Remediation Management Services Company

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July 15, 2025

Washington Department of Ecology
Southwest Regional Office
Attn: Mr. Tim Mullin
300 Desmond Drive SE
Lacey, WA 98503

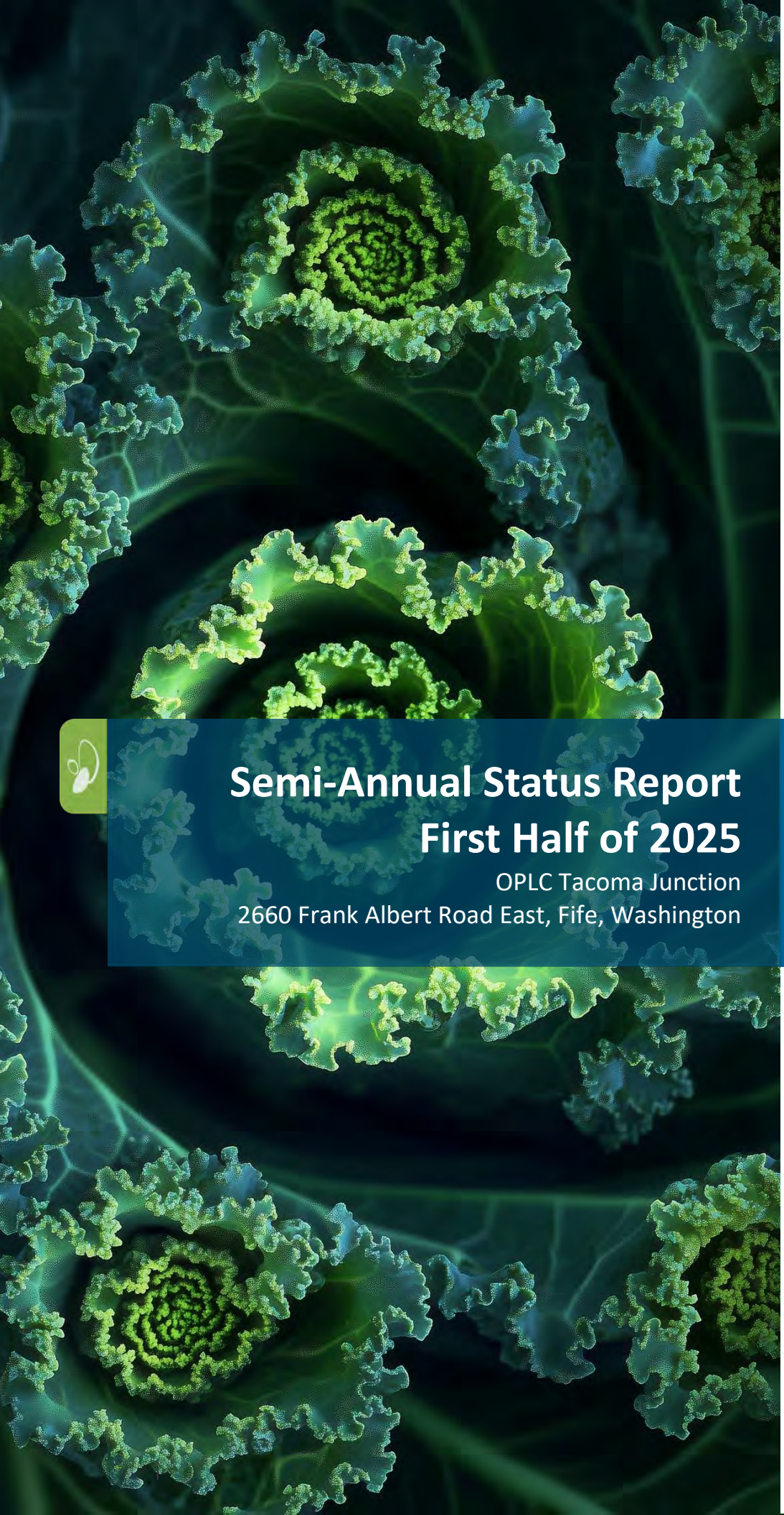
Dear Mr. Mullin:

Please find the enclosed Semi-Annual Status Report - First Half of 2025, that documents the results at Olympic Pipe Line Company LLC, Tacoma Junction located at 2660 Frank Albert Road East, Fife, Washington.

Sincerely yours,

Wade Melton
Operations Project Manager
Remediation Management Services Company
An affiliate of Atlantic Richfield Company

cc: File, Antea Group



Semi-Annual Status Report First Half of 2025

OPLC Tacoma Junction
2660 Frank Albert Road East, Fife, Washington

Antea®Group

Understanding today.
Improving tomorrow.

PREPARED FOR

Remediation Management Services Company
An affiliate of Atlantic Richfield Company
4 Centerpointe Drive, Suite 200
La Palma, CA 90623
and
BP Pipelines and Logistics
Olympic District
600 SW 39th Street, Suite 275
Renton, WA 98057

PREPARED BY

Antea Group - Seattle, WA
July 15, 2025
Project OPLC Tacoma Junction 2025
FSID 24529

us.anteagroup.com

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Semi-Annual Status Report

First Half of 2025
OPLC Tacoma Junction
2660 Frank Albert Road East, Fife, Washington

Reporting Period	January through June 2025
Agency Contact	Tim Mullin, Toxics Cleanup Program +1 360 407 6265
Ecology Facility Site ID No.	24529
Remediation Management Contact	Wade Melton, +1 360 594 7978
Olympic Contact	Paula Skryja, +1 425 469 4043
Antea®Group Contact	Nolan Lewis, +1 503 550 3703

1.0 SITE HISTORY

- Tacoma Junction (Site) is an active Olympic Pipeline Company (OPLC) facility that has been operating since 1965. A Site Location Map and Site Map are presented as **Figure 1** and **Figure 2**, respectively.
- In August 2015, OPLC personnel directed an excavation associated with a facility upgrade project. While excavating, OPLC personnel noted petroleum odors and soil staining. Soil and water samples submitted for laboratory analysis contained concentrations of petroleum hydrocarbons in excess of the Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs). Upon completing the planned excavation, over-excavating was performed to remove contaminated soil to the maximum extent without comprising on-site structures. A total of 302.49 tons of petroleum impacted soil was removed from the Site for disposal. A total of 1,200 gallons of water was removed from the excavation and transported off-site for disposal. Additional information regarding soil excavation and sampling activities can be found in Antea Group's October 12, 2015, *Site Discovery and Independent Remedial Action Report*.
- The Site was listed on Ecology's *Confirmed and Suspected Contaminated Sites List* on October 15, 2015.
- In June 2016, monitoring wells MW-1 through MW-5 were installed at the Site. Due to the presence of quarry spalls down to groundwater, only one soil sample was collected during well installation. Groundwater analytical results indicated the presence of total petroleum hydrocarbons as gasoline (TPH-G), total petroleum hydrocarbons as diesel (TPH-D), and benzene in MW-2 in excess of Ecology's MTCA Method A CULs at concentrations of 2,300 µg/L, 810 µg/L, and 100 µg/L, respectively. Additional information can be found in Antea Group's November 17, 2016, *Subsurface Investigation Report.*
- Quarterly sampling of MW-1 through MW-5 has been implemented since that time except for calendar year 2018, when three sampling events were conducted.
- Site characterization and remedial activities are being conducted by OPLC in accordance with Ecology's MTCA as an Independent Cleanup Action outside the Voluntary Cleanup Program (VCP).

2.0 WORK PERFORMED DURING THE REPORTING PERIOD

- Quarterly groundwater monitoring and sampling events were conducted on January 28, 2025, and May 8, 2025. Groundwater samples were collected from monitoring wells MW-1 through MW-5.
- This semi-annual groundwater monitoring report was prepared.

3.0 PROJECT STATUS

- Quarterly groundwater sample collection from MW-1 through MW-5.
- Semi-annual reporting.

4.0 GROUNDWATER MONITORING

Routine groundwater sampling was conducted on January 28, 2025, and May 8, 2025. Samples were collected using the low-flow sampling methodology and well-specific dedicated tubing. Low-flow purging was achieved using a peristaltic pump. Groundwater parameters measured during purging include temperature, pH, conductivity, oxidation-reduction potential (ORP), total dissolved solids (TDS), and dissolved oxygen (DO). Groundwater elevation data were collected from wells monitoring wells MW-1 through MW-5 prior to purging and sampling of those wells.

Groundwater samples were analyzed for the following constituents:

- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260D.
- Total petroleum hydrocarbons as gasoline (TPH-G) by Northwest Method NWTPH-Gx.
- Total petroleum hydrocarbons as diesel (TPH-D) and as oil (TPH-O) by Northwest Method NWTPH-Dx.

The first and second quarter Groundwater Elevation Contour Maps are presented in **Figure 3** and **Figure 4**, respectively. The Groundwater Analytical Data Map is presented in **Figure 5**. Groundwater gauging data is shown in **Table 1**. Groundwater analytical data is shown in **Table 2**. Analytical lab reports and chain of custody documentation are included in **Appendix A**.

4.1 GROUNDWATER MONITORING RESULTS

A review of the analytical data collected from the first and second quarter 2025 groundwater sampling events indicated the following:

- Groundwater analytical results for monitoring well MW-2 indicated concentrations of benzene, TPH-G and TPH-D in excess of MTCA Method A CULs for both first and second quarters. Concentrations of benzene, TPH-G, and TPH-D reported in this sampling period are similar to concentrations previously reported at this location.
- Groundwater analytical results for monitoring wells MW-1, and MW-3 through MW-5 indicated concentrations of petroleum hydrocarbons below laboratory method reporting limits.
- These results are consistent with results from previous monitoring events.

4.2 QUALITY ASSURANCE/QUALITY CONTROL

Quality assurance and quality control (QA/QC) measures for the groundwater sampling events included the use of trip blanks and the collection of an additional sample for field duplicate testing. Trip blank analytical results were not reported above laboratory reporting limits (RLs). The duplicate sample was reported at similar concentrations (< 20%) to the parent sample from the same location. Antea Group completed QA/QC validation

checklists for the Eurofins Environment Testing Northwest, LLC (Eurofins) analytical reports and determined the sample results are valid for their intended purpose.

5.0 DISCUSSION

Groundwater analytical and monitoring results from this semi-annual sampling appear consistent with previous data. Antea Group is scheduled to conduct the next semi-annual groundwater sampling event during the third quarter of 2025.

6.0 REMARKS

The recommendations contained in this report represent Antea USA, Inc.'s professional opinions based upon the currently available information and are arrived at in accordance with currently accepted professional standards. This report is based upon a specific scope of work requested by the client. The contract between Antea USA, Inc. and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Antea USA, Inc.'s client and anyone else specifically identified in writing by Antea USA, Inc. as a user of this report. Antea USA, Inc. will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea USA, Inc. makes no express or implied warranty as to the contents of this report.

Prepared by:

Colin Dechenne

Date: July 15, 2025

Colin Dechenne
Project Professional

Reviewed by:

Nolan Lewis

Date: July 15, 2025

Nolan Lewis
Senior Manager

State of Washington
24014965
Licensed Geologist
Bradford D. Jackson
Expires 10/9/2025

Date: July 15, 2025

Bradford Jackson, LG
Senior Manager

cc: Mr. Tim Mullin, Department of Ecology Southwest Regional Office (Hardcopy, Electronic Copy)
Ms. Paula Skryja, OPLC, Renton, WA (Electronic Copy)
Mr. Wade Melton, Remediation Management Services Company (Electronic Copy - RMO Upload)
File, Antea Group

7.0 CONTACT INFORMATION

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Tables

Table 1
Groundwater Gauging Data
OPLC Tacoma Junction
2660 Frank Albert Road East, Fife, Washington

Well I.D.	Date	GROUNDWATER ELEVATION DATA					
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-1	6/29/2016	100.00	1.82	NP	--	98.18	--
MW-1	9/8/2016	100.00	1.95	NP	--	98.05	--
MW-1	12/1/2016	100.00	0.76	NP	--	99.24	--
MW-1	2/22/2017	100.00	0.90	NP	--	99.10	--
MW-1	5/10/2017	100.00	1.52	NP	--	98.48	--
MW-1	8/16/2017	100.00	2.04	NP	--	97.96	--
MW-1	10/31/2017	100.00	1.22	NP	--	98.78	--
MW-1	2/13/2018	100.00	1.05	NP	--	98.95	--
MW-1	5/2/2018	100.00	1.36	NP	--	98.64	--
MW-1	8/8/2018	100.00	2.15	NP	--	97.85	--
MW-1	10/23/2018	100.00	1.87	NP	--	98.13	--
MW-1	1/30/2019	100.00	0.96	NP	--	99.04	--
MW-1	4/24/2019	100.00	1.50	NP	--	98.50	--
MW-1	8/1/2019	100.00	1.90	NP	--	98.10	--
MW-1	10/30/2019	100.00	1.09	NP	--	98.91	--
MW-1	2/6/2020	100.00	0.70	NP	--	99.30	--
MW-1	6/24/2020	100.00	1.41	NP	--	98.59	--
MW-1	9/23/2020	100.00	1.69	NP	--	98.31	--
MW-1	11/11/2020	100.00	1.12	NP	--	98.88	--
MW-1	2/10/2021	100.00	1.10	NP	--	98.90	--
MW-1	5/6/2021	100.00	1.50	NP	--	98.50	--
MW-1	8/4/2021	100.00	1.79	NP	--	98.21	--
MW-1	11/17/2021	--	--	--	--	--	DL
MW-1	1/26/2022	100.00	0.75	NP	--	99.25	--
MW-1	4/27/2022	100.00	0.96	NP	--	99.04	--
MW-1	7/20/2022	100.00	1.28	NP	--	98.72	--
MW-1	10/18/2022	100.00	1.68	NP	--	98.32	--
MW-1	1/24/2023	100.00	0.50	NP	--	99.50	DL
MW-1	4/12/2023	100.00	0.69	NP	--	99.31	--
MW-1	8/2/2023	100.00	1.81	NP	--	98.19	--
MW-1	11/1/2023	100.00	1.35	NP	--	98.65	--
MW-1	1/17/2024	100.00	0.40	NP	--	99.60	--
MW-1	5/9/2024	100.00	1.10	NP	--	98.90	--
MW-1	7/23/2024	100.00	1.63	NP	--	98.37	--
MW-1	11/6/2024	100.00	1.14	NP	--	98.86	--
MW-1	1/28/2025	100.00	1.52	NP	--	98.48	--
MW-1	5/8/2025	100.00	1.48	NP	--	98.52	--
MW-2	6/29/2016	99.59	2.49	NP	--	97.10	--
MW-2	9/8/2016	99.59	3.44	3.42	0.02	96.17	--
MW-2	12/1/2016	99.59	1.73	NP	--	97.86	--
MW-2	2/22/2017	99.59	1.13	NP	--	98.46	--
MW-2	5/10/2017	99.59	1.39	NP	--	98.20	--
MW-2	8/16/2017	99.59	2.85	2.82	0.03	96.76	--
MW-2	10/31/2017	99.59	1.79	1.70	0.09	97.87	--
MW-2	2/13/2018	99.59	1.63	NP	--	97.96	--
MW-2	5/2/2018	99.59	1.83	NP	--	97.76	--
MW-2	8/8/2018	99.59	3.35	NP	--	96.24	--

Table 1
Groundwater Gauging Data
OPLC Tacoma Junction
2660 Frank Albert Road East, Fife, Washington

Well I.D.	Date	GROUNDWATER ELEVATION DATA					
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-2	10/23/2018	99.59	2.96	2.95	0.01	96.64	--
MW-2	1/30/2019	99.59	2.20	NP	--	97.39	--
MW-2	4/24/2019	99.59	1.53	1.52	0.01	98.07	--
MW-2	8/1/2019	99.59	2.87	NP	--	96.72	--
MW-2	10/30/2019	99.59	1.90	NP	--	97.69	--
MW-2	2/6/2020	99.59	0.87	NP	--	98.72	--
MW-2	6/24/2020	99.59	1.55	NP	--	98.04	--
MW-2	9/23/2020	99.59	2.23	NP	--	97.36	--
MW-2	11/11/2020	99.59	1.49	NP	--	98.10	--
MW-2	2/10/2021	99.59	1.08	NP	--	98.51	--
MW-2	5/6/2021	99.59	1.58	NP	--	98.01	--
MW-2	8/4/2021	99.59	2.45	NP	--	97.14	--
MW-2	11/17/2021	99.59	0.90	NP	--	98.69	--
MW-2	1/26/2022	99.59	1.74	NP	--	97.85	--
MW-2	4/27/2022	99.59	2.46	NP	--	97.13	--
MW-2	7/20/2022	99.59	2.68	NP	--	96.91	--
MW-2	10/18/2022	99.59	2.26	NP	--	97.33	--
MW-2	1/24/2023	99.59	0.83	NP	--	98.76	--
MW-2	4/12/2023	99.59	0.74	NP	--	98.85	--
MW-2	8/2/2023	99.59	2.26	NP	--	97.33	--
MW-2	11/1/2023	99.59	2.42	NP	--	97.17	--
MW-2	1/17/2024	99.59	0.80	NP	--	98.79	--
MW-2	5/9/2024	99.59	1.16	NP	--	98.43	--
MW-2	7/23/2024	99.59	1.62	NP	--	97.97	--
MW-2	11/6/2024	99.59	1.48	NP	--	98.11	--
MW-2	1/28/2025	99.59	1.59	NP	--	98.00	--
MW-2	5/8/2025	99.59	1.40	NP	--	98.19	--
MW-3	6/29/2016	99.91	1.98	NP	--	97.93	--
MW-3	9/8/2016	99.91	2.61	NP	--	97.30	--
MW-3	12/1/2016	99.91	1.02	NP	--	98.89	--
MW-3	2/22/2017	99.91	1.11	NP	--	98.80	--
MW-3	5/10/2017	99.91	1.32	NP	--	98.59	--
MW-3	8/16/2017	99.91	2.26	NP	--	97.65	--
MW-3	10/31/2017	99.91	1.51	NP	--	98.40	--
MW-3	2/13/2018	99.91	1.00	NP	--	98.91	--
MW-3	5/2/2018	99.91	1.28	NP	--	98.63	--
MW-3	8/8/2018	99.91	2.46	NP	--	97.45	--
MW-3	10/23/2018	99.91	2.11	NP	--	97.80	--
MW-3	1/30/2019	99.91	1.09	NP	--	98.82	--
MW-3	4/24/2019	99.91	1.33	NP	--	98.58	--
MW-3	8/1/2019	99.91	1.84	NP	--	98.07	--
MW-3	10/30/2019	99.91	1.21	NP	--	98.70	--
MW-3	2/6/2020	99.91	0.85	NP	--	99.06	--
MW-3	6/24/2020	99.91	1.29	NP	--	98.62	--
MW-3	9/23/2020	99.91	1.73	NP	--	98.18	--
MW-3	11/11/2020	99.91	1.00	NP	--	98.91	--
MW-3	2/10/2021	99.91	1.17	NP	--	98.74	--

