzene	19.6	---	0.500	ug/L	1	20.0	ND	98	80-120%	---	---	
1,4-Dichlorobenzene	18.4	---	0.500	ug/L	1	20.0	ND	92	79-120%	---	---	
Dichlorodifluoromethane	17.7	---	1.00	ug/L	1	20.0	ND	88	32-152%	---	---	
1,1-Dichloroethane	21.0	---	0.400	ug/L	1	20.0	ND	105	77-125%	---	---	
1,2-Dichloroethane (EDC)	20.0	---	0.400	ug/L	1	20.0	ND	100	73-128%	---	---	
1,1-Dichloroethene	20.1	---	0.400	ug/L	1	20.0	ND	100	71-131%	---	---	
cis-1,2-Dichloroethene	21.0	---	0.400	ug/L	1	20.0	ND	105	78-123%	---	---	
trans-1,2-Dichloroethene	20.7	---	0.400	ug/L	1	20.0	ND	104	75-124%	---	---	
1,2-Dichloropropane	21.2	---	0.500	ug/L	1	20.0	ND	106	78-122%	---	---	
1,3-Dichloropropane	20.2	---	1.00	ug/L	1	20.0	ND	101	80-120%	---	---	
2,2-Dichloropropane	17.2	---	1.00	ug/L	1	20.0	ND	82	60-139%	---	---	
1,1-Dichloropropene	20.8	---	1.00	ug/L	1	20.0	ND	104	79-125%	---	---	
cis-1,3-Dichloropropene	20.4	---	1.00	ug/L	1	20.0	ND	102	75-124%	---	---	
trans-1,3-Dichloropropene	19.0	---	1.00	ug/L	1	20.0	ND	95	73-127%	---	---	
Ethylbenzene	47.8	---	0.500	ug/L	1	20.0	30.6	86	79-121%	---	---	
Hexachlorobutadiene	15.9	---	5.00	ug/L	1	20.0	ND	80	66-134%	---	---	
2-Hexanone	43.9	---	10.0	ug/L	1	40.0	ND	110	57-139%	---	---	
Isopropylbenzene	73.6	---	1.00	ug/L	1	20.0	56.7	84	72-131%	---	---	
4-Isopropyltoluene	23.2	---	1.00	ug/L	1	20.0	1.63	108	77-127%	---	---	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0648 - EPA 5030C						Water						
Matrix Spike (23F0648-MS1)			Prepared: 06/19/23 11:30 Analyzed: 06/19/23 21:35									
QC Source Sample: Non-SDG (A3F1222-08)												
Methylene chloride	20.4	---	10.0	ug/L	1	20.0	ND	102	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	43.2	---	10.0	ug/L	1	40.0	ND	108	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	19.3	---	1.00	ug/L	1	20.0	ND	97	71-124%	---	---	
Naphthalene	30.8	---	2.00	ug/L	1	20.0	14.0	84	61-128%	---	---	Q-54d
n-Propylbenzene	103	---	0.500	ug/L	1	20.0	98.2	24	76-126%	---	---	Q-03
Styrene	20.4	---	1.00	ug/L	1	20.0	ND	102	78-123%	---	---	
1,1,1,2-Tetrachloroethane	24.0	---	0.400	ug/L	1	20.0	ND	120	78-124%	---	---	Q-54c
1,1,2,2-Tetrachloroethane	21.2	---	0.500	ug/L	1	20.0	ND	106	71-121%	---	---	
Tetrachloroethene (PCE)	19.4	---	0.400	ug/L	1	20.0	ND	97	74-129%	---	---	
Toluene	25.6	---	1.00	ug/L	1	20.0	6.68	95	80-121%	---	---	
1,2,3-Trichlorobenzene	18.7	---	2.00	ug/L	1	20.0	ND	94	69-129%	---	---	
1,2,4-Trichlorobenzene	21.0	---	2.00	ug/L	1	20.0	ND	105	69-130%	---	---	
1,1,1-Trichloroethane	20.5	---	0.400	ug/L	1	20.0	ND	103	74-131%	---	---	
1,1,2-Trichloroethane	20.9	---	0.500	ug/L	1	20.0	ND	105	80-120%	---	---	
Trichloroethene (TCE)	22.1	---	0.400	ug/L	1	20.0	ND	110	79-123%	---	---	
Trichlorofluoromethane	21.7	---	2.00	ug/L	1	20.0	ND	108	65-141%	---	---	Q-54a
1,2,3-Trichloropropane	19.6	---	1.00	ug/L	1	20.0	ND	98	73-122%	---	---	
1,2,4-Trimethylbenzene	24.5	---	1.00	ug/L	1	20.0	4.06	102	76-124%	---	---	
1,3,5-Trimethylbenzene	24.0	---	1.00	ug/L	1	20.0	3.98	100	75-124%	---	---	
Vinyl chloride	20.5	---	0.400	ug/L	1	20.0	ND	103	58-137%	---	---	
m,p-Xylene	117	---	1.00	ug/L	1	40.0	79.6	95	80-121%	---	---	
o-Xylene	23.6	---	0.500	ug/L	1	20.0	3.22	102	78-122%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		99 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		100 %		80-120 %		"						

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

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503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0754 - EPA 3546						Soil						
Blank (23F0754-BLK1)			Prepared: 06/21/23 07:56 Analyzed: 06/21/23 18:53						C-07			
EPA 8082A												
Aroclor 1016	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1221	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1232	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1242	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1248	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1254	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1260	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Surr: Decachlorobiphenyl (Surr)		Recovery: 113 %		Limits: 60-125 %		Dilution: 1x						
LCS (23F0754-BS1)			Prepared: 06/21/23 07:56 Analyzed: 06/21/23 19:11						C-07			
EPA 8082A												
Aroclor 1016	216	---	10.0	ug/kg wet	1	250	---	86	47-134%	---	---	
Aroclor 1260	257	---	10.0	ug/kg wet	1	250	---	103	53-140%	---	---	
Surr: Decachlorobiphenyl (Surr)		Recovery: 117 %		Limits: 60-125 %		Dilution: 1x						
Duplicate (23F0754-DUP1)			Prepared: 06/21/23 07:56 Analyzed: 06/21/23 20:04						C-07			
QC Source Sample: Non-SDG (A3F1210-01)												
Aroclor 1016	ND	---	13.5	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1221	ND	---	13.5	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1232	ND	---	13.5	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1242	ND	---	13.5	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1248	ND	---	13.5	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1254	ND	---	13.5	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1260	ND	---	13.5	ug/kg dry	1	---	ND	---	---	---	30%	
Surr: Decachlorobiphenyl (Surr)		Recovery: 76 %		Limits: 60-125 %		Dilution: 1x						
Matrix Spike (23F0754-MS1)			Prepared: 06/21/23 07:56 Analyzed: 06/21/23 23:11						C-07			
QC Source Sample: B-4 (19-20) (A3F1239-01)												
EPA 8082A												
Aroclor 1016	399	---	20.9	ug/kg dry	1	522	ND	76	47-134%	---	---	
Aroclor 1260	478	---	20.9	ug/kg dry	1	522	ND	92	53-140%	---	---	
Surr: Decachlorobiphenyl (Surr)		Recovery: 102 %		Limits: 60-125 %		Dilution: 1x						

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Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0754 - EPA 3546							Soil					

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Project Number: [none]

Project Manager: Ian Maguire

Report ID:

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QUALITY CONTROL (QC) SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0845 - EPA 3510C (Neutral pH)						Water						
Blank (23F0845-BLK1)			Prepared: 06/23/23 07:16 Analyzed: 06/23/23 14:02						C-07			
EPA 8082A												
Aroclor 1016	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Aroclor 1221	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Aroclor 1232	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Aroclor 1242	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Aroclor 1248	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Aroclor 1254	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Aroclor 1260	ND	---	0.0200	ug/L	1	---	---	---	---	---	---	
Surr: Decachlorobiphenyl (Surr)		Recovery: 64 %		Limits: 40-135 %		Dilution: 1x						
LCS (23F0845-BS1)			Prepared: 06/23/23 07:16 Analyzed: 06/23/23 14:20						C-07			
EPA 8082A												
Aroclor 1016	0.677	---	0.0200	ug/L	1	1.25	---	54	46-129%	---	---	
Aroclor 1260	0.841	---	0.0200	ug/L	1	1.25	---	67	45-134%	---	---	
Surr: Decachlorobiphenyl (Surr)		Recovery: 70 %		Limits: 40-135 %		Dilution: 1x						
LCS Dup (23F0845-BSD1)			Prepared: 06/23/23 07:16 Analyzed: 06/23/23 14:38						C-07, Q-19			
EPA 8082A												
Aroclor 1016	0.628	---	0.0200	ug/L	1	1.25	---	50	46-129%	8	30%	
Aroclor 1260	0.746	---	0.0200	ug/L	1	1.25	---	60	45-134%	12	30%	
Surr: Decachlorobiphenyl (Surr)		Recovery: 66 %		Limits: 40-135 %		Dilution: 1x						

