May 4, 2023

TO: Cris Matthews (Ecology)
FROM: Karen Mixon (AECOM)

CC: Nisha Jones (Trans Mountain), Todd Pleadwell (Trans Mountain), Justin Odens (Trans Mountain), Cary Brown (AECOM), Demetrio Cabanillas (AECOM), Dan Heimbigner (Whatcom Environmental)

RE: AECOM Progress Report – July 1, 2021 to March 31, 2023
PROJECT: Cleanup Action
Consent Decree No. 14-2-01294-9 (effective 6-5-2014)
Laurel Station
1009 E. Smith Road, Bellingham, Washington

TRANS MOUNTAIN PM: Nisha Jones
ECOLOGY CASE MGR: Cris Matthews
AECOM PM: Karen Mixon
AECOM PROJECT NO: 60691215

Introduction:
This progress report is presented in accordance with Consent Decree 14-2-01294-9 (effective 6-5-2014) and is intended to present the information as noted under Section XI PROGRESS REPORTS in the Consent Decree. The reporting period covered is July 1, 2021 to March 31, 2023.

Work Accomplished During Reporting Period:

DPE System Operation
From July 1, 2021 to March 31, 2023, the DPE system operated in DPE and SVE mode as noted in the table below. The DPE well locations are shown on attached **Figure 1 Pump Station Area.** Wells were turned on or off based on current site conditions to maximize contaminant recovery. The system operation approach continued in a "pulsed" operation mode during this reporting period. Pulsed operation means that active extraction occurs in intervals separated by periods of no extraction which allows time for diffusion of mass to re-enter permeable pathways. This maximizes contaminant recovery with reduced operational costs and allows assessment of the current removal efficiency of the system as it reaches a point of diminishing returns. Operational changes were made based on monitoring data collected weekly if the system was not shutdown. System downtime was limited to short duration quarterly groundwater sampling events and routine maintenance. Longer duration shutdowns occurred as part of the pulsed operation. Through March 31, 2023, the system has operated 76 percent of the time over 7.5 years since startup on July 17, 2015. The operational efficiency was 87 percent when pulsed operation commenced in September 2020.

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Month/Year	System Mode	Wells On-line
July 2021	Shutdown	July 1 – 15, System shutdown continued from June due to excessive heat (weather)
	SVE	DPE-1, -2, -3, -4, and -7 (July 15 – 19)
	SVE	DPE-1, -2, -3, -4, -5, and -7 (July 19 – 31)
August 2021	SVE	DPE-1, -2, -3, -4, -5, and -7 (August 1 – 12)
	Shutdown	August 12 – 31, System shutdown due to excessive heat (weather)
September 2021	Shutdown	September 1 – 13, System shutdown continued from August
	SVE	DPE-1, -2, -3, and -5 (September 13 – 27)
	Shutdown	September 27 – 29, Shutdown for quarterly groundwater sampling event on September 29
	SVE	DPE-2, and -3 (September 29 – 30)
October 2021	SVE	DPE-2 and -3 (October 1 – 12)
	Shutdown	October 12 – 14, Carbon changeout
	SVE	DPE-2 and -3 (October 14 – 31)
November 2021	SVE	DPE-2 and -3 (November 1)
	Shutdown	November 2 – 30
December 2021	Shutdown	December 1 – 15
	DPE	DPE-1, -3, and -4 (December 15 – 22)
	Shutdown	December 22 – 31, Shutdown due to cold temperatures (weather)
January 2022	Shutdown	January 1 – 31
February 2022	Shutdown	February 1 – 28
March 2022	Shutdown	March 1 – 29
	DPE	DPE-1, -3, and -4 (March 29 – 30)
	Shutdown	March 30 – 31
April 2022	SVE	DPE-5, -6, -7, -8, -9, and -10 (April 1 – 18)
	SVE	DPE-1, -2, -3, and -4 (April 19 – 30)
May 2022	SVE	DPE-1, -2, -3, and -4 (May 1 –31)
June 2022	SVE	DPE-1, -2, -3, and -4 (June 1 – 3)
	Shutdown	June 3 – 30
July 2022	Shutdown	July 1 – 31
August 2022	Shutdown	August 1– 31
September 2022	Shutdown	September 1 – 20
	SVE	DPE-1, -2, -3, -4, -5, -6, -7, -8, -9, and -10 (September 21 – 26)
	SVE	DPE-1, -2, and -3 (September 27 – 30)
October 2022	SVE	DPE-1, -2, and -3 (October 1 – 18)
	Shutdown	October 19 – 26, Carbon changeout
	SVE	DPE-1, -2, and -3 (October 27 – 31)
November 2022	SVE	DPE-1, -2, and -3 (November 1 – 30)
December 2022	SVE	DPE-1, -2, and -3 (December 1 – 15)
	Shutdown	December 16 – 27, Shutdown for quarterly groundwater event (sampling event scheduled for December 20 was rescheduled to December 28 due to forecasted cold temperatures)
	SVE	DPE-1, -2, and -3 (December 28 – 31)

Month/Year	System Mode	Wells On-line
January 2023	SVE	DPE-1, -2, and -3 (January 1 – 10)
	Shutdown	January 11 – 16, Carbon changeout
	SVE	DPE-1, -2, and -3 (January 17 – 31)
February 2023	SVE	DPE-1, -2, and -3 (February 1 – 28)
March 2023	SVE	DPE-1, -2, and -3 (March 1 – 27)
	Shutdown	March 28 – 29, Shutdown for quarterly groundwater event
	SVE	DPE-1, -2, and -3 (March 30 – 31)

When flow occurs, treated groundwater from the system was sampled weekly by Whatcom Environmental as required by the Administrative Order to the facility NPDES permit. There were no exceedances of indicator levels specified in the permit for treated groundwater samples collected during this period. As of March 27, 2023, approximately 211,369 gallons of water has been extracted from the subsurface since startup in July 2015. A graph showing the monthly groundwater removal volumes is provided in **Attachment 1**. No measurable product has been observed or recovered by the system to date.

As of March 27, 2023, approximately 9,421 pounds (32 barrels) of the petroleum related constituents of concern (COCs) have been removed from the vapor phase since the system started operating in July 2015. Graphs showing the cumulative removal of COCs from vapor by the system through March 27, 2023 are provided in **Attachment 1**. Mass removal calculations were completed using measurements collected on a regular basis from different locations of the DPE piping manifold. The primary mass removal estimate (9,421 pounds) is based on calculations made using PID and flow measurements at the combined vapor monitoring point prior to the vapor GAC vessels. A second estimate was also calculated for the mass removal based on individual well measurements which are summed together. The cumulative mass removal estimate based on summation of measurements for each well is 9,526 pounds which is approximately 1.1 percent higher than the estimate using data from one combined sample location prior to GAC treatment.

Vapor-phase monitoring of the extracted air using a PID was conducted by Whatcom Environmental weekly during system operation to monitor the GAC treatment system. The GAC is changed out when PID measurements at the mid-treatment location exceed 50 ppm; during this reporting period, the GAC was changed out on July 29 and October 14, 2021, September 28, October 27, and December 1, 2022, and January 17 and February 22, 2023. The GAC changeouts on July 29, 2021, September 28, October 27 and December 1, 2022, and February 22, 2023 were completed in short duration on these dates and down time to complete the changeout is not reflected in the tabulated operation summary above.

Groundwater Monitoring

The well locations are shown on **Figure 1 Pump Station Area**. Monitoring wells MW-4, MW-6, MW-15, MW-16, and DPE-4 are monitored quarterly as referenced in the Compliance Monitoring Plan and based on the revised groundwater monitoring network discussed with Ecology on October 1, 2015 (CMP, URS 2015; Progress Report, January 21, 2016).

AECOM conducted quarterly groundwater monitoring on September 29 and December 15, 2021, March 28, July 5, and December 28, 2022, and on March 30, 2023. Only well MW-6 was sampled on these dates as the remaining wells were dry or did not have sufficient water to sample. Sample volume was limited at MW-6 on July 5 with adequate volume for TPH-gasoline range and BTEX tests only. No samples were collected in September 2022 due to low water levels. Quarterly groundwater level data is summarized in **Table 1.**

DPE-3 was sampled on March 30, 2023 using a peristaltic pump. This well is not included in the groundwater monitoring program but was sampled due to elevated vapor readings from DPE-3 collected during operation of the DPE system in 2022 and early 2023. A sample was collected from this well to assess if elevated concentrations of TPH and/or PAHs were present in groundwater at this location.

AECOM completed the data review for all the groundwater sampling events. A summary of the analytical results is provided in **Table 2.** Data validation memos and laboratory reports are provided in **Attachment 2**. Petroleum hydrocarbons (gasoline-, diesel-, and motor oil range), and BTEX were not detected in the monitoring well samples. A limited number of PAH compounds were detected at MW-6, but all were below site cleanup levels. TPH in the diesel and motor oil range and naphthalene were detected in DPE-3 at concentrations below site cleanup levels. The level of TPH at DPE-3 in March 2023 was below the levels detected in 2015.

Submittals/Agency Contacts:

- August 19, 2021 – AECOM submitted a progress report to Ecology for the period January 1 – June 30, 2021.
- March 2022/April 25, 2022 – AECOM submitted the 2021 groundwater sample data to Ecology's EIM database in March and responded to Ecology comments received in April.
- June 27, 2022 – AECOM contacted Ecology via phone with project status.
- September 20, 2022 – AECOM contacted Ecology via phone with project status.

Deviations to Approved Plans Not Previously Documented:
None

Deviation to Scope of Work and Schedule as Presented in the Cleanup Action Plan (Exhibit A of Consent Decree):
There were no changes from previous progress reports to the overall Scope of Work described in the Cleanup Action Plan (CAP).

Data Received During Reporting Period: Groundwater monitoring data collected on September 29 and December 15, 2021, March 28, July 5, and December 28, 2022, and on March 30, 2023.

Plans for the Next Reporting Period:
The following are planned activities for the period from April 1 to June 30, 2023.

- Continue to operate and maintain the DPE system.
- Confirm Ecology's acceptance of 2021 groundwater data submitted to Ecology's EIM database.
- Submit the 2022 groundwater data to Ecology's EIM database.
- Submit report summarizing additional groundwater data collection and evaluation based on the March 29, 2019 memorandum to assess perched groundwater conditions.
- Collect second quarter groundwater monitoring samples.
- Review DPE system data and groundwater monitoring data to assess timing of confirmation soil sampling in the treatment area.

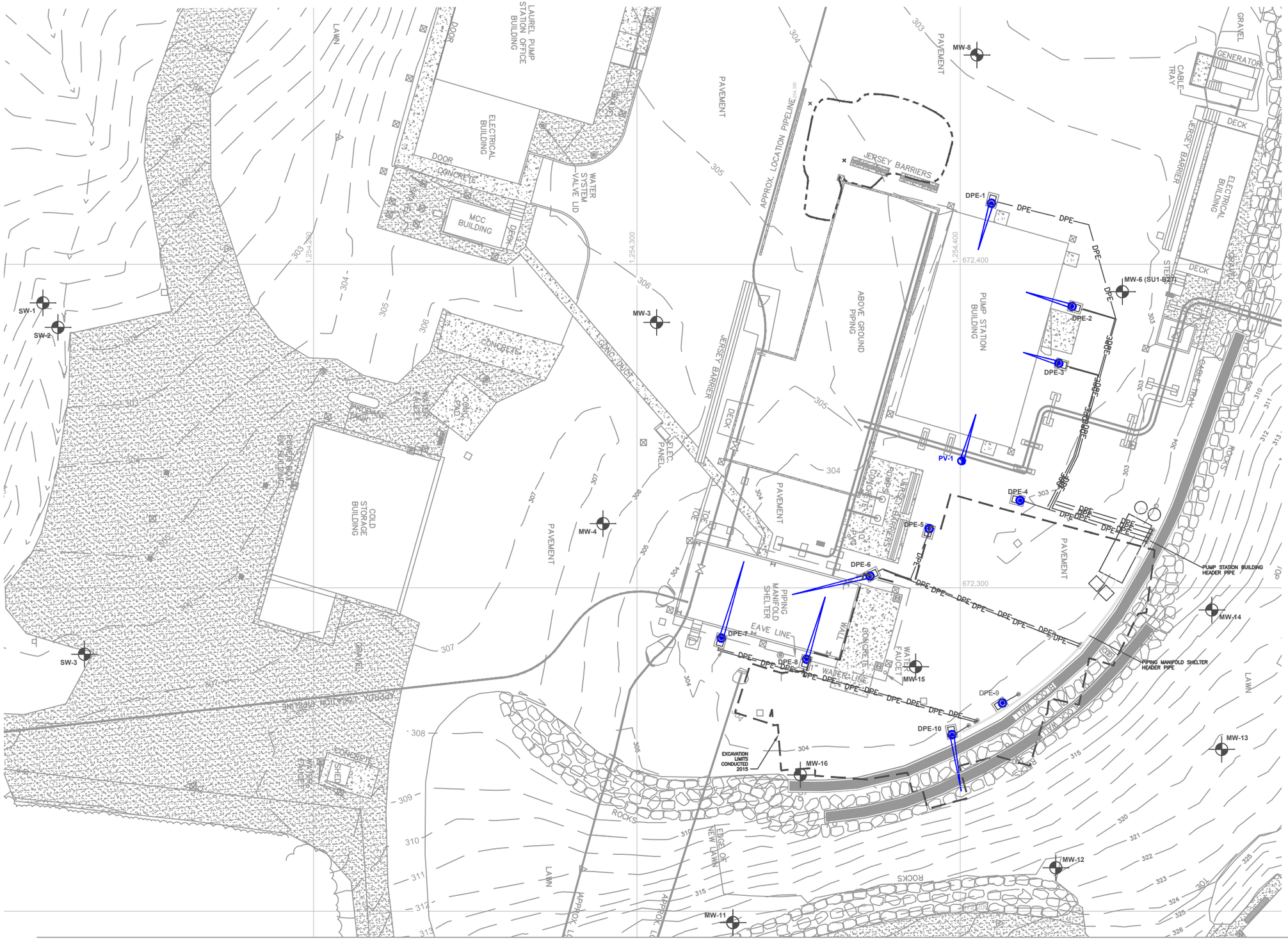
Please contact Karen Mixon at (206) 438-2234 if you have any questions or comments regarding this progress report.

References:

URS Corporation, 2015. Final Compliance Monitoring Plan, Laurel Station, 1009 East Smith Road, Bellingham, Washington, January 16.