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		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-3	5/6/2021	99.91	1.34	NP	--	98.57	--
MW-3	8/4/2021	99.91	1.80	NP	--	98.11	--
MW-3	11/17/2021	99.91	0.91	NP	--	99.00	--
MW-3	1/26/2022	99.91	0.95	NP	--	98.96	--
MW-3	4/27/2022	99.91	1.18	NP	--	98.73	--
MW-3	7/20/2022	99.91	1.28	NP	--	98.63	--
MW-3	10/18/2022	99.91	1.53	NP	--	98.38	--
MW-3	1/24/2023	99.91	0.75	NP	--	99.16	--
MW-3	4/12/2023	99.91	0.85	NP	--	99.06	--
MW-3	8/2/2023	99.91	1.52	NP	--	98.39	--
MW-3	11/1/2023	99.91	1.23	NP	--	98.68	--
MW-3	1/17/2024	99.91	0.79	NP	--	99.12	--
MW-3	5/9/2024	99.91	1.05	NP	--	98.86	--
MW-3	7/23/2024	99.91	1.51	NP	--	98.40	--
MW-3	11/6/2024	99.91	0.96	NP	--	98.95	--
MW-3	1/28/2025	99.91	1.25	NP	--	98.66	--
MW-3	5/8/2025	99.91	1.25	NP	--	98.66	--
MW-4	6/29/2016	99.70	2.20	NP	--	97.50	--
MW-4	9/8/2016	99.70	2.75	NP	--	96.95	--
MW-4	12/1/2016	99.70	1.00	NP	--	98.70	--
MW-4	2/22/2017	99.70	1.05	NP	--	98.65	--
MW-4	5/10/2017	99.70	1.34	NP	--	98.36	--
MW-4	8/16/2017	99.70	2.44	NP	--	97.26	--
MW-4	10/31/2017	99.70	1.35	NP	--	98.35	--
MW-4	2/13/2018	99.70	1.02	NP	--	98.68	--
MW-4	5/2/2018	99.70	1.29	NP	--	98.41	--
MW-4	8/8/2018	99.70	3.63	NP	--	96.07	--
MW-4	10/23/2018	99.70	2.20	NP	--	97.50	--
MW-4	1/30/2019	99.70	1.05	NP	--	98.65	--
MW-4	4/24/2019	99.70	1.35	NP	--	98.35	--
MW-4	8/1/2019	99.70	2.16	NP	--	97.54	--
MW-4	10/30/2019	99.70	1.20	NP	--	98.50	--
MW-4	2/6/2020	99.70	0.80	NP	--	98.90	--
MW-4	6/24/2020	99.70	1.40	NP	--	98.30	--
MW-4	9/23/2020	99.70	2.00	NP	--	97.70	--
MW-4	11/11/2020	99.70	1.11	NP	--	98.59	--
MW-4	2/10/2021	99.70	1.07	NP	--	98.63	--
MW-4	5/6/2021	99.70	1.47	NP	--	98.23	--
MW-4	8/4/2021	99.70	2.05	NP	--	97.65	--
MW-4	11/17/2021	99.70	0.84	NP	--	98.86	--
MW-4	1/26/2022	99.70	0.88	NP	--	98.82	--
MW-4	4/27/2022	99.70	1.02	NP	--	98.68	--
MW-4	7/20/2022	99.70	1.41	NP	--	98.29	--
MW-4	10/18/2022	99.70	1.94	NP	--	97.76	--
MW-4	1/24/2023	99.70	0.75	NP	--	98.95	--
MW-4	4/12/2023	99.70	0.82	NP	--	98.88	--
MW-4	8/2/2023	99.70	1.96	NP	--	97.74	--

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Groundwater Gauging Data
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2660 Frank Albert Road East, Fife, Washington

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		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-4	11/1/2023	99.70	1.49	NP	--	98.21	--
MW-4	1/17/2024	99.70	0.70	NP	--	99.00	--
MW-4	5/9/2024	99.70	1.06	NP	--	98.64	--
MW-4	7/23/2024	99.70	1.77	NP	--	97.93	--
MW-4	11/6/2024	99.70	1.18	NP	--	98.52	--
MW-4	1/28/2025	99.70	1.30	NP	--	98.40	--
MW-4	5/8/2025	99.70	1.42	NP	--	98.28	--
MW-5	6/29/2016	99.60	1.49	NP	--	98.11	--
MW-5	9/8/2016	99.60	1.57	NP	--	98.03	--
MW-5	12/1/2016	99.60	0.61	NP	--	98.99	--
MW-5	2/22/2017	99.60	0.77	NP	--	98.83	--
MW-5	5/10/2017	99.60	1.27	NP	--	98.33	--
MW-5	8/16/2017	99.60	1.70	NP	--	97.90	--
MW-5	10/31/2017	99.60	1.02	NP	--	98.58	--
MW-5	2/13/2018	99.60	0.82	NP	--	98.78	--
MW-5	5/2/2018	99.60	1.12	NP	--	98.48	--
MW-5	8/8/2018	99.60	1.80	NP	--	97.80	--
MW-5	10/23/2018	99.60	1.52	NP	--	98.08	--
MW-5	1/30/2019	99.60	0.73	NP	--	98.87	--
MW-5	4/24/2019	99.60	1.20	NP	--	98.40	--
MW-5	8/1/2019	99.60	1.55	NP	--	98.05	--
MW-5	10/30/2019	99.60	0.89	NP	--	98.71	--
MW-5	2/6/2020	99.60	0.50	NP	--	99.10	--
MW-5	6/24/2020	99.60	1.13	NP	--	98.47	--
MW-5	9/23/2020	99.60	1.42	NP	--	98.18	--
MW-5	11/11/2020	99.60	0.87	NP	--	98.73	--
MW-5	2/10/2021	99.60	0.82	NP	--	98.78	--
MW-5	5/6/2021	99.60	1.22	NP	--	98.38	--
MW-5	8/4/2021	99.60	1.48	NP	--	98.12	--
MW-5	11/17/2021	--	--	--	--	--	DL
MW-5	1/26/2022	99.60	0.55	NP	--	99.05	--
MW-5	4/27/2022	99.60	0.71	NP	--	98.89	--
MW-5	7/20/2022	99.60	1.04	NP	--	98.56	--
MW-5	10/18/2022	99.60	1.37	NP	--	98.23	--
MW-5	1/24/2023	99.60	0.25	NP	--	99.35	DL
MW-5	4/12/2023	99.60	0.44	NP	--	99.16	DL
MW-5	8/2/2023	99.60	1.40	NP	--	98.20	--
MW-5	11/1/2023	99.60	0.99	NP	--	98.61	--
MW-5	1/17/2024	99.60	0.40	NP	--	99.20	--
MW-5	5/9/2024	99.60	1.01	NP	--	98.59	--
MW-5	7/23/2024	99.60	1.30	NP	--	98.30	--
MW-5	11/6/2024	99.60	0.72	NP	--	98.88	--
MW-5	1/28/2025	99.60	1.16	NP	--	98.44	--
MW-5	5/8/2025	99.60	1.12	NP	--	98.48	--

Table 1
Groundwater Gauging Data
OPLC Tacoma Junction
2660 Frank Albert Road East, Fife, Washington

Well I.D.	Date	GROUNDWATER ELEVATION DATA					
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers

Notes:
TOC = Top of Casing
ft = Feet
NP = No Product
LNAPL = Light Non-Aqueous Phase Liquid
* = Corrected for LNAPL if present (assumes LNAPL specific gravity = 0.75)
-- = No Information Available
DL = Depth to water was < 0.5 feet below TOC

Table 2
Groundwater Analytical Data
OPLC Tacoma Junction
2660 Frank Albert Road East, Fife, Washington

CONSTITUENT		B	T	E	X	TPH-G	TPH-D	TPH-O
UNIT		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Well ID	**Date**							
MTCA METHOD A CLEANUP LEVELS		**5**	**1,000**	**700**	**1,000**	**1,000/800***	**500**	**500**
MW-1	6/29/2016	< 20	< 20	< 30	< 30	< 50	160	< 250
MW-1	9/8/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 50	150	< 250
MW-1	12/1/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 50	120	< 250
MW-1	2/22/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 50	< 110	< 250
MW-1	5/10/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 500	< 100	< 260
MW-1	8/16/2017	< 1.0	< 1.0	< 1.0	< 3.0	< 100	140	330
MW-1	10/31/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 250	< 100	< 260
MW-1	2/13/2018	< 2.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 350
MW-1	5/2/2018	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 350
MW-1	10/23/2018	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 350
MW-1	1/30/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 350
MW-1	4/24/2019	< 3.0	< 2.0	< 3.0	< 3.0 *	< 250	< 100	< 100
MW-1	8/1/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 250	180	< 350
MW-1	10/30/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 350
MW-1	2/6/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 350
MW-1	6/24/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 250	130	< 370
MW-1	9/23/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 250	140	< 350
MW-1	11/11/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 250	140	< 330
MW-1	2/10/2021	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 360
MW-1	5/6/2021	< 1.0	< 1.0	< 1.0	< 2.0	< 250	270	< 340
MW-1	8/4/2021	< 1.0	< 1.0	< 1.0	< 2.0	< 250	310	< 380
MW-1	11/17/2021	< 1.0	< 1.0 *1	< 1.0	< 2.0	< 250	< 110	< 350
MW-1	1/26/2022	< 1.0 *1	< 1.0	< 1.0 *1	< 2.0 *1	< 250	< 140	< 440
MW-1	4/27/2022	< 1.0	< 1.0	< 1.0	< 2.0	< 50	110	< 360
MW-1	7/20/2022	< 1.0	< 1.0	< 1.0	< 2.0	< 50	110	< 370
MW-1	10/18/2022	< 1.0	< 1.0	< 1.0	< 2.0	< 50	< 110	< 350
MW-1	1/24/2023	< 1.0	< 1.0	< 1.0	< 2.0	< 50	120	< 360
MW-1	4/12/2023	< 1.0	< 1.0	< 1.0	< 2.0	< 50	150	< 360
MW-1	8/2/2023	< 1.0	< 1.0	< 1.0	< 2.0	< 50	180	**550**
MW-1	9/7/2023	--	--	--	--	--	110	< 350
MW-1	11/1/2023	< 1.0	< 1.0	< 1.0	< 2.0	< 100	170	< 360
MW-1	1/17/2024	< 1.0	< 1.0	< 1.0	< 2.0	< 100	150	< 350
MW-1	5/9/2024	< 1.0	< 1.0	< 1.0	< 2.0	< 150	220	< 360
MW-1	7/23/2024	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 190	< 330
MW-1	11/6/2024	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 200	< 350
MW-1	1/28/2025	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 190	< 340
MW-1	5/8/2025	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 190	< 340
MW-2	6/29/2016	**100**	6.9	56	92	**2,300**	**810**	< 250
MW-2	12/1/2016	**170**	8.7	280	250	**7,000**	**1,700**	< 260
MW-2	2/22/2017	**90**	< 20	120	110	**6,500**	**1,300**	< 250
MW-2	5/10/2017	**85**	6.4	220	150	**6,000**	**990**	< 250
MW-2	2/13/2018	**180**	8.3	130	150	**5,000**	**2,100**	< 350
MW-2	5/2/2018	**170 ***	6.3 *	130	110	**4,200**	**1,100**	< 360
MW-2	1/30/2019	**130**	7.2	74	94	**4,500**	**1,800**	< 350
MW-2	8/1/2019	**110**	6.2	25	43	**1,600**	**1,000**	< 350
MW-2	10/30/2019	**140**	6.1	62	51	**3,400**	**2,000**	< 350

Table 2
Groundwater Analytical Data
OPLC Tacoma Junction
2660 Frank Albert Road East, Fife, Washington

CONSTITUENT		B	T	E	X	TPH-G	TPH-D	TPH-O
UNIT		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Well ID	**Date**							
MTCA METHOD A CLEANUP LEVELS		**5**	**1,000**	**700**	**1,000**	**1,000/800***	**500**	**500**
MW-2	2/6/2020	**120**	5.4	44	35	**2,300**	**930**	< 360
MW-2	6/24/2020	**13**	< 2.0	9.5	3.0	750	**590**	< 350
MW-2	9/23/2020	**15**	< 2.0	19	10	**1,100**	**590**	< 350
MW-2	11/11/2020	**99**	6.2	31	44	**1,500**	**970**	< 340
MW-2	2/10/2021	**47**	3.5	33	17	**1,700**	**670**	< 350
MW-2	5/6/2021	**35**	3.0	17	12	**1,700**	**670**	< 360
MW-2	8/4/2021	**39**	< 10	30	< 20	**1,800**	**830**	410
MW-2	11/17/2021	**330**	< 50 *1	< 50	< 100	**1,700**	< 2,200	< 6,900
MW-2	1/26/2022	**85 *1**	< 5.0	25 *1	14 *1	**1,500**	**730**	< 440
MW-2	4/27/2022	4.3	< 1.0	2.6	< 2.0	510	**900**	< 360
MW-2	7/20/2022	**5.9**	< 1.0	1.6	< 2.0	300	**760**	< 370
MW-2	10/18/2022	**20**	< 10	12	< 20	**3,200**	**650**	< 350
MW-2	1/24/2023	**93**	< 10	16	22	**1,400**	**950**	390
MW-2	4/12/2023	**51**	< 10	14	< 20	**1,600**	**840**	< 350
MW-2	8/2/2023	**55**	4.3	6.3	24	**1,400**	**910**	< 360
MW-2	11/1/2023	**59**	4.3	12	18	**1,400**	**770**	< 350
MW-2	1/17/2024	**71**	5.3	17	17	**1,400**	**920**	< 360
MW-2	5/9/2024	**6.0**	< 1.0	3.6	3.1	**1,200**	**560**	< 360
MW-2	7/23/2024	**27**	3.5	13	11	**1,600**	**910**	< 330
MW-2	11/6/2024	**46**	4.3	17	13	**2,300**	**850**	< 350
MW-2DUP	11/6/2024	**46**	4.6	22	14	**2,800**	**870**	< 360
MW-2	1/28/2025	**31**	3.6	13	12	**2,200**	**780**	< 340
MW-2DUP	1/28/2025	**31**	3.7	14	12	**2,200**	**800**	< 340
MW-2	5/8/2025	**19**	1.4	5.5	4.9	**1,200**	**990**	< 330
MW-3	6/29/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 50	< 110	< 250
MW-3	9/8/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 50	< 110	< 250
MW-3	12/1/2016	< 2.0	88	< 3.0	< 3.0	100	180	< 260
MW-3	2/22/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 50	< 110	< 260
MW-3	5/10/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 500	< 100	< 250
MW-3	8/16/2017	< 1.0	< 1.0	< 1.0	< 3.0	< 100	< 100	< 250
MW-3	10/31/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 250	< 100	< 260
MW-3	2/13/2018	< 2.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 350
MW-3	5/2/2018	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 350
MW-3	10/23/2018	< 3.0	< 2.0	< 3.0	< 3.0	< 250	120	< 350
MW-3	1/30/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 350
MW-3	4/24/2019	< 3.0	< 2.0	< 3.0	< 3.0 *	< 250	< 100	< 100
MW-3	8/1/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 250	110	< 350
MW-3	10/30/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 350
MW-3	2/6/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 350
MW-3	6/24/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 120	< 380
MW-3	9/23/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 250	110	< 350
MW-3	11/11/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 350
MW-3	2/10/2021	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 350
MW-3	5/6/2021	< 1.0	< 1.0	< 1.0	< 2.0	< 250	< 110	< 360
MW-3	8/4/2021	< 1.0	< 1.0	< 1.0	< 2.0	< 250	270	< 360
MW-3	11/17/2021	< 1.0	< 1.0 *1	< 1.0	< 2.0	< 250	< 110	< 340

Table 2
Groundwater Analytical Data
OPLC Tacoma Junction
2660 Frank Albert Road East, Fife, Washington

