AECOM **Environment**

Prepared for
Port of Vancouver USA
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Submitted by
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Submitted to
Washington Department of Ecology

60624310
September 2021

Groundwater Monitoring Letter Report - 2021

Former Automotive Services, Inc. Site

Port of Vancouver USA
2327 West Mill Plain Boulevard
Vancouver, Washington

AECOM

September 10, 2021

Mr. Panjini Balaraju
Washington Department of Ecology
Toxics Cleanup Program
Lacey, Washington
(PDF copy via email: PBAL461@ecy.wa.gov)

Re: Groundwater Monitoring Letter Report – June 2021
Former Automotive Services, Inc. Site
Port of Vancouver USA
2327 West Mill Plain Boulevard
Vancouver, Washington
AECOM Job No. 60519969

Dear Mr. Balaraju:

AECOM has prepared this Groundwater Monitoring Letter Report (herein referred to as the report) on behalf of the Port of Vancouver USA (the Port). This report summarizes the results of the June 2021 groundwater monitoring event conducted at the Former Automotive Services, Inc. (ASI) Site (herein referred to as the Site).

1 Site Location and Background

The Site is located at 2327 West Mill Plain Boulevard in Vancouver, Washington (Figure 1). The Site consists of approximately 4.33 acres of nearly level concrete paved land. The current tax parcel number is 059115-068 and is owned by the Port (Ecology, 2014). The Site is leased by CalPortland for a ready-mix plant (Figure 2).

The Site was historically an agricultural field until the ASI car wash facility was constructed on the Site in 1972 and 1973. The car wash process used hot water with kerosene to clean off a Cosmoline-based protective coating from newly imported cars upon arrival via ship to the Port. The car wash facility originally covered a larger area; however, the site was dissected by the Mill Plain Boulevard extension in 1998. Residual contamination and former car wash areas are located at the Site as summarized below (Ecology, 2014).

- In 1980, due to a process malfunction in the facility's water treatment system, water with kerosene flowed onto the ground surface west of the car wash building resulting in petroleum soil contamination.
- In 1991, four underground storage tanks (USTs) (containing kerosene, gasoline, and diesel) at the car wash facility were removed; confirmation soil samples collected following the removal activities indicated residual petroleum contamination. During the UST removal activities, approximately 1,500 cubic yards of soil was excavated; however, further excavation to remove the remaining impacted soil was not feasible as it would have undermined an on-Site structure.
- In 1992, diesel-impacted soil was encountered on the west side of the Site near the adjacent Marathon aboveground storage tank farm. The source, based on field evidence, appeared to be from a surface spill which occurred in the 1960s prior to placement of Columbia River sand and silt dredge spoils on the ground surface.

Between September 1999 and February 2001, cleanup activities included the on-Site bioremediation of diesel- and kerosene-impacted soils from two soil excavation events described below (Ecology, 2014):

- In August 1999, during the initial excavation event, soils were excavated to approximately 16 feet below ground surface (bgs) where a change in lithology was observed and groundwater was encountered. The excavation was halted because of the presence of groundwater, lack of available stockpile space, and constraints along the Marathon property boundary.
- In July 2000, a second excavation event occurred to remove diesel contamination left from the initial event. Deeper excavation depths were reached, varying from 17 to 20 feet bgs, and the footprint of the

excavation area was expanded to follow contamination in all directions, even into the adjoining Marathon property. Confirmation soil samples were collected from the walls and bottom of the final excavation. Based on samples collected, it was estimated that approximately 389 cubic yards of diesel-impacted soil remained at the Site below 16 feet bgs. Groundwater impacts are limited to the center of the Site around well GL-2 (Figure 2).

As detailed in the No Further Action (NFA) letter from the Washington State Department of Ecology (Ecology), an Environmental Covenant 3407456 was filed with Clark County in 2012 and revised in September 2013 to address the remaining impacted areas (Ecology, 2014). To confirm the long-term effectiveness of the cleanup operations completed at the Site, confirmational groundwater monitoring is necessary; the data will be used by Ecology during periodic reviews. In the NFA, Ecology approved a monitoring plan for the Site's monitoring wells; the monitoring program is summarized in Section 3 below.

A total of seven monitoring wells have been installed at the Site to date: GL-1, GL-2 and GL-3 (formerly identified as MW-1, MW-2 and MW-3) in 1991 and GL-4, GL-5, GL-6 and GL-7 in 2002. All monitoring wells listed on Table 1 are constructed with screened intervals of 10 to 30 feet below top of casing (btoc).

2 Site Hydrogeology and Soils

The depth to groundwater seasonally ranges between 14 to 21 feet bgs (Ecology, 2014). The direction of hydraulic gradient is seasonally variable to the northwest and south-southeast but is nearly flat. Soils beneath the Site have been classified as Hillsboro loam with McBee silty clay loam located diagonally across the center of the property from the northwest corner to southeast corner. The soils become sandy at approximately 10 to 15 feet and the sand becomes more coarse at 18 to 20 feet bgs (Ecology, 2014).

3 Groundwater Monitoring Program and Cleanup Levels

The ASI Site was closed under the Environmental Covenant 3407456, revised in 2012. As part of Ecology's NFA, a site-specific monitoring plan was required. Long-term groundwater monitoring has been conducted at the Site in accordance with the following monitoring plans and revisions since 2009:

- *Long-Term Confirmational Groundwater Monitoring Plan* (CEC, 2007)
- Ecology approval email for use of low-flow sampling techniques (Ecology, 2009)
- *Revised Long-Term Confirmational Groundwater Monitoring Plan for the ASI/Glacier Site* (Kennedy/Jenks Consultants, 2010)

The *Revised Long-Term Monitoring Plan* proposed a reduction in the number of wells sampled during each event and the abandonment of monitoring wells GL-5 and GL-7. In 2010, Ecology agreed that the remaining wells were deemed sufficient to monitor the localized area of diesel impacts in groundwater near GL-2 (Ecology, 2014). Decommissioning activities at GL-7 were completed in October 2019 (AECOM, 2020a). GL-5 was not located until the December 2019 event; the well was decommissioned in April 2020 (AECOM, 2020b).

Based on the *Revised Long-Term Confirmational Groundwater Monitoring Plan*, the current compliance monitoring plan (Table 1) includes the collection of depth-to-groundwater measurements and groundwater samples from the following five monitoring wells every 18 months:

- GL-1
- GL-2
- GL-3
- GL-4
- GL-6

The analyte list for groundwater samples collected includes the full list of Volatile Organic Compounds (VOCs) and diesel- and oil-range total petroleum hydrocarbons (diesel and oil) at all monitoring wells.

In accordance with *Revised Long-Term Confirmational Groundwater Monitoring Plan*, the analytical results are compared to the Ecology Model Toxics Control Act (MTCA) Method A groundwater cleanup levels (CULs).

4 Activities Conducted During June 2021

Groundwater monitoring activities completed during the June 2021 event were conducted in accordance with the following three documents.

- Environmental Protection Agency (EPA) guidance document titled *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures* (EPA, 1996)
- *Revised Long-Term Confirmational Groundwater Monitoring Plan for the ASI/Glacier Site* (Kennedy/Jenks Consultants, 2010)
- Ecology NFA letter (Ecology, 2014)

The groundwater monitoring activities completed during the June 2021 event are as follows:

- Depth-to-groundwater measurements were collected from the five monitoring wells included in the current monitoring plan (see Section 3) using an electronic water level meter. The depth-to-groundwater was measured from the top of casing (TOC) at each well and recorded on the Monitoring Well Sampling Field Logs (Appendix A). Depth-to-groundwater measurements and calculated groundwater elevations are presented on Table 2.
- Groundwater samples were collected from the five monitoring wells included in the current monitoring plan (see Section 3). Each groundwater sample was collected following low-flow purging and stabilization of the following field parameters: temperature, pH, conductivity, dissolved oxygen (DO), and oxidation reduction potential (ORP). A peristaltic pump was used for purging and sampling the five monitoring wells. The peristaltic pump tubing was lowered and retrieved gently and set at the center of the screen interval. Monitoring Well Sampling Field Logs are included in Appendix A, and final field parameters are reported in Table 3.
- A field duplicate sample collected from monitoring well GL-2, a field blank, and a trip blank were also collected and submitted for analysis.
- Sample containers were stored in a cooler with ice from the time of sample collection until delivery to the laboratory.
- Groundwater samples were delivered to Apex Laboratories of Tigard, Oregon under strict chain-of-custody procedures. The samples were submitted for the analyses listed below in accordance with Table 1.
    - Full list of VOCs by EPA Method 8260C
    - Diesel and oil by the NWTPH-Dx Method
- Chain-of-custody forms are included in Appendix B with the laboratory analytical reports. Purge and decontamination water was placed into a labeled, aboveground polyethylene tank, which is temporarily staged under the 26th Avenue overpass pending characterization and disposal. Disposable sampling equipment (including tubing and nitrile gloves) was managed as municipal solid waste.

5 Results of the June 2021 Monitoring Event

Depth-to-groundwater measurements and groundwater samples were collected from the five monitoring wells on June 25, 2021. Depth-to-groundwater measurements are listed on Table 2. Stabilized groundwater field parameters are provided in Table 3. Groundwater analytical results are summarized in Table 4. The laboratory analytical reports are included in Appendix B.

5.1 Groundwater Elevation Monitoring

Depth-to-groundwater measurements recorded in June 2021 were used to calculate groundwater elevations at each monitoring well. The groundwater elevations are presented in Table 2 in feet relative to the National Geodetic Vertical Datum based on the City of Vancouver Benchmark L-181.On June 25, 2021, the groundwater elevations ranged from 19.38 feet at GL-6 to 21.54 feet at GL-4.

Groundwater elevation contours and the inferred direction of groundwater flow from the June 2021 event are shown on Figure 3. The hydraulic gradient was calculated to be 0.002 ft/ft to the west in June 2021; generally consistent with previous sampling events.

5.2 Groundwater Analytical Results

The analytical results from the primary groundwater samples collected in June 2021, along with all historic events, are presented on Table 4. Only the results for the historically detected VOCs (not the full list) are presented on Table 4. The groundwater analytical results from June 2021 compared to the CULs are summarized below:

- Diesel concentrations exceeded the CUL (0.5 milligrams per liter [mg/L]) in the samples from GL-1 (0.715 mg/L) and GL-2 (0.681 mg/L).
- VOCs and oil were not detected in the five primary samples.

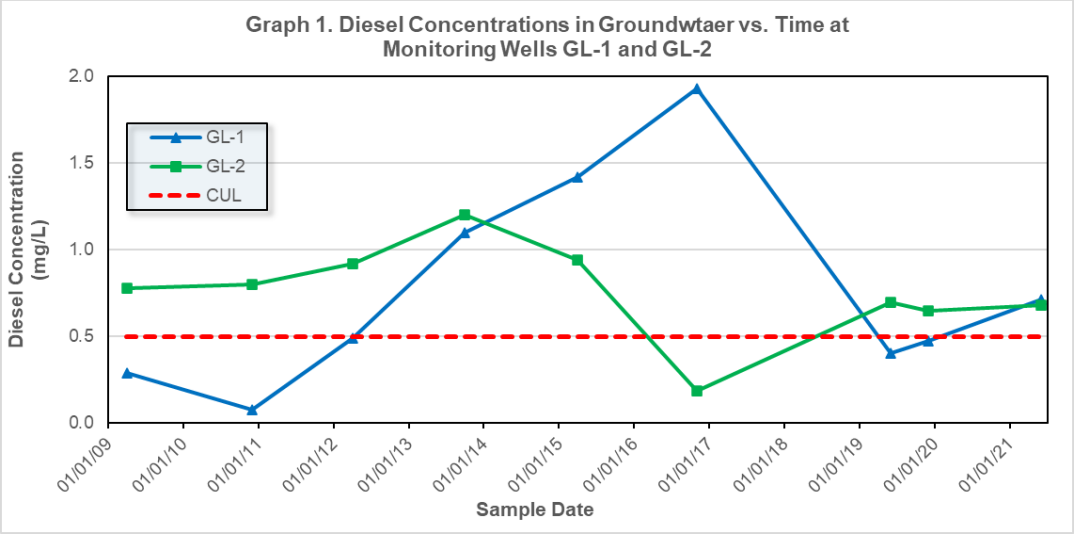
6 Data Quality and Management

Based on a review of the laboratory reports, the analyses and results conformed to quality assurance standards, and the analytical data are of acceptable quality for their intended use. A data quality review is included in Appendix C.

The data from the June 2021 monitoring events will be uploaded into Ecology's Environmental Information Management (EIM) database.

7 Conclusions

Groundwater monitoring was conducted at the Site on June 25, 2021. The diesel exceedances of the CUL in groundwater samples from monitoring wells GL-1 and GL-2 were generally consistent with the past two monitoring events as shown on Graph 1 below.



8 Recommendations and Future Sampling Activities

AECOM does not recommend any changes to the groundwater monitoring program. Groundwater monitoring will continue every 18 months and include measuring depth-to-groundwater and collecting samples from five wells. Samples will continue to be analyzed for VOCs, diesel, and oil. The next monitoring event is scheduled for December 2022.

9 References

AECOM, 2020a. *Monitoring Well Decommissioning Summary Letter – GL-7*. Former Automotive Services, Inc. Site. Port of Vancouver USA. April 2.

AECOM, 2020b. *Monitoring Well Decommissioning Summary Letter – GL-5*. Former Automotive Services, Inc. Site. Port of Vancouver USA. June 15.

CEC, 2007. *Long-Term Confirmational Groundwater Monitoring Plan for the ASI/Glacier Site.* Port of Vancouver USA. March 9.

Ecology, 2014. Letter from Washington State Department of Ecology to Port of Vancouver. *No Further Action for the Former Automotive Services Inc Site.* March 7.

EPA, 1996. *Ground Water Issue. Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures.* By Robert W. Puls and Michael J. Barcelona. EPA/540/S-95/504. April.

Kennedy/Jenks, 2010. Letter from Kennedy/Jenks Consultants to the Washington State Department of Ecology. *Subject: Automotive Services, Inc. – REVISED Long Term Groundwater Monitoring Plan, Former ASI/Glacier Site, Port of Vancouver USA.* May 10.