At**tachments:**

- Figure 1 – Pump Station Area
- Table 1 – Monitoring Well Groundwater Elevation Data Summary
- Table 2 – Groundwater Monitoring Results
- Attachment 1- DPE System Performance Graphs
- Attachment 2 – Data Validation and Laboratory Reports
    - Data Validation and ARI Lab Report (21J0004) – Quarterly Groundwater Samples – September 2021
    - Data Validation and ARI Lab Report (21L0257) – Quarterly Groundwater Samples – December 2021
    - Data Validation and ARI Lab Report (22C0511) – Quarterly Groundwater Samples – March 2022
    - Data Validation and ARI Lab Report (22G0060) – Quarterly Groundwater Samples – July 2022
    - Data Validation and ARI Lab Report (22L0636) – Quarterly Groundwater Samples – December 2022
    - Data Validation and ARI Lab Report (23C0764) – Quarterly Groundwater Samples – March 2023



Legend

- DPE Container
- Liquid-Phase Carbon Vessels
- Vapor-Phase Carbon Vessels
- Dual Phase Extraction Well Vault
- Excavation Limits (2014-2015)
- Excavation Limits (2019 SU1-B11)
- Installed at Angle Shown With Horizontal Extent
- Dual-Phase Extraction (DPE) Well
- Monitoring Well
- Passive Vent Well
- Segmented Concrete Block (Retaining Wall)
- DPE — Underground DPE Lateral Pipe
- Ground Rod

0 15 30
SCALE IN FEET

Figure 1
Pump Station Area

Laurel Station
Bellingham, Washington

AECOM

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Table 1
Monitoring Well Groundwater Elevation Data Summary
Laurel Station
Bellingham, Washington

Well ID	Date Measured	Total Depth[a] (ft-TOC)	TOC Elevation[b] (ft-NAVD88)	Approximate Screen Interval (ft-bgs)	Approximate Screen Interval Elevation (ft-NAVD88)	Depth to Groundwater (ft-TOC)	Groundwater Elevation (ft-NAVD88)	Thickness of Water Column (ft)
SW-1	4/23/2015	18.50				4.30	296.34	14.20
	12/14/2015	18.35				4.10	296.54	14.25
	1/25/2016	18.68				5.09	295.55	13.59
	2/22/2016 *	17.39				14.20	286.44	3.19
	3/21/2016	18.57				5.08	295.56	13.49
	4/25/2016	18.59				DRY	NC	NC
	5/23/2016	18.62				DRY	NC	NC
	6/27/2016	18.40				4.72	295.92	13.68
	8/8/2016	18.37				4.85	295.79	13.52
	8/30/2016	18.40				3.60	297.04	14.80
	9/26/2016	18.37				4.85	295.79	13.52
	10/24/2016	18.40				4.54	296.10	13.86
	11/21/2016	18.36				4.65	295.99	13.71
	12/21/2016	18.40				4.43	296.21	13.97
	1/23/2017	18.40				2.80	297.84	15.60
	3/6/2017	18.25				3.48	297.16	14.77
	3/21/2017	18.52				4.17	296.47	14.35
	3/29/2017	18.45				2.82	297.82	15.63
	6/21/2017	18.39				4.95	295.69	13.44
	6/26/2017	18.56				5.65	294.99	12.91
	7/31/2017	18.41				7.18	293.46	11.23
	8/28/2017	18.38				7.69	292.95	10.69
	9/25/2017	18.27				5.70	294.94	12.57
	9/27/2017	18.20				5.97	294.67	12.23
	10/30/2017	18.31				5.00	295.64	13.31
	11/20/2017	18.37				3.09	297.55	15.28
	12/18/2017	18.44				2.99	297.65	15.45
	1/4/2018	18.47				5.00	295.64	13.47
	1/22/2018	18.27				4.09	296.55	14.18
	2/26/2018	18.43				4.65	295.99	13.78
	3/26/2018	18.37				4.52	296.12	13.85
	4/5/2018	18.40				3.35	297.29	15.05
	4/23/2018	18.47				5.09	295.55	13.38
	5/21/2018	18.43				5.58	295.06	12.85
	6/18/2018	18.35				6.38	294.26	11.97
	6/27/2018	18.39				6.72	293.92	11.67
	7/30/2018	18.42				7.51	293.13	10.91
	8/27/2018	18.47				8.07	292.57	10.40
	9/24/2018	18.40				4.69	295.95	13.71
	10/1/2018	18.38				4.91	295.73	13.47
	10/22/2018	18.42				5.99	294.65	12.43
	11/26/2018	18.43				4.26	296.38	14.17
	12/19/2018	18.34	300.64	5 - 20	295.64 - 280.64	4.22	296.42	14.12
	12/31/2018	18.71				4.82	295.82	13.89
	1/28/2019	18.43				4.82	295.82	13.61
	2/25/2019	18.34				4.75	295.89	13.59
	3/18/2019	18.34				4.81	295.83	13.53
	3/20/2019	18.26				4.77	295.87	13.49
	4/15/2019	18.40				4.63	296.01	13.77
	5/20/2019	18.41				5.13	295.51	13.28
	6/17/2019	18.38				5.67	294.97	12.71
	7/22/2019	18.25				6.04	294.60	12.21
	8/26/2019	18.25				Not Measured		
	9/23/2019	18.27				4.81	295.83	13.46
	10/2/2019	18.29				5.21	295.43	13.08
	11/21/2019	18.27				4.70	295.94	13.57
	12/16/2019	18.40				4.68	295.96	13.72
	12/18/2019	18.43				4.83	295.81	13.60
	1/22/2020	18.46				3.16	297.48	15.30
	3/5/2020	18.15				4.64	296.00	13.51
	3/23/2020	18.28				5.24	295.40	13.04
	4/27/2020	18.39				11.70	288.94	6.69
	5/26/2020	18.46				4.42	296.22	14.04
	6/17/2020	18.45				4.15	296.49	14.30
	7/20/2020	18.37				5.58	295.06	12.79
	8/17/2020	18.55				6.67	293.97	11.88
	9/23/2020	18.52				Not Measured		
	9/30/2020	18.53				5.23	295.41	13.30
	10/26/2020	18.27				4.84	295.80	13.43
	11/30/2020	18.59				4.40	296.24	14.19
	12/21/2020	18.50				4.30	296.34	14.20
	1/18/2021	18.49				4.62	296.02	13.87
	4/5/2021	18.40				5.19	295.45	13.21
	5/3/2021	18.52				5.63	295.01	12.89
	5/24/2021	18.35				5.90	294.74	12.45
	6/22/2021	18.36				5.52	295.12	12.84
	8/9/2021	18.44				7.80	292.84	10.64
	9/27/2021	18.32				4.47	296.17	13.85
	10/26/2021	18.32				4.45	296.19	13.87
	12/15/2021	18.31				4.58	296.06	13.73
	3/28/2022	18.15				4.45	296.19	13.70
	4/21/2022	18.75				4.63	296.01	14.12
	5/16/2022	18.75				3.35	297.29	15.40
	6/5/2022	18.35				5.49	295.15	12.86
	9/21/2022	18.20				8.02	292.62	10.18
	10/17/2022	18.12				8.60	292.04	9.52
	11/14/2022	18.20				5.27	295.37	12.93
	12/28/2022	18.31				2.56	298.08	15.75
	3/30/2023	18.22				4.72	295.92	13.50

Table 1
Monitoring Well Groundwater Elevation Data Summary
Laurel Station
Bellingham, Washington

Well ID	Date Measured	Total Depth[a] (ft-TOC)	TOC Elevation[b] (ft-NAVD88)	Approximate Screen Interval (ft-bgs)	Approximate Screen Interval Elevation (ft-NAVD88)	Depth to Groundwater (ft-TOC)	Groundwater Elevation (ft-NAVD88)	Thickness of Water Column (ft)
SW-2	4/23/2015	49.75		40 - 50	261.37 - 251.37	37.59	263.78	12.16
	2/22/2016	50.26				DRY	NC	NC
	3/21/2016	50.03				36.86	264.51	13.17
	4/25/2016	50.25				DRY	NC	NC
	5/23/2016	50.15				DRY	NC	NC
	6/27/2016	49.75				37.61	263.76	12.14
	8/8/2016	50.20				37.64	263.73	12.56
	8/30/2016 *	56.60				38.02	263.35	18.58
	9/26/2016	50.47				37.87	263.50	12.60
	10/24/2016 *	55.00				38.29	263.08	16.71
	11/21/2016	51.30				37.44	263.93	13.86
	12/21/2016	50.69				37.23	264.14	13.46
	1/23/2017 *	53.50				37.53	263.84	15.97
	3/6/2017	49.60				37.29	264.08	12.31
	3/21/2017	49.91				46.69	254.68	3.22
	3/29/2017	49.89				36.85	264.52	13.04
	6/21/2017	49.61				37.21	264.16	12.40
	6/26/2017	50.10				37.42	263.95	12.68
	7/31/2017	49.81				37.84	263.53	11.97
	8/28/2017	49.82				37.79	263.58	12.03
	9/25/2017	49.87				37.83	263.54	12.04
	9/27/2017	49.69				37.97	263.40	11.72
	10/30/2017	49.84				38.09	263.28	11.75
	11/20/2017	49.83				38.98	262.39	10.85
	12/18/2017	49.92				37.92	263.45	12.00
	1/4/2018	49.92				37.39	263.98	12.53
	1/22/2018	49.81				37.17	264.20	12.64
	2/26/2018	49.84				37.15	264.22	12.69
	3/26/2018	49.80				37.49	263.88	12.31
	4/5/2018	49.68				37.43	263.94	12.25
	4/23/2018	49.89				36.97	264.40	12.92
	5/21/2018	49.82				37.45	263.92	12.37
	6/18/2018	49.74				37.48	263.89	12.26
	6/27/2018	49.87				37.58	263.79	12.29
	7/30/2018	49.81				37.64	263.73	12.17
	8/27/2018	49.83				37.86	263.51	11.97
	9/24/2018	49.84				37.85	263.52	11.99
	10/1/2018	49.80				38.30	263.07	11.50
	10/22/2018	49.81				38.13	263.24	11.68
	11/26/2018	49.84				40.91	260.46	8.93
	12/19/2018	49.78				40.20	261.17	9.58
	12/31/2018	49.89				39.89	261.48	10.00
	1/28/2019	49.84				37.48	263.89	12.36
	2/25/2019	49.89	301.37			37.73	263.64	12.16
	3/18/2019	49.83				37.70	263.67	12.13
	3/20/2019	49.71				37.50	263.87	12.21
	4/15/2019	49.84				37.47	263.90	12.37
	5/20/2019	49.82				37.38	263.99	12.44
	6/17/2019	49.80				37.66	263.71	12.14
	7/22/2019	49.83				37.76	263.61	12.07
	8/26/2019	49.83				Not Measured		
	9/23/2019	49.84				38.80	262.57	11.04
	10/2/2019	50.80				39.50	261.87	11.30
	11/21/2019	49.84				41.01	260.36	8.83
	12/16/2019	49.81				40.76	260.61	9.05
	12/18/2019	49.85				40.83	260.54	9.02
	1/22/2020	49.80				38.00	263.37	11.80
	3/5/2020	49.79				37.20	264.17	12.59
	3/23/2020	49.85				36.06	265.31	13.79
	4/27/2020	49.49				37.30	264.07	12.19
	5/26/2020	49.72				37.71	263.66	12.01
	6/17/2020	49.81				37.84	263.53	11.97
	7/20/2020	49.89				37.52	263.85	12.37
	8/17/2020	49.83				37.84	263.53	11.99
	9/23/2020	49.83				39.63	261.74	10.20
	9/30/2020	49.89				40.23	261.14	9.66
	10/26/2020	49.79				40.84	260.53	8.95
	11/30/2020	49.89				40.28	261.09	9.61
	12/21/2020	49.86				39.74	261.63	10.12
	1/18/2021	50.10				37.44	263.93	12.66
	4/5/2021	49.85				37.51	263.86	12.34
	5/3/2021	50.05				37.59	263.78	12.46
	5/24/2021	49.95				37.48	263.89	12.47
	6/22/2021	49.82				37.78	263.59	12.04
	8/9/2021	49.84				37.95	263.42	11.89
	9/27/2021	49.96				40.77	260.60	9.19
	10/26/2021	49.96				41.03	260.34	8.93
	12/15/2021	49.87				36.00	265.37	13.87
	3/28/2022	49.96				37.11	264.26	12.85
	4/21/2022	49.96				37.15	264.22	12.81
	5/16/2022	49.95				37.27	264.10	12.68
	6/5/2022	50.84				37.50	263.87	13.34
	9/21/2022	49.82				38.88	262.49	10.94
	10/17/2022	49.86				39.13	262.24	10.73
	11/14/2022	49.81				40.51	260.86	9.30
	12/28/2022	49.83				40.62	260.75	9.21
	3/30/2023	50.82				37.17	264.20	13.65

Table 1
Monitoring Well Groundwater Elevation Data Summary
Laurel Station
Bellingham, Washington

Well ID	Date Measured	Total Depth[a] (ft-TOC)	TOC Elevation[b] (ft-NAVD88)	Approximate Screen Interval (ft-bgs)	Approximate Screen Interval Elevation (ft-NAVD88)	Depth to Groundwater (ft-TOC)	Groundwater Elevation (ft-NAVD88)	Thickness of Water Column (ft)
SW-3[c]	4/23/2015	34.75				32.19	277.29	2.56
	12/14/2015	34.78				33.11	276.37	1.67
	1/25/2016	35.12				32.40	277.08	2.72
	2/22/2016	34.86				DRY	NC	NC
	3/21/2016	34.91				31.98	277.50	2.93
	4/25/2016	34.91				DRY	NC	NC
	5/23/2016	35.03				DRY	NC	NC
	6/27/2016	34.70				DRY	NC	NC
	8/8/2016 *	32.60				DRY	NC	NC
	8/30/2016	35.10				32.40	277.08	2.70
	9/26/2016	35.20				33.29	276.19	1.91
	10/24/2016	34.69				32.65	276.83	2.04
	11/21/2016 *	33.77				32.17	277.31	1.60
	12/21/2016	35.14				32.29	277.19	2.85
	1/23/2017	34.65				32.70	276.78	1.95
	3/6/2017	34.66				31.69	277.79	2.97
	3/21/0217	34.08				31.70	277.78	2.38
	3/29/2017	34.85				31.82	277.66	3.03
	6/21/2017	34.68				33.63	275.85	1.05
	6/26/2017	34.84				33.70	275.78	1.14
	7/31/2017	34.80				34.42	275.06	0.38
	8/28/2017	34.74				DRY	NC	NC
	9/25/2017	34.64				DRY	NC	NC
	9/27/2017	34.45				DRY	NC	NC
	10/30/2017	30.66				DRY	NC	NC
	11/20/2017	34.66				33.38	276.10	1.28
	12/18/2017	34.71				32.43	277.05	2.28
	1/4/2018	frozen @ 4.79				well frozen at top		
	1/22/2018	34.71				31.94	277.54	2.77
	2/26/2018	34.76				32.15	277.33	2.61
	3/26/2018	34.73				33.00	276.48	1.73
	4/5/2018	34.68				31.91	277.57	2.77
	4/23/2018	34.80				32.07	277.41	2.73
	5/21/2018	34.78				32.23	277.25	2.55
	6/18/2018	34.74				33.86	275.62	0.88
	6/27/2018	34.36				34.05	275.43	0.31
	7/30/2018	34.81				34.62	274.86	0.19
	8/27/2018	34.75				DRY	NC	NC
	9/24/2018	34.72				DRY	NC	NC
	10/1/2018	34.60				DRY	NC	NC
	10/22/2018	34.65				DRY	NC	NC
	11/26/2018	34.68				33.32	276.16	1.36
	12/19/2018	34.70				33.21	276.27	1.49
	12/31/2018	34.68				32.41	277.07	2.27
	1/28/2019	34.70	309.48	22 - 32	284.48 - 274.48	31.93	277.55	2.77
	2/25/2019	34.73				33.00	276.48	1.73
	3/18/2019	34.74				33.19	276.29	1.55
	3/20/2019	34.64				33.05	276.43	1.59
	4/15/2019	34.74				33.47	276.01	1.27
	5/20/2019	--				could not remove cap		
	6/17/2019	34.74				33.99	275.49	0.75
	7/22/2019	34.70				DRY	NC	NC
	8/26/2019	34.70				Not Measured		
	9/23/2019	34.71				DRY	NC	NC
	10/2/2019	34.58				DRY	NC	NC
	11/21/2019	34.71				33.52	275.96	1.19
	12/16/2019	34.72				33.42	276.06	1.30
	12/18/2019	34.68				33.44	276.04	1.24
	1/22/2020	34.73				32.20	277.28	2.53
	3/5/2020	34.68				32.46	277.02	2.22
	3/23/2020	34.81				32.58	276.90	2.23
	4/27/2020	34.72				DRY	NC	NC
	5/26/2020	34.75				DRY	NC	NC
	6/17/2020	34.77				33.57	275.91	1.20
	7/20/2020	34.76				DRY	NC	NC
	8/17/2020	34.75				DRY	NC	NC
	9/23/2020	34.36				DRY	NC	NC
	9/30/2020	34.62				DRY	NC	NC
	10/26/2020	34.63				DRY	NC	NC
	11/30/2020	34.70				32.48	277.00	2.22
	12/21/2020	34.69				32.75	276.73	1.94
	1/18/2021	34.73				32.10	277.38	2.63
	4/5/2021	34.75				33.48	277.95	1.27
	5/3/2021	34.77				33.96	275.52	0.81
	5/24/2021	34.71				DRY	NC	NC
	6/22/2021	34.72				DRY	NC	NC
	8/9/2021	34.64				DRY	NC	NC
	9/27/2021	34.66				DRY	NC	NC
	10/26/2021	NA				NA	NA	NA
	12/15/2021	31.61				DRY	NC	NC
	3/28/2022	34.69				31.53	277.95	3.16
	4/21/2022	34.68				32.67	276.81	2.01
	5/16/2022	34.67				33.59	275.89	1.08
	6/5/2022	34.75				33.39	276.09	1.36
	9/21/2022	34.64				34.57	274.91	0.07
	10/17/2022	34.67				DRY	NC	NC
	11/14/2022	34.61				DRY	NC	NC
	12/28/2022	34.62				33.89	275.59	0.73
	3/30/2023	34.75				DRY	NC	NC

Table 1
Monitoring Well Groundwater Elevation Data Summary
Laurel Station
Bellingham, Washington