CONSTITUENT		B	T	E	X	TPH-G	TPH-D	TPH-O
UNIT		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Well ID	Date							
MTCA METHOD A CLEANUP LEVELS		5	1,000	700	1,000	1,000/800*	500	500
MW-3	1/26/2022	< 1.0 *1	< 1.0	< 1.0 *1	< 2.0 *1	< 250	< 130	< 430
MW-3	4/27/2022	< 1.0	< 1.0	< 1.0	< 2.0	< 50	< 110	< 370
MW-3	7/20/2022	< 1.0	< 1.0	< 1.0	< 2.0	< 50	< 120	< 370
MW-3	10/18/2022	< 1.0	< 1.0	< 1.0	< 2.0	< 50	110	< 350
MW-3	1/24/2023	< 1.0	< 1.0	< 1.0	< 2.0	< 50	120	< 370
MW-3	4/12/2023	< 1.0	< 1.0	< 1.0	< 2.0	< 50	150	< 360
MW-3	8/2/2023	< 1.0	< 1.0	< 1.0	< 2.0	< 50	110	< 350
MW-3	11/1/2023	< 1.0	< 1.0	< 1.0	< 2.0	< 100	< 110	< 360
MW-3	1/17/2024	< 1.0	< 1.0	< 1.0	< 2.0	< 100	150	< 350
MW-3	5/9/2024	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 200	< 360
MW-3	7/23/2024	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 190	< 330
MW-3	1/28/2025	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 200	< 340
MW-3	5/8/2025	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 190	< 340
MW-4	6/29/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 50	110	< 250
MW-4	9/8/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 50	< 110	< 250
MW-4	12/1/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 50	140	< 260
MW-4	2/22/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 50	< 110	< 250
MW-4	5/10/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 500	120	< 250
MW-4	8/16/2017	< 1.0	< 1.0	< 1.0	< 3.0	< 100	< 100	< 250
MW-4	10/31/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 250	100	< 250
MW-4	2/13/2018	< 2.0	< 2.0	< 3.0	< 3.0	< 250	130	< 350
MW-4	5/2/2018	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 350
MW-4	10/23/2018	< 3.0	< 2.0	< 3.0	< 3.0	< 250	200	< 350
MW-4	1/30/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 250	110	< 350
MW-4	4/24/2019	< 3.0	< 2.0	< 3.0	< 3.0 *	< 250	< 100	< 100
MW-4	8/1/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 250	160	< 350
MW-4	10/30/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 350
MW-4	2/6/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 350
MW-4	6/24/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 120	< 380
MW-4	9/23/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 250	140	< 350
MW-4	11/11/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 250	120	< 350
MW-4	2/10/2021	< 3.0	< 2.0	< 3.0	< 3.0	< 250	< 110	< 350
MW-4	5/6/2021	< 1.0	< 1.0	< 1.0	< 2.0	< 250	< 110	< 350
MW-4	8/4/2021	< 1.0	< 1.0	< 1.0	< 2.0	< 250	310	< 370
MW-4	11/17/2021	< 1.0	< 1.0 *1	< 1.0	< 2.0	< 250	< 110	< 340
MW-4	1/26/2022	< 1.0 *1	< 1.0	< 1.0 *1	< 2.0 *1	< 250	< 130	< 420
MW-4	4/27/2022	< 1.0	< 1.0	< 1.0	< 2.0	< 50	< 110	< 360
MW-4	7/20/2022	< 1.0	< 1.0	< 1.0	< 2.0	< 50	< 120	< 380
MW-4	10/18/2022	< 1.0	< 1.0	< 1.0	< 2.0	< 50	< 110	< 350
MW-4	1/24/2023	< 1.0	< 1.0	< 1.0	< 2.0	< 50	140	< 370
MW-4	4/12/2023	< 1.0	< 1.0	< 1.0	< 2.0	< 50	120	< 360
MW-4	8/2/2023	< 1.0	< 1.0	< 1.0	< 2.0	< 50	140	< 360
MW-4	11/1/2023	< 1.0	< 1.0	< 1.0	< 2.0	< 100	130	< 350
MW-4	1/17/2024	< 1.0	< 1.0	< 1.0	< 2.0	< 100	140	< 350
MW-4	5/9/2024	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 200	< 360
MW-4	7/23/2024	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 190	< 330

Table 2
Groundwater Analytical Data
OPLC Tacoma Junction
2660 Frank Albert Road East, Fife, Washington

CONSTITUENT		B	T	E	X	TPH-G	TPH-D	TPH-O
UNIT		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Well ID	**Date**							
MTCA METHOD A CLEANUP LEVELS		**5**	**1,000**	**700**	**1,000**	**1,000/800***	**500**	**500**
MW-4	11/6/2024	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 200	< 360
MW-4	1/28/2025	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 200	< 340
MW-4	5/8/2025	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 190	< 330
MW-5	6/29/2016	< 2.0	< 2.0	< 3.0	< 3.0	300	230	< 250
MW-5	9/8/2016	< 2.0	< 2.0	< 3.0	< 3.0	270	250	< 250
MW-5	12/1/2016	< 2.0	< 2.0	< 3.0	< 3.0	89	180	< 250
MW-5	2/22/2017	< 2.0	< 2.0	< 3.0	< 3.0	97	< 110	< 250
MW-5	5/10/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 500	220	< 250
MW-5	8/16/2017	< 1.0	< 1.0	< 1.0	< 3.0	240	150	< 250
MW-5	10/31/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 250	120	< 260
MW-5	2/13/2018	3.4	< 2.0	7.4	< 3.0	330	250	< 370
MW-5	5/2/2018	< 3.0 *	< 2.0 *	< 3.0	< 3.0	< 250	< 110	< 350
MW-5	10/23/2018	< 3.0	< 2.0	< 3.0	< 3.0	< 250	200	< 350
MW-5	1/30/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 250	150	< 350
MW-5	4/24/2019	< 3.0	< 2.0	< 3.0	< 3.0 *	< 250	130	< 100
MW-5	8/1/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 250	200	< 350
MW-5	10/30/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 250	120	< 350
MW-5	2/6/2020	< 3.0	< 2.0	4.2	< 3.0	380	190	< 350
MW-5	6/24/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 250	210	< 360
MW-5	9/23/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 250	160	< 360
MW-5	11/11/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 250	120	< 340
MW-5	2/10/2021	3.4	< 2.0	< 3.0	< 3.0	260	150	< 360
MW-5	5/6/2021	< 1.0	< 1.0	< 1.0	< 2.0	< 250	150	< 340
MW-5	8/4/2021	< 1.0	< 1.0	< 1.0	< 2.0	< 250	290	< 360
MW-5	11/17/2021	< 1.0	< 1.0 *1	< 1.0	< 2.0	< 250	< 2,100	< 6,800
MW-5	1/26/2022	3.5	< 1.0	3.9	< 2.0	270	170	< 440
MW-5	4/27/2022	2.4	< 1.0	1.9	< 2.0	600	310	< 360
MW-5	7/20/2022	< 1.0	< 1.0	< 1.0	< 2.0	< 50	130	< 350
MW-5	10/18/2022	< 1.0	< 1.0	< 1.0	< 2.0	110	130	< 350
MW-5	1/24/2023	**5.5**	1.1	6.1	< 2.0	470	380	< 370
MW-5	4/12/2023	1.3	< 1.0	1.7	< 2.0	210	190	< 360
MW-5	8/2/2023	< 1.0	< 1.0	< 1.0	< 2.0	< 50	190	< 360
MW-5	11/1/2023	< 1.0	< 1.0	< 1.0	< 2.0	< 100	130	< 360
MW-5	1/17/2024	**5.3**	1.1	5.1	< 2.0	540	370	< 360
MW-5	5/9/2024	1.2	< 1.0	2.6	< 2.0	460	210	< 360
MW-5	7/23/2024	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 190	< 330
MW-5	11/6/2024	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 200	< 350
MW-5	1/28/2025	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 190	< 340
MW-5	5/8/2025	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 190	< 330
MW-5DUP	5/8/2025	< 1.0	< 1.0	< 1.0	< 2.0	< 150	< 200	< 340

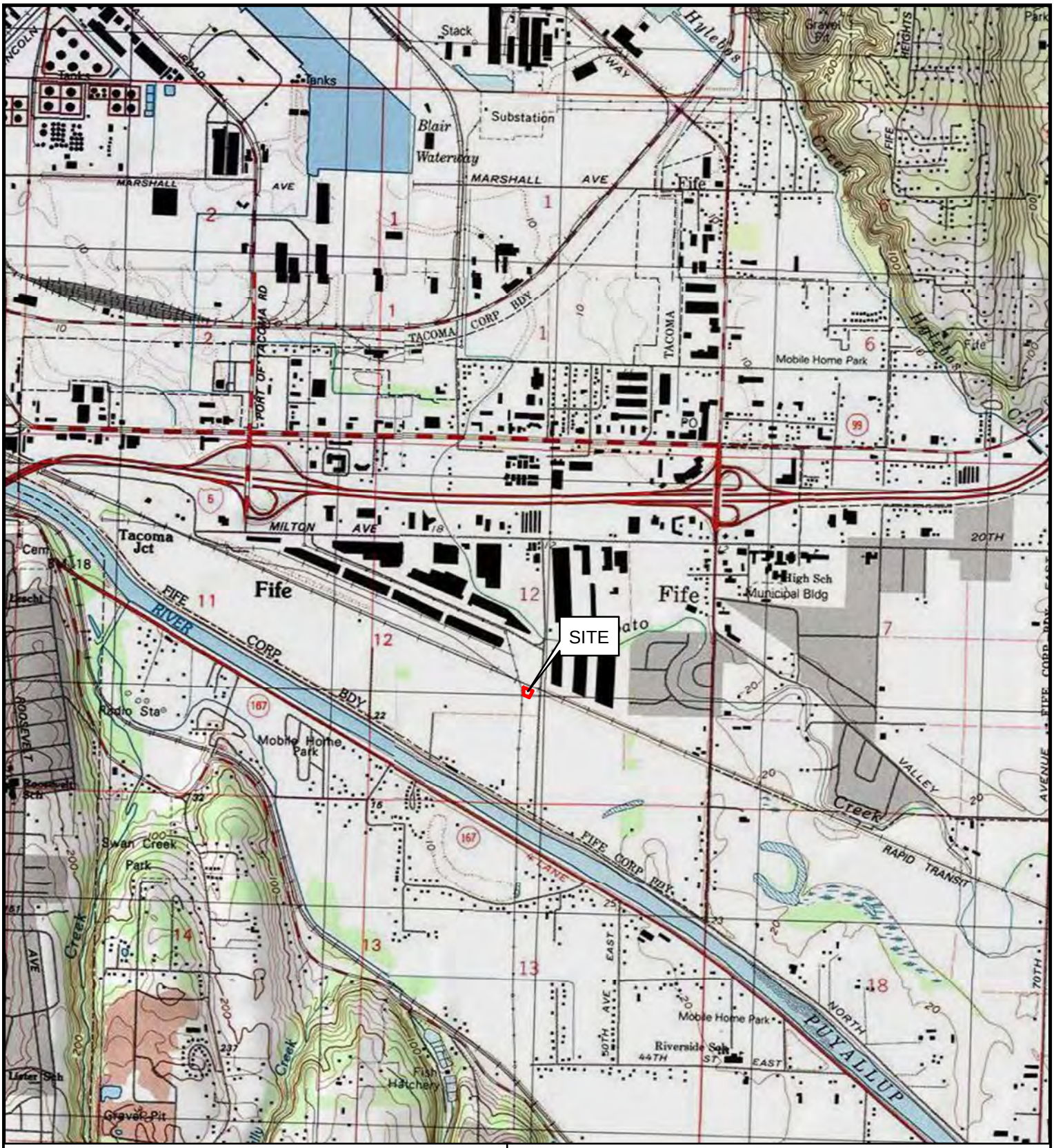
Table 2
Groundwater Analytical Data
OPLC Tacoma Junction
2660 Frank Albert Road East, Fife, Washington

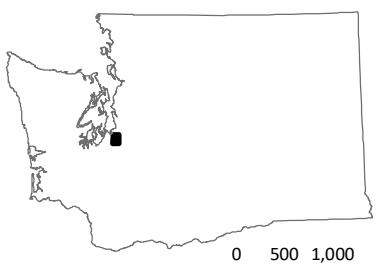
CONSTITUENT		B	T	E	X	TPH-G	TPH-D	TPH-O
UNIT		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Well ID	**Date**							
MTCA METHOD A CLEANUP LEVELS		**5**	**1,000**	**700**	**1,000**	**1,000/800***	**500**	**500**

Notes:
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total xylenes
TPH-G = Total petroleum hydrocarbons as gasoline
TPH-D = Total petroleum hydrocarbons as diesel
TPH-O = Total petroleum hydrocarbons as oil
1,000/800* µg/L if no detectable levels of Benzene in the sample - otherwise 800 µg/L
< 1.0 = Concentrations were not detected above the laboratory method reporting limit
µg/L = Micrograms per liter
-- = No value given/Not analyzed/Not applicable
MTCA = Model Toxics Control Act
Results in **bold** indicate concentrations in excess of MTCA Method A Cleanup Levels
RPD = Relative percent difference
LCS/LCSD = Laboratory control sample/laboratory control sample duplicate

Laboratory Qualifiers:
* = RPD of the LCS and LCSD exceeds the control limits. LCS or LCSD is outside acceptance limits
*1 = LCS/LCSD RPD exceeds control limits

Figures





USGS 7.5-minute Series
Topographic Series
Puyallup, WA, 2013

N

0 500 1,000 2,000 3,000 4,000 Feet

FIGURE 1

SITE LOCATION MAP
OPLC TACOMA JUNCTION
2660 FRANK ALBERT ROAD EAST
FIFE, WASHINGTON

PROJECT NO.	PREPARED BY	REF SCALE	
OPLC - Tacoma Junction 2025	*MB*	*1:24,000*	antea group
DATE	REVIEWED BY	MAP SCALE	
4/10/2025	*FS*	*1 INCH = 2,000 FEET*	

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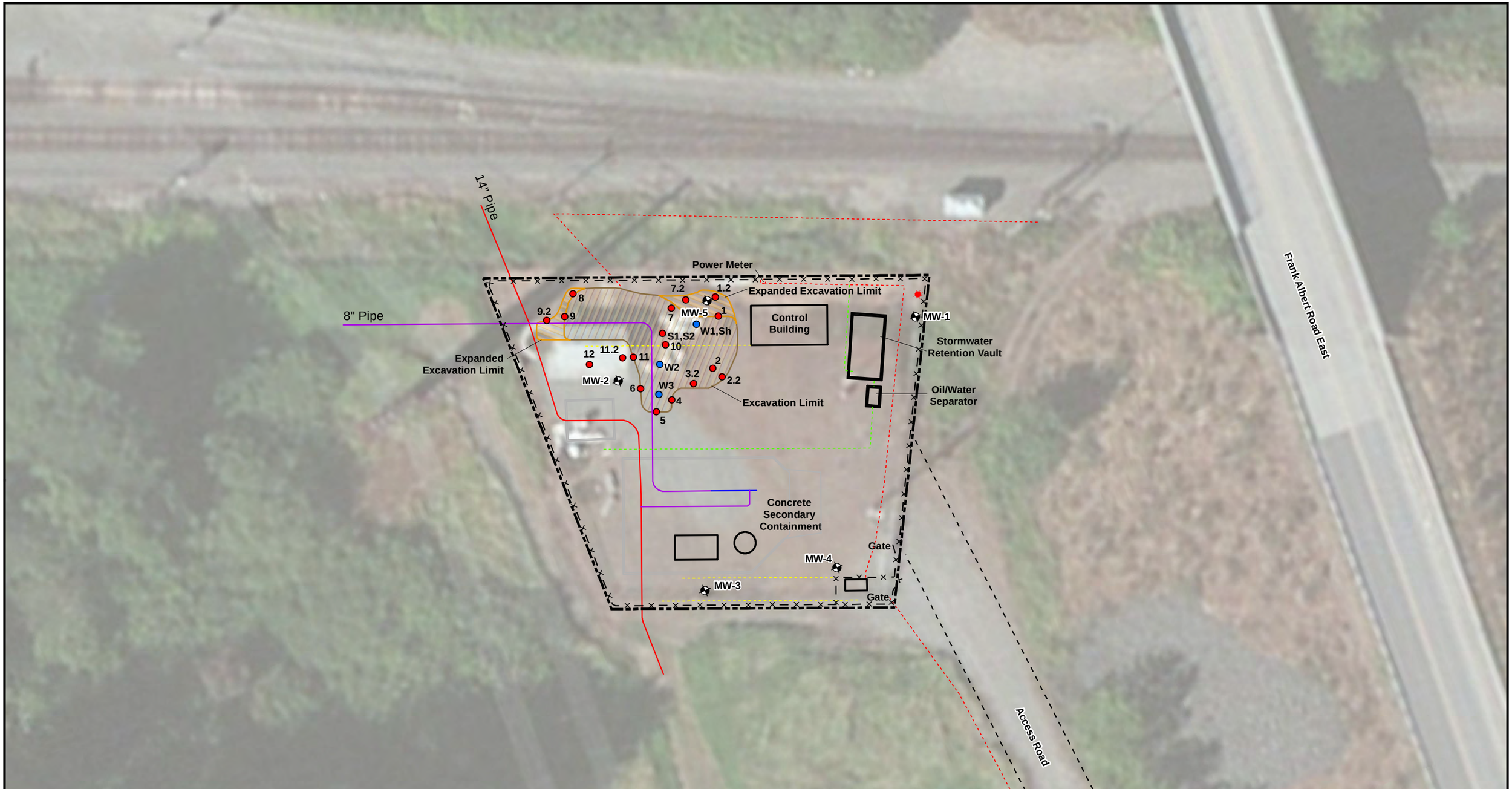

Legend

- Monitoring Well Location
- Light Pole
- Soil Sample Location
- Water Sample Location
- Original Excavation
- Expanded Excavation
- Property Boundary
- Fence
- 14" Pipeline
- 10" Pipeline
- 8" Pipeline
- Utility - Electric
- Utility - Storm Water
- Groundwire