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ANALYTICAL REPORT

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Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

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
Batch 23F0706 - EPA 3546						Soil						
Blank (23F0706-BLK1)			Prepared: 06/20/23 09:34 Analyzed: 06/20/23 13:47									
EPA 8270E SIM												
Acenaphthene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Dibenzofuran	ND	---	10.0	ug/kg wet	1	---	---	---	---	---	---	
Surr: 2-Fluorobiphenyl (Surr)		Recovery: 84 %		Limits: 44-120 %		Dilution: 1x						
p-Terphenyl-d14 (Surr)		87 %		54-127 %		"						

LCS (23F0706-BS1)

Prepared: 06/20/23 09:34 Analyzed: 06/20/23 14:12

EPA 8270E SIM												
Acenaphthene	738	---	10.0	ug/kg wet	1	800	---	92	40-123%	---	---	
Acenaphthylene	719	---	10.0	ug/kg wet	1	800	---	90	32-132%	---	---	
Anthracene	709	---	10.0	ug/kg wet	1	800	---	89	47-123%	---	---	
Benz(a)anthracene	713	---	10.0	ug/kg wet	1	800	---	89	49-126%	---	---	
Benzo(a)pyrene	743	---	10.0	ug/kg wet	1	800	---	93	45-129%	---	---	
Benzo(b)fluoranthene	771	---	10.0	ug/kg wet	1	800	---	96	45-132%	---	---	
Benzo(k)fluoranthene	780	---	10.0	ug/kg wet	1	800	---	98	47-132%	---	---	
Benzo(g,h,i)perylene	558	---	10.0	ug/kg wet	1	800	---	70	43-134%	---	---	
Chrysene	715	---	10.0	ug/kg wet	1	800	---	89	50-124%	---	---	

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ANALYTICAL REPORT

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Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

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	Limits	RPD	RPD Limit	Notes
Batch 23F0706 - EPA 3546												
Soil												
LCS (23F0706-BS1)			Prepared: 06/20/23 09:34 Analyzed: 06/20/23 14:12									
Dibenz(a,h)anthracene	734	---	10.0	ug/kg wet	1	800	---	92	45-134%	---	---	
Fluoranthene	797	---	10.0	ug/kg wet	1	800	---	100	50-127%	---	---	
Fluorene	755	---	10.0	ug/kg wet	1	800	---	94	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	694	---	10.0	ug/kg wet	1	800	---	87	45-133%	---	---	
1-Methylnaphthalene	727	---	10.0	ug/kg wet	1	800	---	91	40-120%	---	---	
2-Methylnaphthalene	728	---	10.0	ug/kg wet	1	800	---	91	38-122%	---	---	
Naphthalene	698	---	10.0	ug/kg wet	1	800	---	87	35-123%	---	---	
Phenanthrene	704	---	10.0	ug/kg wet	1	800	---	88	50-121%	---	---	
Pyrene	819	---	10.0	ug/kg wet	1	800	---	102	47-127%	---	---	
Dibenzofuran	735	---	10.0	ug/kg wet	1	800	---	92	44-120%	---	---	
Surr: 2-Fluorobiphenyl (Surr)		Recovery: 91 %		Limits: 44-120 %		Dilution: 1x						
p-Terphenyl-d14 (Surr)		91 %		54-127 %		"						
Duplicate (23F0706-DUP2)			Prepared: 06/20/23 09:34 Analyzed: 06/21/23 12:24									
QC Source Sample: Non-SDG (A3F0808-05RE2)												
Acenaphthene	ND	---	36.8	ug/kg wet	4	---	ND	---	---	---	30%	
Acenaphthylene	ND	---	36.8	ug/kg wet	4	---	ND	---	---	---	30%	
Anthracene	ND	---	36.8	ug/kg wet	4	---	ND	---	---	---	30%	
Benz(a)anthracene	ND	---	36.8	ug/kg wet	4	---	28.8	---	---	***	30%	
Benzo(a)pyrene	ND	---	36.8	ug/kg wet	4	---	21.2	---	---	***	30%	
Benzo(b)fluoranthene	ND	---	36.8	ug/kg wet	4	---	30.7	---	---	***	30%	
Benzo(k)fluoranthene	ND	---	36.8	ug/kg wet	4	---	ND	---	---	---	30%	
Benzo(g,h,i)perylene	53.0	---	36.8	ug/kg wet	4	---	42.3	---	---	22	30%	
Chrysene	ND	---	36.8	ug/kg wet	4	---	20.5	---	---	***	30%	
Dibenz(a,h)anthracene	ND	---	36.8	ug/kg wet	4	---	ND	---	---	---	30%	
Fluoranthene	ND	---	36.8	ug/kg wet	4	---	ND	---	---	---	30%	
Fluorene	ND	---	36.8	ug/kg wet	4	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	ND	---	36.8	ug/kg wet	4	---	21.3	---	---	***	30%	Q-05
1-Methylnaphthalene	ND	---	36.8	ug/kg wet	4	---	ND	---	---	---	30%	
2-Methylnaphthalene	ND	---	36.8	ug/kg wet	4	---	ND	---	---	---	30%	
Naphthalene	ND	---	36.8	ug/kg wet	4	---	ND	---	---	---	30%	
Phenanthrene	ND	---	36.8	ug/kg wet	4	---	ND	---	---	---	30%	
Pyrene	ND	---	36.8	ug/kg wet	4	---	29.4	---	---	***	30%	
Dibenzofuran	ND	---	36.8	ug/kg wet	4	---	ND	---	---	---	30%	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

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
Batch 23F0706 - EPA 3546						Soil						
Duplicate (23F0706-DUP2)			Prepared: 06/20/23 09:34 Analyzed: 06/21/23 12:24									
<u>QC Source Sample: Non-SDG (A3F0808-05RE2)</u>												
Surr: 2-Fluorobiphenyl (Surr)		Recovery: 87 %		Limits: 44-120 %		Dilution: 4x						
p-Terphenyl-d14 (Surr)		87 %		54-127 %		"						
Matrix Spike (23F0706-MS1)			Prepared: 06/20/23 09:34 Analyzed: 06/20/23 21:49									
<u>QC Source Sample: Non-SDG (A3F1137-10)</u>												
<u>EPA 8270E SIM</u>												
Acenaphthene	3690	---	2210	ug/kg dry	5	984	ND	145	40-123%	---	---	Q-02
Acenaphthylene	1940	---	941	ug/kg dry	5	984	ND	100	32-132%	---	---	
Anthracene	1590	---	677	ug/kg dry	5	984	ND	92	47-123%	---	---	
Benz(a)anthracene	812	---	86.1	ug/kg dry	5	984	ND	82	49-126%	---	---	
Benzo(a)pyrene	762	---	61.5	ug/kg dry	5	984	ND	77	45-129%	---	---	
Benzo(b)fluoranthene	783	---	61.5	ug/kg dry	5	984	ND	80	45-132%	---	---	
Benzo(k)fluoranthene	792	---	61.5	ug/kg dry	5	984	ND	80	47-132%	---	---	
Benzo(g,h,i)perylene	761	---	61.5	ug/kg dry	5	984	ND	77	43-134%	---	---	
Chrysene	871	---	80.0	ug/kg dry	5	984	ND	88	50-124%	---	---	
Dibenz(a,h)anthracene	770	---	61.5	ug/kg dry	5	984	ND	78	45-134%	---	---	
Fluoranthene	1070	---	61.5	ug/kg dry	5	984	139	95	50-127%	---	---	
Fluorene	11500	---	61.5	ug/kg dry	5	984	8270	331	43-125%	---	---	Q-03
Indeno(1,2,3-cd)pyrene	814	---	61.5	ug/kg dry	5	984	ND	83	45-133%	---	---	
1-Methylnaphthalene	59000	---	61.5	ug/kg dry	5	984	45300	1400	40-120%	---	---	E, Q-03
2-Methylnaphthalene	92700	---	61.5	ug/kg dry	5	984	70900	2220	38-122%	---	---	Q-03, E
Naphthalene	1560	---	529	ug/kg dry	5	984	ND	104	35-123%	---	---	
Phenanthrene	13300	---	61.5	ug/kg dry	5	984	9480	386	50-121%	---	---	Q-03
Pyrene	1170	---	61.5	ug/kg dry	5	984	170	101	47-127%	---	---	
Dibenzofuran	3650	---	61.5	ug/kg dry	5	984	ND	134	44-120%	---	---	Q-02
Surr: 2-Fluorobiphenyl (Surr)		Recovery: 91 %		Limits: 44-120 %		Dilution: 5x						
p-Terphenyl-d14 (Surr)		86 %		54-127 %		"						