Well ID	Date Measured	Total Depth[a] (ft-TOC)	TOC Elevation[b] (ft-NAVD88)	Approximate Screen Interval (ft-bgs)	Approximate Screen Interval Elevation (ft-NAVD88)	Depth to Groundwater (ft-TOC)	Groundwater Elevation (ft-NAVD88)	Thickness of Water Column (ft)
DPE-4	4/23/2015	16.91				8.46	293.30	8.45
	10/26/2015	17.00				16.50	285.80	0.50
	12/14/2015	15.70				15.50	286.80	0.20
	1/25/2016	15.70				14.77	287.53	0.93
	2/22/2016	16.14				15.90	286.40	0.24
	3/21/2016	15.09				14.95	287.35	0.14
	4/25/2016	15.14				DRY	NC	NC
	5/23/2016	15.15				DRY	NC	NC
	6/23/2016	15.13				DRY	NC	NC
	8/1/2016	16.16				DRY	NC	NC
	8/30/2016	15.11				DRY	NC	NC
	9/26/2016	14.88				DRY	NC	NC
	10/24/2016	14.90				DRY	NC	NC
	11/21/2016	15.12				15.07	287.23	0.05
	12/21/2016	15.40				DRY	NC	NC
	1/23/2017	14.82				DRY	NC	NC
	3/9/2017	14.87				DRY	NC	NC
	3/21/2017	15.12				DRY	NC	NC
	3/29/2017	15.12				DRY	NC	NC
	6/21/2017	15.14				DRY	NC	NC
	6/26/2017	15.12				DRY	NC	NC
	7/31/2017	15.14				15.11	287.19	0.03
	8/28/2017	15.14				DRY	NC	NC
	9/25/2017	15.14				DRY	NC	NC
	9/27/2017	15.01				DRY	NC	NC
	10/30/2017	15.14				DRY	NC	NC
	11/20/2017	15.13				DRY	NC	NC
	12/18/2017	15.12				DRY	NC	NC
	1/4/2018	14.85				DRY	NC	NC
	1/22/2018	15.11				DRY	NC	NC
	2/26/2018	15.10				14.88	287.42	0.22
	3/26/2018	15.17				14.03	288.27	1.14
	4/5/2018	15.10				DRY	NC	NC
	4/23/2018	15.12				12.80	289.50	2.32
	5/21/2018	15.14				DRY	NC	NC
	6/18/2018	15.15				DRY	NC	NC
	6/27/2018	15.14				DRY	NC	NC
	7/30/2018	15.14				DRY	NC	NC
	8/27/2018	15.13				DRY	NC	NC
	9/24/2018	15.13				DRY	NC	NC
	10/1/2018	15.15				DRY	NC	NC
	10/22/2018	15.14				15.04	287.26	0.10
	11/26/2018	15.11				DRY	NC	NC
	12/19/2018	15.12				DRY	NC	NC
	12/31/2018	15.12				DRY	NC	NC
	1/28/2019	15.11				DRY	NC	NC
	2/25/2019	15.10				DRY	NC	NC
	3/18/2019	15.10	302.30	6.5 - 16.5	298.51 - 288.51	DRY	NC	NC
	3/20/2019	15.12				DRY	NC	NC
	4/15/2019	15.10				DRY	NC	NC
	5/6/2019	15.11				DRY	NC	NC
	5/8/2019	15.12				DRY	NC	NC
	5/20/2019	15.12				13.39	288.91	1.73
	6/17/2019	15.13				13.00	289.30	2.13
	6/19/2019	15.15				DRY	NC	NC
	7/22/2019	15.15				14.35	287.95	0.80
	8/26/2019	15.15				DRY	NC	NC
	9/23/2019	15.13				DRY	NC	NC
	10/2/2019	15.14				DRY	NC	NC
	10/31/2019	15.13				DRY	NC	NC
	11/21/2019	15.13				DRY	NC	NC
	12/16/2019	15.15				DRY	NC	NC
	12/18/2019	15.10				DRY	NC	NC
	1/22/2020	15.11				DRY	NC	NC
	3/5/2020	14.81				DRY	NC	NC
	3/23/2020	15.11				DRY	NC	NC
	4/27/2020	15.14				DRY	NC	NC
	5/26/2020	15.15				DRY	NC	NC
	6/17/2020	15.15				DRY	NC	NC
	7/20/2020	15.18				DRY	NC	NC
	8/17/2020	15.17				DRY	NC	NC
	9/23/2020	15.17				DRY	NC	NC
	9/30/2020	15.17				DRY	NC	NC
	10/26/2020	15.14				DRY	NC	NC
	11/16/2020	15.16				DRY	NC	NC
	11/30/2020	15.13				13.60	288.70	1.53
	12/21/2020	15.15				DRY	NC	NC
	1/18/2021	15.17				DRY	NC	NC
	4/5/2021	15.15				DRY	NC	NC
	5/3/2021	15.16				DRY	NC	NC
	5/24/2021	15.15				DRY	NC	NC
	6/22/2021	15.15				DRY	NC	NC
	8/9/2021	15.16				DRY	NC	NC
	9/27/2021	15.16				DRY	NC	NC
	10/26/2021	15.16				DRY	NC	NC
	12/15/2021	15.14				DRY	NC	NC
	3/28/2022	15.16				DRY	NC	NC
	4/21/2022	15.66				DRY	NC	NC
	5/16/2022	15.15				12.35	289.95	2.80
	7/5/2022	15.21				DRY	NC	NC
	9/21/2022	15.91				DRY	NC	NC
	10/17/2022	15.16				DRY	NC	NC
	11/14/2022	15.16				DRY	NC	NC
	12/28/2022	15.13				DRY	NC	NC
	3/30/2023	15.15				DRY	NC	NC

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Laurel Station
Bellingham, Washington

Well ID	Date Measured	Total Depth[a] (ft-TOC)	TOC Elevation[b] (ft-NAVD88)	Approximate Screen Interval (ft-bgs)	Approximate Screen Interval Elevation (ft-NAVD88)	Depth to Groundwater (ft-TOC)	Groundwater Elevation (ft-NAVD88)	Thickness of Water Column (ft)
MW-3	4/23/2015	33.40				DRY	NC	NC
	12/14/2015	33.55				DRY	NC	NC
	1/25/2016	33.39				DRY	NC	NC
	2/22/2016	33.48				DRY	NC	NC
	3/21/2016	33.99				33.36	272.47	0.63
	4/25/2016 *	34.91				DRY	NC	NC
	5/23/2016	33.86				DRY	NC	NC
	6/23/2016 *	35.10				34.50	271.33	0.60
	6/27/2016 *	34.60				33.73	272.10	0.87
	8/8/2016	33.35				DRY	NC	NC
	8/30/2016	34.09				34.00	271.83	0.09
	9/26/2016	33.33				DRY	NC	NC
	10/24/2016	33.88				33.32	272.51	0.56
	11/21/2016	33.80				33.43	272.40	0.37
	12/21/2016	33.40				33.35	272.48	0.05
	1/23/2017	34.00				29.08	276.75	4.92
	3/6/2017	33.47				DRY	NC	NC
	3/21/2017	33.70				DRY	NC	NC
	3/29/2017	33.60				DRY	NC	NC
	6/21/2017	33.51				DRY	NC	NC
	6/26/2017	33.61				DRY	NC	NC
	7/31/2017	33.56				DRY	NC	NC
	8/28/2017	33.54				33.46	272.37	0.08
	9/25/2017	33.55				33.41	272.42	0.14
	9/27/2017	33.38				DRY	NC	NC
	10/30/2017	33.57				33.42	272.41	0.15
	11/20/2017	33.59				33.49	272.34	0.10
	12/18/2017	33.59				33.43	272.40	0.16
	1/4/2018	33.59				DRY	NC	NC
	1/22/2018	33.58				33.47	272.36	0.11
	2/26/2018	33.58				DRY	NC	NC
	3/26/2018	33.57				33.45	272.38	0.12
	4/5/2018	33.52				DRY	NC	NC
	4/23/2018	33.56				DRY	NC	NC
	5/21/2018	33.59				DRY	NC	NC
	6/18/2018	33.58				33.40	272.43	0.18
	6/27/2018	33.55				33.45	272.38	0.10
	7/30/2018	33.57				DRY	NC	NC
	8/27/2018	33.56				DRY	NC	NC
	9/24/2018	33.59				33.46	272.37	0.13
	10/1/2018	30.21				DRY	NC	NC
	10/22/2018	33.59				DRY	NC	NC
	11/26/2018	33.08				DRY	NC	NC
	12/19/2018	33.55				DRY	NC	NC
	12/31/2018	33.57				33.46	272.37	0.11
	1/28/2019	33.58				33.49	272.34	0.09
	2/25/2019	33.60	305.83	24 - 34	281.83 - 271.83	33.44	272.39	0.16
	3/18/2019	33.58				DRY	NC	NC
	3/20/2019	33.50				33.43	272.40	0.07
	4/15/2019	33.57				33.43	272.40	0.14
	5/6/2019	33.58				33.47	272.36	0.11
	5/8/2019	33.55				DRY	NC	NC
	5/20/2019	33.57				DRY	NC	NC
	6/17/2019	33.58				33.50	272.33	0.08
	6/19/2019	33.58				DRY	NC	NC
	7/22/2019	33.57				DRY	NC	NC
	8/26/2019	33.59				DRY	NC	NC
	9/23/2019	33.58				DRY	NC	NC
	10/2/2019	33.60				DRY	NC	NC
	11/21/2019	33.58				33.49	272.34	0.09
	12/16/2019	33.58				Truck on top of well		
	12/18/2019	33.54				DRY	NC	NC
	1/22/2020	33.56				DRY	NC	NC
	3/5/2020	33.55				DRY	NC	NC
	3/23/2020	33.58				DRY	NC	NC
	4/27/2020	33.59				DRY	NC	NC
	5/26/2020	33.56				DRY	NC	NC
	6/17/2020	33.59				DRY	NC	NC
	7/20/2020	33.58				DRY	NC	NC
	8/17/2020	33.55				DRY	NC	NC
	9/23/2020	33.58				DRY	NC	NC
	9/30/2020	33.58				DRY	NC	NC
	10/26/2020	33.58				DRY	NC	NC
	11/30/2020	33.62				33.52	272.31	0.10
	12/21/2020	33.60				DRY	NC	NC
	1/18/2021	33.99				DRY	NC	NC
	4/5/2021	33.59				DRY	NC	NC
	5/3/2021	33.63				DRY	NC	NC
	5/24/2021	33.58				DRY	NC	NC
	6/22/2021	33.58				DRY	NC	NC
	8/9/2021	33.58				DRY	NC	NC
	9/27/2021	33.58				DRY	NC	NC
	10/26/2021	33.57				DRY	NC	NC
	12/15/2021	33.60				33.52	272.31	0.08
	3/28/2022	33.60				DRY	NC	NC
	4/21/2022	33.60				DRY	NC	NC
	5/16/2022	33.60				DRY	NC	NC
	6/5/2022	33.60				DRY	NC	NC
	9/21/2022	33.57				DRY	NC	NC
	10/17/2022	33.57				DRY	NC	NC
	11/14/2022	33.58				DRY	NC	NC
	12/28/2022	33.59				DRY	NC	NC
	3/30/2023	33.57				DRY	NC	NC

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Laurel Station
Bellingham, Washington

Well ID	Date Measured	Total Depth[a] (ft-TOC)	TOC Elevation[b] (ft-NAVD88)	Approximate Screen Interval (ft-bgs)	Approximate Screen Interval Elevation (ft-NAVD88)	Depth to Groundwater (ft-TOC)	Groundwater Elevation (ft-NAVD88)	Thickness of Water Column (ft)
MW-4	4/23/2015	30.15				28.07	277.61	2.08
	12/14/2015	30.16				DRY	NC	NC
	1/25/2016	30.34				29.04	276.64	1.30
	2/22/2016	30.37				24.33	281.35	6.04
	3/21/2016	30.35				25.86	279.82	4.49
	4/25/2016 *	33.79				DRY	NC	NC
	5/23/2016	30.47				DRY	NC	NC
	6/23/2016	30.15				29.84	275.84	0.31
	6/27/2016	30.12				29.85	275.83	0.27
	8/8/2016	29.87				DRY	NC	NC
	8/30/2016 *	35.40				29.87	275.81	5.53
	9/26/2016	30.03				DRY	NC	NC
	10/24/2016 *	33.50				24.41	281.27	9.09
	11/21/2016 *	31.30				26.71	278.97	4.59
	12/21/2016	30.04				28.74	276.94	1.30
	1/23/2017 *	33.70				33.35	272.33	0.35
	3/6/2017	30.09				27.02	278.66	3.07
	3/21/2017	31.50				24.14	281.54	7.36
	3/29/2017	30.25				28.91	276.77	1.34
	6/21/2017	30.19				29.45	276.23	0.74
	6/26/2017	30.19				29.44	276.24	0.75
	7/31/2017	30.17				29.84	275.84	0.33
	8/28/2017	30.18				DRY	NC	NC
	9/25/2017	30.19				29.94	275.74	0.25
	9/27/2017	29.99				DRY	NC	NC
	10/30/2017	30.19				29.94	275.74	0.25
	11/20/2017	30.21				29.56	276.12	0.65
	12/18/2017	30.20				29.21	276.47	0.99
	1/4/2018	30.19				28.33	277.35	1.86
	1/22/2018	30.21				28.38	277.30	1.83
	2/26/2018	30.23				28.53	277.15	1.70
	3/26/2018	30.19				29.08	276.60	1.11
	4/5/2018	30.15				29.90	275.78	0.25
	4/23/2018	30.22				24.76	280.92	5.46
	5/21/2018	30.22				21.42	284.26	8.80
	6/18/2018	30.23				29.82	275.86	0.41
	6/27/2018	30.18				29.90	275.78	0.28
	7/30/2018	30.21				29.95	275.73	0.26
	8/27/2018	30.20				29.99	275.69	0.21
	9/24/2018	30.21				29.98	275.70	0.23
	10/1/2018	33.57				DRY	NC	NC
	10/22/2018	30.20				30.03	275.65	0.17
	11/26/2018	30.19				29.43	276.25	0.76
	12/19/2018	30.24				29.20	276.48	1.04
	12/31/2018	30.18				29.31	276.37	0.87
	1/28/2019	30.19				29.23	276.45	0.96
	2/25/2019	30.23	305.68	20 - 30	285.67 - 275.67	28.88	276.80	1.35
	3/18/2019	30.20				29.25	276.43	0.95
	3/20/2019	30.10				28.13	277.55	1.97
	4/15/2019	30.21				29.36	276.32	0.85
	5/6/2019	30.20				29.70	275.98	0.50
	5/8/2019	30.20				28.20	277.48	2.00
	5/20/2019	30.21				29.52	276.16	0.69
	6/17/2019	30.20				29.92	275.76	0.28
	6/19/2019	30.22				29.89	275.79	0.33
	7/22/2019	30.22				29.93	275.75	0.29
	8/26/2019	30.22				29.97	275.71	0.25
	9/23/2019	30.20				29.99	275.69	0.21
	10/2/2019	29.90				DRY	NC	NC
	11/21/2019	30.20				29.64	276.04	0.56
	12/16/2019	30.22				29.61	276.07	0.61
	12/18/2019	30.29				29.60	276.08	0.69
	1/22/2020	30.18				28.80	276.88	1.38
	3/5/2020	30.19				DRY	NC	NC
	3/23/2020	30.21				29.27	276.41	0.94
	4/27/2020	30.22				DRY	NC	NC
	5/26/2020	30.23				DRY	NC	NC
	6/17/2020	30.20				DRY	NC	NC
	7/20/2020	30.19				29.80	275.88	0.39
	8/17/2020	30.19				DRY	NC	NC
	9/23/2020	30.20				DRY	NC	NC
	9/30/2020	30.21				DRY	NC	NC
	10/26/2020	30.23				30.03	275.65	0.20
	11/30/2020	30.23				28.90	276.78	1.33
	12/21/2020	30.20				29.57	276.11	0.63
	1/18/2021	30.21				28.94	276.74	1.27
	4/5/2021	30.21				29.35	276.33	0.86
	5/3/2021	30.28				DRY	NC	NC
	5/24/2021	30.23				DRY	NC	NC
	6/22/2021	30.21				29.94	275.74	0.27
	8/9/2021	30.21				29.09	276.59	1.12
	9/27/2021	30.23				DRY	NC	NC
	10/26/2021	30.23				29.52	276.16	0.71
	12/15/2021	30.21				27.97	277.71	2.24
	3/28/2022	30.22				DRY	NC	NC
	4/21/2022	30.22				29.20	276.48	1.02
	5/16/2022	NA				NA	NA	NA
	7/5/2022	30.20				29.44	276.24	0.76
	9/21/2022	30.20				29.99	275.69	0.21
	10/17/2022	30.20				30.01	275.67	0.19
	11/14/2022	30.01				DRY	NC	NC
	12/28/2022	30.21				26.20	279.48	4.01
	3/30/2023	30.22				29.13	276.55	1.09

Table 1
Monitoring Well Groundwater Elevation Data Summary
Laurel Station
Bellingham, Washington