Sources: 2013, Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

0 15 30 60 90 120 Feet

FIGURE 2

SITE MAP
OPLC TACOMA JUNCTION
2660 FRANK ALBERT ROAD EAST
FIFE, WASHINGTON

PROJECT NO.	PREPARED BY	REF SCALE
OPLC - Tacoma Junction 2025	*MB*	*1:360*
DATE	**REVIEWED BY**	**MAP SCALE**
4/10/2025	*FS*	*1 INCH = 30 FEET*

anteagroup

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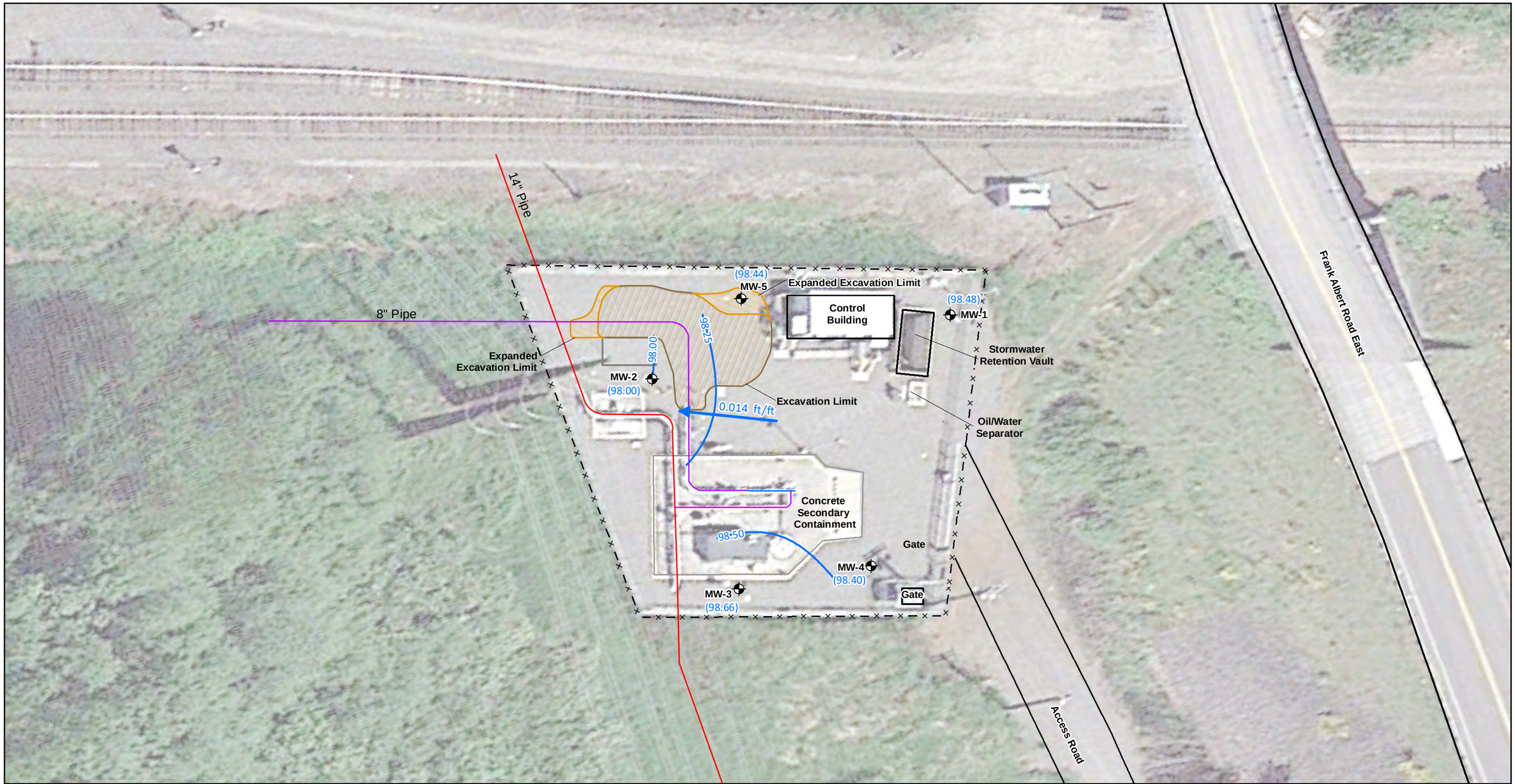

Legend

- Fence
- Monitoring Well Location
- 14" Pipeline
- 10" Pipeline
- 8" Pipeline
- Original Excavation
- Expanded Excavation
- Groundwater Elevation Contour (ft)
- Inferred Groundwater Flow Direction
- (98.48) Groundwater Elevation Contour (ft)
- 0.014 ft/ft Inferred Groundwater Gradient

Sources: 2015, Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

N

0 7.5 15 30 Feet

FIGURE 3

GROUNDWATER ELEVATION CONTOUR MAP
JANUARY 28, 2025
OPLC TACOMA JUNCTION
2660 FRANK ALBERT ROAD EAST
FIFE, WASHINGTON

PROJECT NO.	PREPARED BY	REF SCALE
OPLC - Tacoma Junction 2025	CD	1:360
DATE	REVIEWED BY	MAP SCALE
7/15/2025	MR	1 INCH = 30 FEET

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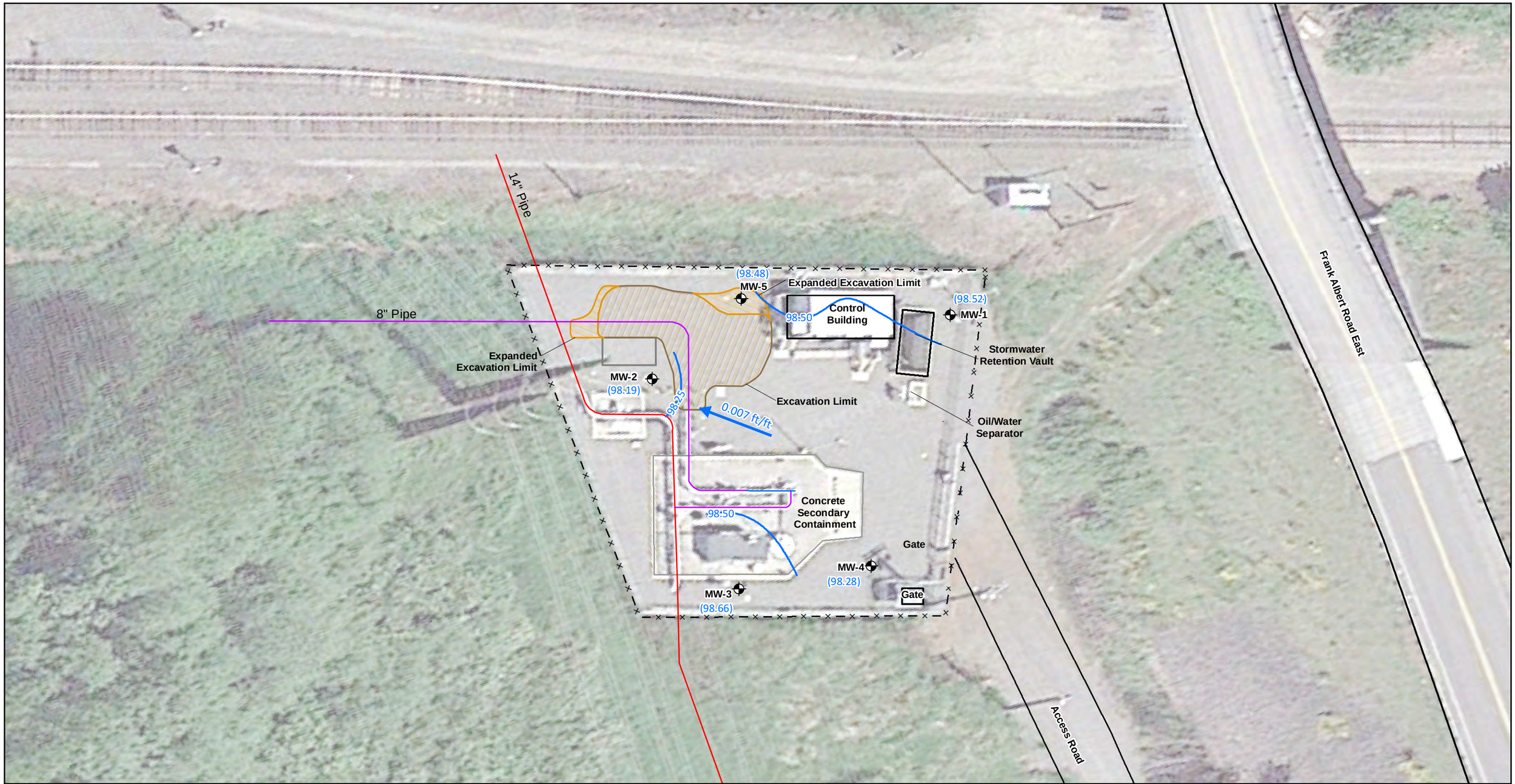

Legend

- Property Boundary
- Fence
- Monitoring Well Location
- 14" Pipeline
- 10" Pipeline
- 8" Pipeline
- Original Excavation
- Expanded Excavation
- Groundwater Elevation Contour (ft)
- Inferred Groundwater Flow Direction
- (98.19) Groundwater Elevation Contour (ft)
- 0.007 ft/ft Inferred Groundwater Gradient

Sources: 2015, Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

N

0 7.5 15 30 Feet

FIGURE 4

GROUNDWATER ELEVATION CONTOUR MAP
MAY 8, 2025
OPLC TACOMA JUNCTION
2660 FRANK ALBERT ROAD EAST
FIFE, WASHINGTON

PROJECT NO.	PREPARED BY	REF SCALE
OPLC - Tacoma Junction 2025	*CD*	*1:360*
DATE	**REVIEWED BY**	**MAP SCALE**
7/15/2025	*SN*	*1 INCH = 30 FEET*

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MW-5		
Date	1/28/2025	5/8/2025
B	< 1.0	< 1.0
T	< 1.0	< 1.0
E	< 1.0	< 1.0
X	< 2.0	< 2.0
TPH-G	< 150	< 150
TPH-D	< 190	< 190
TPH-O	< 340	< 330

MW-1		
Date	1/28/2025	5/8/2025
B	< 1.0	< 1.0
T	< 1.0	< 1.0
E	< 1.0	< 1.0
X	< 2.0	< 2.0
TPH-G	< 150	< 150
TPH-D	< 190	< 190
TPH-O	< 340	< 340

MW-2		
Date	1/28/2025	5/8/2025
B	**31**	**19**
T	3.6	1.4
E	13	5.5
X	12	4.9
TPH-G	**2,200**	**1,200**
TPH-D	**780**	**990**
TPH-O	< 340	< 330

MW-3		
Date	1/28/2025	5/8/2025
B	< 1.0	< 1.0
T	< 1.0	< 1.0
E	< 1.0	< 1.0
X	< 2.0	< 2.0
TPH-G	< 150	< 150
TPH-D	< 200	< 190
TPH-O	< 340	< 340

MW-4		
Date	1/28/2025	5/8/2025
B	< 1.0	< 1.0
T	< 1.0	< 1.0
E	< 1.0	< 1.0
X	< 2.0	< 2.0
TPH-G	< 150	< 150
TPH-D	< 200	< 190
TPH-O	< 340	< 330

14" Pipe
8" Pipe
MW-5
MW-1
MW-2
MW-3
MW-4
Expanded Excavation Limit
Expanded Excavation Limit
Excavation Limit
Control Building
Stormwater Retention Vault
Oil/Water Separator
Concrete Secondary Containment
Gate
Gate
Frank Albert Road East
Access Road

Legend

- Property Boundary
- Fence
- Monitoring Well Location
- 14" Pipeline
- 10" Pipeline
- 8" Pipeline
- Original Excavation
- Expanded Excavation

B - Benzene
T - Toluene
E - Ethylbenzene
X - Total Xylenes
TPH-G - Total petroleum hydrocarbons as gasoline
TPH-D - Total petroleum hydrocarbons as diesel
TPH-O - Total petroleum hydrocarbons as oil
Bold - Concentration above MTCA Method A Cleanup Levels
< - Concentrations were not detected above the laboratory reporting limit
All values in micrograms per liter (µg/L)

N

0 7.5 15 30 Feet

FIGURE 5

GROUNDWATER ANALYTICAL DATA MAP
FIRST HALF OF 2025
OPLC TACOMA JUNCTION
2660 FRANK ALBERT ROAD EAST
FIFE, WASHINGTON

PROJECT NO.	PREPARED BY	REF SCALE
OPLC - Tacoma Junction 2025	*CD*	*1:360*
DATE	**REVIEWED BY**	**MAP SCALE**
7/15/2025	*SN*	*1 INCH = 30 FEET*

anteagroup

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Appendix A – Analytical Lab Reports and Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Nolan Lewis
Antea USA Inc.
205 SE Spokane Street
Suite 300
Portland, Oregon 97202

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JOB DESCRIPTION

BP - OPLC - Tacoma Junction

JOB NUMBER

580-147600-1

Eurofins Seattle
5755 8th Street East
Tacoma WA 98424

See page two for job notes and contact information.

Job Notes

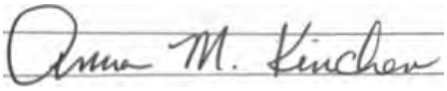
This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Compliance Statement

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the BPLAMP Technical Specifications, applicable federal, state, local regulations and certification requirements as well as the methodologies as described in laboratory SOPs reviewed by the BPLAMP. This Laboratory Report is confidential and is intended for the sole use of Eurofins Environment Testing (USA) and its client. This report shall not be reproduced, except in full, without written permission from Eurofins Environment Testing (USA). The signature on the cover page extends to the case narrative and all the data and forms in the package. The Chain of Custody is included and is an integral part of this report.

Authorization



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Authorized for release by
Anna Kinchen, Project Manager
Anna.Kinchen@et.eurofinsus.com
(253)922-2310

Table of Contents

Definitions/Glossary

Client: Antea USA Inc.
Project/Site: BP - OPLC - Tacoma Junction

Job ID: 580-147600-1

Glossary

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

Job Narrative
580-147600-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 1/28/2025 12:55 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C.

Receipt Exceptions
There are no amber glass 250ml hydrochloric containers with client sample ID MW-1_20250128. There are four amber glass 250ml hydrochloric containers with the client sample ID MW-4_2025128, two of which have the sample date and time that match the sample with client sample ID MW-4_2025128 and the other two have the sample date and time which match the sample with the client sample ID MW-1_2025128. It is believed that the two containers with the date and time that match the sample with the client sample ID MW-1_2025128 are the containers with volume from that sample. The Dx method has been put on hold for that sample pending client verification.

Method NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)
Samples MW-3_20250128 (580-147600-1), MW-4_20250128 (580-147600-2), MW-1_20250128 (580-147600-3), MW-5_20250128 (580-147600-4), MW-2_20250128 (580-147600-5), MW-2DUP_20250128 (580-147600-6) and Tripblank_20250128 (580-147600-7) were analyzed for Northwest - Volatile Petroleum Products (GC/MS). The samples were analyzed on 1/29/2025 and 1/30/2025.

Method 8260D - Volatile Organic Compounds by GC/MS
Samples MW-3_20250128 (580-147600-1), MW-4_20250128 (580-147600-2), MW-1_20250128 (580-147600-3), MW-5_20250128 (580-147600-4), MW-2_20250128 (580-147600-5), MW-2DUP_20250128 (580-147600-6) and Tripblank_20250128 (580-147600-7) were analyzed for Volatile Organic Compounds by GC/MS. The samples were analyzed on 1/29/2025 and 1/30/2025.

Method NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)
Samples MW-3_20250128 (580-147600-1), MW-4_20250128 (580-147600-2), MW-1_20250128 (580-147600-3), MW-5_20250128 (580-147600-4), MW-2_20250128 (580-147600-5) and MW-2DUP_20250128 (580-147600-6) were analyzed for Northwest - Semi-Volatile Petroleum Products (GC). The samples were prepared and analyzed on 2/5/2025.

The following sample contained a hydrocarbon pattern in the diesel range; however, the elution pattern is not the typical diesel fuel pattern used by the laboratory for quantitative purposes: MW-2_20250128 (580-147600-5) and MW-2DUP_20250128 (580-147600-6).

Detection Summary

Client: Antea USA Inc.
Project/Site: BP - OPLC - Tacoma Junction

Job ID: 580-147600-1

Client Sample ID: MW-3_20250128 — Lab Sample ID: 580-147600-1

No Detections.

Client Sample ID: MW-4_20250128 — Lab Sample ID: 580-147600-2

No Detections.

Client Sample ID: MW-1_20250128 — Lab Sample ID: 580-147600-3

No Detections.

Client Sample ID: MW-5_20250128 — Lab Sample ID: 580-147600-4

No Detections.