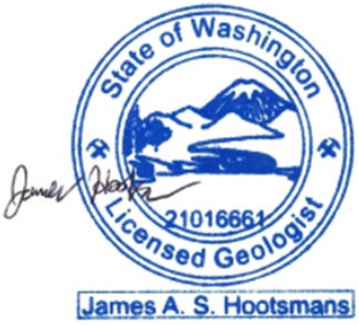
10 Limitations

AECOM has prepared this report for use by the Port. Within the limitations of scope, schedule, and budget, our services have been executed in accordance with accepted environmental science practices in this area at the time this report was prepared. No other warranty or conditions, expressed or implied, should be understood.

We appreciate the opportunity to be of service to the Port on this project. Please call Nicky Moody at (503) 478-2765 with any questions regarding this or any other referenced submittals.

Sincerely,

AECOM



Nicky Moody
Project Manager

James Hootsmans, LG
Hydrogeologist

cc: Craig Rankine, RG, LHG, Cleanup Project Manager/Hydrogeologist, Washington Department of Ecology, Toxics Cleanup Program, Vancouver Field Office, 12121 NE 99th Street, Suite 2100, Vancouver, WA 98682, cran461@ECY.WA.GOV

Matt Graves, LG, Environmental Manager, Port of Vancouver USA, 3103 NW Lower River Road, Vancouver, WA 98660, mgraves@Portvanusa.com

Attachments

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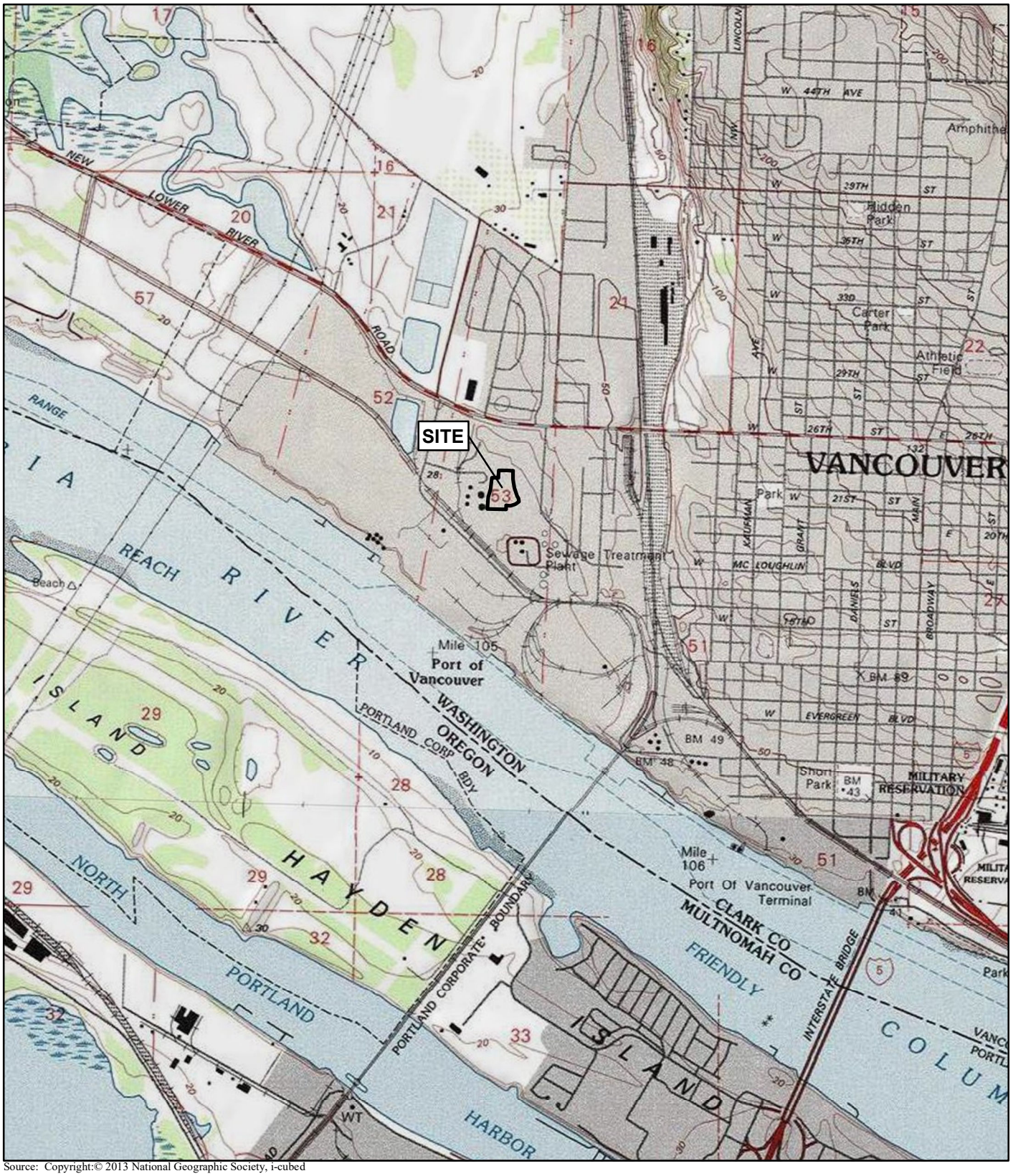

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1,000 0 1,000 2,000

SCALE IN FEET

AECOM

VICINITY MAP

FORMER AUTOMOTIVE SERVICES, INC. SITE
PORT OF VANCOUVER USA
2327 WEST MILL PLAIN BOULEVARD, VANCOUVER, WA

FIGURE 1

O:\60519969 PoV GW Monitoring Services\900-CAD, GIS\MXD\Figure 1 Viciniy Map.mxd

Sources: USGS Imagery, 2012. Clark County GIS, 2019.

50 0 50 100

SCALE IN FEET

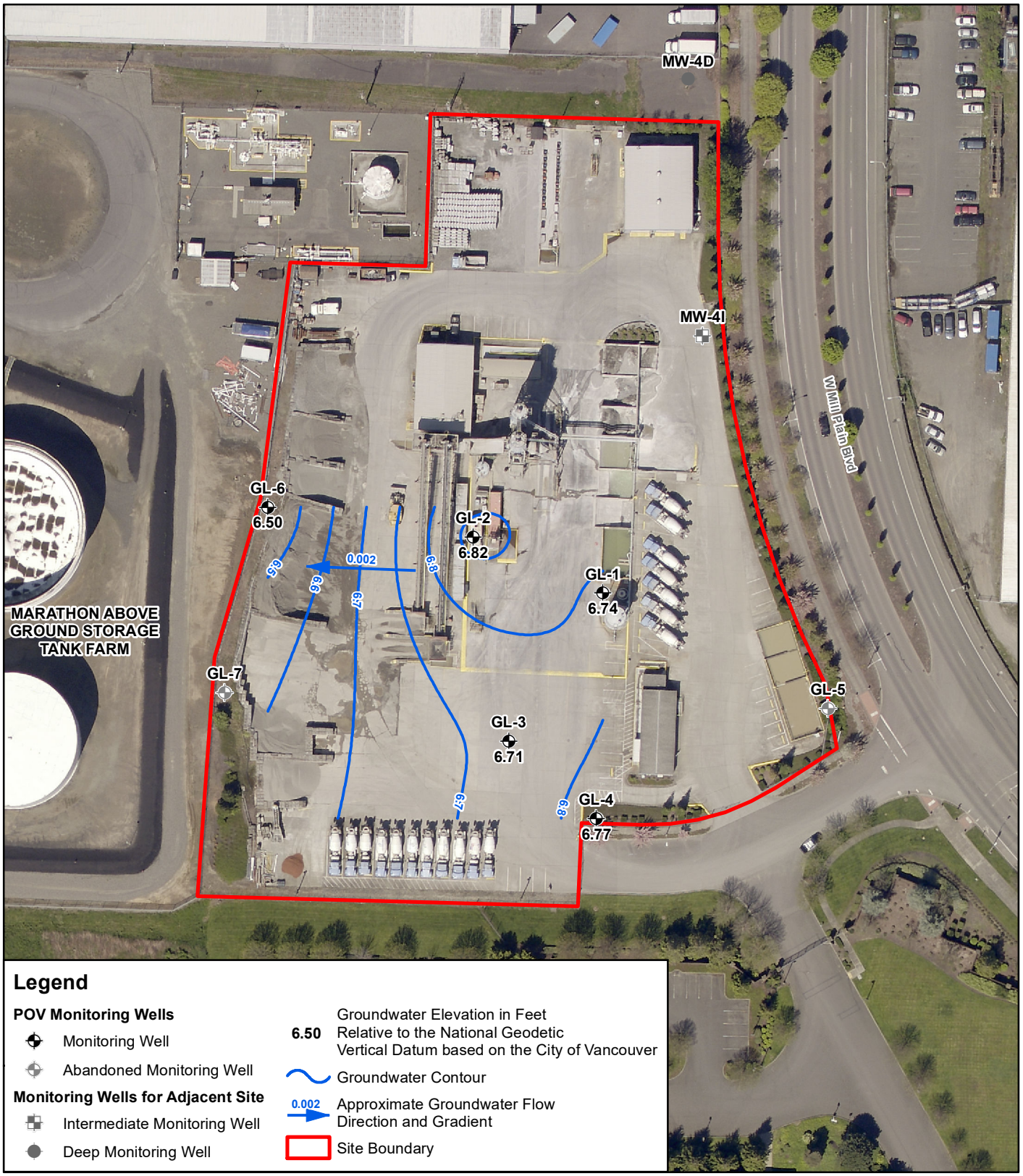
AECOM

SITE MAP

FORMER AUTOMOTIVE SERVICES, INC. SITE
PORT OF VANCOUVER USA
2327 WEST MILL PLAIN BOULEVARD, VANCOUVER, WA

FIGURE 2

O:\60519969 PoV GW Monitoring Services\900-CAD, GIS\MXD\Figure 2 Site Map.mxd



GROUNDWATER ELEVATION, CONTOURS, AND FLOW DIRECTION – JUNE 2021

FORMER AUTOMOTIVE SERVICES, INC. SITE
PORT OF VANCOUVER USA
2327 WEST MILL PLAIN BOULEVARD, VANCOUVER, WA

AECOM

FIGURE 3

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Tables

Table 1. Compliance Monitoring Plan
Former Automotive Services, Inc. Site

Current Well Identification	Original Well Identification	Well Log Total Depth	Well Log Screen Interval	Diameter	Monument Type	Current Compliance Monitoring Plan		
						+18 months	Sampling Method	Analytes
	Units:	feet bgs	feet bgs	inches	--	--	--	--
GL-1	MW-1	33.00	10-30	2.00	Flush	X	PP/Bailer	VOCs, Dx
GL-2	MW-2	27.20	10-30	2.00	Flush	X	PP/Bailer	VOCs, Dx
GL-3	MW-3	26.80	10-30	2.00	Flush	X	PP/Bailer	VOCs, Dx
GL-4	--	30.40	10-30	2.00	Flush	X	PP/Bailer	VOCs, Dx
GL-6	--	28.00	10-30	2.00	Flush	X	PP/Bailer	VOCs, Dx
GL-5	Decommissioned in April 2020							
GL-7	Decommissioned in October 2019							
MW-4D	Included only in the adjacent Cadet Manufacturing site investigation							
MW-4I	Included only in the adjacent Cadet Manufacturing site investigation							

Acronyms and Abbreviations:
-- = not applicable or not included
18 mo = monitoring conducted every 18 months
BTOC = below top of well casing
D = Deep
I = intermediate
Dx = Diesel and oil-range total petroleum hydrocarbons
PP/Bailer = purging conducted using peristaltic pump and then sampling conducted using a double check ball disposable bailer
S = shallow
VOCs = volatile organic compounds

Table 2. Groundwater Elevation Results
Former Automotive Services, Inc. Site

Well Identification	Date	Top of Casing Elevation	Depth-to-Groundwater	Groundwater Elevation	Change in Groundwater Elevation
	Units:	feet [(a)]	feet below TOC	feet [(a)]	feet
GL-1	4/1/2009	27.42	21.03	6.39	--
	12/16/2010	27.42	18.03	9.39	-3.00
	4/26/2012	27.42	13.79	13.63	-4.24
	10/17/2013	27.42	23.41	4.01	9.62
	4/29/2015	27.42	22.48	4.94	-0.93
	11/3/2016	27.42	20.70	6.72	-1.78
	6/10/2019	27.42	20.01	7.41	-0.69
	12/5/2019	27.42	23.20	4.22	3.19
	6/25/2021	27.42	20.68	6.74	-2.52
GL-2	4/1/2009	27.82	21.41	6.41	--
	12/16/2010	27.82	18.41	9.41	-3.00
	4/26/2012	27.82	14.23	13.59	-4.18
	10/17/2013	27.82	23.75	4.07	9.52
	4/29/2015	27.82	22.85	4.97	-0.90
	11/2/2016	27.82	21.62	6.20	-1.23
	6/10/2019	27.82	20.31	7.51	-1.31
	12/5/2019	27.82	23.47	4.35	3.16
	6/25/2021	27.82	21.00	6.82	-2.47
GL-3	4/1/2009	27.17	20.79	6.38	--
	12/16/2010	27.17	17.75	9.42	-3.04
	4/26/2012	27.17	13.51	13.66	-4.24
	10/17/2013	27.17	23.08	4.09	9.57
	4/29/2015	27.17	22.48	4.69	-0.60
	11/2/2016	27.17	20.72	6.45	-1.76
	6/10/2019	27.17	19.69	7.48	-1.03
	12/5/2019	27.17	23.16	4.01	3.47
	6/25/2021	27.17	20.46	6.71	-2.70
GL-4	4/1/2009	28.31	21.95	6.36	--
	12/16/2010	28.31	18.87	9.44	-3.08
	4/26/2012	28.31	14.71	13.60	-4.16
	10/17/2013	28.31	24.28	4.03	9.57
	4/29/2015	28.31	23.31	5.00	-0.97
	11/1/2016	28.31	21.91	6.40	-1.40
	6/10/2019	28.31	20.91	7.40	-1.00
	12/5/2019	28.31	24.48	3.83	3.57
	6/25/2021	28.31	21.54	6.77	-2.94
GL-6	4/1/2009	25.88	19.51	6.37	--
	12/16/2010	25.88	16.53	9.35	-2.98
	4/26/2012	25.88	12.45	13.43	-4.08
	10/17/2013	25.88	21.85	4.03	9.40
	4/30/2015	25.88	22.90	2.98	1.05
	11/2/2016	25.88	19.17	6.71	-3.73
	6/11/2019	25.88	19.39	6.49	0.22
	12/5/2019	25.88	22.12	3.76	2.73
	6/25/2021	25.88	19.38	6.50	-2.74

Acronyms and Abbreviations:
-- = not applicable
TOC = top of casing

Notes:
(a) = Elevation in feet relative to the National Geodetic Vertical Datum based on the City of Vancouver Benchmark L-181.