Well ID	Date Measured	Total Depth[a] (ft-TOC)	TOC Elevation[b] (ft-NAVD88)	Approximate Screen Interval (ft-bgs)	Approximate Screen Interval Elevation (ft-NAVD88)	Depth to Groundwater (ft-TOC)	Groundwater Elevation (ft-NAVD88)	Thickness of Water Column (ft)
MW-6	4/23/2015	26.55	302.78	11 - 26	291.78 - 276.78	16.51	286.27	10.04
	11/30/2015	NA				16.17	286.61	10.38
	12/14/2015	26.56				12.92	289.86	13.64
	1/25/2016	26.74				13.59	289.19	13.15
	2/22/2016	26.77				12.89	289.89	13.88
	3/21/2016	26.65				13.02	289.76	13.63
	4/25/2016	26.73				DRY	#N/A	NC
	5/23/2016	26.84				DRY	#N/A	NC
	6/23/2016	26.78				19.17	283.61	7.61
	6/27/2016	26.70				18.52	284.26	8.18
	8/8/2016	26.81				23.31	279.47	3.50
	8/30/2016	27.06				25.91	276.87	1.15
	9/26/2016	26.63				16.67	286.11	9.96
	10/24/2016	26.55				12.94	289.84	13.61
	11/21/2016	26.76				15.20	287.58	11.56
	12/21/2016	26.62				12.81	289.97	13.81
	1/23/2017	26.55				13.25	289.53	13.30
	3/6/2017	26.48				12.81	289.97	13.67
	3/21/2017	26.17				12.76	290.02	13.41
	3/29/2017	26.75				12.55	290.23	14.20
	6/21/2017	26.64				15.63	287.15	11.01
	6/26/2017	26.73				18.54	284.24	8.19
	7/31/2017	26.71				26.14	276.64	0.57
	8/28/2017	26.73				26.15	276.63	0.58
	9/25/2017	26.72				21.48	281.30	5.24
	9/27/2017	26.73				22.32	280.46	4.41
	10/30/2017	26.72				13.45	289.33	13.27
	11/20/2017	26.72				12.86	289.92	13.86
	12/18/2017	26.72				12.62	290.16	14.10
	1/4/2018	26.72				12.89	289.89	13.83
	1/22/2018	26.71				13.01	289.77	13.70
	2/26/2018	26.72				12.90	289.88	13.82
	3/26/2018	26.73				12.80	289.98	13.93
	4/5/2018	26.70				12.45	290.33	14.25
	4/23/2018	26.72				12.73	290.05	13.99
	5/21/2018	26.72				18.16	284.62	8.56
	6/18/2018	26.72				21.13	281.65	5.59
	6/27/2018	26.68				23.29	279.49	3.39
	7/30/2018	26.68				22.86	279.92	3.82
	8/27/2018	26.67				25.13	277.65	1.54
	9/24/2018	26.72				13.35	289.43	13.37
	10/1/2018	26.72				14.13	288.65	12.59
	10/22/2018	26.70				17.51	285.27	9.19
	11/26/2018	26.71				12.15	290.63	14.56
	12/19/2018	26.70				12.34	290.44	14.36
	12/31/2018	26.69				12.28	290.50	14.41
	1/28/2019	26.70				12.78	290.00	13.92
	2/25/2019	26.72				12.19	290.59	14.53
	3/18/2019	26.70				12.61	290.17	14.09
	3/20/2019	26.62				12.52	290.26	14.10
	4/15/2019	26.69				11.91	290.87	14.78
	5/6/2019	26.68				12.91	289.87	13.77
	5/8/2019	26.69				13.36	289.42	13.33
	5/20/2019	26.68				13.33	289.45	13.35
	6/17/2019	26.70				19.63	283.15	7.07
	6/19/2019	26.70				23.69	279.09	3.01
	7/22/2019	26.70				15.32	287.46	11.38
	8/26/2019	26.69				23.61	279.17	3.08
	9/23/2019	26.71				23.03	279.75	3.68
	10/2/2019	26.68				14.37	288.41	12.31
	11/21/2019	26.72				12.40	290.38	14.32
	12/16/2019	26.71				12.53	290.25	14.18
	12/18/2019	26.73				12.35	290.43	14.38
	1/22/2020	26.71				12.01	290.77	14.70
	3/5/2020	26.58				12.00	290.78	14.58
	3/23/2020	26.74				13.47	289.31	13.27
	4/27/2020	26.70				DRY	#N/A	NC
	5/26/2020	26.73				DRY	#N/A	NC
	6/17/2020	26.73				11.87	290.91	14.86
	7/20/2020	26.71				15.62	287.16	11.09
	8/17/2020	26.69				21.16	281.62	5.53
	9/23/2020	26.69				25.91	276.87	0.78
	9/30/2020	26.70				13.03	289.75	13.67
	10/26/2020	26.71				12.74	290.04	13.97
	11/30/2020	26.72				12.64	290.14	14.08
	12/21/2020	26.72				11.85	290.93	14.87
	1/18/2021	26.73				12.74	290.04	13.99
	4/5/2021	26.83				13.47	289.31	13.36
	5/3/2021	26.71				19.13	283.65	7.58
	5/24/2021	26.69				16.30	286.48	10.39
	6/22/2021	26.69				16.63	286.15	10.06
	8/9/2021	26.67				23.31	279.47	3.36
	9/27/2021	26.68				13.24	289.54	13.44
	10/26/2021	26.69				12.66	290.12	14.03
	12/15/2021	26.72				12.40	290.38	14.32
	3/28/2022	26.77				12.20	290.58	14.57
	4/21/2022	26.76				13.01	289.77	13.75
	5/16/2022	26.76				12.50	290.28	14.26
	7/5/2022	26.87				21.11	281.67	5.76
	9/21/2022	26.69				26.38	276.40	0.31
	10/17/2022	26.69				21.90	280.88	4.79
	11/14/2022	26.74				13.35	289.43	13.39
	12/28/2022	26.71				11.75	291.03	14.96
	3/30/2023	26.71				12.59	290.19	14.12

Table 1
Monitoring Well Groundwater Elevation Data Summary
Laurel Station
Bellingham, Washington

Well ID	Date Measured	Total Depth[a] (ft-TOC)	TOC Elevation[b] (ft-NAVD88)	Approximate Screen Interval (ft-bgs)	Approximate Screen Interval Elevation (ft-NAVD88)	Depth to Groundwater (ft-TOC)	Groundwater Elevation (ft-NAVD88)	Thickness of Water Column (ft)
MW-8	4/23/2015	37.10				DRY	NC	NC
	12/14/2015	37.08				DRY	NC	NC
	1/25/2016	37.28				DRY	NC	NC
	2/22/2016	37.13				36.91	265.33	0.22
	3/21/2016	37.45				37.00	265.24	0.45
	4/25/2016	37.41				DRY	NC	NC
	5/23/2016	37.55				37.05	265.19	0.50
	6/23/2016	37.50				37.04	265.20	0.46
	6/27/2016	37.20				DRY	NC	NC
	8/8/2016	37.68				37.08	265.16	0.60
	8/30/2016	37.96				DRY	NC	NC
	9/26/2016	37.80				37.10	265.14	0.70
	10/24/2016	37.60				37.08	265.16	0.52
	11/21/2016	37.40				37.15	265.09	0.25
	12/21/2016	37.14				37.08	265.16	0.06
	1/23/2017	37.59				36.97	265.27	0.62
	3/6/2017	37.15				DRY	NC	NC
	3/21/2017	31.42				31.05	271.19	0.37
	3/29/2017	37.40				DRY	NC	NC
	6/21/2017	37.40				DRY	NC	NC
	6/26/2017	37.03				DRY	NC	NC
	7/31/2017	37.28				37.05	265.19	0.23
	8/28/2017	37.29				37.09	265.15	0.20
	9/25/2017	37.26				37.09	265.15	0.17
	9/27/2017	37.08				DRY	NC	NC
	10/30/2017	37.29				37.08	265.16	0.21
	11/20/2017	37.27				33.83	268.41	3.44
	12/18/2017	37.30				37.08	265.16	0.22
	1/4/2018	37.26				37.08	265.16	0.18
	1/22/2018	37.26				37.00	265.24	0.26
	2/26/2018	37.29				37.02	265.22	0.27
	3/26/2018	37.27				37.05	265.19	0.22
	4/5/2018	37.21				37.00	265.24	0.21
	4/23/2018	37.30				37.03	265.21	0.27
	5/21/2018	37.28				37.05	265.19	0.23
	6/18/2018	37.26				37.04	265.20	0.22
	6/27/2018	37.24				37.05	265.19	0.19
	7/30/2018	37.29				37.07	265.17	0.22
	8/27/2018	37.28				37.07	265.17	0.21
	9/24/2018	37.26				37.07	265.17	0.19
	10/1/2018	37.12				DRY	NC	NC
	10/22/2018	37.27				37.08	265.16	0.19
	11/26/2018	37.28				37.08	265.16	0.20
	12/19/2018	37.26				DRY	NC	NC
	12/31/2018	37.27				37.09	265.15	0.18
	1/28/2018	37.26				37.03	265.21	0.23
	2/25/2019	37.31	302.24	23 - 38	279.24 - 264.24	37.05	265.19	0.26
	3/18/2019	37.27				37.05	265.19	0.22
	3/20/2019	37.18				37.00	265.24	0.18
	4/15/2019	37.26				37.05	265.19	0.21
	5/6/2019	37.25				37.03	265.21	0.22
	5/8/2019	37.30				37.05	265.19	0.25
	5/20/2019	37.30				37.05	265.19	0.25
	6/17/2019	37.28				37.04	265.20	0.24
	6/19/2019	37.29				37.08	265.16	0.21
	7/22/2019	37.32				37.09	265.15	0.23
	8/26/2019	37.28				37.06	265.18	0.22
	9/23/2019	37.29				37.08	265.16	0.21
	10/2/2019	37.30				DRY	NC	NC
	11/21/2019	37.28				DRY	NC	NC
	12/16/2019	37.33				37.06	265.18	0.27
	12/18/2019	37.25				DRY	NC	NC
	1/22/2020	37.29				DRY	NC	NC
	3/5/2020	37.10				36.99	265.25	0.11
	3/23/2020	37.29				37.01	265.23	0.28
	4/27/2020	37.30				DRY	NC	NC
	5/26/2020	37.27				DRY	NC	NC
	6/17/2020	37.33				DRY	NC	NC
	7/20/2020	37.27				DRY	NC	NC
	8/17/2020	37.26				DRY	NC	NC
	9/23/2020	37.28				DRY	NC	NC
	9/30/2020	37.25				DRY	NC	NC
	10/26/2020	37.26				37.15	265.09	0.11
	11/30/2020	37.28				36.29	265.95	0.99
	12/21/2020	37.30				37.06	265.18	0.24
	1/18/2021	37.32				DRY	NC	NC
	4/5/2021	32.43				DRY	NC	NC
	5/3/2021	37.33				DRY	NC	NC
	5/24/2021	37.27				DRY	NC	NC
	6/22/2021	37.30				37.05	265.19	0.25
	8/9/2021	37.26				37.06	265.18	0.20
	9/27/2021	37.26				DRY	NC	NC
	10/26/2021	37.26				37.00	265.24	0.26
	12/15/2021	37.25				36.97	265.27	0.28
	3/28/2022	37.25				36.74	265.50	0.51
	4/21/2022	37.26				DRY	NC	NC
	5/16/2022	37.25				DRY	NC	NC
	7/5/2022	37.25				37.00	265.24	0.25
	9/21/2022	37.23				36.98	265.26	0.25
	10/17/2022	37.25				37.00	265.24	0.25
	11/14/2022	37.26				37.00	265.24	0.26
	12/28/2022	37.26				36.98	265.26	0.28
	3/30/2023	37.29				37.11	265.13	0.18

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Laurel Station
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Well ID	Date Measured	Total Depth[a] (ft-TOC)	TOC Elevation[b] (ft-NAVD88)	Approximate Screen Interval (ft-bgs)	Approximate Screen Interval Elevation (ft-NAVD88)	Depth to Groundwater (ft-TOC)	Groundwater Elevation (ft-NAVD88)	Thickness of Water Column (ft)
MW-11[c]	4/23/2015	48.15				DRY	NC	NC
	11/30/2015	NA				47.54	273.77	0.61
	12/14/2015	48.17				47.21	274.10	0.96
	1/25/2016 *	46.93				DRY	NC	NC
	2/22/2016	48.21				46.86	274.45	1.35
	3/21/2016	48.52				46.96	274.35	1.56
	4/25/2016	48.69				DRY	NC	NC
	5/23/2016	48.73				DRY	NC	NC
	6/27/2016	48.30				DRY	NC	NC
	8/8/2016	48.02				DRY	NC	NC
	8/30/2016	48.80				48.48	272.83	0.32
	10/24/2016	48.95				48.00	273.31	0.95
	9/26/2016 *	38.00				DRY	NC	NC
	11/21/2016	48.42				47.22	274.09	1.20
	12/21/2016	48.60				47.60	273.71	1.00
	1/23/2017	48.90				47.23	274.08	1.67
	3/6/2017	48.24				46.91	274.40	1.33
	3/21/2017	48.48				46.85	274.46	1.63
	3/29/2017	48.41				47.05	274.26	1.36
	6/21/2017	48.30				47.98	273.33	0.32
	6/26/2017	48.58				48.08	273.23	0.50
	7/31/2017	48.40				48.08	273.23	0.32
	8/28/2017	48.36				48.09	273.22	0.27
	9/25/2017	48.38				48.08	273.23	0.30
	9/27/2017	48.18				48.09	273.22	0.09
	10/30/2017	48.42				48.10	273.21	0.32
	11/20/2017	48.41				47.61	273.70	0.80
	12/18/2017	48.39				48.07	273.24	0.32
	1/4/2018	48.45				47.90	273.41	0.55
	1/22/2018	48.45				47.36	273.95	1.09
	2/26/2018	48.42				47.46	273.85	0.96
	3/26/2018	48.40				47.41	273.90	0.99
	4/5/2018	48.41				47.23	274.08	1.18
	4/23/2018	48.38				47.01	274.30	1.37
	5/21/2018	48.41				48.08	273.23	0.33
	6/18/2018	48.43				48.09	273.22	0.34
	6/27/2018	48.35				48.10	273.21	0.25
	7/30/2018	48.37				48.10	273.21	0.27
	8/27/2018	48.37				48.10	273.21	0.27
	9/24/2018	48.47				48.10	273.21	0.37
	10/1/2018	48.31				DRY	NC	NC
	10/22/2018	48.41				48.11	273.20	0.30
	11/26/2018	48.42				47.61	273.70	0.81
	12/19/2018	48.35				47.55	273.76	0.80
	12/31/2018	48.42				47.38	273.93	1.04
	1/28/2019	48.41	321.31	25 - 45	293.31 - 273.31	47.18	274.13	1.23
	2/25/2019	48.38				47.15	274.16	1.23
	3/18/2019	48.43				47.16	274.15	1.27
	3/20/2019	48.30				47.08	274.23	1.22
	4/15/2019	48.41				47.06	274.25	1.35
	5/20/2019	48.39				48.08	273.23	0.31
	6/17/2019	48.38				48.07	273.24	0.31
	6/19/2019	48.40				48.09	273.22	0.31
	7/22/2019	48.39				48.12	273.19	0.27
	8/26/2019	48.45				48.09	273.22	0.36
	9/23/2019	48.39				48.11	273.20	0.28
	10/2/2019	48.37				48.10	273.21	0.27
	11/21/2019	48.23				47.65	273.66	0.58
	12/16/2019	48.41				47.67	273.64	0.74
	12/18/2019	48.38				47.60	273.71	0.78
	1/22/2020	48.39				41.38	279.93	7.01
	3/5/2020	48.21				DRY	NC	NC
	3/23/2020	48.37				48.10	273.21	0.27
	4/27/2020	48.41				DRY	NC	NC
	5/26/2020	48.42				47.38	273.93	1.04
	6/17/2020	48.39				46.97	274.34	1.42
	7/20/2020	48.38				DRY	NC	NC
	8/17/2020	48.39				DRY	NC	NC
	9/23/2020	48.36				DRY	NC	NC
	9/30/2020	48.47				DRY	NC	NC
	10/26/2020	48.42				48.14	273.17	0.28
	11/30/2020	48.50				47.15	274.16	1.35
	12/21/2020	48.50				47.06	274.25	1.44
	1/18/2021	48.49				47.30	274.01	1.19
	4/5/2021	48.42				DRY	NC	NC
	5/3/2021	48.45				DRY	NC	NC
	5/24/2021	48.50				DRY	NC	NC
	6/22/2021	48.43				48.10	273.21	0.33
	8/9/2021	48.38				48.10	273.21	0.28
	9/27/2021	48.50				DRY	NC	NC
	10/26/2021	48.50				DRY	NC	NC
	12/15/2021	47.40				DRY	NC	NC
	3/28/2022	48.10				46.93	274.38	1.17
	4/21/2022	48.10				DRY	NC	NC
	5/16/2022	48.10				47.32	273.99	0.78
	7/5/2022	49.01				DRY	NC	NC
	9/21/2022	48.39				48.14	273.17	0.25
	10/17/2022	48.42				48.15	273.16	0.27
	11/14/2022	48.39				DRY	NC	NC
	12/28/2022	48.44				DRY	NC	NC
	3/30/2023	48.40				47.32	273.99	1.08