Client Sample ID: MW-2_20250128 — Lab Sample ID: 580-147600-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	31		1.0		ug/L	1		8260D	Total/NA
Ethylbenzene	13		1.0		ug/L	1		8260D	Total/NA
m-Xylene & p-Xylene	11		2.0		ug/L	1		8260D	Total/NA
o-Xylene	1.1		1.0		ug/L	1		8260D	Total/NA
Toluene	3.6		1.0		ug/L	1		8260D	Total/NA
Xylenes, Total	12		2.0		ug/L	1		8260D	Total/NA
Gasoline	2200		150		ug/L	1		NWTPH-Gx	Total/NA
#2 Diesel (C10-C24)	780		190		ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-2DUP_20250128 — Lab Sample ID: 580-147600-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	31		1.0		ug/L	1		8260D	Total/NA
Ethylbenzene	14		1.0		ug/L	1		8260D	Total/NA
m-Xylene & p-Xylene	11		2.0		ug/L	1		8260D	Total/NA
o-Xylene	1.1		1.0		ug/L	1		8260D	Total/NA
Toluene	3.7		1.0		ug/L	1		8260D	Total/NA
Xylenes, Total	12		2.0		ug/L	1		8260D	Total/NA
Gasoline	2200		150		ug/L	1		NWTPH-Gx	Total/NA
#2 Diesel (C10-C24)	800		190		ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: Tripblank_20250128 — Lab Sample ID: 580-147600-7

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-3_20250128

Lab Sample ID: 580-147600-1
Matrix: Water
Date Collected: 01/28/25 09:50
Date Received: 01/28/25 12:55

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			01/29/25 21:23	1
Ethylbenzene	ND		1.0		ug/L			01/29/25 21:23	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/29/25 21:23	1
o-Xylene	ND		1.0		ug/L			01/29/25 21:23	1
Toluene	ND		1.0		ug/L			01/29/25 21:23	1
Xylenes, Total	ND		2.0		ug/L			01/29/25 21:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 120*		*01/29/25 21:23*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*01/29/25 21:23*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*01/29/25 21:23*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*01/29/25 21:23*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			01/29/25 21:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*77 - 123*		*01/29/25 21:23*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		200		ug/L		02/05/25 10:40	02/05/25 17:54	1
Motor Oil (>C24-C36)	ND		340		ug/L		02/05/25 10:40	02/05/25 17:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*79*		*50 - 150*	*02/05/25 10:40*	*02/05/25 17:54*	*1*

Client Sample ID: MW-4_20250128

Lab Sample ID: 580-147600-2
Matrix: Water
Date Collected: 01/28/25 10:25
Date Received: 01/28/25 12:55

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			01/29/25 21:46	1
Ethylbenzene	ND		1.0		ug/L			01/29/25 21:46	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/29/25 21:46	1
o-Xylene	ND		1.0		ug/L			01/29/25 21:46	1
Toluene	ND		1.0		ug/L			01/29/25 21:46	1
Xylenes, Total	ND		2.0		ug/L			01/29/25 21:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*		*01/29/25 21:46*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*01/29/25 21:46*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*01/29/25 21:46*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*01/29/25 21:46*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			01/29/25 21:46	1

Client Sample ID: MW-4_20250128

Lab Sample ID: 580-147600-2

Date Collected: 01/28/25 10:25
Date Received: 01/28/25 12:55

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*77 - 123*		*01/29/25 21:46*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		200		ug/L		02/05/25 10:40	02/05/25 18:14	1
Motor Oil (>C24-C36)	ND		340		ug/L		02/05/25 10:40	02/05/25 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*02/05/25 10:40*	*02/05/25 18:14*	*1*

Client Sample ID: MW-1_20250128

Lab Sample ID: 580-147600-3

Date Collected: 01/28/25 11:00
Date Received: 01/28/25 12:55

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			01/29/25 22:09	1
Ethylbenzene	ND		1.0		ug/L			01/29/25 22:09	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/29/25 22:09	1
o-Xylene	ND		1.0		ug/L			01/29/25 22:09	1
Toluene	ND		1.0		ug/L			01/29/25 22:09	1
Xylenes, Total	ND		2.0		ug/L			01/29/25 22:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*		*01/29/25 22:09*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*01/29/25 22:09*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*01/29/25 22:09*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*01/29/25 22:09*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			01/29/25 22:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*77 - 123*		*01/29/25 22:09*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		190		ug/L		02/05/25 10:40	02/05/25 18:34	1
Motor Oil (>C24-C36)	ND		340		ug/L		02/05/25 10:40	02/05/25 18:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 150*	*02/05/25 10:40*	*02/05/25 18:34*	*1*

Client Sample ID: MW-5_20250128

Lab Sample ID: 580-147600-4

Date Collected: 01/28/25 11:30
Date Received: 01/28/25 12:55

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			01/29/25 22:32	1
Ethylbenzene	ND		1.0		ug/L			01/29/25 22:32	1

Client Sample ID: MW-5_20250128

Lab Sample ID: 580-147600-4

Date Collected: 01/28/25 11:30

Matrix: Water

Date Received: 01/28/25 12:55

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		2.0		ug/L			01/29/25 22:32	1
o-Xylene	ND		1.0		ug/L			01/29/25 22:32	1
Toluene	ND		1.0		ug/L			01/29/25 22:32	1
Xylenes, Total	ND		2.0		ug/L			01/29/25 22:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*		*01/29/25 22:32*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*01/29/25 22:32*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*01/29/25 22:32*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*01/29/25 22:32*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			01/29/25 22:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*77 - 123*		*01/29/25 22:32*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		190		ug/L		02/05/25 10:40	02/05/25 18:54	1
Motor Oil (>C24-C36)	ND		340		ug/L		02/05/25 10:40	02/05/25 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*73*		*50 - 150*	*02/05/25 10:40*	*02/05/25 18:54*	*1*

Client Sample ID: MW-2_20250128

Lab Sample ID: 580-147600-5

Date Collected: 01/28/25 12:00

Matrix: Water

Date Received: 01/28/25 12:55

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**31**		1.0		ug/L			01/30/25 02:23	1
Ethylbenzene	**13**		1.0		ug/L			01/30/25 02:23	1
m-Xylene & p-Xylene	**11**		2.0		ug/L			01/30/25 02:23	1
o-Xylene	**1.1**		1.0		ug/L			01/30/25 02:23	1
Toluene	**3.6**		1.0		ug/L			01/30/25 02:23	1
Xylenes, Total	**12**		2.0		ug/L			01/30/25 02:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 120*		*01/30/25 02:23*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*01/30/25 02:23*	*1*
Dibromofluoromethane (Surr)	*92*		*80 - 120*		*01/30/25 02:23*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*01/30/25 02:23*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**2200**		150		ug/L			01/30/25 02:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*77 - 123*		*01/30/25 02:23*	*1*

Client Sample ID: MW-2_20250128

Lab Sample ID: 580-147600-5

Date Collected: 01/28/25 12:00
Date Received: 01/28/25 12:55

Matrix: Water

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**780**		190		ug/L		02/05/25 10:40	02/05/25 19:14	1
Motor Oil (>C24-C36)	ND		340		ug/L		02/05/25 10:40	02/05/25 19:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*50 - 150*	*02/05/25 10:40*	*02/05/25 19:14*	*1*

Client Sample ID: MW-2DUP_20250128

Lab Sample ID: 580-147600-6

Date Collected: 01/28/25 12:00
Date Received: 01/28/25 12:55

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**31**		1.0		ug/L			01/30/25 02:46	1
Ethylbenzene	**14**		1.0		ug/L			01/30/25 02:46	1
m-Xylene & p-Xylene	**11**		2.0		ug/L			01/30/25 02:46	1
o-Xylene	**1.1**		1.0		ug/L			01/30/25 02:46	1
Toluene	**3.7**		1.0		ug/L			01/30/25 02:46	1
Xylenes, Total	**12**		2.0		ug/L			01/30/25 02:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*		*01/30/25 02:46*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*01/30/25 02:46*	*1*
Dibromofluoromethane (Surr)	*92*		*80 - 120*		*01/30/25 02:46*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*01/30/25 02:46*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**2200**		150		ug/L			01/30/25 02:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*77 - 123*		*01/30/25 02:46*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**800**		190		ug/L		02/05/25 10:40	02/05/25 19:34	1
Motor Oil (>C24-C36)	ND		340		ug/L		02/05/25 10:40	02/05/25 19:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*90*		*50 - 150*	*02/05/25 10:40*	*02/05/25 19:34*	*1*

Client Sample ID: Tripblank_20250128

Lab Sample ID: 580-147600-7

Date Collected: 01/28/25 00:00
Date Received: 01/28/25 12:55

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			01/29/25 20:37	1
Ethylbenzene	ND		1.0		ug/L			01/29/25 20:37	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/29/25 20:37	1
o-Xylene	ND		1.0		ug/L			01/29/25 20:37	1
Toluene	ND		1.0		ug/L			01/29/25 20:37	1
Xylenes, Total	ND		2.0		ug/L			01/29/25 20:37	1

Client: Antea USA Inc.
Project/Site: BP - OPLC - Tacoma Junction

Job ID: 580-147600-1

Client Sample ID: Tripblank_20250128

Date Collected: 01/28/25 00:00
Date Received: 01/28/25 12:55

Lab Sample ID: 580-147600-7

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*		*01/29/25 20:37*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*01/29/25 20:37*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*01/29/25 20:37*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*01/29/25 20:37*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			01/29/25 20:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*77 - 123*		*01/29/25 20:37*	*1*

Surrogate Summary

Client: Antea USA Inc.
Project/Site: BP - OPLC - Tacoma Junction

Job ID: 580-147600-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(80-120)	(80-120)	(80-120)
580-147600-1	MW-3_20250128	96	98	97	101
580-147600-2	MW-4_20250128	98	99	98	100
580-147600-3	MW-1_20250128	97	98	97	102
580-147600-4	MW-5_20250128	97	100	98	101
580-147600-5	MW-2_20250128	94	98	92	103
580-147600-6	MW-2DUP_20250128	93	99	92	103
580-147600-7	Tripblank_20250128	97	98	97	101
LCS 580-483774/5	Lab Control Sample	95	98	95	102
LCSD 580-483774/6	Lab Control Sample Dup	96	99	96	102
MB 580-483774/10	Method Blank	97	98	96	101

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(77-123)
580-147600-1	MW-3_20250128	98
580-147600-2	MW-4_20250128	99
580-147600-3	MW-1_20250128	98
580-147600-4	MW-5_20250128	100
580-147600-5	MW-2_20250128	98
580-147600-6	MW-2DUP_20250128	99
580-147600-7	Tripblank_20250128	98
LCS 580-483770/7	Lab Control Sample	98
LCSD 580-483770/8	Lab Control Sample Dup	98
MB 580-483770/10	Method Blank	98

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		OTPH
Lab Sample ID	Client Sample ID	(50-150)
580-147600-1	MW-3_20250128	79
580-147600-2	MW-4_20250128	88
580-147600-3	MW-1_20250128	86
580-147600-4	MW-5_20250128	73
580-147600-5	MW-2_20250128	84
580-147600-6	MW-2DUP_20250128	90
LCS 580-484230/2-A	Lab Control Sample	92
LCSD 580-484230/3-A	Lab Control Sample Dup	95

Surrogate Summary

Client: Antea USA Inc. Job ID: 580-147600-1
Project/Site: BP - OPLC - Tacoma Junction

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	OTPH (50-150)								
MB 580-484230/1-A	Method Blank	88								

Surrogate Legend

OTPH = o-Terphenyl

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-483774/10
Matrix: Water
Analysis Batch: 483774

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			01/29/25 19:50	1
Ethylbenzene	ND		1.0		ug/L			01/29/25 19:50	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/29/25 19:50	1
o-Xylene	ND		1.0		ug/L			01/29/25 19:50	1
Toluene	ND		1.0		ug/L			01/29/25 19:50	1
Xylenes, Total	ND		2.0		ug/L			01/29/25 19:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*		*01/29/25 19:50*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*01/29/25 19:50*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 120*		*01/29/25 19:50*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*01/29/25 19:50*	*1*

Lab Sample ID: LCS 580-483774/5
Matrix: Water
Analysis Batch: 483774

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			5.00	4.41		ug/L		88	80 - 122		
Ethylbenzene			5.00	4.40		ug/L		88	80 - 120		
m-Xylene & p-Xylene			5.00	4.51		ug/L		90	80 - 120		
o-Xylene			5.00	4.48		ug/L		90	80 - 120		
Toluene			5.00	4.32		ug/L		86	80 - 120		
Xylenes, Total			10.0	8.99		ug/L		90	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*80 - 120*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*95*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*

Lab Sample ID: LCSD 580-483774/6
Matrix: Water
Analysis Batch: 483774

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			5.00	4.40		ug/L		88	80 - 122	0	14
Ethylbenzene			5.00	4.42		ug/L		88	80 - 120	0	14
m-Xylene & p-Xylene			5.00	4.45		ug/L		89	80 - 120	1	14
o-Xylene			5.00	4.40		ug/L		88	80 - 120	2	16
Toluene			5.00	4.35		ug/L		87	80 - 120	1	13
Xylenes, Total			10.0	8.85		ug/L		89	80 - 120	2	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-483774/6
Matrix: Water
Analysis Batch: 483774

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	102		80 - 120

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 580-483770/10
Matrix: Water
Analysis Batch: 483770

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			01/29/25 19:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		77 - 123		01/29/25 19:50	1

Lab Sample ID: LCS 580-483770/7
Matrix: Water
Analysis Batch: 483770

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline			1000	1030		ug/L		103	55 - 148		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		77 - 123

Lab Sample ID: LCSD 580-483770/8
Matrix: Water
Analysis Batch: 483770

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline			1000	1050		ug/L		105	55 - 148	2	10

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		77 - 123

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-484230/1-A
Matrix: Water
Analysis Batch: 484243

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 484230

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		200		ug/L		02/05/25 10:40	02/05/25 16:14	1
Motor Oil (>C24-C36)	ND		350		ug/L		02/05/25 10:40	02/05/25 16:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	88		50 - 150	02/05/25 10:40	02/05/25 16:14	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 580-484230/2-A
Matrix: Water
Analysis Batch: 484243

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 484230

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
#2 Diesel (C10-C24)			4000	3220		ug/L		80	50 - 120		
Motor Oil (>C24-C36)			4000	3720		ug/L		93	64 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*92*		*50 - 150*

Lab Sample ID: LCSD 580-484230/3-A
Matrix: Water
Analysis Batch: 484243

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 484230

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			4000	3250		ug/L		81	50 - 120	1	26
Motor Oil (>C24-C36)			4000	3730		ug/L		93	64 - 120	0	24

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*95*		*50 - 150*

QC Association Summary

Client: Antea USA Inc.
Project/Site: BP - OPLC - Tacoma Junction

Job ID: 580-147600-1

GC/MS VOA

Analysis Batch: 483770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-147600-1	MW-3_20250128	Total/NA	Water	NWTPH-Gx	
580-147600-2	MW-4_20250128	Total/NA	Water	NWTPH-Gx	
580-147600-3	MW-1_20250128	Total/NA	Water	NWTPH-Gx	
580-147600-4	MW-5_20250128	Total/NA	Water	NWTPH-Gx	
580-147600-5	MW-2_20250128	Total/NA	Water	NWTPH-Gx	
580-147600-6	MW-2DUP_20250128	Total/NA	Water	NWTPH-Gx	
580-147600-7	Tripblank_20250128	Total/NA	Water	NWTPH-Gx	
MB 580-483770/10	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 580-483770/7	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 580-483770/8	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

Analysis Batch: 483774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-147600-1	MW-3_20250128	Total/NA	Water	8260D	
580-147600-2	MW-4_20250128	Total/NA	Water	8260D	
580-147600-3	MW-1_20250128	Total/NA	Water	8260D	
580-147600-4	MW-5_20250128	Total/NA	Water	8260D	
580-147600-5	MW-2_20250128	Total/NA	Water	8260D	
580-147600-6	MW-2DUP_20250128	Total/NA	Water	8260D	
580-147600-7	Tripblank_20250128	Total/NA	Water	8260D	
MB 580-483774/10	Method Blank	Total/NA	Water	8260D	
LCS 580-483774/5	Lab Control Sample	Total/NA	Water	8260D	
LCSD 580-483774/6	Lab Control Sample Dup	Total/NA	Water	8260D	

GC Semi VOA

Prep Batch: 484230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-147600-1	MW-3_20250128	Total/NA	Water	3510C	
580-147600-2	MW-4_20250128	Total/NA	Water	3510C	
580-147600-3	MW-1_20250128	Total/NA	Water	3510C	
580-147600-4	MW-5_20250128	Total/NA	Water	3510C	
580-147600-5	MW-2_20250128	Total/NA	Water	3510C	
580-147600-6	MW-2DUP_20250128	Total/NA	Water	3510C	
MB 580-484230/1-A	Method Blank	Total/NA	Water	3510C	
LCS 580-484230/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 580-484230/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 484243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-147600-1	MW-3_20250128	Total/NA	Water	NWTPH-Dx	484230
580-147600-2	MW-4_20250128	Total/NA	Water	NWTPH-Dx	484230
580-147600-3	MW-1_20250128	Total/NA	Water	NWTPH-Dx	484230
580-147600-4	MW-5_20250128	Total/NA	Water	NWTPH-Dx	484230
580-147600-5	MW-2_20250128	Total/NA	Water	NWTPH-Dx	484230
580-147600-6	MW-2DUP_20250128	Total/NA	Water	NWTPH-Dx	484230
MB 580-484230/1-A	Method Blank	Total/NA	Water	NWTPH-Dx	484230
LCS 580-484230/2-A	Lab Control Sample	Total/NA	Water	NWTPH-Dx	484230
LCSD 580-484230/3-A	Lab Control Sample Dup	Total/NA	Water	NWTPH-Dx	484230

Lab Chronicle

Client: Antea USA Inc.
Project/Site: BP - OPLC - Tacoma Junction

Job ID: 580-147600-1

Client Sample ID: MW-3_20250128
Lab Sample ID: 580-147600-1
Date Collected: 01/28/25 09:50
Matrix: Water
Date Received: 01/28/25 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	483774	K1K	EET SEA	01/29/25 21:23
Total/NA	Analysis	NWTPH-Gx		1	483770	K1K	EET SEA	01/29/25 21:23
Total/NA	Prep	3510C			484230	EM	EET SEA	02/05/25 10:40
Total/NA	Analysis	NWTPH-Dx		1	484243	SW	EET SEA	02/05/25 17:54

Client Sample ID: MW-4_20250128
Lab Sample ID: 580-147600-2
Date Collected: 01/28/25 10:25
Matrix: Water
Date Received: 01/28/25 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	483774	K1K	EET SEA	01/29/25 21:46
Total/NA	Analysis	NWTPH-Gx		1	483770	K1K	EET SEA	01/29/25 21:46
Total/NA	Prep	3510C			484230	EM	EET SEA	02/05/25 10:40
Total/NA	Analysis	NWTPH-Dx		1	484243	SW	EET SEA	02/05/25 18:14

Client Sample ID: MW-1_20250128
Lab Sample ID: 580-147600-3
Date Collected: 01/28/25 11:00
Matrix: Water
Date Received: 01/28/25 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	483774	K1K	EET SEA	01/29/25 22:09
Total/NA	Analysis	NWTPH-Gx		1	483770	K1K	EET SEA	01/29/25 22:09
Total/NA	Prep	3510C			484230	EM	EET SEA	02/05/25 10:40
Total/NA	Analysis	NWTPH-Dx		1	484243	SW	EET SEA	02/05/25 18:34