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

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4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0693 - EPA 3511 (Bottle Extraction)						Water						
Blank (23F0693-BLK1)			Prepared: 06/20/23 07:45		Analyzed: 06/20/23 14:31							
EPA 8270E LVI												
Acenaphthene	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	---	0.0160	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	0.0160	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	0.0160	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	0.0640	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	0.0640	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	0.0640	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	---	0.0640	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Carbazole	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	---	0.0320	ug/L	1	---	---	---	---	---	---	
Surr: Acenaphthylene-d8 (Surr)		Recovery: 84 %		Limits: 78-134 %		Dilution: 1x						
Benzo(a)pyrene-d12 (Surr)		100 %		80-132 %		"						

LCS (23F0693-BS1)

Prepared: 06/20/23 07:45 Analyzed: 06/20/23 15:04

EPA 8270E LVI												
Acenaphthene	1.55	---	0.0320	ug/L	1	1.60	---	97	80-120%	---	---	
Acenaphthylene	1.40	---	0.0320	ug/L	1	1.60	---	88	80-124%	---	---	
Anthracene	1.51	---	0.0320	ug/L	1	1.60	---	94	80-123%	---	---	
Benz(a)anthracene	1.50	---	0.0160	ug/L	1	1.60	---	94	80-122%	---	---	
Benzo(a)pyrene	1.53	---	0.0160	ug/L	1	1.60	---	96	80-129%	---	---	
Benzo(b)fluoranthene	1.63	---	0.0160	ug/L	1	1.60	---	102	80-124%	---	---	
Benzo(k)fluoranthene	1.52	---	0.0160	ug/L	1	1.60	---	95	80-125%	---	---	
Benzo(g,h,i)perylene	1.76	---	0.0320	ug/L	1	1.60	---	110	80-120%	---	---	

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323

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GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0693 - EPA 3511 (Bottle Extraction)						Water						
LCS (23F0693-BS1)			Prepared: 06/20/23 07:45		Analyzed: 06/20/23 15:04							
Chrysene	1.54	---	0.0160	ug/L	1	1.60	---	96	80-120%	---	---	
Dibenz(a,h)anthracene	1.49	---	0.0160	ug/L	1	1.60	---	93	80-120%	---	---	
Fluoranthene	1.62	---	0.0320	ug/L	1	1.60	---	101	80-126%	---	---	
Fluorene	1.58	---	0.0320	ug/L	1	1.60	---	99	77-127%	---	---	
Indeno(1,2,3-cd)pyrene	1.51	---	0.0160	ug/L	1	1.60	---	95	80-121%	---	---	
1-Methylnaphthalene	1.48	---	0.0640	ug/L	1	1.60	---	92	53-148%	---	---	
2-Methylnaphthalene	1.45	---	0.0640	ug/L	1	1.60	---	90	48-150%	---	---	
Naphthalene	1.54	---	0.0640	ug/L	1	1.60	---	96	78-120%	---	---	
Phenanthrene	1.48	---	0.0640	ug/L	1	1.60	---	92	80-120%	---	---	
Pyrene	1.62	---	0.0320	ug/L	1	1.60	---	101	80-125%	---	---	
Carbazole	1.52	---	0.0320	ug/L	1	1.60	---	95	65-141%	---	---	
Dibenzofuran	1.41	---	0.0320	ug/L	1	1.60	---	88	76-121%	---	---	
Surr: Acenaphthylene-d8 (Surr)		Recovery: 84 %		Limits: 78-134 %		Dilution: 1x						
Benzo(a)pyrene-d12 (Surr)		102 %		80-132 %		"						

LCS Dup (23F0693-BS1)			Prepared: 06/20/23 07:45 Analyzed: 06/20/23 15:37								Q-19	
EPA 8270E LVI												
Acenaphthene	1.56	---	0.0320	ug/L	1	1.60	---	98	80-120%	1	30%	
Acenaphthylene	1.45	---	0.0320	ug/L	1	1.60	---	91	80-124%	3	30%	
Anthracene	1.53	---	0.0320	ug/L	1	1.60	---	96	80-123%	2	30%	
Benz(a)anthracene	1.53	---	0.0160	ug/L	1	1.60	---	95	80-122%	2	30%	
Benzo(a)pyrene	1.59	---	0.0160	ug/L	1	1.60	---	100	80-129%	4	30%	
Benzo(b)fluoranthene	1.63	---	0.0160	ug/L	1	1.60	---	102	80-124%	0.4	30%	
Benzo(k)fluoranthene	1.56	---	0.0160	ug/L	1	1.60	---	97	80-125%	3	30%	
Benzo(g,h,i)perylene	1.72	---	0.0320	ug/L	1	1.60	---	107	80-120%	3	30%	
Chrysene	1.54	---	0.0160	ug/L	1	1.60	---	96	80-120%	0.2	30%	
Dibenz(a,h)anthracene	1.53	---	0.0160	ug/L	1	1.60	---	96	80-120%	3	30%	
Fluoranthene	1.66	---	0.0320	ug/L	1	1.60	---	104	80-126%	3	30%	
Fluorene	1.65	---	0.0320	ug/L	1	1.60	---	103	77-127%	5	30%	
Indeno(1,2,3-cd)pyrene	1.56	---	0.0160	ug/L	1	1.60	---	97	80-121%	3	30%	
1-Methylnaphthalene	1.56	---	0.0640	ug/L	1	1.60	---	98	53-148%	6	30%	
2-Methylnaphthalene	1.56	---	0.0640	ug/L	1	1.60	---	97	48-150%	7	30%	
Naphthalene	1.55	---	0.0640	ug/L	1	1.60	---	97	78-120%	0.8	30%	
Phenanthrene	1.50	---	0.0640	ug/L	1	1.60	---	94	80-120%	1	30%	

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Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0693 - EPA 3511 (Bottle Extraction)						Water						
LCS Dup (23F0693-BSD1)			Prepared: 06/20/23 07:45 Analyzed: 06/20/23 15:37								Q-19	
Pyrene	1.66	---	0.0320	ug/L	1	1.60	---	104	80-125%	3	30%	
Carbazole	1.57	---	0.0320	ug/L	1	1.60	---	98	65-141%	3	30%	
Dibenzofuran	1.47	---	0.0320	ug/L	1	1.60	---	92	76-121%	4	30%	
Surr: Acenaphthylene-d8 (Surr)		Recovery: 84 %		Limits: 78-134 %		Dilution: 1x						
Benzo(a)pyrene-d12 (Surr)		103 %		80-132 %		"						

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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
Batch 23F0682 - EPA 3015A						Water						
Blank (23F0682-BLK1)			Prepared: 06/19/23 15:45		Analyzed: 06/19/23 21:48							
EPA 6020B												
Arsenic	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Barium	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Chromium	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Mercury	ND	---	0.0800	ug/L	1	---	---	---	---	---	---	
Selenium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (23F0682-BS1)			Prepared: 06/19/23 15:45		Analyzed: 06/19/23 21:53							
EPA 6020B												
Arsenic	55.4	---	1.00	ug/L	1	55.6	---	100	80-120%	---	---	
Barium	61.9	---	2.00	ug/L	1	55.6	---	111	80-120%	---	---	
Cadmium	55.3	---	0.200	ug/L	1	55.6	---	99	80-120%	---	---	
Chromium	55.6	---	2.00	ug/L	1	55.6	---	100	80-120%	---	---	
Lead	59.2	---	0.200	ug/L	1	55.6	---	107	80-120%	---	---	
Mercury	1.08	---	0.0800	ug/L	1	1.11	---	97	80-120%	---	---	
Selenium	29.0	---	1.00	ug/L	1	27.8	---	104	80-120%	---	---	
Silver	27.4	---	0.200	ug/L	1	27.8	---	99	80-120%	---	---	
Duplicate (23F0682-DUP1)			Prepared: 06/19/23 15:45		Analyzed: 06/19/23 22:08							
QC Source Sample: Non-SDG (A3F1237-01)												
Arsenic	5.72	---	1.00	ug/L	1	---	5.81	---	---	2	20%	
Barium	111	---	2.00	ug/L	1	---	114	---	---	2	20%	
Cadmium	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	
Chromium	ND	---	2.00	ug/L	1	---	1.77	---	---	***	20%	
Lead	0.364	---	0.200	ug/L	1	---	0.372	---	---	2	20%	
Mercury	ND	---	0.0800	ug/L	1	---	ND	---	---	---	20%	
Selenium	ND	---	1.00	ug/L	1	---	ND	---	---	---	20%	
Silver	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	