Table 3. Groundwater Field Parameter Measurements
Former Automotive Services, Inc. Site

Well Identification	Sample Date	Temperature	pH	Conductivity	ORP	Dissolved Oxygen
	Units:	°C [(a)]	no units	mS/cm	mV	mg/l
GL-1	4/1/2009	55.69	6.53	0.369	NM	0.78
	12/16/2010	55.92	NM	0.537	NM	0.54
	4/26/2012	57.40	6.79	0.300	NM	2.97
	10/17/2013	57.30	6.61	0.890	NM	0.1
	4/29/2015	57.25	6.42	0.946	NM	0.1
	11/3/2016	54.91	6.64	0.514	NM	17.2
	6/10/2019	57.96	NM	0.794	NM	6.92
	12/5/2019	14.10	7.05	0.991	-113	0.0
	6/25/2021	18.02	6.61	0.981	-75	0.0
GL-2	4/1/2009	54.71	6.03	0.858	NM	1.38
	12/16/2010	55.26	NA	0.890	NM	1.00
	4/26/2012	55.40	6.92	0.715	NM	0.71
	10/17/2013	55.80	6.68	1.000	NM	0.08
	4/29/2015	56.91	6.7	0.946	NM	0.54
	11/2/2016	54.17	6.72	0.540	NM	1.91
	6/10/2019	57.61	6.59	0.845	NM	NM
	12/5/2019	12.97	6.85	1.030	37	0.00
	6/25/2021	15.82	6.56	1.030	299	0.00
GL-3	4/1/2009	55.77	6.20	0.363	NM	1.83
	12/16/2010	56.79	NA	0.375	NM	0.74
	4/26/2012	56.57	6.55	0.236	NM	0.95
	10/17/2013	58.80	6.02	0.468	NM	0.51
	4/29/2015	59.68	6.1	0.346	NM	0.48
	11/2/2016	56.48	5.93	0.238	NM	1.86
	6/10/2019	64.18	6.12	0.370	NM	NM
	12/5/2019	14.40	6.42	0.486	158	0.0
	6/25/2021	18.71	6.09	0.435	29	0.27
GL-4	4/1/2009	56.78	6.38	0.389	NM	1.42
	12/16/2010	56.68	NA	0.593	NM	0.71
	4/26/2012	55.33	6.71	0.373	NM	1.37
	10/18/2013	57.60	6.23	0.293	NM	0.25
	4/29/2015	58.04	6.2	0.376	NM	0.49
	11/1/2016	55.24	5.82	0.184	NM	2.31
	6/10/2019	58.55	6.11	0.260	NM	NM
	12/5/2019	12.30	6.50	0.320	186	0.0
	6/25/2021	21.16	6.08	0.353	50	2.97
GL-6	4/1/2009	52.65	5.92	0.175	NM	3.50
	12/16/2010	54.00	NA	0.190	NM	4.93
	4/26/2012	52.23	6.19	0.089	NM	8.03
	10/18/2013	53.60	6.15	0.070	NM	7.50
	4/30/2015	56.62	5.79	0.070	NM	7.21
	11/2/2016	53.64	5.62	0.140	NM	7.07
	6/11/2019	55.20	6.17	0.125	NM	4.11
	12/5/2019	11.86	6.21	0.136	209	4.12
	6/25/2021	14.55	6.00	0.138	306	4.84

Acronyms and Abbreviations:
°C = Degrees Celsius
mg/l = milligrams per liter
mS/cm = millisiemens per centimeter
mV = millivolts
NM = Not measured or not available to AECOM for this report
ORP = Oxidation-reduction potential

Notes:
(a) = Temperature readings collected prior to Decemeber 2019 collected in °F = Degrees Fahrenheit

Table 4. Volatile Organic Compounds and Total Petroleum Hydrocarbons in Groundwater
Former Automotive Services, Inc. Site

Well Identification	Date	Historically Site Detected VOCs						NWTPH-Dx	
		Acetone	sec-Butylbenzene	Isopropylbenzene	Naphthalene	n-Propylbenzene	PCE	Diesel	Oil
	Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
Groundwater Cleanup Levels:		NE	NE	NE	160	NE	5	0.5	0.5
GL-1	4/1/2009	**100**	NA	NA	5.0 U	NA	1.0 U	**0.29**	0.40 U
GL-1	12/16/2010	5.0 U	NA	NA	1.0 U	NA	**1.2**	**0.077**	0.38 U
GL-1	4/26/2012	5.0 U	NA	NA	**3.4**	NA	1.0 U	**0.49**	0.38 U
GL-1	10/17/2013	25 U	NA	NA	2.0 U	NA	0.5 U	**1.1**	0.24 U
GL-1	4/29/2015	20 U	NA	NA	2.0 U	NA	0.5 U	**1.4**	0.38 U
GL-1	11/3/2016	---	NA	NA	2.0 U	NA	---	**1.9**	0.38 U
GL-1	6/10/2019	**24.6**	**2.85**	**6.74**	2.00 UJ	**10.6**	0.400 U	**0.404**	0.381 U
GL-1	12/5/2019	10.0 U	**0.610 J**	**1.88**	2.00 UJ	**1.18**	0.200 U	**0.475**	0.0755 U
GL-1	6/25/2021	10.0 U	0.500 U	0.500 U	4.00 UJ	0.250 U	0.200 U	**0.715**	0.0762 U
GL-2	4/1/2009	20 U	NA	NA	5.0 U	NA	1.0 U	**0.78**	0.40 U
GL-2	12/16/2010	5.0 U	NA	NA	1.0 U	NA	1.0 U	**0.8**	0.40 U
GL-2	4/26/2012	5.0 U	NA	NA	1.0 U	NA	1.0 U	**0.92**	0.38 U
GL-2	10/17/2013	25 U	NA	NA	2.0 U	NA	0.5 U	**1.2**	0.24 U
GL-2	4/29/2015	20 U	NA	NA	2.0 U	NA	0.5 U	**0.943**	0.38 U
GL-2	11/2/2016	---	NA	NA	2.0 U	NA	---	0.189 U	0.38 U
GL-2	6/10/2019	20.0 U	1.00 U	1.00 U	2.00 UJ	0.500 U	0.400 U	**0.659**	0.381 U
GL-2	12/5/2019	10.0 U	0.500 U	0.500 U	2.00 UJ	0.250 U	0.200 U	**0.647**	0.0755 U
GL-2	6/25/2021	10.0 U	0.500 U	0.500 U	4.00 UJ	0.250 U	0.200 U	**0.681**	0.0755 U
GL-3	4/1/2009	20 U	NA	NA	5.0 U	NA	1.0 U	**0.084**	0.42 U
GL-3	12/16/2010	5.0 U	NA	NA	1.0 U	NA	**1.1**	0.080 U	0.40 U
GL-3	4/26/2012	5.0 U	NA	NA	1.0 U	NA	1.0 U	0.077 U	0.38 U
GL-3	10/17/2013	25 U	NA	NA	2.0 U	NA	0.5 U	**0.15**	0.24 U
GL-3	4/29/2015	20 U	NA	NA	2.0 U	NA	0.5 U	0.19 U	0.38 U
GL-3	11/2/2016	---	NA	NA	2.0 U	NA	---	0.19 U	0.38 U
GL-3	6/10/2019	**20.6**	1.00 U	1.00 U	2.00 UJ	0.500 U	0.400 U	0.190 U	0.381 U
GL-3	12/5/2019	10.0 U	0.500 U	0.500 U	2.00 UJ	0.250 U	0.200 U	**0.120**	0.0792 U
GL-3	6/25/2021	10.0 U	0.500 U	0.500 U	4.00 UJ	0.250 U	0.200 U	**0.0579 J**	0.0755 U
GL-4	4/1/2009	20 U	NA	NA	5.0 U	NA	1.0 U	0.19 U	0.41 U
GL-4	12/16/2010	5.0 U	NA	NA	1.0 U	NA	1.0 U	**0.077**	0.38 U
GL-4	4/26/2012	5.0 U	NA	NA	1.0 U	NA	1.0 U	**0.28**	0.38 U
GL-4	10/18/2013	25 U	NA	NA	2.0 U	NA	0.5 U	0.096 U	0.24 U
GL-4	4/29/2015	20 U	NA	NA	2.0 U	NA	0.5 U	0.19 U	0.38 U
GL-4	11/2/2016	---	NA	NA	2.0 U	NA	---	0.19 U	0.38 U
GL-4	6/10/2019	20.0 U	1.00 U	1.00 U	2.00 UJ	0.500 U	0.400 U	0.190 U	0.381 U
GL-4	12/5/2019	20.0 UJ	0.500 U	0.500 U	2.00 UJ	0.250 U	0.200 U	**0.0629 J**	0.0784 U
GL-4	6/25/2021	10.0 U	0.500 U	0.500 U	4.00 UJ	0.250 U	0.200 U	0.0377 U	0.0755 U
GL-6	4/1/2009	20 U	NA	NA	5.0 U	NA	1.0 U	0.082 U	0.41 U
GL-6	12/16/2010	5.0 U	NA	NA	1.0 U	NA	1.0 U	**0.34**	0.38 U
GL-6	4/26/2012	5.0 U	NA	NA	1.0 U	NA	1.0 U	0.079 U	0.40 U
GL-6	10/18/2013	25 U	NA	NA	2.0 U	NA	0.5 U	0.096 U	0.24 U
GL-6	4/30/2015	20 U	NA	NA	2.0 U	NA	0.5 U	0.189 U	0.377 U
GL-6	11/2/2016	---	NA	NA	2.0 U	NA	---	0.189 U	0.381 U
GL-6	6/11/2019	20.0 U	1.00 U	1.00 U	2.00 UJ	0.500 U	0.400 U	0.190 U	0.381 U
GL-6	12/5/2019	20.0 UJ	0.500 U	0.500 U	2.00 UJ	0.250 U	0.200 U	0.0385 U	0.0769 U
GL-6	6/25/2021	20.0 U	0.500 U	0.500 U	4.00 UJ	0.250 U	0.200 U	0.0377 U	0.0755 U

Table 4. Volatile Organic Compounds and Total Petroleum Hydrocarbons in Groundwater
Former Automotive Services, Inc. Site

Notes:
Values in **bold** were detected above the sample quantitation limit.
CULs are defined in the *Revised Long-Term Confirmational Groundwater Monitoring Plan* (see Section 3).
Shaded values exceed the CUL.

Acronyms and Abbreviations:
--- = Sample not analyzed for constituent
CUL = Groundwater Cleanup Level
J = Constituent was not positively identified; the associated value is estimated
mg/L = milligrams per liter
NE = Not established
NS = Not sampled because well was dry or for another unforseen reason
NWTPH-Dx = Diesel- and oil-range total petroleum hydrocarbons
PCE = Tetrachloroethene
U = Constituent not detected at or above noted sample quantitation limit
µg/L = micrograms per liter
UJ = Constituent not detected at or above noted sample quantitation limit limit. However, the reported sample quantitation limit is approximate.
VOCs = volatile organic compounds

AECOM

Appendix A
Field Forms

AECOM

Monitoring Well Sampling Field Log

Well Number: GL-1

Date: 6/25/21

Project Information	
Project Name:	ASI
AECOM Project Number:	

Sampling Information	
Field Team:	TAUSCHER
Pump Type:	P-PUMP
Purging & Sampling Method:	LOW FLOW
Water Quality Meter: Model:	HORIBA U52
Serial Number:	
Purge Water Disposition:	on site tank

Comments

DTW = 20.68 @ 0925

Well Construction Information

Well Diameter (in)	Well Log Total Depth (ft bgs)	Well Log Screen Interval (ft bgs)	Stick-up or Flush
2	33	10-30	FLUSH

Monitoring Information

Initial DTW (ft btoc)	Sample Inlet Depth (ft btoc)	Typical Flow Rate (mL/min)	Recently Measured Total Depth (ft btoc)	Well Log Screen Interval (ft btoc)
20.68	26			n/a - need survey

Sample Containers

Number	Type	Preservative	Analytical Parameters	Filtered?
3	VOA	HCL	VOC	N
2	1L AMB	HCL	DX	N

Well Purge Data

Time	Volume Purged (mL)	Flow Rate / Drawdown (See SAP Section 2.3.1)	DTW (feet btoc)	Temp. (°C)	pH	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	Clarity/Color/ Remarks
0926	:Time Pump On		Initial DTW 20.68	± 3%	± 0.1	± 10 mv	± 3%	± 10% (> 5) 3 values < 5	10% (> 0.5) 3 values < 0.5	<= Stabilization Criteria (see SAP Section 2.3.2)
0930	.5	115	20.69	19.12	6.71	209	0.976	57.1	1.88	cloudy
0935	1.5	200	20.70	18.06	6.60	-11	0.993	47.1	1.04	clear
0940	2.5	200	20.71	17.74	6.61	-47	0.994	45.9	0.10	clear
0945	3.5	200	20.71	17.85	6.61	-58	0.990	43.7	0.05	clear
0950	4.5	200	20.71	17.93	6.61	-67	0.983	38.7	0.0	clear
0955	5.5	200	20.72	18.63	6.61	-69	0.975	29.1	0.0	clear
1000	6.5	200	20.72	18.12	6.61	-71	0.976	28.8	0.0	clear
1005	7.5	200		18.02	6.61	-75	0.981	27.5	0.0	clear
1010	SAMPLE									