Client Sample ID: MW-5_20250128
Lab Sample ID: 580-147600-4
Date Collected: 01/28/25 11:30
Matrix: Water
Date Received: 01/28/25 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	483774	K1K	EET SEA	01/29/25 22:32
Total/NA	Analysis	NWTPH-Gx		1	483770	K1K	EET SEA	01/29/25 22:32
Total/NA	Prep	3510C			484230	EM	EET SEA	02/05/25 10:40
Total/NA	Analysis	NWTPH-Dx		1	484243	SW	EET SEA	02/05/25 18:54

Client Sample ID: MW-2_20250128
Lab Sample ID: 580-147600-5
Date Collected: 01/28/25 12:00
Matrix: Water
Date Received: 01/28/25 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	483774	K1K	EET SEA	01/30/25 02:23
Total/NA	Analysis	NWTPH-Gx		1	483770	K1K	EET SEA	01/30/25 02:23
Total/NA	Prep	3510C			484230	EM	EET SEA	02/05/25 10:40
Total/NA	Analysis	NWTPH-Dx		1	484243	SW	EET SEA	02/05/25 19:14

Lab Chronicle

Client: Antea USA Inc.
Project/Site: BP - OPLC - Tacoma Junction

Job ID: 580-147600-1

Client Sample ID: MW-2DUP_20250128

Lab Sample ID: 580-147600-6

Date Collected: 01/28/25 12:00

Matrix: Water

Date Received: 01/28/25 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	483774	K1K	EET SEA	01/30/25 02:46
Total/NA	Analysis	NWTPH-Gx		1	483770	K1K	EET SEA	01/30/25 02:46
Total/NA	Prep	3510C			484230	EM	EET SEA	02/05/25 10:40
Total/NA	Analysis	NWTPH-Dx		1	484243	SW	EET SEA	02/05/25 19:34

Client Sample ID: Tripblank_20250128

Lab Sample ID: 580-147600-7

Date Collected: 01/28/25 00:00

Matrix: Water

Date Received: 01/28/25 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	483774	K1K	EET SEA	01/29/25 20:37
Total/NA	Analysis	NWTPH-Gx		1	483770	K1K	EET SEA	01/29/25 20:37

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Antea USA Inc.
Job ID: 580-147600-1
Project/Site: BP - OPLC - Tacoma Junction

Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C788-24	07-13-25

Method Summary

Client: Antea USA Inc.
Project/Site: BP - OPLC - Tacoma Junction

Job ID: 580-147600-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET SEA
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	EET SEA
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	EET SEA
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET SEA
5030B	Purge and Trap	SW846	EET SEA

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Antea USA Inc.
Project/Site: BP - OPLC - Tacoma Junction

Job ID: 580-147600-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-147600-1	MW-3_20250128	Water	01/28/25 09:50	01/28/25 12:55
580-147600-2	MW-4_20250128	Water	01/28/25 10:25	01/28/25 12:55
580-147600-3	MW-1_20250128	Water	01/28/25 11:00	01/28/25 12:55
580-147600-4	MW-5_20250128	Water	01/28/25 11:30	01/28/25 12:55
580-147600-5	MW-2_20250128	Water	01/28/25 12:00	01/28/25 12:55
580-147600-6	MW-2DUP_20250128	Water	01/28/25 12:00	01/28/25 12:55
580-147600-7	Tripblank_20250128	Water	01/28/25 00:00	01/28/25 12:55

580-147600 Chain of Custody

ratory Management Program (LaMP) Chain of Custody Record

Soil, Sediment and Groundwater Samples

BP Site Node Path: Olympic Pipeline Company | Req Due Date (mm/dd/yy): Standard TAT | Rush TAT Yes _____ No _____X

BP/RM Facility No: Tacoma Junction | Lab Work Order Number:

Lab Name:	Eurofins	BP/ARC Facility Address:	2660 Frank Albert Road East	Consultant/Contractor:	Antea Group
Lab Address:	Tacoma, WA	City, State, ZIP Code:	Fife, Washington 98424	Consultant/Contractor Project No:	OPLC Tacoma Junction 2024
Lab PM:	M. Elaine Walker	Lead Regulatory Agency:	Washington Department of Ecology	Address:	18378-B Redmond Way, Redmond, WA 98052
Lab Phone:	253-922-2310	California Global ID No.:	NA	Consultant/Contractor PM:	Nolan Lewis
Lab Shipping Accnt:	NA	Enfos Proposal No:	~~PENDING~~ WR115 1813/00BPT-0014	Phone: 503-550-3703 Email:	Nolan.Lewis@anteagroup.us
Lab Bottle Order No:	NA	Accounting Mode:	Provision __X__ OOC-BU _____ OOC-RM _____	Send/Submit EDD to:	Nolan.Lewis@anteagroup.us
Other Info:	m.elaine.walker@et.eurofinsus.com	Stage	1_Appraise (10) Activity Interim Measures (123)	Invoice To:	BP-RM _____ BP/ARC ___X___
BP/RM PM:	Wade Melton				
PM Phone:	360-594-7978				
PM Email:	wade.melton@bp.com				

Report Type & QC Level: Limited (Standard) Package ____ | Limited Plus Package ____ | Full Package ——

Lab No.	Sample Description	Date	Time	Field Matrix	Start Depth	End Depth	Depth Unit	Grab (G) or Composite (C)	Total Number of Containers	Filt	Pres	Analysis: 8260BTEX	NWTPH-Gx	NWTPH-DX	Comments
	MW-3_20250128	1/28/25	950	W				G	8			X	X	X	
	MW-4_20250128		1025	W				G	8			X	X	X	
	MW-1_20250128		1100	W				G	8			X	X	X	
	MW-5_20250128		1130	W				G	8			X	X	X	
	MW-2_20250128		1200	W				G	8			X	X	X	
	MW-2DUP_20250128		1200	W				G	8			X	X	X	
	TripBlank_20250128		0000	W				G	6			X	X		

Therm. ID: 11 Cor: 5.4° Unc: 6.4°
Cooler Dsc: LR
Packing: Bub
Cust. Seal: Yes ___ No X
Blue Ice, Wet, Dry, None
FedEx: _____
UPS: _____
Lab Cour: _____
Other: CD

Sampler's Name:	Colin Dechenne	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	Antea Group	Colin Dechenne / Antea Group	1/28/25	1255	Brook Moore EETN	1/28/25	1255
Ship Method:	Drop off	Ship Date: 1/28/25					
Shipment Tracking No:							

Special Instructions: Please only report Total Xylenes (instead of m&p or o). Report all groundwater results in ug/L

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: _____°F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP LaMP Soil/H2O COC July 2018

Login Sample Receipt Checklist

Client: Antea USA Inc.

Job Number: 580-147600-1

Login Number: 147600
List Number: 1
Creator: Groves, Elizabeth

List Source: Eurofins Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Seattle Job No.: 580-147600-1

SDG No.:

Batch Number: 483774 Batch Start Date: 01/29/25 16:45 Batch Analyst: Klongnganchui, Kanjana 1

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS 00053	VOAMasterSEC 00097	VOASTDGASSEC 00004
LCS 580-483774/5		8260D			10 mL	10 mL		10 uL	5 uL	5 uL
LCSD 580-483774/6		8260D			10 mL	10 mL		10 uL	5 uL	5 uL
MB 580-483774/10		8260D			10 mL	10 mL		10 uL		
580-147600-B-7	Tripblank_20250128	8260D	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-147600-A-1	MW-3_20250128	8260D	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-147600-A-2	MW-4_20250128	8260D	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-147600-A-3	MW-1_20250128	8260D	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-147600-A-4	MW-5_20250128	8260D	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-147600-A-5	MW-2_20250128	8260D	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-147600-A-6	MW-32DUP_20250128	8260D	Water	T	10 mL	10 mL	<2 SU	10 uL		

Batch Notes	
pH Indicator ID	204524
Vial Lot Number	0112201I

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GASOLINE RANGE ORGANICS BATCH WORKSHEET

Lab Name: Eurofins Seattle Job No.: 580-147600-1

SDG No.:

Batch Number: 483770 Batch Start Date: 01/29/25 16:45 Batch Analyst: Klongnganchui, Kanjana 1

Batch Method: NWTPH-Gx Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS 00053	GRO_LCS_SEC 00001	
LCS 580-483770/7		NWTPH-Gx			10 mL	10 mL		10 uL	25 uL	
LCSD 580-483770/8		NWTPH-Gx			10 mL	10 mL		10 uL	25 uL	
MB 580-483770/10		NWTPH-Gx			10 mL	10 mL		10 uL		
580-147600-B-7	Tripblank_20250128	NWTPH-Gx	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-147600-A-1	MW-3_20250128	NWTPH-Gx	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-147600-A-2	MW-4_20250128	NWTPH-Gx	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-147600-A-3	MW-1_20250128	NWTPH-Gx	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-147600-A-4	MW-5_20250128	NWTPH-Gx	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-147600-A-5	MW-2_20250128	NWTPH-Gx	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-147600-A-6	MW-32DUP_20250128	NWTPH-Gx	Water	T	10 mL	10 mL	<2 SU	10 uL		

Batch Notes	
pH Indicator ID	204524
Vial Lot Number	0112201I

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HYDROCARBONS BATCH WORKSHEET

Lab Name: Eurofins Seattle Job No.: 580-147600-1

SDG No.:

Batch Number: 484230 Batch Start Date: 02/05/25 10:40 Batch Analyst: Madrid-fierro, Evelyn

Batch Method: 3510C Batch End Date: 02/05/25 15:01

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH
MB 580-484230/1		3510C, NWTPH-Dx					250 mL	2 mL	7 SU	2 SU
LCS 580-484230/2		3510C, NWTPH-Dx					250 mL	2 mL	7 SU	2 SU
LCSD 580-484230/3		3510C, NWTPH-Dx					250 mL	2 mL	7 SU	2 SU
580-147600-G-1	MW-3_20250128	3510C, NWTPH-Dx	Water	T	00430.99 g	00176.96 g	254 mL	2 mL	2 SU	n/a SU
580-147600-H-2	MW-4_20250128	3510C, NWTPH-Dx	Water	T	00435.91 g	00179.64 g	256.3 mL	2 mL	2 SU	n/a SU
580-147600-G-3	MW-1_20250128	3510C, NWTPH-Dx	Water	T	00437.35 g	00179.74 g	257.6 mL	2 mL	2 SU	n/a SU
580-147600-H-4	MW-5_20250128	3510C, NWTPH-Dx	Water	T	00434.84 g	00178.37 g	256.5 mL	2 mL	2 SU	n/a SU
580-147600-G-5	MW-2_20250128	3510C, NWTPH-Dx	Water	T	00433.75 g	00175.92 g	257.8 mL	2 mL	2 SU	n/a SU
580-147600-G-6	MW-2DUP_20250128	3510C, NWTPH-Dx	Water	T	00436.71 g	00175.84 g	260.9 mL	2 mL	2 SU	n/a SU

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	SecondAdjustpH	TPH_Water_Spk 00044	TPH_WaterSurr 00122			
MB 580-484230/1		3510C, NWTPH-Dx			n/a SU		100 uL			
LCS 580-484230/2		3510C, NWTPH-Dx			n/a SU	100 uL	100 uL			
LCSD 580-484230/3		3510C, NWTPH-Dx			n/a SU	100 uL	100 uL			
580-147600-G-1	MW-3_20250128	3510C, NWTPH-Dx	Water	T	n/a SU		100 uL			
580-147600-H-2	MW-4_20250128	3510C, NWTPH-Dx	Water	T	n/a SU		100 uL			
580-147600-G-3	MW-1_20250128	3510C, NWTPH-Dx	Water	T	n/a SU		100 uL			
580-147600-H-4	MW-5_20250128	3510C, NWTPH-Dx	Water	T	n/a SU		100 uL			
580-147600-G-5	MW-2_20250128	3510C, NWTPH-Dx	Water	T	n/a SU		100 uL			
580-147600-G-6	MW-2DUP_20250128	3510C, NWTPH-Dx	Water	T	n/a SU		100 uL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HYDROCARBONS BATCH WORKSHEET

Lab Name: Eurofins Seattle Job No.: 580-147600-1

SDG No.:

Batch Number: 484230 Batch Start Date: 02/05/25 10:40 Batch Analyst: Madrid-fierro, Evelyn

Batch Method: 3510C Batch End Date: 02/05/25 15:01

Batch Notes	
Method/Fraction	3510C_LVI/NWTPH_Dx/8015D_DRO
Balance ID	SEA225
Balance is Level? (Y/N)	yes
pH Indicator ID	10BDH3421/6105009/6204001
Pipette/Syringe/Dispenser ID	E4
Analyst ID - Extraction	EF/MB/JH
Reagent Water ID	DI
Analyst ID - Spike Analyst	EF
Analyst ID - Spike Witness Analyst	JH
Sufficient Volume for Batch QC	no
Acid Used for pH Adjustment ID	3932454
Prep Solvent ID	3925695
Prep Solvent Volume Used	100 mL
Filter ID	09-790-12F
Na2SO4 ID	3916219
Analyst ID - Concentration	JH/ER
Equipment ID - Concentration 1	Steambath 1
Thermometer ID - Concentration 1	61013-040-1
Concentration 1 Uncorrected Temperature	70.0-75.0 Degrees C
Concentration 1 Corrected Temperature	69.4-74.4 Degrees C
Equipment ID - Concentration 2	Turbovap 6
Thermometer ID - Concentration 2	DIGITAL READOUT
Concentration 2 Uncorrected Temperature	42 Degrees C
Concentration 2 Corrected Temperature	40 Degrees C
Vial Lot Number	13-09-1335
Pipette Tip Lot ID	14672-200
Batch Comment	Vialed by: ER Reviewed by: EF

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HYDROCARBONS BATCH WORKSHEET

Lab Name: Eurofins Seattle Job No.: 580-147600-1

SDG No.:

Batch Number: 484230 Batch Start Date: 02/05/25 10:40 Batch Analyst: Madrid-fierro, Evelyn

Batch Method: 3510C Batch End Date: 02/05/25 15:01

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Nolan Lewis
Antea USA Inc.
205 SE Spokane Street
Suite 300
Portland, Oregon 97202

Generated 5/21/2025 4:20:23 PM

JOB DESCRIPTION

BP - OPLC - Tacoma Junction 2025

JOB NUMBER

580-150340-1

Eurofins Seattle
5755 8th Street East
Tacoma WA 98424

See page two for job notes and contact information.

Job Notes

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Compliance Statement

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the BPLAMP Technical Specifications, applicable federal, state, local regulations and certification requirements as well as the methodologies as described in laboratory SOPs reviewed by the BPLAMP. This Laboratory Report is confidential and is intended for the sole use of Eurofins Environment Testing (USA) and its client. This report shall not be reproduced, except in full, without written permission from Eurofins Environment Testing (USA). The signature on the cover page extends to the case narrative and all the data and forms in the package. The Chain of Custody is included and is an integral part of this report.

Authorization

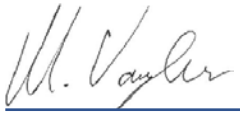

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Table of Contents

Definitions/Glossary

Client: Antea USA Inc. Job ID: 580-150340-1
Project/Site: BP - OPLC - Tacoma Junction 2025

Glossary

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

Job ID: 580-150340-1 Eurofins Seattle

Job Narrative
580-150340-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 5/8/2025 11:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 8.5°C.

Method NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)
Samples MW-3_20250508 (580-150340-1), MW-4_20250508 (580-150340-2), MW-1_20250508 (580-150340-3), MW-2_20250508 (580-150340-4), MW-5_20250508 (580-150340-5), MW-5DUP_20250508 (580-150340-6) and Tripblank_20250508 (580-150340-7) were analyzed for Northwest - Volatile Petroleum Products (GC/MS). The samples were analyzed on 5/16/2025.

Method 8260D - Volatile Organic Compounds by GC/MS
Samples MW-3_20250508 (580-150340-1), MW-4_20250508 (580-150340-2), MW-1_20250508 (580-150340-3), MW-2_20250508 (580-150340-4), MW-5_20250508 (580-150340-5), MW-5DUP_20250508 (580-150340-6) and Tripblank_20250508 (580-150340-7) were analyzed for Volatile Organic Compounds by GC/MS. The samples were analyzed on 5/16/2025.

Method NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)
Samples MW-3_20250508 (580-150340-1), MW-4_20250508 (580-150340-2), MW-1_20250508 (580-150340-3), MW-2_20250508 (580-150340-4), MW-5_20250508 (580-150340-5) and MW-5DUP_20250508 (580-150340-6) were analyzed for Northwest - Semi-Volatile Petroleum Products (GC). The samples were prepared on 5/12/2025 and analyzed on 5/16/2025.

Detection Summary

Client: Antea USA Inc.
Project/Site: BP - OPLC - Tacoma Junction 2025

Job ID: 580-150340-1

Client Sample ID: MW-3_20250508 — Lab Sample ID: 580-150340-1

No Detections.

Client Sample ID: MW-4_20250508 — Lab Sample ID: 580-150340-2

No Detections.

Client Sample ID: MW-1_20250508 — Lab Sample ID: 580-150340-3

No Detections.

Client Sample ID: MW-2_20250508 — Lab Sample ID: 580-150340-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	19		1.0		ug/L	1		8260D	Total/NA
Ethylbenzene	5.5		1.0		ug/L	1		8260D	Total/NA
m-Xylene & p-Xylene	4.9		2.0		ug/L	1		8260D	Total/NA
Toluene	1.4		1.0		ug/L	1		8260D	Total/NA
Xylenes, Total	4.9		2.0		ug/L	1		8260D	Total/NA
Gasoline	1200		150		ug/L	1		NWTPH-Gx	Total/NA
#2 Diesel (C10-C24)	990		190		ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-5_20250508 — Lab Sample ID: 580-150340-5

No Detections.

Client Sample ID: MW-5DUP_20250508 — Lab Sample ID: 580-150340-6

No Detections.