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Laurel Station
Bellingham, Washington

Well ID	Date Measured	Total Depth[a] (ft-TOC)	TOC Elevation[b] (ft-NAVD88)	Approximate Screen Interval (ft-bgs)	Approximate Screen Interval Elevation (ft-NAVD88)	Depth to Groundwater (ft-TOC)	Groundwater Elevation (ft-NAVD88)	Thickness of Water Column (ft)
MW-12[c]	4/23/2015	51.60				DRY	NC	NC
	11/30/2015	NA				50.69	272.84	0.91
	12/14/2015	51.80				51.20	272.33	0.60
	1/25/2016	52.12				DRY	NC	NC
	2/22/2016	51.99				DRY	NC	NC
	3/21/2016	52.20				51.74	271.79	0.46
	4/25/2016	52.12				DRY	NC	NC
	5/23/2016	52.22				DRY	NC	NC
	6/27/2016	51.75				DRY	NC	NC
	8/8/2016	51.72				DRY	NC	NC
	8/30/2016	52.55				DRY	NC	NC
	9/26/2016	52.50				DRY	NC	NC
	10/24/2016	52.50				DRY	NC	NC
	11/21/2016	51.89				51.80	271.73	0.09
	12/21/2016	52.67				51.77	271.76	0.90
	1/23/2017	52.25				DRY	NC	NC
	3/6/2017	51.69				DRY	NC	NC
	3/21/2017	52.45				DRY	NC	NC
	3/29/2017	51.89				DRY	NC	NC
	6/21/2017	51.70				DRY	NC	NC
	6/26/2017	51.83				DRY	NC	NC
	7/31/2017	51.83				DRY	NC	NC
	8/28/2017	51.82				DRY	NC	NC
	9/25/2017	51.87				DRY	NC	NC
	9/27/2017	51.65				DRY	NC	NC
	10/30/2017	51.92				DRY	NC	NC
	11/20/2017	51.89				DRY	NC	NC
	12/18/2017	51.86				DRY	NC	NC
	1/4/2018	51.86				51.60	271.93	0.26
	1/22/2018	51.82				DRY	NC	NC
	2/26/2018	51.90				DRY	NC	NC
	3/26/2018	51.86				DRY	NC	NC
	4/5/2018	51.85				DRY	NC	NC
	4/23/2018	51.87				DRY	NC	NC
	5/21/2018	51.88				DRY	NC	NC
	6/18/2018	51.90				DRY	NC	NC
	6/27/2018	51.83				DRY	NC	NC
	7/30/2018	51.88				DRY	NC	NC
	8/27/2018	51.83				DRY	NC	NC
	9/24/2018	51.94				DRY	NC	NC
	10/1/2018	51.85				DRY	NC	NC
	10/22/2018	51.86				DRY	NC	NC
	11/26/2018	51.84				DRY	NC	NC
	12/19/2018	51.85				DRY	NC	NC
	12/31/2018	51.90	323.53	29 - 49	291.53 - 271.53	DRY	NC	NC
	1/28/2019	51.88				DRY	NC	NC
	2/25/2019	51.87				DRY	NC	NC
	3/18/2019	51.90				DRY	NC	NC
	3/20/2019	51.76				DRY	NC	NC
	4/15/2019	51.87				DRY	NC	NC
	5/20/2019	51.89				DRY	NC	NC
	6/17/2019	51.90				DRY	NC	NC
	6/19/2019	51.87				DRY	NC	NC
	7/22/2019	51.88				DRY	NC	NC
	8/26/2019	51.88				DRY	NC	NC
	9/23/2019	51.81				DRY	NC	NC
	10/2/2019	51.89				DRY	NC	NC
	11/21/2019	51.86				DRY	NC	NC
	12/16/2019	51.88				DRY	NC	NC
	12/18/2019	51.86				DRY	NC	NC
	1/22/2020	57.85				DRY	NC	NC
	3/5/2020	51.50				DRY	NC	NC
	3/23/2020	50.68				DRY	NC	NC
	4/27/2020	51.84				DRY	NC	NC
	5/26/2020	51.88				DRY	NC	NC
	6/17/2020	51.86				DRY	NC	NC
	7/20/2020	51.95				DRY	NC	NC
	8/17/2020	51.90				DRY	NC	NC
	9/23/2020	51.91				DRY	NC	NC
	9/30/2020	51.89				DRY	NC	NC
	10/26/2020	51.92				DRY	NC	NC
	11/30/2020	51.63				DRY	NC	NC
	12/21/2020	51.85				DRY	NC	NC
	1/18/2021	51.99				DRY	NC	NC
	4/5/2021	51.89				DRY	NC	NC
	5/3/2021	51.97				DRY	NC	NC
	5/24/2021	51.90				DRY	NC	NC
	6/22/2021	51.88				DRY	NC	NC
	8/9/2021	51.87				DRY	NC	NC
	9/27/2021	51.90				DRY	NC	NC
	10/26/2021	51.90				DRY	NC	NC
	12/15/2021	51.88				51.61	271.92	0.27
	3/28/2022	51.90				51.65	271.88	0.25
	4/21/2022	51.90				DRY	NC	NC
	5/16/2022	51.90				DRY	NC	NC
	7/5/2022	51.64				DRY	NC	NC
	9/21/2022	32.95				32.65	290.88	0.30
	10/17/2022	31.88				31.66	291.87	0.22
	11/14/2022	51.90				DRY	NC	NC
	12/28/2022	51.93				51.69	271.84	0.24
	3/30/2023	51.86				51.66	271.87	0.20

Table 1
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Laurel Station
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Well ID	Date Measured	Total Depth[a] (ft-TOC)	TOC Elevation[b] (ft-NAVD88)	Approximate Screen Interval (ft-bgs)	Approximate Screen Interval Elevation (ft-NAVD88)	Depth to Groundwater (ft-TOC)	Groundwater Elevation (ft-NAVD88)	Thickness of Water Column (ft)
MW-13	4/23/2015	62.45				DRY	NC	NC
	11/30/2015	NA				63.48	NC	NC
	12/14/2015	62.62				DRY	NC	NC
	1/25/2016	63.21				62.45	260.75	0.76
	2/22/2016	62.56				DRY	NC	NC
	3/21/2016	63.06				DRY	NC	NC
	4/25/2016	63.09				DRY	NC	NC
	5/23/2016	63.11				DRY	NC	NC
	6/27/2016	62.60				DRY	NC	NC
	8/8/2016	62.50				DRY	NC	NC
	8/30/2016	63.29				DRY	NC	NC
	9/26/2016	63.91				DRY	NC	NC
	10/24/2016 *	63.70				DRY	NC	NC
	11/21/2016	63.00				62.52	260.68	0.48
	12/21/2016	62.90				DRY	NC	NC
	1/23/2017	63.36				DRY	NC	NC
	3/6/2017	62.50				DRY	NC	NC
	3/21/2017	63.47				DRY	NC	NC
	3/29/2017	62.68				DRY	NC	NC
	6/21/2017	62.60				DRY	NC	NC
	6/26/2017	63.08				DRY	NC	NC
	7/31/2017	62.70				62.57	260.63	0.13
	8/28/2017	62.68				62.58	260.62	0.10
	9/25/2017	62.68				62.61	260.59	0.07
	9/27/2017	62.54				DRY	NC	NC
	10/30/2017	62.66				62.62	260.58	0.04
	11/20/2017	62.69				62.61	260.59	0.08
	12/18/2017	62.76				62.61	260.59	0.15
	1/4/2018	62.69				DRY	NC	NC
	1/22/2018	62.65				DRY	NC	NC
	2/26/2018	62.69				DRY	NC	NC
	3/26/2018	62.69				DRY	NC	NC
	4/5/2018	62.68				62.62	260.58	0.06
	4/23/2018	62.68				DRY	NC	NC
	5/21/2018	62.68				DRY	NC	NC
	6/18/2018	62.68				DRY	NC	NC
	6/27/2018	62.65				DRY	NC	NC
	7/30/2018	62.67				DRY	NC	NC
	8/27/2018	62.69				DRY	NC	NC
	9/24/2018	62.71				DRY	NC	NC
	10/1/2018	62.67				DRY	NC	NC
	10/22/2018	62.71				DRY	NC	NC
	11/26/2018	62.67				DRY	NC	NC
	12/19/2018	62.79				DRY	NC	NC
	12/31/2018	62.79				DRY	NC	NC
	1/28/2019	62.69	323.20	39 - 59	281.20 - 261.20	DRY	NC	NC
	2/25/2019	62.68				DRY	NC	NC
	3/18/2019	62.75				DRY	NC	NC
	3/20/2019	63.26				DRY	NC	NC
	4/15/2019	62.67				DRY	NC	NC
	5/20/2019	62.66				DRY	NC	NC
	6/17/2019	62.66				DRY	NC	NC
	6/19/2019	62.67				DRY	NC	NC
	7/22/2019	62.67				DRY	NC	NC
	8/26/2019	62.68				DRY	NC	NC
	9/23/2019	62.65				DRY	NC	NC
	10/2/2019	60.65				DRY	NC	NC
	11/21/2019	62.68				DRY	NC	NC
	12/16/2019	62.72				DRY	NC	NC
	12/18/2019	62.67				DRY	NC	NC
	1/22/2020	63.65				DRY	NC	NC
	3/5/2020	62.62				DRY	NC	NC
	3/23/2020	62.69				DRY	NC	NC
	4/27/2020	62.63				DRY	NC	NC
	5/26/2020	62.69				DRY	NC	NC
	6/17/2020	62.69				DRY	NC	NC
	7/20/2020	62.65				DRY	NC	NC
	8/17/2020	62.68				DRY	NC	NC
	9/23/2020	62.66				DRY	NC	NC
	9/30/2020	62.68				DRY	NC	NC
	10/26/2020	62.74				DRY	NC	NC
	11/30/2020	62.69				DRY	NC	NC
	12/21/2020	62.71				DRY	NC	NC
	1/18/2021	62.91				DRY	NC	NC
	4/5/2021	62.72				DRY	NC	NC
	5/3/2021	62.89				DRY	NC	NC
	5/24/2021	62.84				DRY	NC	NC
	6/22/2021	62.72				DRY	NC	NC
	8/9/2021	62.71				DRY	NC	NC
	9/27/2021	62.84				DRY	NC	NC
	10/26/2021	62.85				DRY	NC	NC
	12/15/2021	52.66				DRY	NC	NC
	3/28/2022	42.84				DRY	NC	NC
	4/21/2022	42.83				DRY	NC	NC
	5/16/2022	42.82				DRY	NC	NC
	7/5/2022	63.45				DRY	NC	NC
	9/21/2022	62.65				DRY	NC	NC
	10/17/2022	62.59				DRY	NC	NC
	11/14/2022	62.66				DRY	NC	NC
	12/28/2022	62.68				DRY	NC	NC
	3/30/2023	63.67				DRY	NC	NC

Table 1
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Laurel Station
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Well ID	Date Measured	Total Depth[a] (ft-TOC)	TOC Elevation[b] (ft-NAVD88)	Approximate Screen Interval (ft-bgs)	Approximate Screen Interval Elevation (ft-NAVD88)	Depth to Groundwater (ft-TOC)	Groundwater Elevation (ft-NAVD88)	Thickness of Water Column (ft)
MW-14	4/23/2015	50.75				DRY	NC	NC
	11/30/2015	NA				50.72	266.05	0.03
	12/14/2015	50.94				DRY	NC	NC
	1/25/2016	51.37				DRY	NC	NC
	2/22/2016	51.24				50.77	266.00	0.47
	3/21/2016	51.46				50.73	266.04	0.73
	4/25/2016	51.46				DRY	NC	NC
	5/23/2016	51.12				DRY	NC	NC
	6/27/2016	50.90				DRY	NC	NC
	8/8/2016	51.30				DRY	NC	NC
	8/30/2016 *	52.00				DRY	NC	NC
	9/26/2016	51.80				50.72	266.05	1.08
	10/24/2016	51.65				46.90	269.87	4.75
	11/21/2016	51.20				50.85	265.92	0.35
	12/21/2016	51.30				51.23	265.54	0.07
	1/23/2017	51.50				50.61	266.16	0.89
	3/6/2017	50.82				50.69	266.08	0.13
	3/21/2017	51.35				50.78	265.99	0.57
	3/29/2017	50.89				DRY	NC	NC
	6/21/2017	50.65				DRY	NC	NC
	6/26/2017	50.98				50.77	266.00	0.21
	7/31/2017	50.96				50.76	266.01	0.20
	8/28/2017	50.96				50.78	265.99	0.18
	9/25/2017	50.97				50.83	265.94	0.14
	9/27/2017	50.80				DRY	NC	NC
	10/30/2017	51.02				50.82	265.95	0.20
	11/20/2017	50.99				50.81	265.96	0.18
	12/18/2017	51.02				50.85	265.92	0.17
	1/4/2018	51.01				50.88	265.89	0.13
	1/22/2018	51.02				50.87	265.90	0.15
	2/26/2018	51.01				50.76	266.01	0.25
	3/26/2018	51.01				50.78	265.99	0.23
	4/5/2018	50.98				50.78	265.99	0.20
	4/23/2018	51.01				50.73	266.04	0.28
	5/21/2018	51.02				50.75	266.02	0.27
	6/18/2018	51.02				DRY	NC	NC
	6/27/2018	50.95				50.75	266.02	0.20
	7/30/2018	50.98				50.77	266.00	0.21
	8/27/2018	50.98				50.79	265.98	0.19
	9/24/2018	51.01				50.77	266.00	0.24
	10/1/2018	50.97				DRY	NC	NC
	10/22/2018	51.01				DRY	NC	NC
	11/26/2018	50.98				50.87	265.90	0.11
	12/19/2018	51.10				DRY	NC	NC
	12/31/2018	51.00	316.77	30 - 50	286.77 - 266.77	50.84	265.93	0.16
	1/28/2019	51.00				50.84	265.93	0.16
	2/25/2019	51.01				50.75	266.02	0.26
	3/18/2019	51.04				50.78	265.99	0.26
	3/20/2019	50.87				DRY	NC	NC
	4/15/2019	51.01				50.77	266.00	0.24
	5/20/2019	50.98				DRY	NC	NC
	6/17/2019	51.00				50.79	265.98	0.21
	6/19/2019	50.98				50.79	265.98	0.19
	7/22/2019	51.00				50.80	265.97	0.20
	8/26/2019	51.02				50.82	265.95	0.20
	9/23/2019	51.03				50.80	265.97	0.23
	10/2/2019	50.98				50.80	265.97	0.18
	11/21/2019	50.99				DRY	NC	NC
	12/16/2019	51.04				DRY	NC	NC
	12/18/2019	51.00				DRY	NC	NC
	1/22/2020	50.98				50.72	266.05	0.26
	3/5/2020	50.80				50.70	266.07	0.10
	3/23/2020	50.99				50.75	266.02	0.24
	4/27/2020	51.04				DRY	NC	NC
	5/26/2020	50.98				DRY	NC	NC
	6/17/2020	51.02				DRY	NC	NC
	7/20/2020	51.03				DRY	NC	NC
	8/17/2020	51.01				DRY	NC	NC
	9/23/2020	51.02				DRY	NC	NC
	9/30/2020	51.00				DRY	NC	NC
	10/26/2020	51.01				50.83	265.94	0.18
	11/30/2020	51.13				DRY	NC	NC
	12/21/2020	51.03				DRY	NC	NC
	1/18/2021	51.05				DRY	NC	NC
	4/5/2021	50.95				DRY	NC	NC
	5/3/2021	51.10				DRY	NC	NC
	5/24/2021	51.08				DRY	NC	NC
	6/22/2021	51.00				50.80	265.97	0.20
	8/9/2021	51.00				50.88	265.89	0.12
	9/27/2021	51.09				DRY	NC	NC
	10/26/2021	51.06				DRY	NC	NC
	12/15/2021	51.01				DRY	NC	NC
	3/28/2022	51.08				DRY	NC	NC
	4/21/2022	51.08				DRY	NC	NC
	5/16/2022	51.08				DRY	NC	NC
	7/5/2022	51.62				DRY	NC	NC
	9/21/2022	50.99				50.79	265.98	0.20
	10/17/2022	51.00				50.80	265.97	0.20
	11/14/2022	51.00				DRY	NC	NC
	12/28/2022	51.00				50.72	266.05	0.28
	3/30/2023	51.00				50.75	266.02	0.25