Sampling Information			
1010	Start Filling Containers	Designated for MS/MSD? (circle one) No Yes	Collected QA Sample? (circle one) No Duplicate Rinsate Blank
1024	Finish Filling Containers	Primary Sample ID: GL-1	QA Sample ID:
		Primary Sample Time 1010	QA Sample Time

Acronymns: bgs= below ground surface btoc=below top of casing DTW=depth to water
Clarity: VC=very cloudy Cl=cloudy SC=slightly cloudy AC=almost clear C=clear CC=crystal clear

AECOM

Monitoring Well Sampling Field Log

Well Number: GL-2

Date: 6/25/21

Project Information	
Project Name:	ASI POR
AECOM Project Number:	

Sampling Information	
Field Team:	TAUSCHER
Pump Type:	~~Bladder Pump~~ P-PUMP
Purging & Sampling Method:	LOW FLOW
Water Quality Meter: Model:	HORIBA U52
Serial Number:	
Purge Water Disposition:	on site tank

Comments

DTW= 21.00 @ 0806

Duplicate collected

Well Construction Information

Well Diameter (in)	Well Log Total Depth (ft bgs)	Well Log Screen Interval (ft bgs)	Stick-up or Flush
2	27.2	10-30	FLUSH

Monitoring Information

Initial DTW (ft btoc)	Sample Inlet Depth (ft btoc)	Typical Flow Rate (mL/min)	Recently Measured Total Depth (ft btoc)	Well Log Screen Interval (ft btoc)
21.00	26	-		n/a - need survey

Sample Containers

Number	Type	Preservative	Analytical Parameters	Filtered?
2	~~1 AMB~~	HCL	~~VOC~~ DX	N
3	VOA	HCL	VOC	N
3	VOA	HCL	VOC	N
2	1L AMB	HCL	DX	N

Well Purge Data

Time	Volume Purged (mL)	Flow Rate / Drawdown (See SAP Section 2.3.1)	DTW (feet btoc)	Temp. (°C)	pH	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	Clarity/Color/ Remarks
0806	:Time Pump On		Initial DTW 21.0	± 3%	± 0.1	± 10 mv	± 3%	± 10% (> 5) 3 values < 5	10% (> 0.5) 3 values < 0.5	<= Stabilization Criteria (see SAP Section 2.3.2)
0815	1.5	160	21.25	17.42	6.52	298	0.985	55.0	0.14	clear
0820	2.5	200	21.32	16.12	6.53	300	1.02	18.2	0.04	clear
0825	3.5	200	21.34	15.77	6.53	301	1.03	8.3	0.0	clear
0830	4.5	200	21.36	15.78	6.54	300	1.03	9.0	0.0	clear
0835	5.5	200	21.38	15.79	6.54	301	1.03	8.3	0.0	clear
0840	6.5	200	21.38	15.76	6.55	300	1.03	8.5	0.0	clear
0845	7.5	200	21.39	15.82	6.56	299	1.03	8.7	0.0	clear
0850	SAMPLE									

Sampling Information		Designated for MS/MSD? (circle one) No Yes	Collected QA Sample? (circle one) No Duplicate ~~Rinsate Blank~~
0850	Start Filling Containers	Primary Sample ID: GL-2	QA Sample ID: GL-2-DUP
	Finish Filling Containers	Primary Sample Time 0850	QA Sample Time 0852

Acronymns: bgs= below ground surface btoc=below top of casing DTW=depth to water
Clarity: VC=very cloudy Cl=cloudy SC=slightly cloudy AC=almost clear C=clear CC=crystal clear

AECOM

Monitoring Well Sampling Field Log

Well Number: GL-3

Date: 6/25/21

Project Information	
Project Name:	ASJ
AECOM Project Number:	

Sampling Information	
Field Team:	MARK TAUSCHER
Pump Type:	P-PUMP
Purging & Sampling Method:	
Water Quality Meter:	Model: HORIBA U52
	Serial Number:
Purge Water Disposition:	on site tank

Comments

DTW = 20.46 @ 1035

Well Construction Information

Well Diameter (in)	Well Log Total Depth (ft bgs)	Well Log Screen Interval (ft bgs)	Stick-up or Flush
2	26.80	10-27.	FLUSH

Monitoring Information

Initial DTW (ft btoc)	Sample Inlet Depth (ft btoc)	Typical Flow Rate (mL/min)	Recently Measured Total Depth (ft btoc)	Well Log Screen Interval (ft btoc)
20.46	23			n/a - need survey

Sample Containers

Number	Type	Preservative	Analytical Parameters	Filtered?
3	VOA	HCL	VOC	N
2	1L AMB	HCL	Dx	N

Well Purge Data

Time	Volume Purged (mL)	Flow Rate / Drawdown (See SAP Section 2.3.1)	DTW (feet btoc) Initial DTW	Temp. (°C) ±3%	pH ±0.1	ORP (mV) ±10 mv	Conductivity (mS/cm) ±3%	Turbidity (NTUs) ± 10% (> 5) 3 values < 5	DO (mg/L) 10% (> 0.5) 3 values < 0.5	Clarity/Color/ Remarks <= Stabilization Criteria (see SAP Section 2.3.2)
1037	:Time Pump On									
1040	0.2 L	100	20.50	21.00	6.18	9	0.481	20.0	0.60	clear
1045	1.2	200	20.51	20.75	6.18	10	0.468	18.6	0.57	clear
1050	2.2	200	20.52	19.30	6.13	20	0.437	20.7	0.40	clear
1055	3.2	200	20.52	19.24	6.13	21	0.435	20.3	0.39	clear
1100	4.2	200	20.52	19.34	6.13	21	0.434	22.4	0.38	clear
1105	5.2	200	20.51	19.10	6.12	24	0.434	20.8	0.33	clear
1110	6.2	200	20.51	19.11	6.11	25	0.434	20.5	0.29	clear
1115	7.2	200	20.52	18.88	6.10	27	0.433	20.7	0.26	clear
1120	8.2	200	20.52	18.71	6.09	29	0.435	20.9	0.27	clear
1125	SAMPLE									

Sampling Information			
1125	Start Filling Containers	Designated for MS/MSD? (circle one) No Yes	Collected QA Sample? (circle one) No Duplicate Rinsate Blank
1137	Finish Filling Containers	Primary Sample ID: GL-3	QA Sample ID:
		Primary Sample Time 1125	QA Sample Time

Acronymns: bgs= below ground surface btoc=below top of casing DTW=depth to water
Clarity: VC=very cloudy Cl=cloudy SC=slightly cloudy AC=almost clear C=clear CC=crystal clear

Field blank collected @ 1108

AECOM

Monitoring Well Sampling Field Log

Well Number: GL-4

Date: 6/25/21

Project Information	
Project Name:	ASI
AECOM Project Number:	

Sampling Information	
Field Team:	TAUSCHER
Pump Type:	P-PUMP
Purging & Sampling Method:	LOW FLOW
Water Quality Meter: Model:	HORIBA U52
Serial Number:	
Purge Water Disposition:	on site tank

Comments

DTW = 21.54 @ 1141

Well Construction Information

Well Diameter (in)	Well Log Total Depth (ft bgs)	Well Log Screen Interval (ft bgs)	Stick-up or Flush
2	30.4	10-30	FLUSH

Monitoring Information

Initial DTW (ft btoc)	Sample Inlet Depth (ft btoc)	Typical Flow Rate (mL/min)	Recently Measured Total Depth (ft btoc)	Well Log Screen Interval (ft btoc)
21.54	26			*n/a - need survey*

Sample Containers

Number	Type	Preservative	Analytical Parameters	Filtered?
3	VOA	HCL	VOC	N
2	1L AMB	HCL	TN	N

Well Purge Data

Time	Volume Purged (mL)	Flow Rate / Drawdown (See SAP Section 2.3.1)	DTW (feet btoc)	Temp. (°C)	pH	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	Clarity/Color/ Remarks
1141	:Time Pump On		Initial DTW 21.54	± 3%	± 0.1	± 10 mv	± 3%	± 10% (> 5) 3 values < 5	10% (> 0.5) 3 values < 0.5	<= Stabilization Criteria (see SAP Section 2.3.2)
1145	0.8L	200	21.56	21.71	6.13	42	0.390	21.4	3.00	clear
1150	2.8	200	21.58	20.60	6.11	44	0.383	21.9	3.32	clear
1155	3.8	200	21.59	20.76	6.11	44	0.376	23.5	3.45	clear
1200	4.8	200	21.60	20.83	6.09	46	.360	22.2	3.10	clear
1205	5.8	200	21.60	21.06	6.09	46	0.360	23.0	3.05	clear
1210	6.8	200	21.60	21.05	6.08	48	0.360	22.7	3.00	clear
1215	7.8	200	21.61	21.09	6.08	49	0.355	23.1	2.99	clear
1220	8.8	200	21.61	21.16	6.08	50	0.353	22.9	2.97	clear
1225	SAMPLE									

Sampling Information			
1225	Start Filling Containers	Designated for MS/MSD? (circle one) No Yes	Collected QA Sample? (circle one) No Duplicate Rinsate Blank
1237	Finish Filling Containers	Primary Sample ID: GL-4	QA Sample ID:
		Primary Sample Time 1225	QA Sample Time

Acronymns: bgs= below ground surface btoc=below top of casing DTW=depth to water
Clarity: VC=very cloudy Cl=cloudy SC=slightly cloudy AC=almost clear C=clear CC=crystal clear

AECOM

Monitoring Well Sampling Field Log

Well Number: GL-6

Date: 6/25/21

Project Information	
Project Name:	ASI POV
AECOM Project Number:	

Sampling Information	
Field Team:	TAUSCHER
Pump Type:	D-PUMP
Purging & Sampling Method:	LOW FLOW
Water Quality Meter: Model:	HORIBA U52
Serial Number:	
Purge Water Disposition:	on site tank

Comments

DTW = 19.38 @ 0640

Well Construction Information

Well Diameter (in)	Well Log Total Depth (ft bgs)	Well Log Screen Interval (ft bgs)	Stick-up or Flush
2	28.0	10-30	FLUSH

Monitoring Information

Initial DTW (ft btoc)	Sample Inlet Depth (ft btoc)	Typical Flow Rate (mL/min)	Recently Measured Total Depth (ft btoc)	Well Log Screen Interval (ft btoc)
19.38	25'			*n/a - need survey*

Sample Containers

Number	Type	Preservative	Analytical Parameters	Filtered?
3	VOA	HCL	VOC	N
2	1L	HCL	DX	N

Well Purge Data

Time	Volume Purged (mL)	Flow Rate / Drawdown (See SAP Section 2.3.1)	DTW (feet btoc) Initial DTW	Temp. (°C) ± 3%	pH ± 0.1	ORP (mV) ± 10 mv	Conductivity (mS/cm) ± 3%	Turbidity (NTUs) ± 10% (> 5) 3 values < 5	DO (mg/L) 10% (> 0.5) 3 values < 0.5	Clarity/Color/ Remarks <= Stabilization Criteria (see SAP Section 2.3.2)
0648	:Time Pump On									
0650	Flow Through	250mL/min	19.51	16.34	6.96	274	0.147	27.0	6.69	clear
0655	1.25L	250	19.50	15.17	6.25	295	0.143	9.2	5.50	clear
0700	2.5L	250	19.50	14.15	6.12	300	0.141	6.2	5.27	clear
0705	3.75	250	19.51	14.61	6.06	302	0.139	6.2	4.86	clear
0710	4.75	200	19.50	14.52	6.06	302	0.139	6.9	4.85	clear
0715	5.75	200	19.49	14.56	6.02	304	0.139	11.7	4.99	clear
0720	6.75	200	19.48	14.55	6.00	306	0.139	6.7	4.82	clear
0725	7.75	200	19.48	14.55	6.00	306	0.138	6.8	4.84	clear
0730	SAMPLE									

sensor bounce

Sampling Information		Designated for MS/MSD? (circle one) No Yes	Collected QA Sample? (circle one) (No) Duplicate Rinsate Blank
0730	Start Filling Containers	Primary Sample ID: GL-6	QA Sample ID:
0747	Finish Filling Containers	Primary Sample Time 0730	QA Sample Time

Acronymns: bgs= below ground surface btoc=below top of casing DTW=depth to water
Clarity: VC=very cloudy Cl=cloudy SC=slightly cloudy AC=almost clear C=clear CC=crystal clear

AECOM

Appendix B
Laboratory Report and Chain-of-Custody Form

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

ANALYTICAL REPORT

Tuesday, July 13, 2021

Nicky Moody
AECOM
111 SW Columbia St. Ste. 1500
Portland, OR 97201

RE: A1F1017 - POV ASI - [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 A1F1017, which was received by the laboratory on 6/25/2021 at 1:20:00PM.

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)

Cooler #1	2.3 degC	Cooler #2	2.1 degC

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

Apex Laboratories

Darrell Auvil, Client Services Manager

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.

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

ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GL-6	A1F1017-01	Water	06/25/21 07:30	06/25/21 13:20
GL-3	A1F1017-02	Water	06/25/21 11:25	06/25/21 13:20
GL-1	A1F1017-03	Water	06/25/21 10:10	06/25/21 13:20
GL-2	A1F1017-04	Water	06/25/21 08:50	06/25/21 13:20
GL-2-DUP	A1F1017-05	Water	06/25/21 08:52	06/25/21 13:20
Field Blank	A1F1017-06	Water	06/25/21 11:08	06/25/21 13:20
GL-4	A1F1017-07	Water	06/25/21 12:25	06/25/21 13:20
Trip Blank	A1F1017-08	Water	06/25/21 00:00	06/25/21 13:20

Apex Laboratories

Darrell Auvil, Client Services Manager

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.