Client Sample ID: Tripblank_20250508 — Lab Sample ID: 580-150340-7

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-3_20250508
Lab Sample ID: 580-150340-1
Date Collected: 05/08/25 09:10
Matrix: Water
Date Received: 05/08/25 11:20

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			05/16/25 05:34	1
Ethylbenzene	ND		1.0		ug/L			05/16/25 05:34	1
m-Xylene & p-Xylene	ND		2.0		ug/L			05/16/25 05:34	1
o-Xylene	ND		1.0		ug/L			05/16/25 05:34	1
Toluene	ND		1.0		ug/L			05/16/25 05:34	1
Xylenes, Total	ND		2.0		ug/L			05/16/25 05:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*05/16/25 05:34*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*05/16/25 05:34*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*05/16/25 05:34*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*05/16/25 05:34*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			05/16/25 05:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*77 - 123*		*05/16/25 05:34*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		190		ug/L		05/12/25 09:07	05/16/25 18:19	1
Motor Oil (>C24-C36)	ND		340		ug/L		05/12/25 09:07	05/16/25 18:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*58*		*50 - 150*	*05/12/25 09:07*	*05/16/25 18:19*	*1*

Client Sample ID: MW-4_20250508
Lab Sample ID: 580-150340-2
Date Collected: 05/08/25 09:35
Matrix: Water
Date Received: 05/08/25 11:20

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			05/16/25 05:11	1
Ethylbenzene	ND		1.0		ug/L			05/16/25 05:11	1
m-Xylene & p-Xylene	ND		2.0		ug/L			05/16/25 05:11	1
o-Xylene	ND		1.0		ug/L			05/16/25 05:11	1
Toluene	ND		1.0		ug/L			05/16/25 05:11	1
Xylenes, Total	ND		2.0		ug/L			05/16/25 05:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*05/16/25 05:11*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*05/16/25 05:11*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*05/16/25 05:11*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*05/16/25 05:11*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			05/16/25 05:11	1

Client Sample ID: MW-4_20250508
Lab Sample ID: 580-150340-2
Date Collected: 05/08/25 09:35
Matrix: Water
Date Received: 05/08/25 11:20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*77 - 123*		*05/16/25 05:11*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		190		ug/L		05/12/25 09:07	05/16/25 18:39	1
Motor Oil (>C24-C36)	ND		330		ug/L		05/12/25 09:07	05/16/25 18:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*55*		*50 - 150*	*05/12/25 09:07*	*05/16/25 18:39*	*1*

Client Sample ID: MW-1_20250508
Lab Sample ID: 580-150340-3
Date Collected: 05/08/25 10:00
Matrix: Water
Date Received: 05/08/25 11:20

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			05/16/25 05:57	1
Ethylbenzene	ND		1.0		ug/L			05/16/25 05:57	1
m-Xylene & p-Xylene	ND		2.0		ug/L			05/16/25 05:57	1
o-Xylene	ND		1.0		ug/L			05/16/25 05:57	1
Toluene	ND		1.0		ug/L			05/16/25 05:57	1
Xylenes, Total	ND		2.0		ug/L			05/16/25 05:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*05/16/25 05:57*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*05/16/25 05:57*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*05/16/25 05:57*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*05/16/25 05:57*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			05/16/25 05:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*77 - 123*		*05/16/25 05:57*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		190		ug/L		05/12/25 09:07	05/16/25 19:00	1
Motor Oil (>C24-C36)	ND		340		ug/L		05/12/25 09:07	05/16/25 19:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*56*		*50 - 150*	*05/12/25 09:07*	*05/16/25 19:00*	*1*

Client Sample ID: MW-2_20250508
Lab Sample ID: 580-150340-4
Date Collected: 05/08/25 10:25
Matrix: Water
Date Received: 05/08/25 11:20

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**19**		1.0		ug/L			05/16/25 06:20	1
Ethylbenzene	**5.5**		1.0		ug/L			05/16/25 06:20	1
m-Xylene & p-Xylene	**4.9**		2.0		ug/L			05/16/25 06:20	1

Client Sample ID: MW-2_20250508

Lab Sample ID: 580-150340-4

Date Collected: 05/08/25 10:25
Matrix: Water
Date Received: 05/08/25 11:20

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		1.0		ug/L			05/16/25 06:20	1
Toluene	**1.4**		1.0		ug/L			05/16/25 06:20	1
Xylenes, Total	**4.9**		2.0		ug/L			05/16/25 06:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*05/16/25 06:20*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*05/16/25 06:20*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*05/16/25 06:20*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*05/16/25 06:20*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**1200**		150		ug/L			05/16/25 06:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*77 - 123*		*05/16/25 06:20*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**990**		190		ug/L		05/12/25 09:07	05/16/25 19:20	1
Motor Oil (>C24-C36)	ND		330		ug/L		05/12/25 09:07	05/16/25 19:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*61*		*50 - 150*	*05/12/25 09:07*	*05/16/25 19:20*	*1*

Client Sample ID: MW-5_20250508

Lab Sample ID: 580-150340-5

Date Collected: 05/08/25 11:00
Matrix: Water
Date Received: 05/08/25 11:20

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			05/16/25 07:07	1
Ethylbenzene	ND		1.0		ug/L			05/16/25 07:07	1
m-Xylene & p-Xylene	ND		2.0		ug/L			05/16/25 07:07	1
o-Xylene	ND		1.0		ug/L			05/16/25 07:07	1
Toluene	ND		1.0		ug/L			05/16/25 07:07	1
Xylenes, Total	ND		2.0		ug/L			05/16/25 07:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*05/16/25 07:07*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*05/16/25 07:07*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*05/16/25 07:07*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*05/16/25 07:07*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			05/16/25 07:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*77 - 123*		*05/16/25 07:07*	*1*

Client Sample ID: MW-5_20250508

Lab Sample ID: 580-150340-5
Date Collected: 05/08/25 11:00
Matrix: Water
Date Received: 05/08/25 11:20

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		190		ug/L		05/12/25 09:07	05/16/25 19:40	1
Motor Oil (>C24-C36)	ND		330		ug/L		05/12/25 09:07	05/16/25 19:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*57*		*50 - 150*	*05/12/25 09:07*	*05/16/25 19:40*	*1*

Client Sample ID: MW-5DUP_20250508

Lab Sample ID: 580-150340-6
Date Collected: 05/08/25 11:00
Matrix: Water
Date Received: 05/08/25 11:20

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			05/16/25 07:30	1
Ethylbenzene	ND		1.0		ug/L			05/16/25 07:30	1
m-Xylene & p-Xylene	ND		2.0		ug/L			05/16/25 07:30	1
o-Xylene	ND		1.0		ug/L			05/16/25 07:30	1
Toluene	ND		1.0		ug/L			05/16/25 07:30	1
Xylenes, Total	ND		2.0		ug/L			05/16/25 07:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*05/16/25 07:30*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*05/16/25 07:30*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*05/16/25 07:30*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*05/16/25 07:30*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			05/16/25 07:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*77 - 123*		*05/16/25 07:30*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		200		ug/L		05/12/25 09:07	05/16/25 20:01	1
Motor Oil (>C24-C36)	ND		340		ug/L		05/12/25 09:07	05/16/25 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*56*		*50 - 150*	*05/12/25 09:07*	*05/16/25 20:01*	*1*

Client Sample ID: Tripblank_20250508

Lab Sample ID: 580-150340-7
Date Collected: 05/08/25 00:00
Matrix: Water
Date Received: 05/08/25 11:20

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			05/16/25 03:14	1
Ethylbenzene	ND		1.0		ug/L			05/16/25 03:14	1
m-Xylene & p-Xylene	ND		2.0		ug/L			05/16/25 03:14	1
o-Xylene	ND		1.0		ug/L			05/16/25 03:14	1
Toluene	ND		1.0		ug/L			05/16/25 03:14	1
Xylenes, Total	ND		2.0		ug/L			05/16/25 03:14	1

Client: Antea USA Inc.
Project/Site: BP - OPLC - Tacoma Junction 2025

Job ID: 580-150340-1

Client Sample ID: Tripblank_20250508

Date Collected: 05/08/25 00:00
Date Received: 05/08/25 11:20

Lab Sample ID: 580-150340-7

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*05/16/25 03:14*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*05/16/25 03:14*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*05/16/25 03:14*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*05/16/25 03:14*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			05/16/25 03:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*77 - 123*		*05/16/25 03:14*	*1*

Surrogate Summary

Client: Antea USA Inc.
Project/Site: BP - OPLC - Tacoma Junction 2025

Job ID: 580-150340-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(80-120)	(80-120)	(80-120)
580-150340-1	MW-3_20250508	106	95	100	103
580-150340-2	MW-4_20250508	107	95	100	101
580-150340-3	MW-1_20250508	107	96	101	102
580-150340-4	MW-2_20250508	103	100	103	100
580-150340-5	MW-5_20250508	107	98	100	103
580-150340-6	MW-5DUP_20250508	107	98	100	103
580-150340-7	Tripblank_20250508	107	96	101	103
LCS 580-492685/5	Lab Control Sample	106	99	101	102
LCSD 580-492685/6	Lab Control Sample Dup	104	98	100	103
MB 580-492685/10	Method Blank	106	97	100	102

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(77-123)
580-150340-1	MW-3_20250508	95
580-150340-2	MW-4_20250508	95
580-150340-3	MW-1_20250508	96
580-150340-4	MW-2_20250508	100
580-150340-5	MW-5_20250508	98
580-150340-6	MW-5DUP_20250508	98
580-150340-7	Tripblank_20250508	96
LCS 580-492680/7	Lab Control Sample	97
LCSD 580-492680/8	Lab Control Sample Dup	97
MB 580-492680/10	Method Blank	97

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		OTPH
Lab Sample ID	Client Sample ID	(50-150)
580-150340-1	MW-3_20250508	58
580-150340-2	MW-4_20250508	55
580-150340-3	MW-1_20250508	56
580-150340-4	MW-2_20250508	61
580-150340-5	MW-5_20250508	57
580-150340-6	MW-5DUP_20250508	56
LCS 580-492300/2-A	Lab Control Sample	81
LCSD 580-492300/3-A	Lab Control Sample Dup	79

Surrogate Summary

Client: Antea USA Inc. Job ID: 580-150340-1
Project/Site: BP - OPLC - Tacoma Junction 2025

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	OTPH (50-150)								
MB 580-492300/1-A	Method Blank	63								

Surrogate Legend

OTPH = o-Terphenyl

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-492685/10
Matrix: Water
Analysis Batch: 492685

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			05/16/25 02:28	1
Ethylbenzene	ND		1.0		ug/L			05/16/25 02:28	1
m-Xylene & p-Xylene	ND		2.0		ug/L			05/16/25 02:28	1
o-Xylene	ND		1.0		ug/L			05/16/25 02:28	1
Toluene	ND		1.0		ug/L			05/16/25 02:28	1
Xylenes, Total	ND		2.0		ug/L			05/16/25 02:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*05/16/25 02:28*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*05/16/25 02:28*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*05/16/25 02:28*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*05/16/25 02:28*	*1*

Lab Sample ID: LCS 580-492685/5
Matrix: Water
Analysis Batch: 492685

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			5.00	5.16		ug/L		103	80 - 122		
Ethylbenzene			5.00	5.09		ug/L		102	80 - 120		
m-Xylene & p-Xylene			5.00	5.08		ug/L		102	80 - 120		
o-Xylene			5.00	4.97		ug/L		99	80 - 120		
Toluene			5.00	5.09		ug/L		102	80 - 120		
Xylenes, Total			10.0	10.1		ug/L		101	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*

Lab Sample ID: LCSD 580-492685/6
Matrix: Water
Analysis Batch: 492685

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			5.00	5.30		ug/L		106	80 - 122	3	14
Ethylbenzene			5.00	5.16		ug/L		103	80 - 120	2	14
m-Xylene & p-Xylene			5.00	5.19		ug/L		104	80 - 120	2	14
o-Xylene			5.00	5.16		ug/L		103	80 - 120	4	16
Toluene			5.00	5.16		ug/L		103	80 - 120	1	13
Xylenes, Total			10.0	10.4		ug/L		104	80 - 120	3	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-492685/6
Matrix: Water
Analysis Batch: 492685

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	*103*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 580-492680/10
Matrix: Water
Analysis Batch: 492680

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			05/16/25 02:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*97*		*77 - 123*		*05/16/25 02:28*	*1*

Lab Sample ID: LCS 580-492680/7
Matrix: Water
Analysis Batch: 492680

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline			1000	995		ug/L		100	55 - 148		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*97*		*77 - 123*

Lab Sample ID: LCSD 580-492680/8
Matrix: Water
Analysis Batch: 492680

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline			1000	993		ug/L		99	55 - 148	0	10

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*97*		*77 - 123*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-492300/1-A
Matrix: Water
Analysis Batch: 492743

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 492300

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		200		ug/L		05/12/25 09:07	05/16/25 17:18	1
Motor Oil (>C24-C36)	ND		350		ug/L		05/12/25 09:07	05/16/25 17:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*63*		*50 - 150*	*05/12/25 09:07*	*05/16/25 17:18*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 580-492300/2-A
Matrix: Water
Analysis Batch: 492743

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 492300

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
#2 Diesel (C10-C24)			4000	3160		ug/L		79	50 - 120		
Motor Oil (>C24-C36)			4000	3340		ug/L		83	64 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*81*		*50 - 150*

Lab Sample ID: LCSD 580-492300/3-A
Matrix: Water
Analysis Batch: 492743

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 492300

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			4000	3030		ug/L		76	50 - 120	4	26
Motor Oil (>C24-C36)			4000	3240		ug/L		81	64 - 120	3	24

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*79*		*50 - 150*

QC Association Summary

Client: Antea USA Inc.
Project/Site: BP - OPLC - Tacoma Junction 2025

Job ID: 580-150340-1

GC/MS VOA

Analysis Batch: 492680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-150340-1	MW-3_20250508	Total/NA	Water	NWTPH-Gx	
580-150340-2	MW-4_20250508	Total/NA	Water	NWTPH-Gx	
580-150340-3	MW-1_20250508	Total/NA	Water	NWTPH-Gx	
580-150340-4	MW-2_20250508	Total/NA	Water	NWTPH-Gx	
580-150340-5	MW-5_20250508	Total/NA	Water	NWTPH-Gx	
580-150340-6	MW-5DUP_20250508	Total/NA	Water	NWTPH-Gx	
580-150340-7	Tripblank_20250508	Total/NA	Water	NWTPH-Gx	
MB 580-492680/10	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 580-492680/7	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 580-492680/8	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

Analysis Batch: 492685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-150340-1	MW-3_20250508	Total/NA	Water	8260D	
580-150340-2	MW-4_20250508	Total/NA	Water	8260D	
580-150340-3	MW-1_20250508	Total/NA	Water	8260D	
580-150340-4	MW-2_20250508	Total/NA	Water	8260D	
580-150340-5	MW-5_20250508	Total/NA	Water	8260D	
580-150340-6	MW-5DUP_20250508	Total/NA	Water	8260D	
580-150340-7	Tripblank_20250508	Total/NA	Water	8260D	
MB 580-492685/10	Method Blank	Total/NA	Water	8260D	
LCS 580-492685/5	Lab Control Sample	Total/NA	Water	8260D	
LCSD 580-492685/6	Lab Control Sample Dup	Total/NA	Water	8260D	

GC Semi VOA

Prep Batch: 492300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-150340-1	MW-3_20250508	Total/NA	Water	3510C	
580-150340-2	MW-4_20250508	Total/NA	Water	3510C	
580-150340-3	MW-1_20250508	Total/NA	Water	3510C	
580-150340-4	MW-2_20250508	Total/NA	Water	3510C	
580-150340-5	MW-5_20250508	Total/NA	Water	3510C	
580-150340-6	MW-5DUP_20250508	Total/NA	Water	3510C	
MB 580-492300/1-A	Method Blank	Total/NA	Water	3510C	
LCS 580-492300/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 580-492300/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 492743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-150340-1	MW-3_20250508	Total/NA	Water	NWTPH-Dx	492300
580-150340-2	MW-4_20250508	Total/NA	Water	NWTPH-Dx	492300
580-150340-3	MW-1_20250508	Total/NA	Water	NWTPH-Dx	492300
580-150340-4	MW-2_20250508	Total/NA	Water	NWTPH-Dx	492300
580-150340-5	MW-5_20250508	Total/NA	Water	NWTPH-Dx	492300
580-150340-6	MW-5DUP_20250508	Total/NA	Water	NWTPH-Dx	492300
MB 580-492300/1-A	Method Blank	Total/NA	Water	NWTPH-Dx	492300
LCS 580-492300/2-A	Lab Control Sample	Total/NA	Water	NWTPH-Dx	492300
LCSD 580-492300/3-A	Lab Control Sample Dup	Total/NA	Water	NWTPH-Dx	492300

Lab Chronicle

Client: Antea USA Inc.
Project/Site: BP - OPLC - Tacoma Junction 2025

Job ID: 580-150340-1

Client Sample ID: MW-3_20250508
Lab Sample ID: 580-150340-1
Date Collected: 05/08/25 09:10
Matrix: Water
Date Received: 05/08/25 11:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	492685	AA	EET SEA	05/16/25 05:34
Total/NA	Analysis	NWTPH-Gx		1	492680	AA	EET SEA	05/16/25 05:34
Total/NA	Prep	3510C			492300	EM	EET SEA	05/12/25 09:07
Total/NA	Analysis	NWTPH-Dx		1	492743	SW	EET SEA	05/16/25 18:19

Client Sample ID: MW-4_20250508
Lab Sample ID: 580-150340-2
Date Collected: 05/08/25 09:35
Matrix: Water
Date Received: 05/08/25 11:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	492685	AA	EET SEA	05/16/25 05:11
Total/NA	Analysis	NWTPH-Gx		1	492680	AA	EET SEA	05/16/25 05:11
Total/NA	Prep	3510C			492300	EM	EET SEA	05/12/25 09:07
Total/NA	Analysis	NWTPH-Dx		1	492743	SW	EET SEA	05/16/25 18:39