Matrix Spike (23F0682-MS1)

Prepared: 06/19/23 15:45 Analyzed: 06/19/23 22:13

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Project Manager: Ian Maguire

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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
Batch 23F0682 - EPA 3015A						Water						
Matrix Spike (23F0682-MS1)			Prepared: 06/19/23 15:45 Analyzed: 06/19/23 22:13									
QC Source Sample: Non-SDG (A3F1237-01)												
EPA 6020B												
Arsenic	61.9	---	1.00	ug/L	1	55.6	5.81	101	75-125%	---	---	
Barium	173	---	2.00	ug/L	1	55.6	114	108	75-125%	---	---	
Cadmium	55.9	---	0.200	ug/L	1	55.6	ND	101	75-125%	---	---	
Chromium	57.1	---	2.00	ug/L	1	55.6	1.77	100	75-125%	---	---	
Lead	58.4	---	0.200	ug/L	1	55.6	0.372	104	75-125%	---	---	
Mercury	1.07	---	0.0800	ug/L	1	1.11	ND	96	75-125%	---	---	
Selenium	29.7	---	1.00	ug/L	1	27.8	ND	107	75-125%	---	---	
Silver	27.4	---	0.200	ug/L	1	27.8	ND	99	75-125%	---	---	

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Project Manager: Ian Maguire

Report ID:

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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
Batch 23F0688 - EPA 3051A												
Soil												
Blank (23F0688-BLK2)												
Prepared: 06/20/23 07:07 Analyzed: 06/20/23 19:44												
EPA 6020B												
Arsenic	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	Q-16
Barium	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	Q-16
Cadmium	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	Q-16
Chromium	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	Q-16
Lead	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	Q-16
Mercury	ND	---	0.0800	mg/kg wet	10	---	---	---	---	---	---	Q-16
Selenium	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	Q-16
Silver	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	Q-16
LCS (23F0688-BS2)												
Prepared: 06/20/23 07:07 Analyzed: 06/20/23 17:38												
EPA 6020B												
Arsenic	46.9	---	1.00	mg/kg wet	10	50.0	---	94	80-120%	---	---	Q-16
Barium	52.9	---	1.00	mg/kg wet	10	50.0	---	106	80-120%	---	---	Q-16
Cadmium	47.0	---	0.200	mg/kg wet	10	50.0	---	94	80-120%	---	---	Q-16
Chromium	46.6	---	1.00	mg/kg wet	10	50.0	---	93	80-120%	---	---	Q-16
Lead	51.6	---	0.200	mg/kg wet	10	50.0	---	103	80-120%	---	---	Q-16
Mercury	0.980	---	0.0800	mg/kg wet	10	1.00	---	98	80-120%	---	---	Q-16
Selenium	24.5	---	1.00	mg/kg wet	10	25.0	---	98	80-120%	---	---	Q-16
Silver	24.1	---	0.200	mg/kg wet	10	25.0	---	97	80-120%	---	---	Q-16
Duplicate (23F0688-DUP2)												
Prepared: 06/20/23 07:07 Analyzed: 06/20/23 19:55												
QC Source Sample: Non-SDG (A3F1214-02RE1)												
Arsenic	4.84	---	1.32	mg/kg dry	10	---	6.53	---	---	30	20%	Q-05, Q-16
Barium	149	---	1.32	mg/kg dry	10	---	179	---	---	19	20%	Q-16
Cadmium	ND	---	0.264	mg/kg dry	10	---	0.244	---	---	***	20%	Q-16
Chromium	16.7	---	1.32	mg/kg dry	10	---	22.5	---	---	30	20%	Q-04, Q-16
Lead	9.21	---	0.264	mg/kg dry	10	---	10.6	---	---	14	20%	Q-16
Mercury	ND	---	0.106	mg/kg dry	10	---	ND	---	---	---	20%	Q-16
Selenium	ND	---	1.32	mg/kg dry	10	---	ND	---	---	---	20%	Q-16
Silver	ND	---	0.264	mg/kg dry	10	---	ND	---	---	---	20%	Q-16

Matrix Spike (23F0688-MS2)

Prepared: 06/20/23 07:07 Analyzed: 06/20/23 20:00

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0688 - EPA 3051A						Soil						
Matrix Spike (23F0688-MS2)			Prepared: 06/20/23 07:07 Analyzed: 06/20/23 20:00									
QC Source Sample: Non-SDG (A3F1214-02RE1)												
EPA 6020B												
Arsenic	74.1	---	1.45	mg/kg dry	10	72.6	6.53	93	75-125%	---	---	Q-16
Barium	241	---	1.45	mg/kg dry	10	72.6	179	85	75-125%	---	---	Q-16
Cadmium	68.9	---	0.290	mg/kg dry	10	72.6	0.244	95	75-125%	---	---	Q-16
Chromium	88.9	---	1.45	mg/kg dry	10	72.6	22.5	91	75-125%	---	---	Q-16
Lead	79.9	---	0.290	mg/kg dry	10	72.6	10.6	95	75-125%	---	---	Q-16
Mercury	1.38	---	0.116	mg/kg dry	10	1.45	ND	95	75-125%	---	---	Q-16
Selenium	35.1	---	1.45	mg/kg dry	10	36.3	ND	97	75-125%	---	---	Q-16
Silver	33.7	---	0.290	mg/kg dry	10	36.3	ND	93	75-125%	---	---	Q-16

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**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**GeoEngineers**4000 Kruse Way Place, Bldg 3 Suite 200
Lake Oswego, OR 97035Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS**Percent Dry Weight**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0651 - Total Solids (Dry Weight) - 2022							Soil					
Duplicate (23F0651-DUP1)			Prepared: 06/19/23 09:47 Analyzed: 06/20/23 06:22									
QC Source Sample: Non-SDG (A3F0702-12)												
% Solids	94.6	---	1.00	%	1	---	93.9	---	---	0.7	10%	
Duplicate (23F0651-DUP2)			Prepared: 06/19/23 09:47 Analyzed: 06/20/23 06:22									
QC Source Sample: Non-SDG (A3F0702-16)												
% Solids	89.5	---	1.00	%	1	---	90.1	---	---	0.6	10%	
Duplicate (23F0651-DUP3)			Prepared: 06/19/23 09:47 Analyzed: 06/20/23 06:22									
QC Source Sample: Non-SDG (A3F0702-20)												
% Solids	85.8	---	1.00	%	1	---	84.7	---	---	1	10%	
Duplicate (23F0651-DUP4)			Prepared: 06/19/23 09:47 Analyzed: 06/20/23 06:22									
QC Source Sample: Non-SDG (A3F0702-31)												
% Solids	88.8	---	1.00	%	1	---	87.7	---	---	1	10%	
Duplicate (23F0651-DUP5)			Prepared: 06/19/23 09:47 Analyzed: 06/20/23 06:22									
QC Source Sample: Non-SDG (A3F0702-35)												
% Solids	89.0	---	1.00	%	1	---	88.9	---	---	0.08	10%	
Duplicate (23F0651-DUP6)			Prepared: 06/19/23 09:47 Analyzed: 06/20/23 06:22									
QC Source Sample: Non-SDG (A3F0702-39)												
% Solids	89.1	---	1.00	%	1	---	89.1	---	---	0.08	10%	
Duplicate (23F0651-DUP7)			Prepared: 06/19/23 09:47 Analyzed: 06/20/23 06:22									
QC Source Sample: Non-SDG (A3F1199-02)												
% Solids	41.9	---	1.00	%	1	---	42.5	---	---	1	10%	
Duplicate (23F0651-DUP8)			Prepared: 06/19/23 19:12 Analyzed: 06/20/23 06:22									
QC Source Sample: Non-SDG (A3F1291-03)												
% Solids	83.7	---	1.00	%	1	---	80.2	---	---	4	10%	

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ANALYTICAL REPORT

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GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200
Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23F0651 - Total Solids (Dry Weight) - 2022							Soil					
Duplicate (23F0651-DUP9)			Prepared: 06/19/23 19:12 Analyzed: 06/20/23 06:22									
QC Source Sample: Non-SDG (A3F1283-01)												
% Solids	91.9	---	1.00	%	1	---	92.4	---	---	0.5	10%	

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

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

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Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