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Laurel Station
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Well ID	Date Measured	Total Depth[a] (ft-TOC)	TOC Elevation[b] (ft-NAVD88)	Approximate Screen Interval (ft-bgs)	Approximate Screen Interval Elevation (ft-NAVD88)	Depth to Groundwater (ft-TOC)	Groundwater Elevation (ft-NAVD88)	Thickness of Water Column (ft)
MW-15	4/23/2015	34.25	303.12	25 - 35	278.12 - 268.12	DRY	NC	NC
	10/26/2015	33.76				33.72	269.40	0.04
	11/30/2015	NA				33.82	269.30	NC
	12/14/2015	34.24				33.79	269.33	0.45
	1/25/2016	35.15				33.80	269.32	1.35
	2/22/2016 *	33.39				33.19	269.93	0.20
	3/21/2016	34.82				33.78	269.34	1.04
	4/25/2016	34.71				DRY	NC	NC
	5/23/2016	34.80				DRY	NC	NC
	6/27/2016 *	33.52				DRY	NC	NC
	8/8/2016	34.31				33.74	269.38	0.57
	8/30/2016 *	35.26				33.74	269.38	1.52
	9/26/2016 *	36.00				DRY	NC	NC
	10/24/2016	35.15				33.63	269.49	1.52
	11/21/2016	33.80				33.73	269.39	0.07
	12/21/2016	34.39				33.72	269.40	0.67
	1/23/2017	35.25				33.70	269.42	1.55
	3/6/2017	34.08				33.74	269.38	0.34
	3/21/2017	35.30				DRY	NC	NC
	3/29/2017	34.37				DRY	NC	NC
	6/21/2017	34.31				DRY	NC	NC
	6/26/2017	34.67				33.75	269.37	0.92
	7/31/2017	34.26				33.79	269.33	0.47
	8/28/2017	34.31				33.77	269.35	0.54
	9/25/2017	34.28				33.76	269.36	0.52
	9/27/2017	34.07				33.77	269.35	0.30
	10/30/2017	34.28				33.78	269.34	0.50
	11/20/2017	34.24				33.79	269.33	0.45
	12/18/2017	34.31				33.76	269.36	0.55
	1/4/2018	34.36				33.77	269.35	0.59
	1/22/2018	34.38				33.82	269.30	0.56
	2/26/2018	34.28				33.82	269.30	0.46
	3/26/2018	34.32				33.91	269.21	0.41
	4/5/2018	34.35				33.65	269.47	0.70
	4/23/2018	34.40				33.79	269.33	0.61
	5/21/2018	34.39				33.79	269.33	0.60
	6/18/2018	34.38				33.74	269.38	0.64
	6/27/2018	34.43				33.77	269.35	0.66
	7/30/2018	34.46				33.73	269.39	0.73
	8/27/2018	34.32				33.79	269.33	0.53
	9/24/2018	34.38				33.78	269.34	0.60
	10/1/2018	34.35				DRY	NC	NC
	10/22/2018	34.39				33.79	269.33	0.60
	11/26/2018	34.34				33.79	269.33	0.55
	12/19/2018	33.82				DRY	NC	NC
	12/31/2018	34.34				33.81	269.31	0.53
	1/28/2019	34.32				33.79	269.33	0.53
	2/25/2019	34.35				33.79	269.33	0.56
	3/18/2019	34.37				33.80	269.32	0.57
	3/20/2019	34.16				DRY	NC	NC
	4/15/2019	34.34				33.77	269.35	0.57
	5/6/2019	34.31				33.74	269.38	0.57
	5/8/2019	34.20				33.70	269.42	0.50
	5/20/2019	34.37				33.79	269.33	0.58
	6/17/2019	34.32				34.13	268.99	0.19
	6/19/2019	34.35				33.80	269.32	0.55
	7/22/2019	34.35				33.81	269.31	0.54
	8/26/2019	34.31				33.80	269.32	0.51
	9/23/2019	34.41				33.81	269.31	0.60
	10/2/2019	34.26				33.81	269.31	0.45
	11/21/2019	34.33				33.81	269.31	0.52
	12/16/2019	34.28				33.82	269.30	0.46
	12/18/2019	34.30				33.90	269.22	0.40
	1/22/2020	34.33				33.80	269.32	0.53
	3/5/2020	34.30				33.81	269.31	0.49
	3/23/2020	34.31				33.79	269.33	0.52
	4/27/2020	34.32				DRY	NC	NC
	5/26/2020	34.33				DRY	NC	NC
	6/17/2020	34.30				DRY	NC	NC
	7/20/2020	34.26				33.73	269.39	0.53
	8/17/2020	34.26				DRY	NC	NC
	9/23/2020	34.26				DRY	NC	NC
	9/30/2020	34.30				33.80	269.32	0.50
	10/26/2020	34.30				33.80	269.32	0.50
	11/30/2020	34.45				33.80	269.32	0.65
	12/21/2020	34.37				DRY	NC	NC
	1/18/2021	34.24				DRY	NC	NC
	4/5/2021	34.40				33.82	269.30	0.58
	5/3/2021	34.33				33.81	269.31	0.52
	5/24/2021	34.35				DRY	NC	NC
	6/22/2021	34.30				33.76	269.36	0.54
	8/9/2021	34.38				33.84	269.28	0.54
	9/27/2021	34.34				DRY	NC	NC
	10/26/2021	34.34				DRY	NC	NC
	12/15/2021	34.34				33.77	269.35	0.57
	3/28/2022	34.34				DRY	NC	NC
	4/21/2022	34.34				DRY	NC	NC
	5/16/2022	34.34				DRY	NC	NC
	7/5/2022	34.30				33.87	269.25	0.43
	9/21/2022	34.29				33.78	269.34	0.51
	10/17/2022	34.35				33.80	269.32	0.55
	11/14/2022	34.43				DRY	NC	NC
	12/28/2022	34.32				33.80	269.32	0.52
	3/30/2023	34.30				33.82	269.30	0.48

Table 1
Monitoring Well Groundwater Elevation Data Summary
Laurel Station
Bellingham, Washington

Well ID	Date Measured	Total Depth[a] (ft-TOC)	TOC Elevation[b] (ft-NAVD88)	Approximate Screen Interval (ft-bgs)	Approximate Screen Interval Elevation (ft-NAVD88)	Depth to Groundwater (ft-TOC)	Groundwater Elevation (ft-NAVD88)	Thickness of Water Column (ft)
MW-16	4/23/2015	34.82				DRY	NC	NC
	10/26/2015	34.91				34.80	269.11	0.11
	12/14/2015	34.83				DRY	NC	NC
	1/25/2016	35.73				DRY	NC	NC
	2/22/2016	35.72				34.97	268.94	0.75
	3/21/2016	35.61				33.81	270.10	1.80
	4/25/2016	35.41				DRY	NC	NC
	5/23/2016	35.58				DRY	NC	NC
	6/27/2016	34.70				DRY	NC	NC
	8/8/2016	35.50				34.73	269.18	0.77
	8/30/2016 *	36.23				34.74	269.17	1.49
	9/26/2016 *	36.50				DRY	NC	NC
	10/24/2016 *	36.65				DRY	NC	NC
	11/21/2016	35.46				34.60	269.31	0.86
	12/21/2016 *	36.10				DRY	NC	NC
	1/23/2017	35.70				34.36	269.55	1.34
	3/6/2017	34.61				34.02	269.89	0.59
	3/21/2017	35.73				DRY	NC	NC
	3/29/2017	34.87				DRY	NC	NC
	6/21/2017	34.69				DRY	NC	NC
	6/26/2017	34.72				DRY	NC	NC
	7/31/2017	35.95				34.75	269.16	1.20
	8/28/2017	34.85				34.74	269.17	0.11
	9/25/2017	34.93				34.68	269.23	0.25
	9/27/2017	34.77				DRY	NC	NC
	10/30/2017	34.97				34.92	268.99	0.05
	11/20/2017	34.71				DRY	NC	NC
	12/18/2017	35.01				34.88	269.03	0.13
	1/4/2018	35.45				34.72	269.19	0.73
	1/22/2018	34.81				34.64	269.27	0.17
	2/26/2018	34.89				34.74	269.17	0.15
	3/26/2018	34.84				DRY	NC	NC
	4/5/2018	34.83				34.55	269.36	0.28
	4/23/2018	35.02				DRY	NC	NC
	5/21/2018	34.84				34.71	269.20	0.13
	6/18/2018	34.87				34.68	269.23	0.19
	6/27/2018	35.05				34.92	268.99	0.13
	7/30/2018	34.96				DRY	NC	NC
	8/27/2018	34.83				DRY	NC	NC
	9/24/2018	34.82				DRY	NC	NC
	10/1/2018	34.91				DRY	NC	NC
	10/22/2018	34.99				DRY	NC	NC
	11/26/2018	34.83				DRY	NC	NC
	12/19/2018	34.82				DRY	NC	NC
	12/31/2018	34.70				DRY	NC	NC
	1/28/2019	34.88				DRY	NC	NC
	2/25/2019	Frozen	303.91	25 - 35	278.91 - 268.91	Frozen		
	3/18/2019	34.77				DRY	NC	NC
	3/20/2019	34.89				DRY	NC	NC
	4/15/2019	34.81				DRY	NC	NC
	5/6/2019	34.80				34.76	269.15	0.04
	5/8/2019	34.80				DRY	NC	NC
	5/20/2019	34.97				33.79	270.12	1.18
	6/17/2019	34.88				34.77	269.14	0.11
	6/19/2019	34.82				DRY	NC	NC
	7/22/2019	34.95				DRY	NC	NC
	8/26/2019	35.01				34.91	269.00	0.10
	9/23/2019	34.87				DRY	NC	NC
	10/2/2019	35.55				DRY	NC	NC
	11/21/2019	34.84				DRY	NC	NC
	12/16/2019	35.01				DRY	NC	NC
	12/18/2019	35.14				34.72	269.19	0.42
	1/22/2020	35.00				34.82	269.09	0.18
	3/5/2020	34.74				DRY	NC	NC
	3/23/2020	34.99				34.85	269.06	0.14
	4/27/2020	35.11				DRY	NC	NC
	5/26/2020	35.05				DRY	NC	NC
	6/17/2020	35.08				DRY	NC	NC
	7/20/2020	35.04				DRY	NC	NC
	8/17/2020	35.07				DRY	NC	NC
	9/23/2020	35.05				DRY	NC	NC
	9/30/2020	34.74				DRY	NC	NC
	10/26/2020	35.02				34.92	268.99	0.10
	11/30/2020	34.89				DRY	NC	NC
	12/21/2020	34.86				DRY	NC	NC
	1/18/2021	34.94				DRY	NC	NC
	4/5/2021	34.87				DRY	NC	NC
	5/3/2021	34.87				DRY	NC	NC
	5/24/2021	34.95				DRY	NC	NC
	6/22/2021	34.79				DRY	NC	NC
	8/9/2021	35.08				34.88	269.03	0.20
	9/27/2021	34.95				DRY	NC	NC
	10/26/2021	34.95				DRY	NC	NC
	12/15/2021	34.74				34.23	269.68	0.51
	3/28/2022	34.95				DRY	NC	NC
	4/21/2022	34.94				DRY	NC	NC
	5/16/2022	34.94				DRY	NC	NC
	7/5/2022	35.60				34.75	269.16	0.85
	9/21/2022	34.85				DRY	NC	NC
	10/17/2022	34.95				DRY	NC	NC
	11/14/2022	34.81				DRY	NC	NC
	12/28/2022	34.63				33.58	270.33	1.05
	3/30/2023	34.50				DRY	NC	NC

Table 1
Monitoring Well Groundwater Elevation Data Summary
Laurel Station
Bellingham, Washington

Well ID	Date Measured	Total Depth[a] (ft-TOC)	TOC Elevation[b] (ft-NAVD88)	Approximate Screen Interval (ft-bgs)	Approximate Screen Interval Elevation (ft-NAVD88)	Depth to Groundwater (ft-TOC)	Groundwater Elevation (ft-NAVD88)	Thickness of Water Column (ft)

[a]Total depth was measured by sounding the wells prior to sampling and may differ from total depth as installed.

[b]Source of TOC elevations is Larry Steele & Associates. The TOC noted for DPE-4 is the elevation for the sampling port due to the DPE equipment installed in the well. For DPE-4, the measurement on April 23, 2015 was TOC for well casing (pre-dated DPE installation).

Notes:

Highlighted cells recorded a water column less than 0.7 foot. This is an indication that the well is dry and the water measured in the well is due to the collection of water in the bottom cap of the well.

Well is dry.

* - Indicates measured depth to bottom of well is very different than expected; impacts calculation of thickness of water column.

ft - foot

ft-TOC - feet below top of well casing

ft-NAVD88 - vertical elevation in feet relative to North American Vertical Datum of 1988

ft-bgs - feet below ground surface

NC - not calculated

NM - not measured

Table 2 - Groundwater Monitoring Results
Laurel Station Cleanup Action
Bellingham, Washington

Sample ID	Groundwater Cleanup	MW4		MW-6						
Sample Date	Levels	4/23/15	5/8/19	4/23/15	4/23/15 (DUP)	12/14/15	3/29/16	3/29/16 (DUP)	6/27/16	6/27/16 (DUP)
Total Petroleum Hydrocarbons (TPH, mg/L)										
Gasoline-range (Gx)	0.8/1.0 [a]	0.25 U	NA	0.25 U	0.25 U	0.25 U	0.10 U	0.10 U	0.10 U	0.10 U
Diesel-range (Dx)	NE	**0.94**	**4.11**	0.10 U	0.13 U	**0.12**	0.10 U	0.10 U	**0.11**	0.10 U
Motor Oil-range	NE	**0.47**	**2.33**	0.20 U	0.25 U	**0.22**	0.20 U	0.20 U	0.20 U	0.20 U
Total TPH (Sum Dx, Oil-range, mg/L)	0.5	**1.41**	**6.44**	ND	ND	**0.34**	ND	ND	**0.11**	ND
BTEX (ug/L)										
Benzene	5	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Toluene	640	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Ethylbenzene	700	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
m,p-Xylene	1,600	0.40 U	NA	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
o-Xylene	1,600	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Polycyclic Aromatic Hydrocarbons (ug/L)										
1-Methylnaphthalene	1.51	NA	NA	0.010 U	NA	0.010 U	0.10 U	0.10 U	0.10 U	0.10 U
2-Methylnaphthalene	32	NA	NA	**0.019**	NA	0.010 U	0.10 U	0.10 U	0.10 U	0.10 U
Acenaphthene	960	NA	NA	0.010 U	NA	0.010 U	0.10 U	0.10 U	0.10 U	0.10 U
Acenaphthylene	NE	NA	NA	0.010 U	NA	0.010 U	0.10 U	0.10 U	0.10 U	0.10 U
Anthracene	4,800	NA	NA	0.010 U	NA	0.010 U	0.10 U	0.10 U	0.10 U	0.10 U
Benzo(a)anthracene [1]	0.12	NA	NA	**0.013**	NA	0.010 U	0.10 U	0.10 U	0.10 U	0.10 U
Benzo(b)fluoranthene [1]	0.12	NA	NA	**0.011**	NA	0.010 U	NA	NA	NA	NA
Benzo(k)fluoranthene [1]	1.2	NA	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
Benzo(a)pyrene [1]	0.12	NA	NA	**0.012**	NA	0.010 U	0.10 U	0.10 U	0.10 U	0.10 U
Benzo(g,h,i)perylene	NE	NA	NA	0.010 U	NA	0.010 U	0.10 U	0.10 U	0.10 U	0.10 U
Chrysene [1]	12	NA	NA	**0.015**	NA	**0.012**	0.10 U	0.10 U	0.10 U	0.10 U
Dibenz(a,h)anthracene [1]	0.012	NA	NA	0.010 U	NA	0.010 U	0.10 U	0.10 U	0.10 U	0.10 U
Dibenzofuran	16	NA	NA	0.010 U	NA	0.010 U	0.10 U	0.10 U	0.10 U	0.10 U
Fluoranthene	640	NA	NA	**0.017**	NA	**0.013**	0.10 U	0.10 U	0.10 U	0.10 U
Fluorene	640	NA	NA	0.010 U	NA	0.010 U	0.10 U	0.10 U	0.10 U	0.10 U
Indeno(1,2,3-cd)pyrene [1]	0.12	NA	NA	0.010 U	NA	0.010 U	0.10 U	0.10 U	0.10 U	0.10 U
Naphthalene	160	NA	NA	0.010 U	NA	0.010 U	0.10 U	0.10 U	**0.22**	**0.15**
Phenanthrene	NE	NA	NA	0.010 U	NA	**0.010**	0.10 U	0.10 U	0.10 U	0.10 U
Pyrene	480	NA	NA	**0.022**	NA	**0.014**	0.10 U	0.10 U	0.10 U	0.10 U
Total Benzofluoranthenes [2]	0.12	NA	NA	**0.024 J**	NA	0.020 U	0.10 U	0.10 U	0.10 U	0.10 U
TTEC	0.12	NA	NA	0.015	NA	0.00012	NC	NC	NC	NC