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

ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

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
GL-6 (A1F1017-01)				**Matrix: Water**		**Batch: 1070240**		
Diesel	ND	0.0377	0.0755	mg/L	1	07/08/21 23:42	NWTPH-Dx LL	
Oil	ND	0.0755	0.151	mg/L	1	07/08/21 23:42	NWTPH-Dx LL	
Surrogate: o-Terphenyl (Surr)		*Recovery: 90 %*		*Limits: 50-150 %*	*1*	*07/08/21 23:42*	*NWTPH-Dx LL*	
GL-3 (A1F1017-02)				**Matrix: Water**		**Batch: 1070240**		
Diesel	**0.0579**	0.0377	0.0755	mg/L	1	07/09/21 00:03	NWTPH-Dx LL	**J**
Oil	ND	0.0755	0.151	mg/L	1	07/09/21 00:03	NWTPH-Dx LL	
Surrogate: o-Terphenyl (Surr)		*Recovery: 89 %*		*Limits: 50-150 %*	*1*	*07/09/21 00:03*	*NWTPH-Dx LL*	
GL-1 (A1F1017-03)				**Matrix: Water**		**Batch: 1070240**		
Diesel	**0.715**	0.0381	0.0762	mg/L	1	07/09/21 00:23	NWTPH-Dx LL	
Oil	ND	0.0762	0.152	mg/L	1	07/09/21 00:23	NWTPH-Dx LL	
Surrogate: o-Terphenyl (Surr)		*Recovery: 87 %*		*Limits: 50-150 %*	*1*	*07/09/21 00:23*	*NWTPH-Dx LL*	
GL-2 (A1F1017-04)				**Matrix: Water**		**Batch: 1070240**		
Diesel	**0.681**	0.0377	0.0755	mg/L	1	07/09/21 00:44	NWTPH-Dx LL	**F-11**
Oil	ND	0.0755	0.151	mg/L	1	07/09/21 00:44	NWTPH-Dx LL	
Surrogate: o-Terphenyl (Surr)		*Recovery: 86 %*		*Limits: 50-150 %*	*1*	*07/09/21 00:44*	*NWTPH-Dx LL*	
GL-2-DUP (A1F1017-05)				**Matrix: Water**		**Batch: 1070240**		
Diesel	**0.671**	0.0377	0.0755	mg/L	1	07/09/21 01:05	NWTPH-Dx LL	**F-11**
Oil	ND	0.0755	0.151	mg/L	1	07/09/21 01:05	NWTPH-Dx LL	
Surrogate: o-Terphenyl (Surr)		*Recovery: 85 %*		*Limits: 50-150 %*	*1*	*07/09/21 01:05*	*NWTPH-Dx LL*	
GL-4 (A1F1017-07)				**Matrix: Water**		**Batch: 1070240**		
Diesel	ND	0.0377	0.0755	mg/L	1	07/09/21 01:25	NWTPH-Dx LL	
Oil	ND	0.0755	0.151	mg/L	1	07/09/21 01:25	NWTPH-Dx LL	
Surrogate: o-Terphenyl (Surr)		*Recovery: 85 %*		*Limits: 50-150 %*	*1*	*07/09/21 01:25*	*NWTPH-Dx LL*	

Apex Laboratories

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Darrell Auvil, Client Services Manager

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

ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GL-6 (A1F1017-01)				**Matrix: Water**		**Batch: 1061245**		
Acetone	ND	20.0	20.0	ug/L	1	06/30/21 15:20	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	06/30/21 15:20	EPA 8260D	
Benzene	ND	0.100	0.200	ug/L	1	06/30/21 15:20	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	06/30/21 15:20	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	06/30/21 15:20	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	06/30/21 15:20	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	06/30/21 15:20	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 15:20	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	06/30/21 15:20	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	06/30/21 15:20	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	06/30/21 15:20	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	06/30/21 15:20	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 15:20	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 15:20	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 15:20	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	06/30/21 15:20	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	06/30/21 15:20	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 15:20	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 15:20	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 15:20	EPA 8260D	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	06/30/21 15:20	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	

Apex Laboratories

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Darrell Auvil, Client Services Manager

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

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GL-6 (A1F1017-01)				**Matrix: Water**		**Batch: 1061245**		
Ethylbenzene	ND	0.250	0.500	ug/L	1	06/30/21 15:20	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	06/30/21 15:20	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	06/30/21 15:20	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	06/30/21 15:20	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	06/30/21 15:20	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
Naphthalene	ND	4.00	4.00	ug/L	1	06/30/21 15:20	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	06/30/21 15:20	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	06/30/21 15:20	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	06/30/21 15:20	EPA 8260D	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	06/30/21 15:20	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	06/30/21 15:20	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	06/30/21 15:20	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	06/30/21 15:20	EPA 8260D	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	06/30/21 15:20	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	06/30/21 15:20	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	06/30/21 15:20	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
Vinyl chloride	ND	0.200	0.400	ug/L	1	06/30/21 15:20	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	06/30/21 15:20	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	06/30/21 15:20	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*108 %*	*Limits:*	*80-120 %*	*1*	*06/30/21 15:20*	*EPA 8260D*	
Toluene-d8 (Surr)			*102 %*		*80-120 %*	*1*	*06/30/21 15:20*	*EPA 8260D*	
4-Bromofluorobenzene (Surr)			*106 %*		*80-120 %*	*1*	*06/30/21 15:20*	*EPA 8260D*	
GL-3 (A1F1017-02)				**Matrix: Water**		**Batch: 1061245**		
Acetone	ND	10.0	20.0	ug/L	1	06/30/21 15:47	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	06/30/21 15:47	EPA 8260D	
Benzene	ND	0.100	0.200	ug/L	1	06/30/21 15:47	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	06/30/21 15:47	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	

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Darrell Auvil, Client Services Manager

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

ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GL-3 (A1F1017-02)				**Matrix: Water**		**Batch: 1061245**		
Bromoform	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	06/30/21 15:47	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	06/30/21 15:47	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	06/30/21 15:47	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 15:47	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	06/30/21 15:47	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	06/30/21 15:47	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	06/30/21 15:47	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	06/30/21 15:47	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 15:47	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 15:47	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 15:47	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	06/30/21 15:47	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	06/30/21 15:47	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 15:47	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 15:47	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 15:47	EPA 8260D	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	06/30/21 15:47	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	06/30/21 15:47	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	06/30/21 15:47	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	06/30/21 15:47	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	06/30/21 15:47	EPA 8260D	

Apex Laboratories

Darrell Auvil, Client Services Manager

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APEX LABORATORIES

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

ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GL-3 (A1F1017-02)				**Matrix: Water**		**Batch: 1061245**		
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	06/30/21 15:47	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
Naphthalene	ND	4.00	4.00	ug/L	1	06/30/21 15:47	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	06/30/21 15:47	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	06/30/21 15:47	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	06/30/21 15:47	EPA 8260D	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	06/30/21 15:47	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	06/30/21 15:47	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	06/30/21 15:47	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	06/30/21 15:47	EPA 8260D	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	06/30/21 15:47	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	06/30/21 15:47	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	06/30/21 15:47	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
Vinyl chloride	ND	0.200	0.400	ug/L	1	06/30/21 15:47	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	06/30/21 15:47	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	06/30/21 15:47	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*110 %*	*Limits: 80-120 %*	*1*	*06/30/21 15:47*	*EPA 8260D*	
Toluene-d8 (Surr)			*101 %*	*80-120 %*	*1*	*06/30/21 15:47*	*EPA 8260D*	
4-Bromofluorobenzene (Surr)			*106 %*	*80-120 %*	*1*	*06/30/21 15:47*	*EPA 8260D*	
GL-1 (A1F1017-03)				**Matrix: Water**		**Batch: 1061245**		
Acetone	ND	10.0	20.0	ug/L	1	06/30/21 16:14	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	06/30/21 16:14	EPA 8260D	
Benzene	ND	0.100	0.200	ug/L	1	06/30/21 16:14	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	06/30/21 16:14	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	06/30/21 16:14	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	06/30/21 16:14	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	

Apex Laboratories

Darrell Auvil, Client Services Manager

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

ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GL-1 (A1F1017-03)				**Matrix: Water**		**Batch: 1061245**		
Carbon disulfide	ND	5.00	10.0	ug/L	1	06/30/21 16:14	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 16:14	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	06/30/21 16:14	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	06/30/21 16:14	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	06/30/21 16:14	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	06/30/21 16:14	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 16:14	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 16:14	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 16:14	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	06/30/21 16:14	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	06/30/21 16:14	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 16:14	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 16:14	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 16:14	EPA 8260D	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	06/30/21 16:14	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	06/30/21 16:14	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	06/30/21 16:14	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	06/30/21 16:14	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	06/30/21 16:14	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	06/30/21 16:14	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
Naphthalene	ND	4.00	4.00	ug/L	1	06/30/21 16:14	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	06/30/21 16:14	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	06/30/21 16:14	EPA 8260D	

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Darrell Auvil, Client Services Manager

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

ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GL-1 (A1F1017-03)				**Matrix: Water**		**Batch: 1061245**		
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	06/30/21 16:14	EPA 8260D	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	06/30/21 16:14	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	06/30/21 16:14	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	06/30/21 16:14	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	06/30/21 16:14	EPA 8260D	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	06/30/21 16:14	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	06/30/21 16:14	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	06/30/21 16:14	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
Vinyl chloride	ND	0.200	0.400	ug/L	1	06/30/21 16:14	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	06/30/21 16:14	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	06/30/21 16:14	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*110 %*	*Limits: 80-120 %*	*1*	*06/30/21 16:14*	*EPA 8260D*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*06/30/21 16:14*	*EPA 8260D*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*06/30/21 16:14*	*EPA 8260D*	
GL-2 (A1F1017-04)				**Matrix: Water**		**Batch: 1061245**		
Acetone	ND	10.0	20.0	ug/L	1	06/30/21 16:41	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	06/30/21 16:41	EPA 8260D	
Benzene	ND	0.100	0.200	ug/L	1	06/30/21 16:41	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	06/30/21 16:41	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	06/30/21 16:41	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	06/30/21 16:41	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	06/30/21 16:41	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 16:41	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	06/30/21 16:41	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	06/30/21 16:41	EPA 8260D	

Apex Laboratories

Darrell Auvil, Client Services Manager

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

ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GL-2 (A1F1017-04)				**Matrix: Water**		**Batch: 1061245**		
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	06/30/21 16:41	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	06/30/21 16:41	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 16:41	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 16:41	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 16:41	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	06/30/21 16:41	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	06/30/21 16:41	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 16:41	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 16:41	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 16:41	EPA 8260D	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	06/30/21 16:41	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	06/30/21 16:41	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	06/30/21 16:41	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	06/30/21 16:41	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	06/30/21 16:41	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	06/30/21 16:41	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
Naphthalene	ND	4.00	4.00	ug/L	1	06/30/21 16:41	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	06/30/21 16:41	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	06/30/21 16:41	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	06/30/21 16:41	EPA 8260D	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	06/30/21 16:41	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	06/30/21 16:41	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	06/30/21 16:41	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	06/30/21 16:41	EPA 8260D	

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Darrell Auvil, Client Services Manager

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

ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GL-2 (A1F1017-04)				**Matrix: Water**		**Batch: 1061245**		
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	06/30/21 16:41	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	06/30/21 16:41	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	06/30/21 16:41	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
Vinyl chloride	ND	0.200	0.400	ug/L	1	06/30/21 16:41	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	06/30/21 16:41	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	06/30/21 16:41	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*108 %*	*Limits: 80-120 %*	*1*	*06/30/21 16:41*	*EPA 8260D*	
Toluene-d8 (Surr)			*101 %*	*80-120 %*	*1*	*06/30/21 16:41*	*EPA 8260D*	
4-Bromofluorobenzene (Surr)			*103 %*	*80-120 %*	*1*	*06/30/21 16:41*	*EPA 8260D*	
GL-2-DUP (A1F1017-05)				**Matrix: Water**		**Batch: 1061245**		
Acetone	ND	10.0	20.0	ug/L	1	06/30/21 17:08	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	06/30/21 17:08	EPA 8260D	
Benzene	ND	0.100	0.200	ug/L	1	06/30/21 17:08	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	06/30/21 17:08	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	06/30/21 17:08	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	06/30/21 17:08	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	06/30/21 17:08	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 17:08	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	06/30/21 17:08	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	06/30/21 17:08	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	06/30/21 17:08	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	06/30/21 17:08	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	

Apex Laboratories

Darrell Auvil, Client Services Manager

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

ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GL-2-DUP (A1F1017-05)				**Matrix: Water**		**Batch: 1061245**		
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 17:08	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 17:08	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 17:08	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	06/30/21 17:08	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	06/30/21 17:08	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 17:08	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 17:08	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 17:08	EPA 8260D	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	06/30/21 17:08	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	06/30/21 17:08	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	06/30/21 17:08	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	06/30/21 17:08	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	06/30/21 17:08	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	06/30/21 17:08	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
Naphthalene	ND	4.00	4.00	ug/L	1	06/30/21 17:08	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	06/30/21 17:08	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	06/30/21 17:08	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	06/30/21 17:08	EPA 8260D	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	06/30/21 17:08	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	06/30/21 17:08	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	06/30/21 17:08	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	06/30/21 17:08	EPA 8260D	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	06/30/21 17:08	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	06/30/21 17:08	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	06/30/21 17:08	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	

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.