Client Sample ID: MW-1_20250508
Lab Sample ID: 580-150340-3
Date Collected: 05/08/25 10:00
Matrix: Water
Date Received: 05/08/25 11:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	492685	AA	EET SEA	05/16/25 05:57
Total/NA	Analysis	NWTPH-Gx		1	492680	AA	EET SEA	05/16/25 05:57
Total/NA	Prep	3510C			492300	EM	EET SEA	05/12/25 09:07
Total/NA	Analysis	NWTPH-Dx		1	492743	SW	EET SEA	05/16/25 19:00

Client Sample ID: MW-2_20250508
Lab Sample ID: 580-150340-4
Date Collected: 05/08/25 10:25
Matrix: Water
Date Received: 05/08/25 11:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	492685	AA	EET SEA	05/16/25 06:20
Total/NA	Analysis	NWTPH-Gx		1	492680	AA	EET SEA	05/16/25 06:20
Total/NA	Prep	3510C			492300	EM	EET SEA	05/12/25 09:07
Total/NA	Analysis	NWTPH-Dx		1	492743	SW	EET SEA	05/16/25 19:20

Client Sample ID: MW-5_20250508
Lab Sample ID: 580-150340-5
Date Collected: 05/08/25 11:00
Matrix: Water
Date Received: 05/08/25 11:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	492685	AA	EET SEA	05/16/25 07:07
Total/NA	Analysis	NWTPH-Gx		1	492680	AA	EET SEA	05/16/25 07:07
Total/NA	Prep	3510C			492300	EM	EET SEA	05/12/25 09:07
Total/NA	Analysis	NWTPH-Dx		1	492743	SW	EET SEA	05/16/25 19:40

Lab Chronicle

Client: Antea USA Inc.
Project/Site: BP - OPLC - Tacoma Junction 2025

Job ID: 580-150340-1

Client Sample ID: MW-5DUP_20250508

Lab Sample ID: 580-150340-6

Date Collected: 05/08/25 11:00
Date Received: 05/08/25 11:20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	492685	AA	EET SEA	05/16/25 07:30
Total/NA	Analysis	NWTPH-Gx		1	492680	AA	EET SEA	05/16/25 07:30
Total/NA	Prep	3510C			492300	EM	EET SEA	05/12/25 09:07
Total/NA	Analysis	NWTPH-Dx		1	492743	SW	EET SEA	05/16/25 20:01

Client Sample ID: Tripblank_20250508

Lab Sample ID: 580-150340-7

Date Collected: 05/08/25 00:00
Date Received: 05/08/25 11:20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	492685	AA	EET SEA	05/16/25 03:14
Total/NA	Analysis	NWTPH-Gx		1	492680	AA	EET SEA	05/16/25 03:14

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Antea USA Inc.
Job ID: 580-150340-1
Project/Site: BP - OPLC - Tacoma Junction 2025

Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C788-24	07-13-25

Method Summary

Client: Antea USA Inc.
Project/Site: BP - OPLC - Tacoma Junction 2025

Job ID: 580-150340-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET SEA
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	EET SEA
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	EET SEA
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET SEA
5030B	Purge and Trap	SW846	EET SEA

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Antea USA Inc.
Job ID: 580-150340-1
Project/Site: BP - OPLC - Tacoma Junction 2025

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-150340-1	MW-3_20250508	Water	05/08/25 09:10	05/08/25 11:20
580-150340-2	MW-4_20250508	Water	05/08/25 09:35	05/08/25 11:20
580-150340-3	MW-1_20250508	Water	05/08/25 10:00	05/08/25 11:20
580-150340-4	MW-2_20250508	Water	05/08/25 10:25	05/08/25 11:20
580-150340-5	MW-5_20250508	Water	05/08/25 11:00	05/08/25 11:20
580-150340-6	MW-5DUP_20250508	Water	05/08/25 11:00	05/08/25 11:20
580-150340-7	Tripblank_20250508	Water	05/08/25 00:00	05/08/25 11:20

Laboratory Management Program (LaMP) Chain of Custody Record

Soil, Sediment and Groundwater Samples

Page _1_ of _1_

BP Site Node Path: Olympic Pipeline Company | **Req Due Date (mm/dd/yy):** Standard TAT | Rush TAT Yes ____ No X

BP/RM Facility No: Tacoma Junction | **Lab Work Order Number:** ____

Lab Name: Eurofins	BP/ARC Facility Address: 2660 Frank Albert Road East	Consultant/Contractor:	Antea Group
Lab Address: Tacoma, WA	City, State, ZIP Code: Fife, Washington 98424	Consultant/Contractor Project No:	OPLC Tacoma Junction ~~2024~~ 2025 SN 5/8
Lab PM: Madison Vaughan	Lead Regulatory Agency: Washington Department of Ecology	Address:	18378-B Redmond Way, Redmond, WA 98052
Lab Phone: 253-922-2310	California Global ID No.: NA	Consultant/Contractor PM:	Nolan Lewis
Lab Shipping Accnt: NA	Enfos Proposal No: WR1151813 / 00BPT-0014	Phone: 503-550-3703	Email: Nolan.Lewis@anteagroup.us
Lab Bottle Order No: NA	Accounting Mode: Provision _X_ OOC-BU ____ OOC-RM ____	Send/Submit EDD to:	Nolan.Lewis@anteagroup.us
Other Info: Madison.Vaughan@et.eurofinsus.com	Stage 1_Appraise (10) Activity Interim Measures (123)	Invoice To:	BP-RM ____ BP/ARC _X_

BP/RM PM: Wade Melton
PM Phone: 360-594-7978
PM Email: wade.melton@bp.com

Report Type & QC Level
Limited (Standard) Package ____
Limited Plus Package ____
Full Package ____

580-150340 COC

580-150340 Chain of Custody

Lab No.	Sample Description	Date	Time	Field Matrix	Start Depth	End Depth	Depth Unit	Grab (G) or Composite (C)	Total Number of Containers	Analysis	BTEX by EPA Method 8260	NWTPH-Gx	NWTPH-DX
	MW-3_20250508	5/8/25	910	W	-	-	-	G	8		X	X	X
	MW-4_20250508	5/8/25	935	W	-	-	-	G	8		X	X	X
	MW-1_20250508	5/8/25	1000	W	-	-	-	G	8		X	X	X
	MW-2_20250508	5/8/25	1025	W	-	-	-	G	8		X	X	X
	MW-5_20250508	5/8/25	1100	W	-	-	-	G	8		X	X	X
	MW-5DUP-20250508	5/8/25	1100	W	-	-	-	G	8		X	X	X
	Trip blank	5/8/25	0000	W	-	-	-	G	6		X	X	

Therm. ID: 15 Cor: 8.5 ° Unc: 8.5 °
Cooler Dsc: LB
Packing: BuB
Cust. Seal: Yes ___ No X
Blue Ice, Wet, Dry, None (Wet circled)
FedEx: ____
UPS: ____
Lab Cour: ____
Other: CD

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Sneha Nachimuthu / Colin Deehenne	Sneha Nachimuthu / Antea	5/8/25	1120	[signature] EETN	5/8/25	1120
Sampler's Company: Antea Group						
Ship Method: Drop-Off Ship Date: 5/8/25						
Shipment Tracking No:						

Special Instructions: Please only report Total Xylenes (instead of m&p or o). Report all groundwater results in ug/L

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ________°F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP LaMP Soil/H2O COC July 2018

Laboratory Management Program (LaMP) Chain of Custody Record
Soil, Sediment and Groundwater Samples

BP Site Node Path: Olympic Pipeline Company | Req Due Date (mm/dd/yy): Standard TAT | Rush TAT Yes _____ No X

BP/RM Facility No: Tacoma Junction | Lab Work Order Number:

Lab Name:	Eurofins	BP/ARC Facility Address:	2660 Frank Albert Road East	Consultant/Contractor:	Antea Group
Lab Address:	Tacoma, WA	City, State, ZIP Code:	Fife, Washington 98424	Consultant/Contractor Project No:	OPLC Tacoma Junction ~~2024~~ 2025 (N/S/B)
Lab PM:	Madison Vaughan	Lead Regulatory Agency:	Washington Department of Ecology	Address:	18378-B Redmond Way, Redmond, WA 98052
Lab Phone:	253-922-2310	California Global ID No.:	NA	Consultant/Contractor PM:	Nolan Lewis
Lab Shipping Accnt:	NA	Enfos Proposal No:	WR1151813 / 00BPT-0014	Phone: 503-550-3703	Email: Nolan.Lewis@anteagroup.us
Lab Bottle Order No:	NA	Accounting Mode:	Provision __X__ OOC-BU _____ OOC-RM _____	Send/Submit EDD to:	Nolan.Lewis@anteagroup.us
Other Info:	Madison.Vaughan@et.eurofinsus.com	Stage	1_Appraise (10) Activity Interim Measures (123)	Invoice To:	BP-RM _____ BP/ARC ___X___
BP/RM PM:	Wade Melton				
PM Phone:	360-594-7978				
PM Email:	wade.melton@bp.com				

Report Type & QC Level: Limited (Standard) Package ____ | Limited Plus Package ____ | Full Package ____

580-150340 COC

580-150340 Chain of Custody

Lab No.	Sample Description	Date	Time	Field Matrix	Start Depth	End Depth	Depth Unit	Grab (G) or Composite (C)	Total Number of Containers	Filt	Pres	Analysis: BTEX by EPA Method 8260	NWTPH-Gx	NWTPH-DX
	MW-3_20250508	5/8/25	910	W	-	-	-	G	8			X	X	X
	MW-4_20250508	5/8/25	935	W	-	-	-	G	8			X	X	X
	MW-1_20250508	5/8/25	1000	W	-	-	-	G	8			X	X	X
	MW-2_20250508	5/8/25	1025	W	-	-	-	G	8			X	X	X
	MW-5_20250508	5/8/25	1100	W	-	-	-	G	8			X	X	X
	MW-5DUP-20250508	5/8/25	1100	W	-	-	-	G	8			X	X	X
	Trip blank	5/8/25	0000	W	-	-	-	G	6			X	X	

Therm. ID: 15 Cor: 8.5 ° Unc: 8.5 °
Cooler Dsc: LB
Packing: BuB
Cust. Seal: Yes ___ No X
Blue Ice, Wet, Dry, None
FedEx: _____
UPS: _____
Lab Cour: _____
Other: CD

Sampler's Name: Sneha Nachimuthu / Colin Rechenmacher	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Antea Group	Sneha Nachimuthu / Antea	5/8/25	1120	EETN	5/8/25	1120
Ship Method: Drop-Off Ship Date: 5/8/25						
Shipment Tracking No:						

Special Instructions: Please only report Total Xylenes (instead of m&p or o). Report all groundwater results in ug/L

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: _____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP LaMP Soil/H2O COC July 2018

Login Sample Receipt Checklist

Client: Antea USA Inc.

Job Number: 580-150340-1

Login Number: 150340
List Number: 1
Creator: Pike, Jacob 1

List Source: Eurofins Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Seattle Job No.: 580-150340-1

SDG No.:

Batch Number: 492685 Batch Start Date: 05/15/25 23:22 Batch Analyst: Abando, Ariyana

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS 00055	VOAMasterSEC 00099	VOASTDGASSEC 00005
LCS 580-492685/5		8260D			10 mL	10 mL		10 uL	5 uL	5 uL
LCSD 580-492685/6		8260D			10 mL	10 mL		10 uL	5 uL	5 uL
MB 580-492685/10		8260D			10 mL	10 mL		10 uL		
580-150340-B-7	Tripblank	8260D	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-150340-D-2	MW-4_20250508	8260D	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-150340-D-1	MW-3_20250508	8260D	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-150340-D-3	MW-1_20250508	8260D	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-150340-D-4	MW-2_20250508	8260D	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-150340-D-5	MW-5_20250508	8260D	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-150340-G-6	MW-5DUP_20250508	8260D	Water	T	10 mL	10 mL	<2 SU	10 uL		

Batch Notes	
pH Indicator ID	204524
Vial Lot Number	0101601J

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GASOLINE RANGE ORGANICS BATCH WORKSHEET

Lab Name: Eurofins Seattle Job No.: 580-150340-1

SDG No.:

Batch Number: 492680 Batch Start Date: 05/15/25 23:22 Batch Analyst: Abando, Ariyana

Batch Method: NWTPH-Gx Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS 00055	GRO_LCS_SEC 00004	
LCS 580-492680/7		NWTPH-Gx			10 mL	10 mL		10 uL	25 uL	
LCSD 580-492680/8		NWTPH-Gx			10 mL	10 mL		10 uL	25 uL	
MB 580-492680/10		NWTPH-Gx			10 mL	10 mL		10 uL		
580-150340-B-7	Tripblank	NWTPH-Gx	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-150340-D-2	MW-4_20250508	NWTPH-Gx	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-150340-D-1	MW-3_20250508	NWTPH-Gx	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-150340-D-3	MW-1_20250508	NWTPH-Gx	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-150340-D-4	MW-2_20250508	NWTPH-Gx	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-150340-D-5	MW-5_20250508	NWTPH-Gx	Water	T	10 mL	10 mL	<2 SU	10 uL		
580-150340-G-6	MW-5DUP_20250508	NWTPH-Gx	Water	T	10 mL	10 mL	<2 SU	10 uL		

Batch Notes	
pH Indicator ID	204524
Vial Lot Number	0101601J

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HYDROCARBONS BATCH WORKSHEET

Lab Name: Eurofins Seattle Job No.: 580-150340-1

SDG No.:

Batch Number: 492300 Batch Start Date: 05/12/25 09:07 Batch Analyst: Madrid-fierro, Evelyn

Batch Method: 3510C Batch End Date: 05/12/25 15:20

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH
MB 580-492300/1		3510C, NWTPH-Dx					250 mL	2 mL	7 SU	2 SU
LCS 580-492300/2		3510C, NWTPH-Dx					250 mL	2 mL	7 SU	2 SU
LCSD 580-492300/3		3510C, NWTPH-Dx					250 mL	2 mL	7 SU	2 SU
580-150340-B-1	MW-3_20250508	3510C, NWTPH-Dx	Water	T	437.60 g	178.00 g	259.6 mL	2 mL	2 SU	n/a SU
580-150340-A-2	MW-4_20250508	3510C, NWTPH-Dx	Water	T	439.75 g	178.55 g	261.2 mL	2 mL	2 SU	n/a SU
580-150340-B-3	MW-1_20250508	3510C, NWTPH-Dx	Water	T	436.38 g	177.37 g	259 mL	2 mL	2 SU	n/a SU
580-150340-B-4	MW-2_20250508	3510C, NWTPH-Dx	Water	T	443.07 g	179.17 g	263.9 mL	2 mL	2 SU	n/a SU
580-150340-B-5	MW-5_20250508	3510C, NWTPH-Dx	Water	T	440.89 g	177.81 g	263.1 mL	2 mL	2 SU	n/a SU
580-150340-B-6	MW-5DUP_20250508	3510C, NWTPH-Dx	Water	T	433.19 g	177.73 g	255.5 mL	2 mL	2 SU	n/a SU

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	SecondAdjustpH	TPH_Water_Spk 00045	TPH_WaterSurr 00127			
MB 580-492300/1		3510C, NWTPH-Dx			n/a SU		100 uL			
LCS 580-492300/2		3510C, NWTPH-Dx			n/a SU	100 uL	100 uL			
LCSD 580-492300/3		3510C, NWTPH-Dx			n/a SU	100 uL	100 uL			
580-150340-B-1	MW-3_20250508	3510C, NWTPH-Dx	Water	T	n/a SU		100 uL			
580-150340-A-2	MW-4_20250508	3510C, NWTPH-Dx	Water	T	n/a SU		100 uL			
580-150340-B-3	MW-1_20250508	3510C, NWTPH-Dx	Water	T	n/a SU		100 uL			
580-150340-B-4	MW-2_20250508	3510C, NWTPH-Dx	Water	T	n/a SU		100 uL			
580-150340-B-5	MW-5_20250508	3510C, NWTPH-Dx	Water	T	n/a SU		100 uL			
580-150340-B-6	MW-5DUP_20250508	3510C, NWTPH-Dx	Water	T	n/a SU		100 uL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HYDROCARBONS BATCH WORKSHEET

Lab Name: Eurofins Seattle Job No.: 580-150340-1

SDG No.:

Batch Number: 492300 Batch Start Date: 05/12/25 09:07 Batch Analyst: Madrid-fierro, Evelyn

Batch Method: 3510C Batch End Date: 05/12/25 15:20

Batch Notes	
Method/Fraction	3510C_LVI/NWTPH_Dx
Balance ID	SEA225
Balance is Level? (Y/N)	yes
pH Indicator ID	1-09535-0001
Pipette/Syringe/Dispenser ID	E4
Analyst ID - Extraction	JH/EF
Reagent Water ID	DI
Analyst ID - Spike Analyst	EF
Analyst ID - Spike Witness Analyst	JH
Sufficient Volume for Batch QC	no
Acid Used for pH Adjustment ID	4004377
Prep Solvent ID	3925695
Prep Solvent Volume Used	100 mL
Filter ID	09-790-12F
Na2SO4 ID	3990270
Analyst ID - Concentration	JH
Equipment ID - Concentration 1	Steambath 1
Thermometer ID - Concentration 1	61013-040-1
Concentration 1 Uncorrected Temperature	70.0-75.0 Degrees C
Concentration 1 Corrected Temperature	69.4-74.4 Degrees C
Equipment ID - Concentration 2	Turbovap 6
Thermometer ID - Concentration 2	DIGITAL READOUT
Concentration 2 Uncorrected Temperature	42 Degrees C
Concentration 2 Corrected Temperature	40 Degrees C
Vial Lot Number	13-09-1335
Pipette Tip Lot ID	14672-200
Batch Comment	Vialed by:EF Reviewed by:JH

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HYDROCARBONS BATCH WORKSHEET

Lab Name: Eurofins Seattle Job No.: 580-150340-1

SDG No.:

Batch Number: 492300 Batch Start Date: 05/12/25 09:07 Batch Analyst: Madrid-fierro, Evelyn

Batch Method: 3510C Batch End Date: 05/12/25 15:20

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.