Table 2 - Groundwater Monitoring Results
Laurel Station Cleanup Action
Bellingham, Washington

Sample ID	Groundwater Cleanup	MW-6 (continued)								
Sample Date	Levels	9/26/16	12/21/16	12/21/16 (DUP)	3/29/17	6/21/17	6/21/17 (DUP)	9/27/17	1/4/18	4/5/18
Total Petroleum Hydrocarbons (TPH, mg/L)										
Gasoline-range (Gx)	0.8/1.0 [a]	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
Diesel-range (Dx)	NE	**0.273**	0.100 U	0.100 U	0.100 U	0.115 U	**0.124**	**0.421**	**0.117**	0.100 U
Motor Oil-range	NE	0.200 U	0.200 U	0.200 U	0.200 U	0.230 U	**0.269**	**0.336**	0.200 U	0.200 U
Total TPH (Sum Dx, Oil-range, mg/L)	0.5	**0.273**	ND	ND	ND	ND	**0.393**	**0.757**	**0.117**	ND
BTEX (ug/L)										
Benzene	5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Toluene	640	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Ethylbenzene	700	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
m,p-Xylene	1,600	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
o-Xylene	1,600	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Polycyclic Aromatic Hydrocarbons (ug/L)										
1-Methylnaphthalene	1.51	**0.020**	**0.017**	**0.012**	0.010 U	0.013 U	0.011 U	NA	0.010 U	0.010 U
2-Methylnaphthalene	32	**0.049**	**0.048**	**0.033**	**0.026**	**0.018**	**0.017**	NA	0.010 U	0.010 U
Acenaphthene	960	0.010 U	0.010 U	0.010 U	0.010 U	0.013 U	0.011 U	NA	0.010 U	0.010 U
Acenaphthylene	NE	0.010 U	0.010 U	0.010 U	0.010 U	0.013 U	0.011 U	NA	0.010 U	0.010 U
Anthracene	4,800	**0.014**	0.010 U	0.010 U	0.010 U	0.013 U	0.011 U	NA	0.010 U	0.010 U
Benzo(a)anthracene [1]	0.12	**0.020**	0.010 U	0.010 U	0.010 U	0.013 U	0.011 U	NA	0.010 U	0.010 U
Benzo(b)fluoranthene [1]	0.12	**0.013**	0.010 U	0.010 U	0.010 U	0.013 U	0.011 U	NA	0.010 U	0.010 U
Benzo(k)fluoranthene [1]	1.2	0.010 U	0.010 U	0.010 U	0.010 U	0.013 U	0.011 U	NA	0.010 U	0.010 U
Benzo(a)pyrene [1]	0.12	**0.014**	0.010 U	0.010 U	0.010 U	0.013 U	0.011 U	NA	0.010 U	0.010 U
Benzo(g,h,i)perylene	NE	0.010 UJ	0.010 U	0.010 U	0.010 U	0.013 U	0.011 U	NA	0.010 U	0.010 U
Chrysene [1]	12	**0.023**	0.010 U	0.010 U	0.010 U	0.013 U	0.011 U	NA	0.010 U	0.010 U
Dibenz(a,h)anthracene [1]	0.012	0.010 UJ	0.010 U	0.010 U	0.010 U	0.013 U	0.011 U	NA	0.010 U	0.010 U
Dibenzofuran	16	0.010 U	0.010 U	0.010 U	0.010 U	0.013 U	0.011 U	NA	0.010 U	0.010 U
Fluoranthene	640	**0.045**	0.010 U	0.010 U	0.010 U	0.013 U	**0.015**	NA	0.010 U	0.010 U
Fluorene	640	0.010 U	0.010 U	0.010 U	0.010 U	0.013 U	0.011 U	NA	0.010 U	0.010 U
Indeno(1,2,3-cd)pyrene [1]	0.12	0.010 UJ	0.010 U	0.010 U	0.010 U	0.013 U	0.011 U	NA	0.010 U	0.010 U
Naphthalene	160	**0.670**	**0.303 J**	**0.209 J**	**0.153**	**0.164**	**0.150**	NA	**0.040**	**0.013**
Phenanthrene	NE	**0.024**	0.010 U	0.010 U	0.010 U	0.013 U	0.011 U	NA	0.010 U	0.010 U
Pyrene	480	**0.054**	0.010 U	0.010 U	0.010 U	0.013 U	**0.012**	NA	0.010 U	0.010 U
Total Benzofluoranthenes [2]	0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA
TTEC	0.12	0.0175	NC	NC	NC	NC	NC	NC	NC	NC

Table 2 - Groundwater Monitoring Results
Laurel Station Cleanup Action
Bellingham, Washington

Sample ID	Groundwater Cleanup	MW-6 (continued)								
Sample Date	Levels	4/5/18 (DUP)	6/27/18	10/1/18	12/19/18	3/20/19	5/8/19	6/19/19	10/2/19	10/2/19 (DUP)
Total Petroleum Hydrocarbons (TPH, mg/L)										
Gasoline-range (Gx)	0.8/1.0 [a]	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	NA	0.100 U	0.100 U	0.100 U
Diesel-range (Dx)	NE	0.100 U	0.100 U	**0.141**	0.100 U	0.100 U	0.100 U	NA	0.100 U	0.100 U
Motor Oil-range	NE	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	NA	0.200 U	0.200 U
Total TPH (Sum Dx, Oil-range, mg/L)	0.5	ND	ND	**0.141**	ND	ND	ND	NC	ND	ND
BTEX (ug/L)										
Benzene	5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U
Toluene	640	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	**0.21**	0.20 U	0.20 U
Ethylbenzene	700	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U
m,p-Xylene	1,600	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	NA	0.40 U	0.40 U	0.40 U
o-Xylene	1,600	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U
Polycyclic Aromatic Hydrocarbons (ug/L)										
1-Methylnaphthalene	1.51	0.010 U	NA	0.010 U	0.010 U	0.010 UJ	NA	**0.049**	**0.016**	**0.011**
2-Methylnaphthalene	32	0.010 U	NA	0.010 U	**0.018**	**0.015 J**	NA	**0.122**	**0.032**	**0.031**
Acenaphthene	960	0.010 U	NA	0.010 U	0.010 U	0.010 UJ	NA	0.019 U	0.010 U	0.010 U
Acenaphthylene	NE	0.010 U	NA	0.010 U	0.010 U	0.010 UJ	NA	0.019 U	0.010 U	0.010 U
Anthracene	4,800	0.010 U	NA	0.010 U	0.010 U	0.010 UJ	NA	**0.050**	0.010 U	0.010 U
Benzo(a)anthracene [1]	0.12	0.010 U	NA	0.010 U	0.010 U	0.010 UJ	NA	**0.201 J**	0.010 U	0.010 U
Benzo(b)fluoranthene [1]	0.12	0.010 U	NA	0.010 U	0.010 U	0.010 UJ	NA	**0.131 J**	0.010 U	0.010 U
Benzo(k)fluoranthene [1]	1.2	0.010 U	NA	0.010 U	0.010 U	0.010 UJ	NA	**0.080 J**	0.010 U	0.010 U
Benzo(a)pyrene [1]	0.12	0.010 U	NA	0.010 U	0.010 U	0.010 UJ	NA	**0.166 J**	0.010 U	0.010 U
Benzo(g,h,i)perylene	NE	0.010 U	NA	0.010 U	0.010 U	0.010 UJ	NA	**0.097 J**	0.010 U	0.010 U
Chrysene [1]	12	0.010 U	NA	0.010 U	0.010 U	0.010 UJ	NA	**0.203 J**	0.010 U	0.010 U
Dibenz(a,h)anthracene [1]	0.012	0.010 U	NA	0.010 U	0.010 U	0.010 UJ	NA	**0.025 J**	0.010 U	0.010 U
Dibenzofuran	16	0.010 U	NA	0.010 U	0.010 U	0.010 UJ	NA	**0.019**	0.010 U	0.010 U
Fluoranthene	640	0.010 U	NA	**0.014**	0.010 U	0.010 UJ	NA	**0.180**	0.010 U	0.010 U
Fluorene	640	0.010 U	NA	0.010 U	0.010 U	0.010 UJ	NA	**0.019**	0.010 U	0.010 U
Indeno(1,2,3-cd)pyrene [1]	0.12	0.010 U	NA	0.010 U	0.010 U	0.010 UJ	NA	**0.082 J**	0.010 U	0.010 U
Naphthalene	160	**0.013**	NA	**0.083**	**0.088**	**0.073 J**	NA	**0.934**	**0.248**	**0.241**
Phenanthrene	NE	0.010 U	NA	0.010 U	0.010 U	0.010 UJ	NA	**0.099**	0.010 U	0.010 U
Pyrene	480	0.010 U	NA	**0.012**	0.010 U	0.010 UJ	NA	**0.188 J**	0.010 U	0.010 U
Total Benzofluoranthenes [2]	0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA
TTEC	0.12	NC	NC	NC	NC	NC	NA	0.220	NC	NC

Table 2 - Groundwater Monitoring Results
Laurel Station Cleanup Action
Bellingham, Washington

Sample ID	Groundwater Cleanup	MW-6 (continued)							
Sample Date	Levels	12/18/19	3/5/20	3/5/20 (DUP)	6/17/20	12/21/20	12/21/20 (DUP)	3/8/21	3/8/21 (DUP)
Total Petroleum Hydrocarbons (TPH, mg/L)									
Gasoline-range (Gx)	0.8/1.0 [a]	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
Diesel-range (Dx)	NE	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.111 U	0.111 U
Motor Oil-range	NE	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.222 U	0.222 U
Total TPH (Sum Dx, Oil-range, mg/L)	0.5	ND	ND	ND	ND	ND	ND	ND	ND
BTEX (ug/L)									
Benzene	5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Toluene	640	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Ethylbenzene	700	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
m,p-Xylene	1,600	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
o-Xylene	1,600	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Polycyclic Aromatic Hydrocarbons (ug/L)									
1-Methylnaphthalene	1.51	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
2-Methylnaphthalene	32	**0.021**	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
Acenaphthene	960	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
Acenaphthylene	NE	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
Anthracene	4,800	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
Benzo(a)anthracene [1]	0.12	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
Benzo(b)fluoranthene [1]	0.12	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
Benzo(k)fluoranthene [1]	1.2	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
Benzo(a)pyrene [1]	0.12	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
Benzo(g,h,i)perylene	NE	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
Chrysene [1]	12	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
Dibenz(a,h)anthracene [1]	0.012	0.010 U	0.010 U	0.010 U	0.010 U	0.010 UJ	0.010 UJ	0.010 U	0.011 U
Dibenzofuran	16	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
Fluoranthene	640	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
Fluorene	640	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
Indeno(1,2,3-cd)pyrene [1]	0.12	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
Naphthalene	160	**0.119**	**0.031**	**0.027**	**0.013**	0.010 U	0.010 U	0.010 U	0.011 U
Phenanthrene	NE	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
Pyrene	480	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
Total Benzofluoranthenes [2]	0.12	NA	NA	NA	NA	NA	NA	NA	NA
TTEC	0.12	NC	NC	NC	NC	NC	NC	NC	NC

Table 2 - Groundwater Monitoring Results
Laurel Station Cleanup Action
Bellingham, Washington

Sample ID	Groundwater Cleanup	MW-6 (continued)								
Sample Date	Levels	6/22/21	9/29/21	9/29/21 (DUP)	12/15/21	3/28/22	7/5/22	12/28/22	12/28/22 (DUP)	3/30/23
Total Petroleum Hydrocarbons (TPH, mg/L)										
Gasoline-range (Gx)	0.8/1.0 [a]	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
Diesel-range (Dx)	NE	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	NA	0.100 U	0.100 U	0.100 U
Motor Oil-range	NE	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	NA	0.200 U	0.200 U	0.200 U
Total TPH (Sum Dx, Oil-range, mg/L)	0.5	ND	ND	ND	ND	ND	NC	ND	ND	ND
BTEX (ug/L)										
Benzene	5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Toluene	640	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Ethylbenzene	700	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
m,p-Xylene	1,600	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
o-Xylene	1,600	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Polycyclic Aromatic Hydrocarbons (ug/L)										
1-Methylnaphthalene	1.51	0.010 U	0.010 U	0.010 U	0.010 U	0.001 J	NA	0.010 U	0.010 U	0.010 U
2-Methylnaphthalene	32	**0.011**	0.010 U	0.010 U	0.010 U	0.002 J	NA	0.010 U	0.010 U	0.010 U
Acenaphthene	960	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	0.010 U	0.010 U	0.010 U
Acenaphthylene	NE	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	0.010 U	0.010 U	0.010 U
Anthracene	4,800	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	0.010 U	0.010 U	0.010 U
Benzo(a)anthracene [1]	0.12	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	0.010 U	0.010 U	0.010 U
Benzo(b)fluoranthene [1]	0.12	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	0.010 UJ	0.010 UJ	0.010 U
Benzo(k)fluoranthene [1]	1.2	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	0.010 U	0.010 U	0.010 U
Benzo(a)pyrene [1]	0.12	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	0.010 U	0.010 U	0.010 U
Benzo(g,h,i)perylene	NE	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	0.010 U	0.010 U	0.010 U
Chrysene [1]	12	0.010 U	0.010 U	0.010 U	0.010 U	0.002 J	NA	0.010 U	0.010 U	0.010 U
Dibenz(a,h)anthracene [1]	0.012	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	0.010 U	0.010 U	0.010 UJ
Dibenzofuran	16	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	0.010 U	0.010 U	0.010 U
Fluoranthene	640	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	0.010 U	0.010 U	0.010 U
Fluorene	640	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	0.010 U	0.010 U	0.010 U
Indeno(1,2,3-cd)pyrene [1]	0.12	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	0.010 U	0.010 U	0.010 U
Naphthalene	160	**0.034**	0.010 U	0.010 U	**0.023**	0.010 U	NA	**0.026**	**0.026**	0.019 U
Phenanthrene	NE	**0.014**	0.010 U	0.010 U	0.010 U	0.010 U	NA	0.010 U	0.010 U	0.010 U
Pyrene	480	0.010 U	0.010 U	0.010 U	0.010 U	0.002 J	NA	0.010 U	0.010 U	0.010 U
Total Benzofluoranthenes [2]	0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA
TTEC	0.12	NC	NC	NC	NC	0.00002	NA	NC	NC	NC

Table 2 - Groundwater Monitoring Results
Laurel Station Cleanup Action
Bellingham, Washington

Sample ID	Groundwater Cleanup	PV-1	DPE-1		DPE-2	
Sample Date	Levels	4/24/15	4/24/15	4/24/15	5/8/19	5/8/19 (DUP)
Total Petroleum Hydrocarbons (TPH, mg/L)						
Gasoline-range (Gx)	0.8/1.0 [a]	0.25 U	0.25 U	0.25 U	NA	NA
Diesel-range (Dx)	NE	**0.38**	**2.1**	**0.59**	**0.230**	**0.349**
Motor Oil-range	NE	0.20 U	**0.54**	**0.23**	0.200 U	0.200 U
Total TPH (Sum Dx, Oil-range, mg/L)	0.5	**0.38**	**2.64**	**0.82**	**0.230**	**0.349**
BTEX (ug/L)						
Benzene	5	0.20 U	0.20 U	0.20 U	NA	NA
Toluene	640	**0.26**	0.20 U	**0.55**	NA	NA
Ethylbenzene	700	0.20 U	0.20 U	0.20 U	NA	NA
m,p-Xylene	1,600	0.40 U	0.40 U	0.40 U	NA	NA
o-Xylene	1,600	0.20 U	0.20 U	0.20 U	NA	NA
Polycyclic Aromatic Hydrocarbons (ug/L)						
1-Methylnaphthalene	1.51	0.010 U	0.010 U	**0.010**	NA	NA
2-Methylnaphthalene	32	0.010 U	0.010 U	0.010 U	NA	NA
Acenaphthene	960	0.010 U	0.010 U	0.010 U	NA	NA
Acenaphthylene	NE	0.010 U	0.010 U	0.010 U	NA	NA
Anthracene	4,800	0.010 U	0.010 U	0.010 U	NA	NA
Benzo(a)anthracene [1]	0.12	0.010 U	0.010 U	0.010 U	NA	NA
Benzo(b)fluoranthene [1]	0.12	0.010 U	**0.015**	0.010 U	NA	NA
Benzo(k)fluoranthene [1]	1.2	0.010 U	0.010 U	0.010 U	NA	NA
Benzo(a)pyrene [1]	0.12	0.010 U	0.010 U	0.010 U	NA	NA
Benzo(g,h,i)perylene	NE	0.010 U	0.010 U	0.010 U	NA	NA
Chrysene [1]	12	0.010 U	**0.098**	**0.013**	NA	NA
Dibenz(a,h)anthracene [1]	0.012	0.010 U	0.010 U	0.010 U	NA	NA
Dibenzofuran	16	0.010 U	0.010 U	0.010 U	NA	NA
Fluoranthene	640	0.010 U	0.010 U	0.010 U	NA	NA
Fluorene	640	0.010 U	0.010 U	**0.018**	NA	NA
Indeno(1,2,3-cd)pyrene [1]	0.12	0.010 U	0.010 U	0.010 U	NA	NA
Naphthalene	160	0.010 U	0.021 U	0.031 U	NA	NA
Phenanthrene	NE	0.010 U	0.010 U	0.010 U	NA	NA
Pyrene	480	0.010 U	**0.057**	**0.020**	NA	NA
Total Benzofluoranthenes [2]	0.12	0.020 U	0.020 U	0.020 U	NA	NA
TTEC	0.12	NC	0.0025	0.00013	NA	NA