Darrell Auvil, Client Services Manager

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

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GL-2-DUP (A1F1017-05)				**Matrix: Water**		**Batch: 1061245**		
Vinyl chloride	ND	0.200	0.400	ug/L	1	06/30/21 17:08	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	06/30/21 17:08	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	06/30/21 17:08	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*110 %*	*Limits: 80-120 %*	*1*	*06/30/21 17:08*	*EPA 8260D*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*06/30/21 17:08*	*EPA 8260D*	
4-Bromofluorobenzene (Surr)			*105 %*	*80-120 %*	*1*	*06/30/21 17:08*	*EPA 8260D*	
Field Blank (A1F1017-06)				**Matrix: Water**		**Batch: 1061245**		
Acetone	ND	10.0	20.0	ug/L	1	06/30/21 14:26	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	06/30/21 14:26	EPA 8260D	
Benzene	ND	0.100	0.200	ug/L	1	06/30/21 14:26	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	06/30/21 14:26	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	06/30/21 14:26	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	06/30/21 14:26	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	06/30/21 14:26	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 14:26	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	06/30/21 14:26	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	06/30/21 14:26	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	06/30/21 14:26	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	06/30/21 14:26	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 14:26	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 14:26	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 14:26	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	06/30/21 14:26	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	06/30/21 14:26	EPA 8260D	

Apex Laboratories

Darrell Auvil, Client Services Manager

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

ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Field Blank (A1F1017-06)				**Matrix: Water**		**Batch: 1061245**		
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 14:26	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 14:26	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 14:26	EPA 8260D	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	06/30/21 14:26	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	06/30/21 14:26	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	06/30/21 14:26	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	06/30/21 14:26	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	06/30/21 14:26	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	06/30/21 14:26	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
Naphthalene	ND	4.00	4.00	ug/L	1	06/30/21 14:26	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	06/30/21 14:26	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	06/30/21 14:26	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	06/30/21 14:26	EPA 8260D	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	06/30/21 14:26	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	06/30/21 14:26	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	06/30/21 14:26	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	06/30/21 14:26	EPA 8260D	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	06/30/21 14:26	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	06/30/21 14:26	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	06/30/21 14:26	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
Vinyl chloride	ND	0.200	0.400	ug/L	1	06/30/21 14:26	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	06/30/21 14:26	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	06/30/21 14:26	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*109 %*	*Limits: 80-120 %*	*1*	*06/30/21 14:26*	*EPA 8260D*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*06/30/21 14:26*	*EPA 8260D*	

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Darrell Auvil, Client Services Manager

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

ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Field Blank (A1F1017-06)				**Matrix: Water**		**Batch: 1061245**		
Surrogate: 4-Bromofluorobenzene (Surr)		*Recovery: 106 %*	*Limits: 80-120 %*		*1*	*06/30/21 14:26*	*EPA 8260D*	
GL-4 (A1F1017-07)				**Matrix: Water**		**Batch: 1061245**		
Acetone	ND	10.0	20.0	ug/L	1	06/30/21 17:35	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	06/30/21 17:35	EPA 8260D	
Benzene	ND	0.100	0.200	ug/L	1	06/30/21 17:35	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	06/30/21 17:35	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	06/30/21 17:35	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	06/30/21 17:35	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	06/30/21 17:35	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 17:35	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	06/30/21 17:35	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	06/30/21 17:35	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	06/30/21 17:35	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	06/30/21 17:35	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 17:35	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 17:35	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 17:35	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	06/30/21 17:35	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	06/30/21 17:35	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 17:35	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 17:35	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 17:35	EPA 8260D	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	06/30/21 17:35	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	

Apex Laboratories

Darrell Auvil, Client Services Manager

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

ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GL-4 (A1F1017-07)				**Matrix: Water**		**Batch: 1061245**		
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	06/30/21 17:35	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	06/30/21 17:35	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	06/30/21 17:35	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	06/30/21 17:35	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	06/30/21 17:35	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
Naphthalene	ND	4.00	4.00	ug/L	1	06/30/21 17:35	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	06/30/21 17:35	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	06/30/21 17:35	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	06/30/21 17:35	EPA 8260D	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	06/30/21 17:35	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	06/30/21 17:35	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	06/30/21 17:35	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	06/30/21 17:35	EPA 8260D	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	06/30/21 17:35	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	06/30/21 17:35	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	06/30/21 17:35	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
Vinyl chloride	ND	0.200	0.400	ug/L	1	06/30/21 17:35	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	06/30/21 17:35	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	06/30/21 17:35	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*109 %*	*Limits: 80-120 %*	*1*	*06/30/21 17:35*	*EPA 8260D*	
Toluene-d8 (Surr)			*102 %*	*80-120 %*	*1*	*06/30/21 17:35*	*EPA 8260D*	
4-Bromofluorobenzene (Surr)			*108 %*	*80-120 %*	*1*	*06/30/21 17:35*	*EPA 8260D*	
Trip Blank (A1F1017-08)				**Matrix: Water**		**Batch: 1061245**		**V-01**
Acetone	ND	10.0	20.0	ug/L	1	06/30/21 14:53	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	06/30/21 14:53	EPA 8260D	
Benzene	ND	0.100	0.200	ug/L	1	06/30/21 14:53	EPA 8260D	

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Darrell Auvil, Client Services Manager

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

ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Trip Blank (A1F1017-08)				**Matrix: Water**			**Batch: 1061245**	**V-01**
Bromobenzene	ND	0.250	0.500	ug/L	1	06/30/21 14:53	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	06/30/21 14:53	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	06/30/21 14:53	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	06/30/21 14:53	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 14:53	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	06/30/21 14:53	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	06/30/21 14:53	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	06/30/21 14:53	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	06/30/21 14:53	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 14:53	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 14:53	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	06/30/21 14:53	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	06/30/21 14:53	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	06/30/21 14:53	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 14:53	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 14:53	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	06/30/21 14:53	EPA 8260D	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	06/30/21 14:53	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	06/30/21 14:53	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	06/30/21 14:53	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	06/30/21 14:53	EPA 8260D	

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Darrell Auvil, Client Services Manager

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

ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Trip Blank (A1F1017-08)				**Matrix: Water**		**Batch: 1061245**		**V-01**
Isopropylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	06/30/21 14:53	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	06/30/21 14:53	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
Naphthalene	ND	4.00	4.00	ug/L	1	06/30/21 14:53	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	06/30/21 14:53	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	06/30/21 14:53	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	06/30/21 14:53	EPA 8260D	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	06/30/21 14:53	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	06/30/21 14:53	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	06/30/21 14:53	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	06/30/21 14:53	EPA 8260D	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	06/30/21 14:53	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	06/30/21 14:53	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	06/30/21 14:53	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
Vinyl chloride	ND	0.200	0.400	ug/L	1	06/30/21 14:53	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	06/30/21 14:53	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	06/30/21 14:53	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*109 %*	*Limits: 80-120 %*	*1*	*06/30/21 14:53*	*EPA 8260D*	
Toluene-d8 (Surr)			*102 %*	*80-120 %*	*1*	*06/30/21 14:53*	*EPA 8260D*	
4-Bromofluorobenzene (Surr)			*105 %*	*80-120 %*	*1*	*06/30/21 14:53*	*EPA 8260D*	

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Darrell Auvil, Client Services Manager

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

ANALYTICAL REPORT

AECOM	Project:	POV ASI
111 SW Columbia St. Ste. 1500	Project Number:	[none]
Portland, OR 97201	Project Manager:	Nicky Moody

Report ID:
A1F1017 - 07 13 21 0914

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 1070240 - EPA 3510C (Fuels/Acid Ext.)											Water	
Blank (1070240-BLK1)			Prepared: 07/08/21 12:32		Analyzed: 07/08/21 22:40							
NWTPH-Dx LL												
Diesel	ND	0.0364	0.0727	mg/L	1	---	---	---	---	---	---	
Oil	ND	0.0727	0.145	mg/L	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 96 %*		*Limits: 50-150 %*			*Dilution: 1x*				
LCS (1070240-BS1)			Prepared: 07/08/21 12:32		Analyzed: 07/08/21 23:01							
NWTPH-Dx LL												
Diesel	0.429	0.0400	0.0800	mg/L	1	0.500	---	86	36 - 132%	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 102 %*		*Limits: 50-150 %*			*Dilution: 1x*				
LCS Dup (1070240-BSD1)			Prepared: 07/08/21 12:32		Analyzed: 07/08/21 23:21							**Q-19**
NWTPH-Dx LL												
Diesel	0.425	0.0400	0.0800	mg/L	1	0.500	---	85	36 - 132%	1	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 98 %*		*Limits: 50-150 %*			*Dilution: 1x*				

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Darrell Auvil, Client Services Manager

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

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

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 1061245 - EPA 5030B												**Water**
Blank (1061245-BLK1)		Prepared: 06/30/21 08:00		Analyzed: 06/30/21 11:16								
EPA 8260D												
Acetone	ND	10.0	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	

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Darrell Auvil, Client Services Manager

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

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

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 1061245 - EPA 5030B							Water					
Blank (1061245-BLK1)		Prepared: 06/30/21 08:00		Analyzed: 06/30/21 11:16								
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	4.00	4.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 105 %*		*Limits: 80-120 %*				*Dilution: 1x*				

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ORELAP ID: **OR100062**

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

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 1061245 - EPA 5030B												
Blank (1061245-BLK1)		Prepared: 06/30/21 08:00		Analyzed: 06/30/21 11:16								
Surr: Toluene-d8 (Surr)		*Recovery: 101 %*		*Limits: 80-120 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)				*108 %*		*80-120 %*		*"*				
LCS (1061245-BS1)		Prepared: 06/30/21 08:00		Analyzed: 06/30/21 10:18								
EPA 8260D												
Acetone	34.6	10.0	20.0	ug/L	1	40.0	---	86	80 - 120%	---	---	
Acrylonitrile	19.6	1.00	2.00	ug/L	1	20.0	---	98	80 - 120%	---	---	
Benzene	20.6	0.100	0.200	ug/L	1	20.0	---	103	80 - 120%	---	---	
Bromobenzene	19.1	0.250	0.500	ug/L	1	20.0	---	96	80 - 120%	---	---	
Bromochloromethane	19.1	0.500	1.00	ug/L	1	20.0	---	95	80 - 120%	---	---	
Bromodichloromethane	18.8	0.500	1.00	ug/L	1	20.0	---	94	80 - 120%	---	---	
Bromoform	20.9	0.500	1.00	ug/L	1	20.0	---	104	80 - 120%	---	---	
Bromomethane	22.4	5.00	5.00	ug/L	1	20.0	---	112	80 - 120%	---	---	
2-Butanone (MEK)	36.9	5.00	10.0	ug/L	1	40.0	---	92	80 - 120%	---	---	
n-Butylbenzene	20.8	0.500	1.00	ug/L	1	20.0	---	104	80 - 120%	---	---	
sec-Butylbenzene	21.5	0.500	1.00	ug/L	1	20.0	---	107	80 - 120%	---	---	
tert-Butylbenzene	20.1	0.500	1.00	ug/L	1	20.0	---	101	80 - 120%	---	---	
Carbon disulfide	19.3	5.00	10.0	ug/L	1	20.0	---	96	80 - 120%	---	---	
Carbon tetrachloride	22.0	0.500	1.00	ug/L	1	20.0	---	110	80 - 120%	---	---	
Chlorobenzene	20.0	0.250	0.500	ug/L	1	20.0	---	100	80 - 120%	---	---	
Chloroethane	17.2	5.00	5.00	ug/L	1	20.0	---	86	80 - 120%	---	---	
Chloroform	19.2	0.500	1.00	ug/L	1	20.0	---	96	80 - 120%	---	---	
Chloromethane	20.0	2.50	5.00	ug/L	1	20.0	---	100	80 - 120%	---	---	
2-Chlorotoluene	20.5	0.500	1.00	ug/L	1	20.0	---	102	80 - 120%	---	---	
4-Chlorotoluene	20.8	0.500	1.00	ug/L	1	20.0	---	104	80 - 120%	---	---	
Dibromochloromethane	20.9	0.500	1.00	ug/L	1	20.0	---	104	80 - 120%	---	---	
1,2-Dibromo-3-chloropropane	18.2	2.50	5.00	ug/L	1	20.0	---	91	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	20.8	0.250	0.500	ug/L	1	20.0	---	104	80 - 120%	---	---	
Dibromomethane	19.2	0.500	1.00	ug/L	1	20.0	---	96	80 - 120%	---	---	
1,2-Dichlorobenzene	21.1	0.250	0.500	ug/L	1	20.0	---	105	80 - 120%	---	---	
1,3-Dichlorobenzene	21.7	0.250	0.500	ug/L	1	20.0	---	109	80 - 120%	---	---	
1,4-Dichlorobenzene	20.1	0.250	0.500	ug/L	1	20.0	---	100	80 - 120%	---	---	
Dichlorodifluoromethane	24.3	0.500	1.00	ug/L	1	20.0	---	**121**	**80 - 120%**	---	---	Q-56
1,1-Dichloroethane	18.4	0.200	0.400	ug/L	1	20.0	---	92	80 - 120%	---	---	

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
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503-718-2323
ORELAP ID: **OR100062**

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

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 1061245 - EPA 5030B							**Water**					
LCS (1061245-BS1)		Prepared: 06/30/21 08:00		Analyzed: 06/30/21 10:18								
1,2-Dichloroethane (EDC)	18.7	0.200	0.400	ug/L	1	20.0	---	94	80 - 120%	---	---	
1,1-Dichloroethene	20.0	0.200	0.400	ug/L	1	20.0	---	100	80 - 120%	---	---	
cis-1,2-Dichloroethene	19.5	0.200	0.400	ug/L	1	20.0	---	98	80 - 120%	---	---	
trans-1,2-Dichloroethene	19.7	0.200	0.400	ug/L	1	20.0	---	99	80 - 120%	---	---	
1,2-Dichloropropane	19.2	0.250	0.500	ug/L	1	20.0	---	96	80 - 120%	---	---	
1,3-Dichloropropane	19.4	0.500	1.00	ug/L	1	20.0	---	97	80 - 120%	---	---	
2,2-Dichloropropane	22.7	0.500	1.00	ug/L	1	20.0	---	113	80 - 120%	---	---	
1,1-Dichloropropene	21.3	0.500	1.00	ug/L	1	20.0	---	106	80 - 120%	---	---	
cis-1,3-Dichloropropene	20.6	0.500	1.00	ug/L	1	20.0	---	103	80 - 120%	---	---	
trans-1,3-Dichloropropene	21.9	0.500	1.00	ug/L	1	20.0	---	110	80 - 120%	---	---	
Ethylbenzene	21.3	0.250	0.500	ug/L	1	20.0	---	107	80 - 120%	---	---	
Hexachlorobutadiene	23.2	2.50	5.00	ug/L	1	20.0	---	116	80 - 120%	---	---	
2-Hexanone	33.7	5.00	10.0	ug/L	1	40.0	---	84	80 - 120%	---	---	
Isopropylbenzene	20.8	0.500	1.00	ug/L	1	20.0	---	104	80 - 120%	---	---	
4-Isopropyltoluene	21.0	0.500	1.00	ug/L	1	20.0	---	105	80 - 120%	---	---	
Methylene chloride	20.7	5.00	10.0	ug/L	1	20.0	---	104	80 - 120%	---	---	
4-Methyl-2-pentanone (MiBK)	36.5	5.00	10.0	ug/L	1	40.0	---	91	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	20.3	0.500	1.00	ug/L	1	20.0	---	101	80 - 120%	---	---	
Naphthalene	15.7	4.00	4.00	ug/L	1	20.0	---	**78**	**80 - 120%**	---	---	Q-55
n-Propylbenzene	21.1	0.250	0.500	ug/L	1	20.0	---	106	80 - 120%	---	---	
Styrene	20.1	0.500	1.00	ug/L	1	20.0	---	101	80 - 120%	---	---	
1,1,1,2-Tetrachloroethane	21.3	0.200	0.400	ug/L	1	20.0	---	107	80 - 120%	---	---	
1,1,2,2-Tetrachloroethane	17.1	0.250	0.500	ug/L	1	20.0	---	85	80 - 120%	---	---	
Tetrachloroethene (PCE)	21.1	0.200	0.400	ug/L	1	20.0	---	106	80 - 120%	---	---	
Toluene	19.4	0.500	1.00	ug/L	1	20.0	---	97	80 - 120%	---	---	
1,2,3-Trichlorobenzene	21.3	1.00	2.00	ug/L	1	20.0	---	107	80 - 120%	---	---	
1,2,4-Trichlorobenzene	20.6	1.00	2.00	ug/L	1	20.0	---	103	80 - 120%	---	---	
1,1,1-Trichloroethane	20.1	0.200	0.400	ug/L	1	20.0	---	100	80 - 120%	---	---	
1,1,2-Trichloroethane	19.3	0.250	0.500	ug/L	1	20.0	---	96	80 - 120%	---	---	
Trichloroethene (TCE)	21.2	0.200	0.400	ug/L	1	20.0	---	106	80 - 120%	---	---	
Trichlorofluoromethane	20.0	1.00	2.00	ug/L	1	20.0	---	100	80 - 120%	---	---	
1,2,3-Trichloropropane	18.5	0.500	1.00	ug/L	1	20.0	---	93	80 - 120%	---	---	
1,2,4-Trimethylbenzene	20.4	0.500	1.00	ug/L	1	20.0	---	102	80 - 120%	---	---	
1,3,5-Trimethylbenzene	20.6	0.500	1.00	ug/L	1	20.0	---	103	80 - 120%	---	---	