SAMPLE PREPARATION INFORMATION**Diesel and/or Oil Hydrocarbons by NWTPH-Dx****Prep: EPA 3510C (Fuels/Acid Ext.)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23F0798							
A3F1239-07	Water	NWTPH-Dx LL	06/15/23 13:30	06/22/23 07:11	980mL/2mL	1000mL/2mL	1.02
A3F1239-08	Water	NWTPH-Dx LL	06/15/23 14:45	06/22/23 07:11	960mL/2mL	1000mL/2mL	1.04
A3F1239-09	Water	NWTPH-Dx LL	06/15/23 15:30	06/22/23 07:11	990mL/2mL	1000mL/2mL	1.01

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23F0772							
A3F1239-01	Soil	NWTPH-Dx	06/15/23 12:50	06/21/23 11:03	10.05g/5mL	10g/5mL	1.00
A3F1239-02	Soil	NWTPH-Dx	06/15/23 15:30	06/21/23 11:03	10.06g/5mL	10g/5mL	0.99
A3F1239-03	Soil	NWTPH-Dx	06/15/23 13:50	06/21/23 11:03	10.99g/5mL	10g/5mL	0.91
A3F1239-04	Soil	NWTPH-Dx	06/15/23 15:00	06/21/23 11:03	10.21g/5mL	10g/5mL	0.98
A3F1239-05	Soil	NWTPH-Dx	06/15/23 14:30	06/21/23 11:03	10.81g/5mL	10g/5mL	0.93
A3F1239-06	Soil	NWTPH-Dx	06/15/23 16:00	06/21/23 11:03	10.39g/5mL	10g/5mL	0.96

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

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23F0648							
A3F1239-07	Water	NWTPH-Gx (MS)	06/15/23 13:30	06/19/23 11:30	5mL/5mL	5mL/5mL	1.00
A3F1239-08	Water	NWTPH-Gx (MS)	06/15/23 14:45	06/19/23 11:30	5mL/5mL	5mL/5mL	1.00
A3F1239-09	Water	NWTPH-Gx (MS)	06/15/23 15:30	06/19/23 11:30	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23F0647							
A3F1239-01	Soil	NWTPH-Gx (MS)	06/15/23 12:50	06/15/23 12:50	3.9g/5mL	5g/5mL	1.28
A3F1239-02	Soil	NWTPH-Gx (MS)	06/15/23 15:30	06/15/23 15:30	5.48g/5mL	5g/5mL	0.91
A3F1239-03	Soil	NWTPH-Gx (MS)	06/15/23 13:50	06/15/23 13:50	6.11g/5mL	5g/5mL	0.82
A3F1239-04	Soil	NWTPH-Gx (MS)	06/15/23 15:00	06/15/23 15:00	5.75g/5mL	5g/5mL	0.87
A3F1239-05	Soil	NWTPH-Gx (MS)	06/15/23 14:30	06/15/23 14:30	6.73g/5mL	5g/5mL	0.74
A3F1239-06	Soil	NWTPH-Gx (MS)	06/15/23 16:00	06/15/23 16:00	4.59g/5mL	5g/5mL	1.09

Volatile Organic Compounds by EPA 8260D

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

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Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

SAMPLE PREPARATION INFORMATION**Volatile Organic Compounds by EPA 8260D****Prep: EPA 5030C**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23F0648							
A3F1239-07	Water	EPA 8260D	06/15/23 13:30	06/19/23 11:30	5mL/5mL	5mL/5mL	1.00
A3F1239-08	Water	EPA 8260D	06/15/23 14:45	06/19/23 11:30	5mL/5mL	5mL/5mL	1.00
A3F1239-09	Water	EPA 8260D	06/15/23 15:30	06/19/23 11:30	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23F0647							
A3F1239-01	Soil	5035A/8260D	06/15/23 12:50	06/15/23 12:50	3.9g/5mL	5g/5mL	1.28
A3F1239-02	Soil	5035A/8260D	06/15/23 15:30	06/15/23 15:30	5.48g/5mL	5g/5mL	0.91
A3F1239-03	Soil	5035A/8260D	06/15/23 13:50	06/15/23 13:50	6.11g/5mL	5g/5mL	0.82
A3F1239-04	Soil	5035A/8260D	06/15/23 15:00	06/15/23 15:00	5.75g/5mL	5g/5mL	0.87
A3F1239-05	Soil	5035A/8260D	06/15/23 14:30	06/15/23 14:30	6.73g/5mL	5g/5mL	0.74
A3F1239-06	Soil	5035A/8260D	06/15/23 16:00	06/15/23 16:00	4.59g/5mL	5g/5mL	1.09

Polychlorinated Biphenyls by EPA 8082A**Prep: EPA 3510C (Neutral pH)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23F0845							
A3F1239-07	Water	EPA 8082A	06/15/23 13:30	06/23/23 07:16	970mL/5mL	1000mL/5mL	1.03
A3F1239-09	Water	EPA 8082A	06/15/23 15:30	06/23/23 07:16	960mL/5mL	1000mL/5mL	1.04

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23F0754							
A3F1239-01	Soil	EPA 8082A	06/15/23 12:50	06/21/23 07:56	10.33g/5mL	10g/5mL	0.97

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)**Prep: EPA 3546**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23F0706							
A3F1239-01	Soil	EPA 8270E SIM	06/15/23 12:50	06/20/23 12:57	10.06g/5mL	10g/5mL	0.99
A3F1239-02	Soil	EPA 8270E SIM	06/15/23 15:30	06/20/23 12:57	10.03g/5mL	10g/5mL	1.00
A3F1239-04	Soil	EPA 8270E SIM	06/15/23 15:00	06/20/23 12:57	10.81g/5mL	10g/5mL	0.93
A3F1239-06	Soil	EPA 8270E SIM	06/15/23 16:00	06/20/23 12:57	10.69g/5mL	10g/5mL	0.94

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

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Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

SAMPLE PREPARATION INFORMATION

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

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
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Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Prep: EPA 3511 (Bottle Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
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Batch: 23F0693

A3F1239-07	Water	EPA 8270E LVI	06/15/23 13:30	06/20/23 07:46	109.38mL/5mL	125mL/5mL	1.14
A3F1239-08	Water	EPA 8270E LVI	06/15/23 14:45	06/20/23 07:46	107.62mL/5mL	125mL/5mL	1.16
A3F1239-09	Water	EPA 8270E LVI	06/15/23 15:30	06/20/23 07:46	99.22mL/5mL	125mL/5mL	1.26

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
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Batch: 23F0682

A3F1239-07	Water	EPA 6020B	06/15/23 13:30	06/19/23 15:45	45mL/50mL	45mL/50mL	1.00
A3F1239-08	Water	EPA 6020B	06/15/23 14:45	06/19/23 15:45	45mL/50mL	45mL/50mL	1.00
A3F1239-09	Water	EPA 6020B	06/15/23 15:30	06/19/23 15:45	45mL/50mL	45mL/50mL	1.00

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
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Batch: 23F0688

A3F1239-01RE1	Soil	EPA 6020B	06/15/23 12:50	06/20/23 07:07	0.463g/50mL	0.5g/50mL	1.08
A3F1239-02RE1	Soil	EPA 6020B	06/15/23 15:30	06/20/23 07:07	0.476g/50mL	0.5g/50mL	1.05
A3F1239-04RE1	Soil	EPA 6020B	06/15/23 15:00	06/20/23 07:07	0.484g/50mL	0.5g/50mL	1.03
A3F1239-06	Soil	EPA 6020B	06/15/23 16:00	06/20/23 07:07	0.477g/50mL	0.5g/50mL	1.05

Percent Dry Weight

Prep: Total Solids (Dry Weight) - 2022

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
------------	--------	--------	---------	----------	----------------------	-----------------------	----------------

Batch: 23F0651

A3F1239-01	Soil	EPA 8000D	06/15/23 12:50	06/19/23 09:47			NA
A3F1239-02	Soil	EPA 8000D	06/15/23 15:30	06/19/23 09:47			NA
A3F1239-03	Soil	EPA 8000D	06/15/23 13:50	06/19/23 09:47			NA
A3F1239-04	Soil	EPA 8000D	06/15/23 15:00	06/19/23 09:47			NA
A3F1239-05	Soil	EPA 8000D	06/15/23 14:30	06/19/23 09:47			NA

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ANALYTICAL REPORT

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Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

Prep: Total Solids (Dry Weight) - 2022

					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
A3F1239-06	Soil	EPA 8000D	06/15/23 16:00	06/19/23 09:47			NA

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Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

QUALIFIER DEFINITIONS

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

Apex Laboratories

- C-07** Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.
- E** Estimated Value. The result is above the calibration range of the instrument.
- F-13** The chromatographic pattern does not resemble the fuel standard used for quantitation.
- ICV-01** Estimated Result. Initial Calibration Verification (ICV) failed high. There is no effect on non-detect results.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-02** Spike recovery is outside of established control limits due to matrix interference.
- Q-03** Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
- Q-04** Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-16** Reanalysis of an original Batch QC sample.
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- Q-52** Due to known erratic recoveries, the result and reporting levels for this analyte are reported as Estimated Values. This analyte may not have passed all QC requirements for this method.
- Q-54** 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-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +17%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +23%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +4%. The results are reported as Estimated Values.
- Q-54d** 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.
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.