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Darrell Auvil, Client Services Manager

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ORELAP ID: **OR100062**

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

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 1061245 - EPA 5030B												**Water**
LCS (1061245-BS1)		Prepared: 06/30/21 08:00		Analyzed: 06/30/21 10:18								
Vinyl chloride	21.1	0.200	0.400	ug/L	1	20.0	---	106	80 - 120%	---	---	
m,p-Xylene	41.1	0.500	1.00	ug/L	1	40.0	---	103	80 - 120%	---	---	
o-Xylene	19.2	0.250	0.500	ug/L	1	20.0	---	96	80 - 120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 100 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*98 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*97 %*		*80-120 %*			*"*					
Matrix Spike (1061245-MS1)		Prepared: 06/30/21 09:26		Analyzed: 06/30/21 18:02								
QC Source Sample: GL-4 (A1F1017-07)												
EPA 8260D												
Acetone	41.3	10.0	20.0	ug/L	1	40.0	ND	103	39 - 160%	---	---	
Acrylonitrile	21.3	1.00	2.00	ug/L	1	20.0	ND	107	63 - 135%	---	---	
Benzene	22.0	0.100	0.200	ug/L	1	20.0	ND	110	79 - 120%	---	---	
Bromobenzene	19.0	0.250	0.500	ug/L	1	20.0	ND	95	80 - 120%	---	---	
Bromochloromethane	21.7	0.500	1.00	ug/L	1	20.0	ND	108	78 - 123%	---	---	
Bromodichloromethane	20.0	0.500	1.00	ug/L	1	20.0	ND	100	79 - 125%	---	---	
Bromoform	20.9	0.500	1.00	ug/L	1	20.0	ND	105	66 - 130%	---	---	
Bromomethane	25.9	5.00	5.00	ug/L	1	20.0	ND	130	53 - 141%	---	---	
2-Butanone (MEK)	41.1	5.00	10.0	ug/L	1	40.0	ND	103	56 - 143%	---	---	
n-Butylbenzene	19.7	0.500	1.00	ug/L	1	20.0	ND	99	75 - 128%	---	---	
sec-Butylbenzene	20.7	0.500	1.00	ug/L	1	20.0	ND	104	77 - 126%	---	---	
tert-Butylbenzene	19.9	0.500	1.00	ug/L	1	20.0	ND	99	78 - 124%	---	---	
Carbon disulfide	20.9	5.00	10.0	ug/L	1	20.0	ND	104	64 - 133%	---	---	
Carbon tetrachloride	23.2	0.500	1.00	ug/L	1	20.0	ND	116	72 - 136%	---	---	
Chlorobenzene	20.1	0.250	0.500	ug/L	1	20.0	ND	101	80 - 120%	---	---	
Chloroethane	20.5	5.00	5.00	ug/L	1	20.0	ND	103	60 - 138%	---	---	
Chloroform	20.7	0.500	1.00	ug/L	1	20.0	ND	103	79 - 124%	---	---	
Chloromethane	23.0	2.50	5.00	ug/L	1	20.0	ND	115	50 - 139%	---	---	
2-Chlorotoluene	19.7	0.500	1.00	ug/L	1	20.0	ND	99	79 - 122%	---	---	
4-Chlorotoluene	20.4	0.500	1.00	ug/L	1	20.0	ND	102	78 - 122%	---	---	
Dibromochloromethane	20.9	0.500	1.00	ug/L	1	20.0	ND	104	74 - 126%	---	---	
1,2-Dibromo-3-chloropropane	18.4	2.50	5.00	ug/L	1	20.0	ND	92	62 - 128%	---	---	
1,2-Dibromoethane (EDB)	21.0	0.250	0.500	ug/L	1	20.0	ND	105	77 - 121%	---	---	
Dibromomethane	20.8	0.500	1.00	ug/L	1	20.0	ND	104	79 - 123%	---	---	

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Darrell Auvil, Client Services Manager

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

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

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 1061245 - EPA 5030B							**Water**					
Matrix Spike (1061245-MS1)		Prepared: 06/30/21 09:26		Analyzed: 06/30/21 18:02								
QC Source Sample: GL-4 (A1F1017-07)												
1,2-Dichlorobenzene	20.5	0.250	0.500	ug/L	1	20.0	ND	103	80 - 120%	---	---	
1,3-Dichlorobenzene	20.9	0.250	0.500	ug/L	1	20.0	ND	105	80 - 120%	---	---	
1,4-Dichlorobenzene	19.6	0.250	0.500	ug/L	1	20.0	ND	98	79 - 120%	---	---	
Dichlorodifluoromethane	24.8	0.500	1.00	ug/L	1	20.0	ND	124	32 - 152%	---	---	Q-54
1,1-Dichloroethane	19.7	0.200	0.400	ug/L	1	20.0	ND	99	77 - 125%	---	---	
1,2-Dichloroethane (EDC)	20.2	0.200	0.400	ug/L	1	20.0	ND	101	73 - 128%	---	---	
1,1-Dichloroethene	21.8	0.200	0.400	ug/L	1	20.0	ND	109	71 - 131%	---	---	
cis-1,2-Dichloroethene	20.5	0.200	0.400	ug/L	1	20.0	ND	103	78 - 123%	---	---	
trans-1,2-Dichloroethene	20.8	0.200	0.400	ug/L	1	20.0	ND	104	75 - 124%	---	---	
1,2-Dichloropropane	20.2	0.250	0.500	ug/L	1	20.0	ND	101	78 - 122%	---	---	
1,3-Dichloropropane	19.7	0.500	1.00	ug/L	1	20.0	ND	99	80 - 120%	---	---	
2,2-Dichloropropane	21.0	0.500	1.00	ug/L	1	20.0	ND	105	60 - 139%	---	---	
1,1-Dichloropropene	22.4	0.500	1.00	ug/L	1	20.0	ND	112	79 - 125%	---	---	
cis-1,3-Dichloropropene	17.3	0.500	1.00	ug/L	1	20.0	ND	87	75 - 124%	---	---	
trans-1,3-Dichloropropene	21.7	0.500	1.00	ug/L	1	20.0	ND	108	73 - 127%	---	---	
Ethylbenzene	21.9	0.250	0.500	ug/L	1	20.0	ND	109	79 - 121%	---	---	
Hexachlorobutadiene	20.1	2.50	5.00	ug/L	1	20.0	ND	100	66 - 134%	---	---	
2-Hexanone	35.8	5.00	10.0	ug/L	1	40.0	ND	90	57 - 139%	---	---	
Isopropylbenzene	20.5	0.500	1.00	ug/L	1	20.0	ND	102	72 - 131%	---	---	
4-Isopropyltoluene	19.8	0.500	1.00	ug/L	1	20.0	ND	99	77 - 127%	---	---	
Methylene chloride	21.1	5.00	10.0	ug/L	1	20.0	ND	106	74 - 124%	---	---	
4-Methyl-2-pentanone (MiBK)	38.5	5.00	10.0	ug/L	1	40.0	ND	96	67 - 130%	---	---	
Methyl tert-butyl ether (MTBE)	20.5	0.500	1.00	ug/L	1	20.0	ND	103	71 - 124%	---	---	
Naphthalene	15.3	4.00	4.00	ug/L	1	20.0	ND	76	61 - 128%	---	---	Q-54a
n-Propylbenzene	20.7	0.250	0.500	ug/L	1	20.0	ND	103	76 - 126%	---	---	
Styrene	20.0	0.500	1.00	ug/L	1	20.0	ND	100	78 - 123%	---	---	
1,1,1,2-Tetrachloroethane	21.5	0.200	0.400	ug/L	1	20.0	ND	108	78 - 124%	---	---	
1,1,2,2-Tetrachloroethane	17.8	0.250	0.500	ug/L	1	20.0	ND	89	71 - 121%	---	---	
Tetrachloroethene (PCE)	20.9	0.200	0.400	ug/L	1	20.0	ND	104	74 - 129%	---	---	
Toluene	19.8	0.500	1.00	ug/L	1	20.0	ND	99	80 - 121%	---	---	
1,2,3-Trichlorobenzene	20.4	1.00	2.00	ug/L	1	20.0	ND	102	69 - 129%	---	---	
1,2,4-Trichlorobenzene	19.1	1.00	2.00	ug/L	1	20.0	ND	96	69 - 130%	---	---	
1,1,1-Trichloroethane	21.4	0.200	0.400	ug/L	1	20.0	ND	107	74 - 131%	---	---	

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Darrell Auvil, Client Services Manager

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ORELAP ID: OR100062

ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

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 1061245 - EPA 5030B												**Water**
Matrix Spike (1061245-MS1)		Prepared: 06/30/21 09:26		Analyzed: 06/30/21 18:02								
QC Source Sample: GL-4 (A1F1017-07)												
1,1,2-Trichloroethane	19.6	0.250	0.500	ug/L	1	20.0	ND	98	80 - 120%	---	---	
Trichloroethene (TCE)	21.7	0.200	0.400	ug/L	1	20.0	ND	109	79 - 123%	---	---	
Trichlorofluoromethane	22.5	1.00	2.00	ug/L	1	20.0	ND	112	65 - 141%	---	---	
1,2,3-Trichloropropane	18.9	0.500	1.00	ug/L	1	20.0	ND	95	73 - 122%	---	---	
1,2,4-Trimethylbenzene	20.0	0.500	1.00	ug/L	1	20.0	ND	100	76 - 124%	---	---	
1,3,5-Trimethylbenzene	20.3	0.500	1.00	ug/L	1	20.0	ND	101	75 - 124%	---	---	
Vinyl chloride	22.7	0.200	0.400	ug/L	1	20.0	ND	114	58 - 137%	---	---	
m,p-Xylene	41.7	0.500	1.00	ug/L	1	40.0	ND	104	80 - 121%	---	---	
o-Xylene	19.1	0.250	0.500	ug/L	1	20.0	ND	96	78 - 122%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 101 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*95 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*95 %*		*80-120 %*			*"*					

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ANALYTICAL REPORT

AECOM	Project: POV ASI	
111 SW Columbia St. Ste. 1500	Project Number: [none]	Report ID:
Portland, OR 97201	Project Manager: Nicky Moody	A1F1017 - 07 13 21 0914

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: 1070240							
A1F1017-01	Water	NWTPH-Dx LL	06/25/21 07:30	07/08/21 12:32	1060mL/2mL	1000mL/2mL	0.94
A1F1017-02	Water	NWTPH-Dx LL	06/25/21 11:25	07/08/21 12:32	1060mL/2mL	1000mL/2mL	0.94
A1F1017-03	Water	NWTPH-Dx LL	06/25/21 10:10	07/08/21 12:32	1050mL/2mL	1000mL/2mL	0.95
A1F1017-04	Water	NWTPH-Dx LL	06/25/21 08:50	07/08/21 12:32	1060mL/2mL	1000mL/2mL	0.94
A1F1017-05	Water	NWTPH-Dx LL	06/25/21 08:52	07/08/21 12:32	1060mL/2mL	1000mL/2mL	0.94
A1F1017-07	Water	NWTPH-Dx LL	06/25/21 12:25	07/08/21 12:32	1060mL/2mL	1000mL/2mL	0.94

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 1061245							
A1F1017-01	Water	EPA 8260D	06/25/21 07:30	06/30/21 09:26	5mL/5mL	5mL/5mL	1.00
A1F1017-02	Water	EPA 8260D	06/25/21 11:25	06/30/21 09:26	5mL/5mL	5mL/5mL	1.00
A1F1017-03	Water	EPA 8260D	06/25/21 10:10	06/30/21 09:26	5mL/5mL	5mL/5mL	1.00
A1F1017-04	Water	EPA 8260D	06/25/21 08:50	06/30/21 09:26	5mL/5mL	5mL/5mL	1.00
A1F1017-05	Water	EPA 8260D	06/25/21 08:52	06/30/21 09:26	5mL/5mL	5mL/5mL	1.00
A1F1017-06	Water	EPA 8260D	06/25/21 11:08	06/30/21 09:26	5mL/5mL	5mL/5mL	1.00
A1F1017-07	Water	EPA 8260D	06/25/21 12:25	06/30/21 09:26	5mL/5mL	5mL/5mL	1.00
A1F1017-08	Water	EPA 8260D	06/25/21 00:00	06/30/21 09:26	5mL/5mL	5mL/5mL	1.00

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

ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

QUALIFIER DEFINITIONS

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

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F-11	The hydrocarbon pattern indicates possible weathered diesel, mineral oil, or a contribution from a related component.
J	Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
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 +1%. The results are reported as Estimated Values.
Q-54a	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -2%. 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
V-01	Sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

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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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Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

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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ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

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:

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Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

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

Secondary Accreditations

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

Subcontract Laboratory Accreditations

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

Field Testing Parameters

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

Apex Laboratories

Darrell Auvil, Client Services Manager

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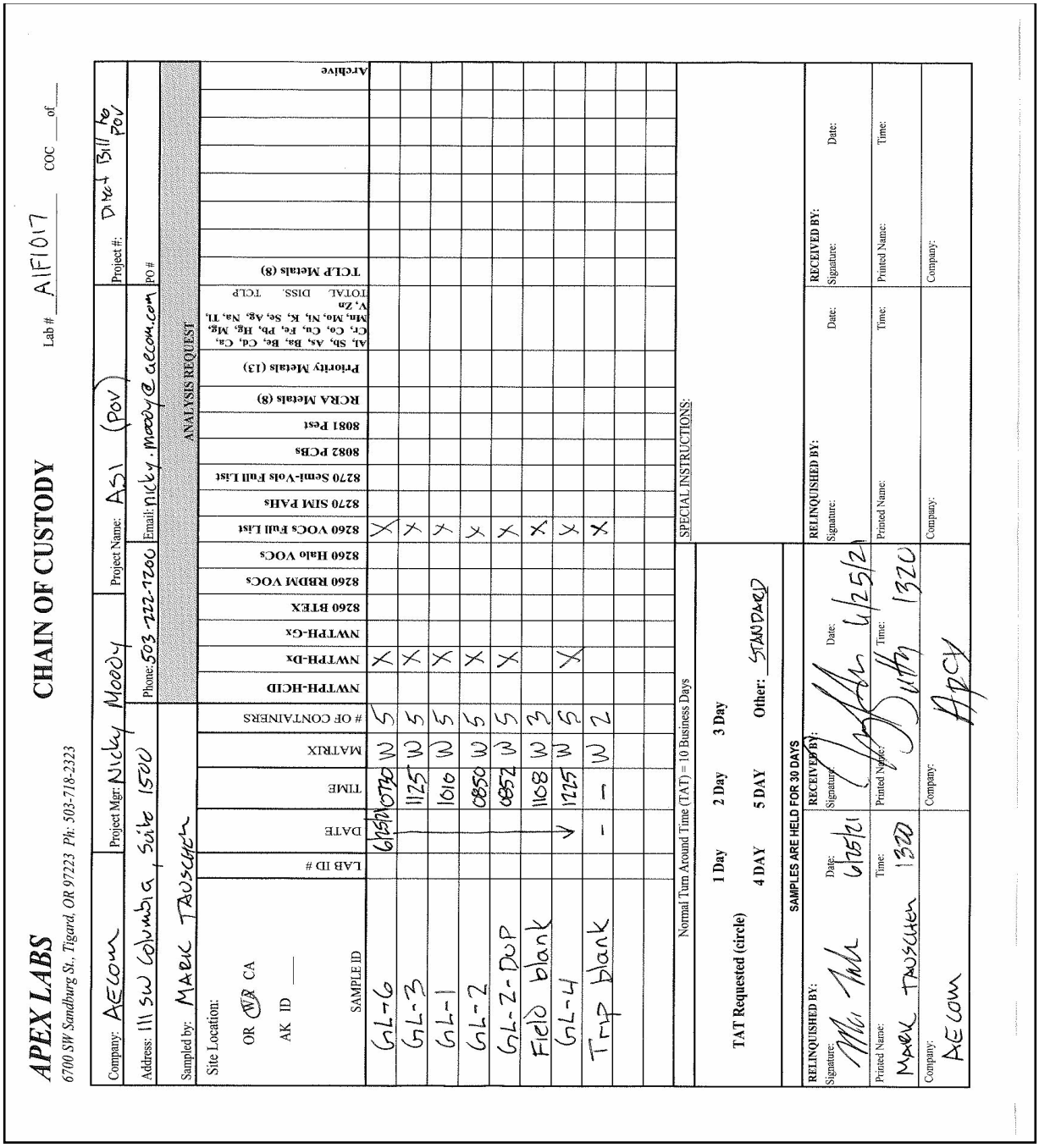
ANALYTICAL REPORT

AECOM	Project:	**POV ASI**
111 SW Columbia St. Ste. 1500	Project Number:	**[none]**
Portland, OR 97201	Project Manager:	**Nicky Moody**

Report ID:
A1F1017 - 07 13 21 0914



APEX LABS — CHAIN OF CUSTODY
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323
Lab # A1F1017 COC ___ of ___

Company: AECOM | Project Mgr: Nicky Moody | Project Name: ASI (POV) | Project #: Direct Bill the POV
Address: 111 SW Columbia, Suite 1500 | Phone: 503-222-7200 | Email: nicky.moody@aecom.com | PO #
Sampled by: Mark Tauscher
Site Location: OR WA CA / AK ID ___

ANALYSIS REQUEST

SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pest	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Archive
GL-6		6/25/21	0730	W	5		X					X								
GL-3			1125	W	5		X					X								
GL-1			1010	W	5		X					X								
GL-2			0850	W	5		X					X								
GL-2-DUP			0852	W	5		X					X								
Field blank			1108	W	3							X								
GL-4		↓	1225	W	5		X					X								
Trip blank		-	-	W	2							X								

SPECIAL INSTRUCTIONS:

Normal Turn Around Time (TAT) = 10 Business Days
TAT Requested (circle): 1 Day 2 Day 3 Day 4 DAY 5 DAY Other: STANDARD

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Date: 6/25/21	Date: 6/25/21	Date: 6/25/21	Date:
Time: 1320	Time: 1320	Time: 1320	Time:
Printed Name: Mark Tauscher	Printed Name:	Printed Name:	Printed Name:
Company: AECOM	Company: APEX	Company:	Company:

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ANALYTICAL REPORT

AECOM	Project: **POV ASI**	
111 SW Columbia St. Ste. 1500	Project Number: **[none]**	**Report ID:**
Portland, OR 97201	Project Manager: **Nicky Moody**	**A1F1017 - 07 13 21 0914**

APEX LABS COOLER RECEIPT FORM

Client: Aecom Element WO#: A1 F1017

Project/Project #: ASI (POV)

Delivery Info:

Date/time received: 6/25/21 @ 1320 By: JS

Delivered by: Apex ___ Client X ESS ___ FedEx ___ UPS ___ Swift ___ Senvoy ___ SDS ___ Other ___

Cooler Inspection Date/time inspected: 6/25/21 @ 1322 By: JS

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

Signed/dated by client? Yes ✓ No ___

Signed/dated by Apex? Yes ✓ No ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	2.3	2.1					
Received on ice? (Y/N)	y	y					
Temp. blanks? (Y/N)	y	y					
Ice type: (Gel/Real/Other)	real	real					
Condition:	good	good					

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: 6/28/21 @ 1410 By: HAS

All samples intact? Yes X No ___ Comments: ___

Bottle labels/COCs agree? Yes ___ No X Comments: 1 HCl VOA of GL-2 reads date of 6/21/21.

COC/container discrepancies form initiated? Yes ___ No X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: ___

Do VOA vials have visible headspace? Yes X No ___ NA ___

Comments trip blanks have headspace

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

Comments: TB # = 2877

Additional information: ___

Labeled by: HAS Witness: TAG1 Cooler Inspected by: HAS

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Appendix C
Data Quality Review Report

AECOM
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503 222 4292 fax

Data Quality Review Report

Laboratory & Report No.	Apex Laboratories, Incorporated #A1F1017
Report Date	August 4, 2021
Sampling Event	June 2021
Site Location	Port of Vancouver, ASI
AECOM Project No.	60624310
Project Name	June 2021 Groundwater Monitoring

This document summarizes the data quality review of the five primary groundwater samples, one field duplicate groundwater sample, one field blank sample, and one trip blank sample collected on June 25, 2021, and reported in Apex Laboratories, Incorporated (Apex) laboratory group A1F1017, at the former Automotive Services, Incorporated (ASI) site located at the Port of Vancouver in Vancouver, Washington. Samples were submitted to Apex Laboratories (Apex) of Tigard, Oregon and analyzed for the following:

- Volatile organic compounds (VOCs) by US Environmental Protection Agency (EPA) Method 8260D
- Diesel-range and oil-range hydrocarbons by NWTPH-Dx

Analytical data results are presented in Apex report A1F1071. The data was reviewed based on *National Functional Guidelines for Superfund Organic Methods Data Review*, January 2017, and/or laboratory quality control criteria. Items reviewed included: chain-of-custody (COC) records and holding times, along with results for surrogate recoveries, laboratory control sample and laboratory control sample duplicates (LCS/LCSD), matrix spike sample and matrix spike sample duplicates (MS/MSD), laboratory duplicates, field duplicates, method blanks, and field/trip blanks, where applicable. Qualifiers assigned as a result of this review are included in Table 1. The following criteria were evaluated during the review:

- COC Records – Acceptable except as noted below:

  General – The laboratory noted that the sample collection date listed on one vial submitted for sample GL-2 was incorrectly recorded as June 21, 2021. The laboratory logged this sample using the sample collection date recorded on the COC and the other vials submitted for this sample.

- Temperature – Acceptable

- Preservation – Acceptable except as noted below:

  VOCs by EPA Method 8260C – The laboratory noted that the trip blank vial used for VOC analysis was analyzed from a vial with headspace present; therefore, the results for all VOCs reported in the trip blank were qualified as estimated and flagged 'UJ.'

- Holding Times – Acceptable

- Field/Trip Blanks – Acceptable

- Method Blanks – Acceptable

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- Surrogates – Acceptable

- Laboratory Control Samples (LCS) – Acceptable except as noted below:

  VOCs by EPA Method 8260C – The percent recoveries for the following analytes in the laboratory control sample were outside the control limits of 80-120%:

Batch	Analyte	Percent Recovery
1061245	Dichlorodifluoromethane	121%
	Naphthalene	78%

  Dibromochloromethane was not detected in the associated samples; therefore, data were not qualified for dichlodifluoromethane based on the elevated LCS recovery. The results for naphthalene in GL-6, GL-3, GL-1, GL-2, GL-2-DUP, GL-4, and the field blank were qualified as estimated and flagged 'UJ' based on the low LCS recovery. The result for naphthalene in the trip blank was qualified based on vial headspace as described above; therefore, no further qualification based on the LCS recovery was necessary.

- Matrix Spike Sample (MS) – Acceptable

  VOCs by EPA Method 8260C – A matrix spike was performed using GL-4. Results were acceptable.

  Diesel and Oil-range Hydrocarbons by NWTPH-Dx – Matrix spikes were not performed using project samples. Accuracy was assessed using the LCS/LCSD results.

- Laboratory Duplicates

  Laboratory duplicates were not performed in association with these analyses. Precision was assessed using LCS/LCSD, MS, and/or field duplicate results.

- Field Duplicate – Acceptable

  A field duplicate was submitted for GL-2 and identified GL-2-DUP. Results were comparable.

- Reporting Limits – Acceptable except as noted below:

  Diesel and Oil-range Hydrocarbons by NWTPH-Dx – The reporting limits for diesel-range and/or oil-range hydrocarbons reported as not detected in multiple samples were elevated due to limited sample volume. The elevated reporting limits do not impact the use of the data.

- Laboratory Notes and Qualifiers

  The result for diesel-range hydrocarbons in GL-3 was flagged 'J' by the laboratory to indicate that the sample concentration was less than the laboratory reporting limit but above the method detection limit. As there is a greater level of uncertainty with this concentration, the result is considered estimated.

  The laboratory noted that the diesel-range hydrocarbons patterns in GL-2 and GL-2-DUP indicated possible weathered diesel, mineral oil, or a contribution from a related component. No

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data qualifiers were assigned based on these qualitative observations by the laboratory.

VOCs by EPA Method 8260C – The laboratory noted that the percent differences for dibromochloromethane (1% high) and naphthalene (-2% low) were outside the method limits of ±20% in the continuing calibration verification (CCV) associated with batch 1061245. The results for these analytes were qualified based on the associated LCS recoveries; therefore, no further qualification was necessary based on these CCV results.

Overall Assessment of Data

The completeness of the analytical report for this groundwater monitoring event is 100%. The usefulness of the data is based on the EPA guidance documents referenced in the introduction of this report. Upon consideration of the information presented above, the data are considered usable. The data qualifiers assigned by the laboratory are shown on the laboratory reports.

Data Qualifier Definitions

U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria.

DNR Do Not Report. Another result is available that is more reliable.

References

EPA, 2017. *EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*. EPA-540-R-2016-002. January.

Table 1. Sample Qualification Summary

Field Sample ID	Laboratory Sample ID	Analyte	Qualifier	Rationale
GL-1	A1F1017-01	Naphthalene	UJ	Low LCS Recovery
GL-3	A1F1017-02			
GL-1	A1F1017-03			
GL-2	A1F1017-04			
GL-2 DUP	A1F1017-05			
Field Blank	A1F1017-06			
GL-4	A1F1017-07			
Trip Blank	A1F1017-08	All VOCs	UJ	Headspace

About AECOM

AECOM (NYSE: ACM) is a global provider of professional technical and management support services to a broad range of markets, including transportation, facilities, environmental, energy, water and government. With approximately 100,000 employees around the world, AECOM is a leader in all of the key markets that it serves. AECOM provides a blend of global reach, local knowledge, innovation, and collaborative technical excellence in delivering solutions that enhance and sustain the world's built, natural, and social environments. A Fortune 500 company, AECOM serves clients in more than 100 countries and has annual revenue in excess of $6 billion.

More information on AECOM and its services can be found at www.aecom.com.

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