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.

Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200
Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

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

Detection Limits: Limit of Detection (LOD)

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

Reporting Limits: Limit of Quantitation (LOQ)

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

Reporting Conventions:

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

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

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

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

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

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

QC Source:

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

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

Miscellaneous Notes:

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

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

Apex Laboratories

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Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: **Ian Maguire**

Report ID:

A3F1239 - 06 26 23 1646

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

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

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

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

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

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

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

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

Soil and Sediment Samples:

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

Sampling and Preservation Notes:

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

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

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

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

Apex Laboratories

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) -

EPA ID: OR01039

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

Apex Laboratories

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

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

Secondary Accreditations

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

Subcontract Laboratory Accreditations

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

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

Field Testing Parameters

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

Apex Laboratories

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Lake Oswego, OR 97035

Project: Beaverton Phs. II

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

APEX LABS		CHAIN OF CUSTODY		Lab # <u>A3F1239</u> COC # <u> </u> of <u> </u>																				
Company: <u>Geo Engineers</u>		Project Mgr: <u>Ian Maguire</u>		Project Name: <u>Beaverton Phs II</u>																				
Address: <u>5820 S Kelly Ave, Portland, OR</u>		Phone: <u> </u>		Email: <u>imaguire@geoengineers.com</u>																				
Sampled by: <u>Sam Russell / Jan Weatherford</u>		Project #: <u> </u>		Project #: <u> </u>																				
Site Location: <u> </u>		Project Name: <u>Beaverton Phs II</u>		Project Name: <u>Beaverton Phs II</u>																				
Slate: <u>OR</u>		Project Name: <u>Beaverton Phs II</u>		Project Name: <u>Beaverton Phs II</u>																				
County: <u> </u>		Project Name: <u>Beaverton Phs II</u>		Project Name: <u>Beaverton Phs II</u>																				
SAMPLE ID		DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-DX	NWTPH-CX	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (9)	Priority Metals (13)	AL, Sb, As, Ba, Be, Cd, Cr, Cu, Fe, Pb, Hg, Mn, Mo, Ni, K, Se, Ag, Na, Ti, V, Zn	TOTAL DISS. TCIP	TCIP Metals (9)	Hold Sample	Frozen Archive	
B-4 (19-20)	6/15/23	12:30	S	4			X	X					X				X							
B-2 (6-7)	1	15:30	S	4			X	X					X				X							
B-3 (2-5)	1	13:00		4			X	X					X				X							
B-5 (5-6)	1	15:00		4			X	X					X				X							
B-6 (5-6)	1	14:00		4			X	X					X				X							
HA (2)	1	13:30	S	4			X	X					X				X							
B-4 (6W)	1	13:30	S	4			X	X					X				X							
B-3 (6W)	1	14:15		4			X	X					X				X							
B-6 (6W)	1	15:30		4			X	X					X				X							
B-2 (8)	1	16:40		4			X	X					X				X							

Standard Turn Around Time (TAT) = 10 Business Days

1 Day 2 Day 3 Day

TAT Requested (circle) Standard</



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

GeoEngineers

4000 Kruse Way Place, Bldg 3 Suite 200

Lake Oswego, OR 97035

Project: **Beaverton Phs. II**

Project Number: [none]

Project Manager: Ian Maguire

Report ID:

A3F1239 - 06 26 23 1646

APEX LABS COOLER RECEIPT FORMClient: GeoEngineers Element WO#: A3F1239Project/Project #: Beaverton Phs II**Delivery Info:**Date/time received: 6/15/23 @ 17:30 By: SKMDelivered by: Apex ☒ Client ☒ ESS ☐ FedEx ☐ UPS ☐ Radio ☐ Morgan ☐ SDS ☐ Evergreen ☐ Other ☐**Cooler Inspection** Date/time inspected: 6/15/23 @ 17:30 By: SKMChain of Custody included? Yes ☒ No ☐Signed/dated by client? Yes ☒ No ☐

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>4.7</u>	<u>1.9</u>					
Custody seals? (Y/N)	<u>N</u>	<u>N</u>					
Received on ice? (Y/N)	<u>Y</u>	<u>Y</u>					
Temp. blanks? (Y/N)	<u>Y</u>	<u>Y</u>					
Ice type: (Gel/Real/Other)	<u>Real</u>	<u>Real</u>					
Condition (In/Out):	<u>IN</u>	<u>IN</u>					

Cooler out of temp? (Y/N) ☒ Possible reason why:Green dots applied to out of temperature samples? Yes ☒ No ☐Out of temperature samples form initiated? Yes ☒ No ☐**Sample Inspection:** Date/time inspected: 6/16/23 @ 15:22 By: SKMAll samples intact? Yes ☒ No ☐ Comments:Bottle labels/COCs agree? Yes ☒ No ☒ Comments: SKM 6/16
No containers for W-2 and sample
were receivedCOC/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 B-4(LW), B-3(LW), B-6(LW) 3/3 has sed.Water samples: pH checked: Yes ☒ No ☐ NA ☐ pH appropriate? Yes ☒ No ☐ NA ☐

Comments:

Additional information: TB#3320 provided, not listed on COC.Labeled by: SKMWitness: APWCooler Inspected by: SKM

Form Y-003 R-00

Apex Laboratories

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CABri

Cameron O'Brien For Darrell Auvil, Client Services Manager

Page 89 of 89

APPENDIX C

Report Limitations and Guidelines for Use

APPENDIX D

REPORT LIMITATIONS AND GUIDELINES FOR USE²

This appendix provides information to help you manage your risks with respect to the use of this report. Please confer with GeoEngineers if you need to know more about how these “Report Limitations and Guidelines for Use” apply to your project or property.

Read These Provisions Closely

It is important to recognize that environmental engineering and geoscience practices (geotechnical engineering, geology and environmental science) are less exact than other engineering and natural science disciplines. GeoEngineers includes these explanatory “limitations” provisions in our reports to help reduce the risk of misunderstandings or unrealistic expectations that lead to disappointments, claims and disputes.

Environmental Services are Performed for Specific Purposes, Persons and Projects

GeoEngineers has performed this Phase II ESA of the Beaverton Cardlock and Bulk Plant facility at 6750 SW 110th Court, Beaverton, Oregon in general accordance with the scope and limitations of our proposal, dated June 1, 2023 and subsequent contract amendments. This report has been prepared for the exclusive use of Jubitz Corporation (Jubitz) and Bretthauer Oil Company, Inc. (Bretthauer). This report is not intended for use by others, and the information contained herein is not applicable to other properties.

GeoEngineers structures its services to meet the specific needs of its clients. For example, an ESA study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and property. The use of this report is not recommended for any purpose or project other than as expressly stated in this report.

This Environmental Report is Based on a Unique Set of Project-Specific Factors

This report has been prepared for the B Cardlock and Bulk Plant facility at 6750 SW 110th Court, Beaverton, Oregon. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this Project. Unless GeoEngineers specifically indicates otherwise, it is important not to rely on this report if it was:

- not prepared for you,
- not prepared for your Project,
- not prepared for the specific site explored, or
- completed before Project changes were made.

If changes to the Project or property occur after the date of this report, GeoEngineers cannot be responsible for any consequences of such changes in relation to this report unless we have been given the opportunity

² Developed based on material provided by GBA, GeoProfessional Business Association; www.geoprofessional.org.

to review our interpretations and recommendations in the context of such changes. Based on that review, we can provide written modifications or confirmation, as appropriate.

Reliance Conditions for Third Parties

This report was prepared for the exclusive use of the party to whom this report is addressed. No other party may rely on the product of our services unless we agree to such reliance in advance and in writing. Within the limitations of the agreed Project scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted environmental practices in this area at the time this report was prepared.

Understand That Geotechnical Issues Have Not Been Addressed

Unless geotechnical engineering was specifically included in our scope of service, this report does not provide any geotechnical findings, conclusions, or recommendations, including but not limited to, the suitability of subsurface materials for construction purposes.

Do Not Separate Documentation from the Report

Environmental reports often include supplemental documentation, such as maps, figures, and tables. Do not separate such documentation from the report. Further, do not, and do not permit any other party to redraw or modify any of the supplemental documentation for incorporation into other professionals' instruments of service.

Environmental Regulations Change and Evolve

Some substances may be present in the vicinity of the site in quantities or under conditions that may have led, or may lead, to contamination of the site, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substances, change or if more stringent environmental standards are developed in the future.

Uncertainty May Remain Even After This Phase II ESA is Completed

Performance of a Phase II ESA is intended to reduce uncertainty regarding the potential for contamination in connection with a property, but no ESA can wholly eliminate that uncertainty. Our interpretation of subsurface conditions in this study is based on field observations and chemical analytical data from widely spaced sampling locations. It is always possible that contamination exists in areas that were not explored, sampled or analyzed.

Subsurface Conditions Can Change

This environmental report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by man-made events such as construction on or adjacent to the site, by new releases of hazardous substances, new information or technology that become available subsequent to the report date, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Please contact GeoEngineers before applying this

report for its intended purpose so that GeoEngineers may evaluate whether changed conditions affect the continued applicability of the report.

Soil and Groundwater End Use

The cleanup levels referenced in this report are site- and situation-specific. The cleanup levels may not be applicable for other properties or for other on-site uses of the affected soil and/or groundwater. Note that hazardous substances may be present in some of the on-site soil and/or groundwater at detectable concentrations that are less than the referenced cleanup levels. GeoEngineers should be contacted prior to the export of soil or groundwater from the site or reuse of the affected soil or groundwater on-site to evaluate the potential for associated environmental liabilities. GeoEngineers will not assume responsibility for potential environmental liability arising out of the transfer of soil and/or groundwater from the site to another location, or the reuse of such soil and/or groundwater on-site in any instances that we did not recommend, know of, or control.

Most Environmental Findings Are Professional Opinions

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the site. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoEngineers reviewed field and laboratory data and then applied its professional judgment to render an informed opinion about subsurface conditions throughout the property. Actual subsurface conditions may differ significantly from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

Do Not Redraw the Exploration Logs

Environmental scientists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in an environmental report should never be redrawn for inclusion in other design documents. Only photographic or electronic reproduction that preserves the entire original boring log is acceptable, but separating logs from the report can increase the risk of potential misinterpretation.

Biological Pollutants

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention, or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings, or conclusions regarding the detecting, assessing, preventing, or abating of Biological Pollutants, and no conclusions or inferences should be drawn regarding Biological Pollutants as they may relate to this Project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

A Client that desires these specialized services is advised to obtain them from a consultant who offers services in this specialized field.

Appendix B

Chain-of-Custody and Analytical Results
Laboratory Report A3E1088



ANALYTICAL REPORT

Apex Laboratories, LLC

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

Thursday, May 18, 2023

Casey Michaels
4C's Environmental Inc.
1590 SE Uglow Ave
Dallas, OR 97338

RE: A3E1088 - BRET-Beaverton-2012

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 A3E1088, which was received by the laboratory on 5/5/2023 at 4:03:00PM.

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

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

Cooler Receipt Information

(See Cooler Receipt Form for details)

Default Cooler	1.9 degC
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This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

Darrell Auvil, Client Services Manager

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

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

4C's Environmental Inc.

1590 SE Uglow Ave

Dallas, OR 97338

Project/#: **BRET-Beaverton-2012**

Project Manager: Casey Michaels

Report ID:

A3E1088 - 05 18 23 1104

ANALYTICAL REPORT FOR SAMPLES**SAMPLE INFORMATION**

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B1	A3E1088-01	Soil	05/05/23 08:05	05/05/23 16:03
B2	A3E1088-02	Soil	05/05/23 08:11	05/05/23 16:03
B3	A3E1088-03	Soil	05/05/23 08:15	05/05/23 16:03
B4	A3E1088-04	Soil	05/05/23 08:18	05/05/23 16:03
B5	A3E1088-05	Soil	05/05/23 08:20	05/05/23 16:03

Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

4C's Environmental Inc.

1590 SE Uglow Ave

Dallas, OR 97338

Project/#: BRET-Beaverton-2012

Project Manager: Casey Michaels

Report ID:

A3E1088 - 05 18 23 1104

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B1 (A3E1088-01)		Matrix: Soil		Batch: 23E0243				
Gasoline Range Organics	ND	---	23.9	mg/kg dry	1	05/06/23 01:24	NWTPH-HCID	
Diesel Range Organics	ND	---	59.8	mg/kg dry	1	05/06/23 01:24	NWTPH-HCID	
Oil Range Organics	ND	---	120	mg/kg dry	1	05/06/23 01:24	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		Recovery:	101 %	Limits: 50-150 %	1	05/06/23 01:24	NWTPH-HCID	
4-Bromofluorobenzene (Surr)			93 %	50-150 %	1	05/06/23 01:24	NWTPH-HCID	
B2 (A3E1088-02)		Matrix: Soil		Batch: 23E0243				
Gasoline Range Organics	ND	---	25.6	mg/kg dry	1	05/06/23 01:47	NWTPH-HCID	
Diesel Range Organics	ND	---	63.9	mg/kg dry	1	05/06/23 01:47	NWTPH-HCID	
Oil Range Organics	ND	---	128	mg/kg dry	1	05/06/23 01:47	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		Recovery:	102 %	Limits: 50-150 %	1	05/06/23 01:47	NWTPH-HCID	
4-Bromofluorobenzene (Surr)			95 %	50-150 %	1	05/06/23 01:47	NWTPH-HCID	
B3 (A3E1088-03)		Matrix: Soil		Batch: 23E0243				
Gasoline Range Organics	ND	---	24.4	mg/kg dry	1	05/06/23 02:10	NWTPH-HCID	
Diesel Range Organics	ND	---	61.0	mg/kg dry	1	05/06/23 02:10	NWTPH-HCID	
Oil Range Organics	ND	---	122	mg/kg dry	1	05/06/23 02:10	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		Recovery:	106 %	Limits: 50-150 %	1	05/06/23 02:10	NWTPH-HCID	
4-Bromofluorobenzene (Surr)			95 %	50-150 %	1	05/06/23 02:10	NWTPH-HCID	
B4 (A3E1088-04)		Matrix: Soil		Batch: 23E0243				
Gasoline Range Organics	ND	---	24.3	mg/kg dry	1	05/06/23 04:29	NWTPH-HCID	
Diesel Range Organics	DET	---	60.7	mg/kg dry	1	05/06/23 04:29	NWTPH-HCID	F-11
Oil Range Organics	ND	---	121	mg/kg dry	1	05/06/23 04:29	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		Recovery:	106 %	Limits: 50-150 %	1	05/06/23 04:29	NWTPH-HCID	
4-Bromofluorobenzene (Surr)			94 %	50-150 %	1	05/06/23 04:29	NWTPH-HCID	
B5 (A3E1088-05)		Matrix: Soil		Batch: 23E0243				
Gasoline Range Organics	ND	---	22.4	mg/kg dry	1	05/06/23 02:33	NWTPH-HCID	
Diesel Range Organics	ND	---	56.1	mg/kg dry	1	05/06/23 02:33	NWTPH-HCID	
Oil Range Organics	ND	---	112	mg/kg dry	1	05/06/23 02:33	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		Recovery:	99 %	Limits: 50-150 %	1	05/06/23 02:33	NWTPH-HCID	
4-Bromofluorobenzene (Surr)			88 %	50-150 %	1	05/06/23 02:33	NWTPH-HCID	

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Darrell Auvil, Client Services Manager

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

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

4C's Environmental Inc.

1590 SE Uglow Ave

Dallas, OR 97338

Project/#: **BRET-Beaverton-2012**

Project Manager: Casey Michaels

Report ID:

A3E1088 - 05 18 23 1104

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
B4 (A3E1088-04)				Matrix: Soil		Batch: 23E0377		
Diesel	4690	---	249	mg/kg dry	10	05/09/23 22:01	NWTPH-Dx	F-11
Oil	ND	---	498	mg/kg dry	10	05/09/23 22:01	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 89 %		Limits: 50-150 %	10	05/09/23 22:01	NWTPH-Dx	S-05

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Report ID:

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ANALYTICAL SAMPLE RESULTS**Percent Dry Weight**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B1 (A3E1088-01)				Matrix: Soil		Batch: 23E0298		
% Solids	81.2	---	1.00	%	1	05/08/23 04:24	EPA 8000D	
B2 (A3E1088-02)				Matrix: Soil		Batch: 23E0298		
% Solids	78.1	---	1.00	%	1	05/08/23 04:24	EPA 8000D	
B3 (A3E1088-03)				Matrix: Soil		Batch: 23E0298		
% Solids	77.7	---	1.00	%	1	05/08/23 04:24	EPA 8000D	
B4 (A3E1088-04)				Matrix: Soil		Batch: 23E0298		
% Solids	76.1	---	1.00	%	1	05/08/23 04:24	EPA 8000D	
B5 (A3E1088-05)				Matrix: Soil		Batch: 23E0298		
% Solids	81.8	---	1.00	%	1	05/08/23 04:24	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS**Hydrocarbon Identification Screen by NWTPH-HCID**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23E0243 - NWTPH-HCID (Soil)						Soil						
Blank (23E0243-BLK1)		Prepared: 05/05/23 07:12 Analyzed: 05/05/23 22:41										
NWTPH-HCID												
Gasoline Range Organics	ND	---	20.0	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	50.0	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	100	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 90 %		Limits: 50-150 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		87 %		50-150 %		"						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23E0377 - EPA 3546 (Fuels)						Soil						
Blank (23E0377-BLK1)		Prepared: 05/09/23 09:50 Analyzed: 05/09/23 20:40										
NWTPH-Dx												
Diesel	ND	---	20.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	40.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 103 %		Limits: 50-150 %		Dilution: 1x						
LCS (23E0377-BS1)		Prepared: 05/09/23 09:50 Analyzed: 05/09/23 21:00										
NWTPH-Dx												
Diesel	107	---	20.0	mg/kg wet	1	125	---	85	38 - 132%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 105 %		Limits: 50-150 %		Dilution: 1x						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23E0298 - Total Solids (Dry Weight) - 2022							Soil					
Duplicate (23E0298-DUP1)		Prepared: 05/06/23 15:25 Analyzed: 05/08/23 04:24										
<u>QC Source Sample: B1 (A3E1088-01)</u>												
<u>EPA 8000D</u>												
% Solids	81.6	---	1.00	%	1	---	81.2	---	---	0.5	10%	
Duplicate (23E0298-DUP2)		Prepared: 05/06/23 15:25 Analyzed: 05/08/23 04:24										
<u>QC Source Sample: B2 (A3E1088-02)</u>												
<u>EPA 8000D</u>												
% Solids	75.8	---	1.00	%	1	---	78.1	---	---	3	10%	
Duplicate (23E0298-DUP3)		Prepared: 05/06/23 15:25 Analyzed: 05/08/23 04:24										
<u>QC Source Sample: B3 (A3E1088-03)</u>												
<u>EPA 8000D</u>												
% Solids	77.1	---	1.00	%	1	---	77.7	---	---	0.7	10%	

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

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Report ID:

A3E1088 - 05 18 23 1104

SAMPLE PREPARATION INFORMATION**Hydrocarbon Identification Screen by NWTPH-HCID****Prep: NWTPH-HCID (Soil)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23E0243							
A3E1088-01	Soil	NWTPH-HCID	05/05/23 08:05	05/05/23 18:34	10.29g/10mL	10g/10mL	0.97
A3E1088-02	Soil	NWTPH-HCID	05/05/23 08:11	05/05/23 18:34	10.01g/10mL	10g/10mL	1.00
A3E1088-03	Soil	NWTPH-HCID	05/05/23 08:15	05/05/23 18:34	10.55g/10mL	10g/10mL	0.95
A3E1088-04	Soil	NWTPH-HCID	05/05/23 08:18	05/05/23 18:34	10.82g/10mL	10g/10mL	0.92
A3E1088-05	Soil	NWTPH-HCID	05/05/23 08:20	05/05/23 18:34	10.89g/10mL	10g/10mL	0.92

Diesel and/or Oil Hydrocarbons by NWTPH-Dx**Prep: EPA 3546 (Fuels)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23E0377							
A3E1088-04	Soil	NWTPH-Dx	05/05/23 08:18	05/09/23 17:13	10.55g/5mL	10g/5mL	0.95

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

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23E0298							
A3E1088-01	Soil	EPA 8000D	05/05/23 08:05	05/06/23 15:25			NA
A3E1088-02	Soil	EPA 8000D	05/05/23 08:11	05/06/23 15:25			NA
A3E1088-03	Soil	EPA 8000D	05/05/23 08:15	05/06/23 15:25			NA
A3E1088-04	Soil	EPA 8000D	05/05/23 08:18	05/06/23 15:25			NA
A3E1088-05	Soil	EPA 8000D	05/05/23 08:20	05/06/23 15:25			NA

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Report ID:

A3E1088 - 05 18 23 1104

QUALIFIER DEFINITIONS

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

Apex Laboratories

- F-11 The hydrocarbon pattern indicates possible weathered diesel, mineral oil, or a contribution from a related component.
- S-05 Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

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

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).

If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

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

Reporting Conventions:

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

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

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

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

QC Source:

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

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

Miscellaneous Notes:

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

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

Blanks:

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

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

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

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

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

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

Soil and Sediment Samples:

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

Sampling and Preservation Notes:

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

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

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

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

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LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation)

EPA ID: OR01039

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

Apex Laboratories

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

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

Secondary Accreditations

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

Subcontract Laboratory Accreditations

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

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

Field Testing Parameters

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

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Report ID:

A3E1088 - 05 18 23 1104

APEX LABS		CHAIN OF CUSTODY		Lab # <u>A3E1088</u> COC # of <u>1</u>	
Company: <u>4C's Environmental Inc.</u>		Project Name: <u>BRET-Beaverton</u>		Project #: <u>2012</u>	
Address: <u>1590 SE Uglow Ave.</u>		Phone: <u>503 606 3000</u>		PO # <u>2012</u>	
Dallas, OR 97338		Email:			
ANALYSIS REQUEST					
SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS
B1		5/5/23	8:05	Cap	1
B2		5/11	8:11	↑	1
B3		8:15	8:15	↑	1
B4		8:15	8:15	↓	1
B5		5/13	8:20	Cap	1
ARCHIVE					
TCLP Metals (8)					
TOTAL DISS. TCLP					
V, Zn, Mn, Ni, K, Sc, Ag, Na, TL					
Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Sc, Ag, Na, TL					
Priority Metals (13)					
RCRA Metals (8)					
8081 Pest					
8082 PCBs					
8270 Semi-Vols Full List					
8270 SIM PAHs					
8260 VOCs Full List					
8260 Halo VOCs					
8260 RBDM VOCs					
8260 BTEX					
NTPH-GX					
NTPH-DX					
NTPH-HCID					
SPECIAL INSTRUCTIONS:					
Normal Turn Around Time (TAT) = 10 Business Days					
TAT Requested (circle) 1 Day 2 Day 3 Day 4 DAY 5 DAY Other: _____					
SAMPLES ARE HELD FOR 30 DAYS					
RELINQUISHED BY:		RECEIVED BY:		RECEIVED BY:	
Signature: <u>Darrell Mauer</u>		Signature: _____		Signature: _____	
Date: <u>5/15/23</u>		Date: <u>5-5-23</u>		Date: _____	
Printed Name: <u>Darrell Mauer</u>		Printed Name: <u>Darrell Mauer</u>		Printed Name: _____	
Time: <u>4:03</u>		Time: <u>1603</u>		Time: _____	
Company: <u>4C's Environmental Inc</u>		Company: _____		Company: _____	

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Project Manager: Casey Michaels

Report ID:

A3E1088 - 05 18 23 1104

APEX LABS COOLER RECEIPT FORM

Client: 4C's Environmental Element WO#: A3E1088Project/Project #: BRET-Beaverton / 2012

Delivery Info:

Date/time received: 5-5-23 @ 1603 By: DJSDelivered by: Apex Client YES FedEx UPS Radio Morgan SDS Evergreen Other _____Cooler Inspection Date/time inspected: 5-5-23 @ 1604 By: DJSChain of Custody included? Yes X No _____Signed/dated by client? Yes X No _____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>1.9</u>						
Custody seals? (Y/N)	<u>N</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition (In/Out):	<u>In</u>						

Cooler out of temp? (Y/N) No Possible reason why: _____Green dots applied to out of temperature samples? Yes NoOut of temperature samples form initiated? Yes NoSample Inspection: Date/time inspected: 5/5/23 @ 16:14 By: KAMAll samples intact? Yes X No _____ Comments: _____Bottle labels/COCs agree? Yes X No _____ Comments: _____COC/container discrepancies form initiated? Yes _____ No XContainers/volumes received appropriate for analysis? Yes X No _____ Comments: _____Do VOA vials have visible headspace? Yes _____ No _____ NA XComments: _____Water samples: pH checked: Yes _____ No _____ NA X pH appropriate? Yes _____ No _____ NA XComments: _____Additional information: _____Labeled by: KAMWitness: DJSCooler Inspected by: KAM

Form Y-003 R-00

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