Table 2 - Groundwater Monitoring Results
Laurel Station Cleanup Action
Bellingham, Washington

Sample ID	Groundwater Cleanup	DPE-3			DPE-4	DPE-5		DPE-7	DPE-8
Sample Date	Levels	4/23/15	3/30/23	3/30/23 (DUP)	4/24/15	4/24/15	5/8/19	5/8/19	4/23/15
Total Petroleum Hydrocarbons (TPH, mg/L)									
Gasoline-range (Gx)	0.8/1.0 [a]	0.25 U	0.100 U	0.100 U	0.25 U	0.25 U	NA	NA	0.25 U
Diesel-range (Dx)	NE	**0.86**	**0.247**	**0.274**	**0.14**	**0.46**	**0.332**	**7.01**	**0.60**
Motor Oil-range	NE	**0.82**	0.200 U	**0.201**	0.20 U	0.20 U	**0.442**	**2.11**	0.20 U
Total TPH (Sum Dx, Oil-range, mg/L)	0.5	**1.68**	**0.247**	**0.475**	**0.14**	**0.46**	**0.774**	**9.12**	**0.60**
BTEX (ug/L)									
Benzene	5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	NA	0.20 U
Toluene	640	**0.37**	0.20 U	0.20 U	0.20 U	0.20 U	NA	NA	**0.44**
Ethylbenzene	700	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	NA	0.20 U
m,p-Xylene	1,600	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	NA	NA	0.40 U
o-Xylene	1,600	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	NA	0.20 U
Polycyclic Aromatic Hydrocarbons (ug/L)									
1-Methylnaphthalene	1.51	**0.019**	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U
2-Methylnaphthalene	32	**0.022**	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U
Acenaphthene	960	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U
Acenaphthylene	NE	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U
Anthracene	4,800	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U
Benzo(a)anthracene [1]	0.12	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U
Benzo(b)fluoranthene [1]	0.12	**0.016**	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U
Benzo(k)fluoranthene [1]	1.2	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U
Benzo(a)pyrene [1]	0.12	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U
Benzo(g,h,i)perylene	NE	**0.015**	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U
Chrysene [1]	12	**0.044**	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	**0.011**
Dibenz(a,h)anthracene [1]	0.012	0.010 U	0.010 UJ	0.010 UJ	0.010 U	0.010 U	NA	NA	0.010 U
Dibenzofuran	16	**0.012**	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U
Fluoranthene	640	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U
Fluorene	640	**0.012**	0.010 U	0.010 U	0.010 U	**0.027**	**NA**	**NA**	0.010 U
Indeno(1,2,3-cd)pyrene [1]	0.12	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U
Naphthalene	160	0.010 U	**0.020 J**	**0.020 J**	0.019 U	0.033 U	NA	NA	0.020 U
Phenanthrene	NE	**0.013**	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U
Pyrene	480	**0.031**	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	**0.012**
Total Benzofluoranthenes [2]	0.12	0.020 U	NA	NA	0.020 U	0.020 U	NA	NA	0.020 U
TTEC	0.12	0.0020	NC	NC	NC	NC	NA	NA	0.00011

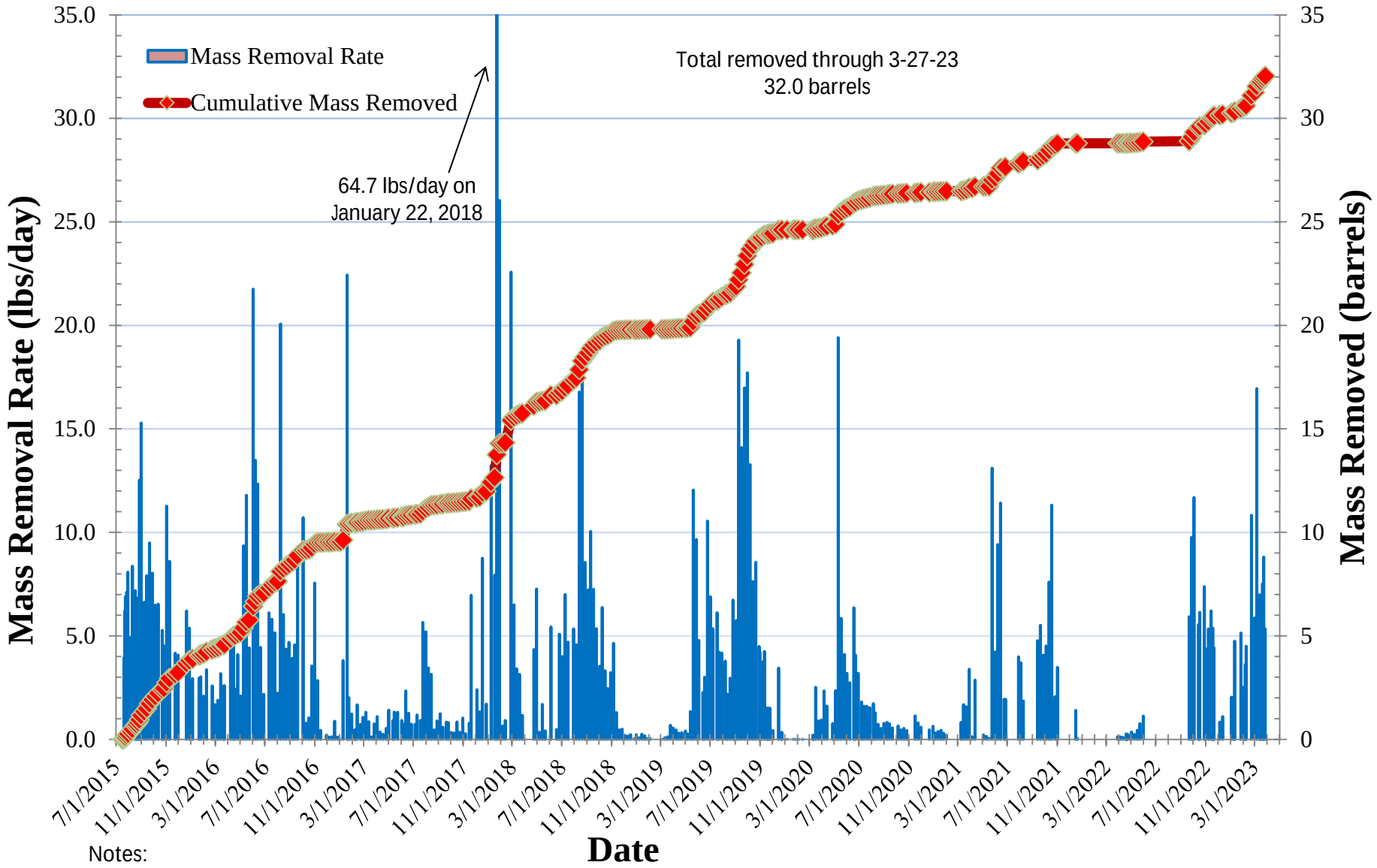
Notes:
Bolded values indicate that analyte was detected above the laboratory reporting limit.
Bolded and highlighted values exceed the project cleanup levels.
BTEX - benzene, toluene, ethylbenzene, and xylenes
J - estimated value
mg/L - milligram per liter
NA - not analyzed or not applicable
NC- not calculable
ND - not detected
NE - not established
TTEC - Total Toxicity Equivalent Concentration, reference WAC173-340-708
U - Compound was analyzed for but not detected above the reporting limit shown.
UJ - Compound was analyzed for but not detected above the reporting limit shown. Reporting limit is an estimated value.
ug/L - microgram per liter
[a] Gasoline with benzene present/without benzene present
[1] This is considered a carcinogenic polycyclic aromatic hydrocarbon compound.
[2] Total benzofluoranthenes is the sum of the benzo(b)fluoranthene, benzo(j)fluoranthene, and benzo(k)fluoranthene isomers. The cleanup level of 0.12 ug/L is based on benzo(b)fluoranthene.

ATTACHMENT 1

DPE SYSTEM PERFORMANCE GRAPHS

COMBINED SYSTEM MASS REMOVAL DATA

Laurel Station DPE System

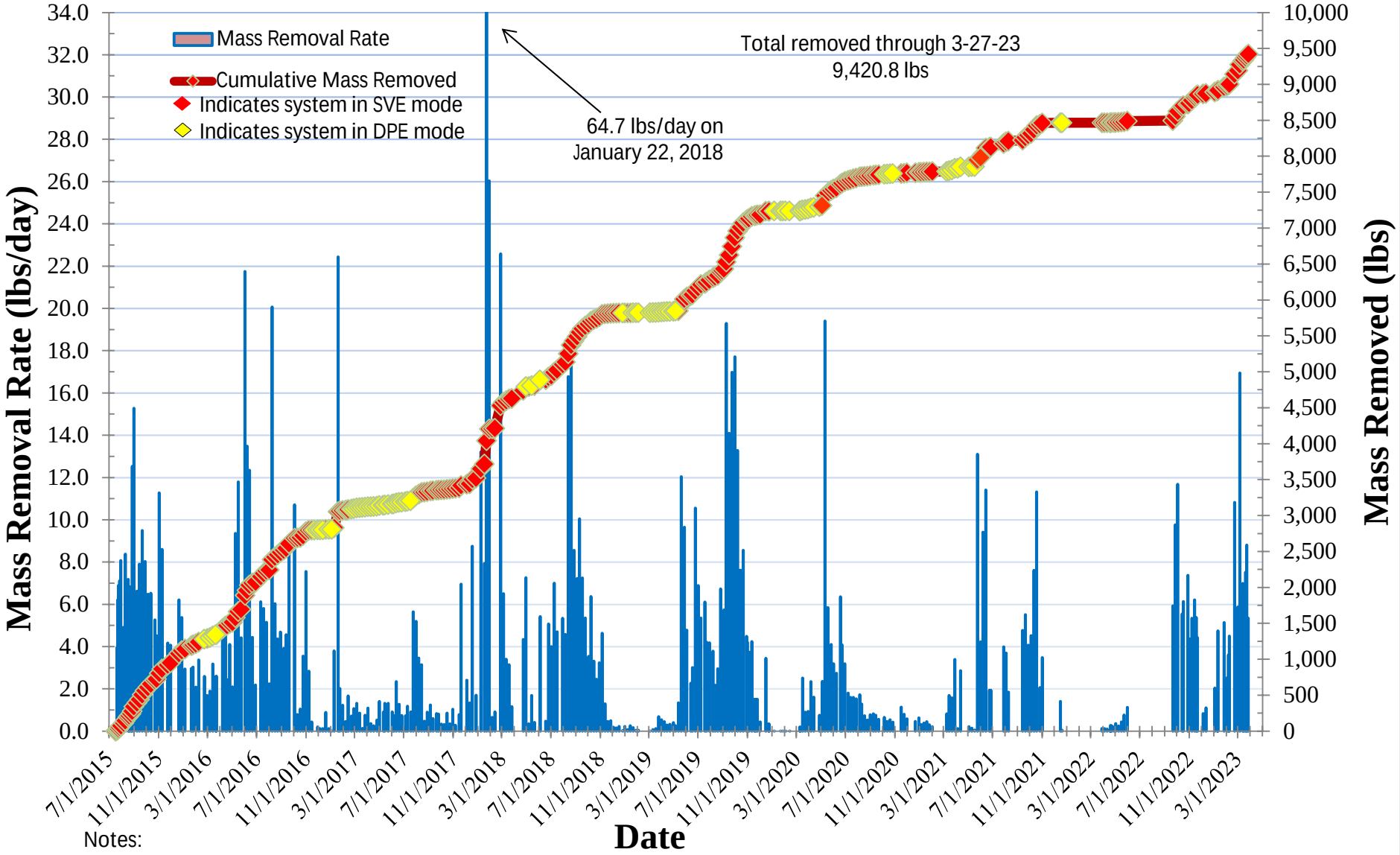


Notes:

1. Data shown from July 17, 2015 through March 27, 2023 after approximately 7.5 years of operation.
2. The Cumulative Mass Removed is based on data taken from the pre-treatment sampling port directly before carbon treatment.

COMBINED SYSTEM MASS REMOVAL DATA

Laurel Station DPE System

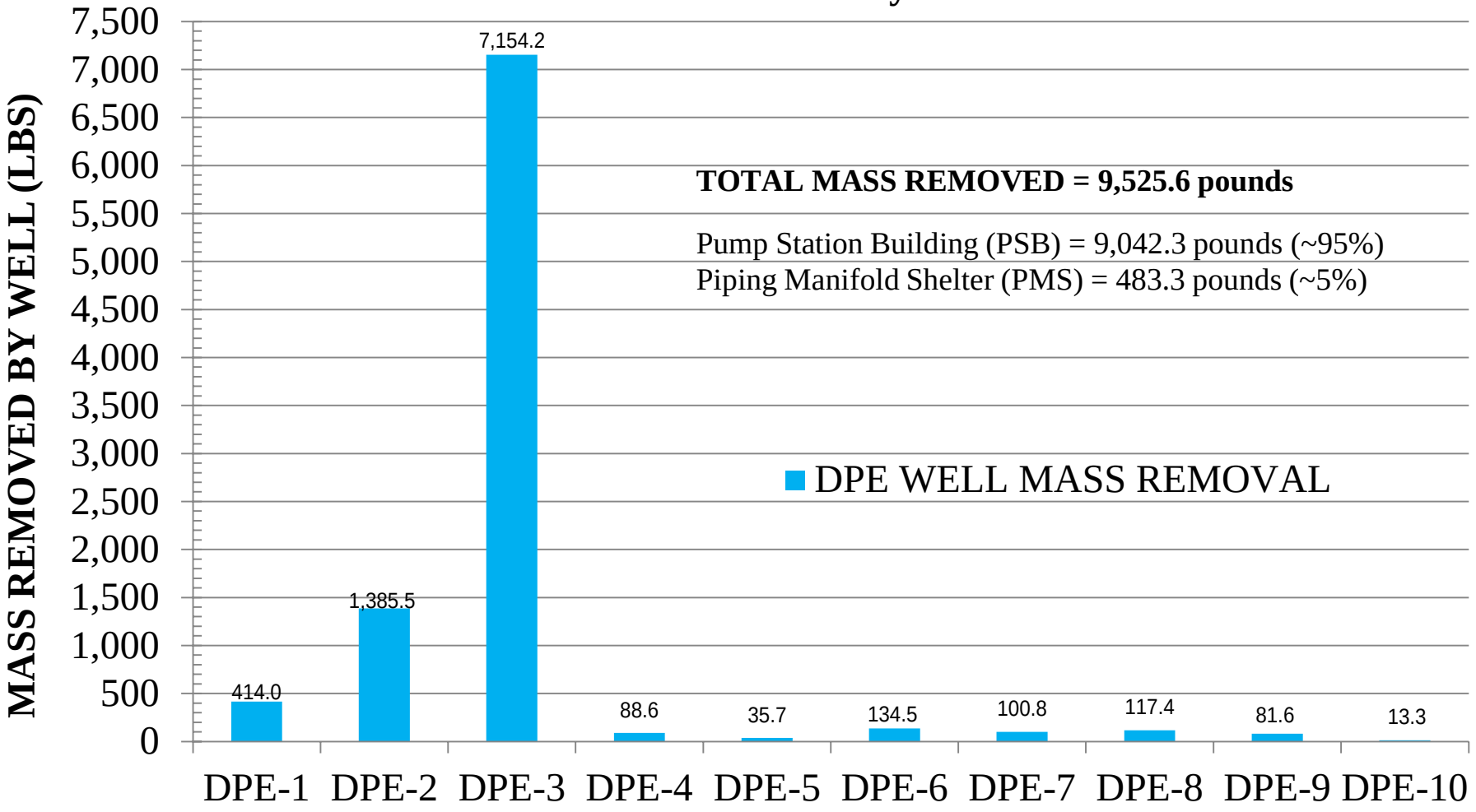


Notes:

1. Data shown from July 17, 2015 through March 27, 2023, after approximately 7.5 years of operation.
2. The Cumulative Mass Removed is based on data taken from the pre-treatment sampling port directly before carbon treatment.

MASS REMOVAL DISTRIBUTION - Cumulative

Laurel Station DPE System

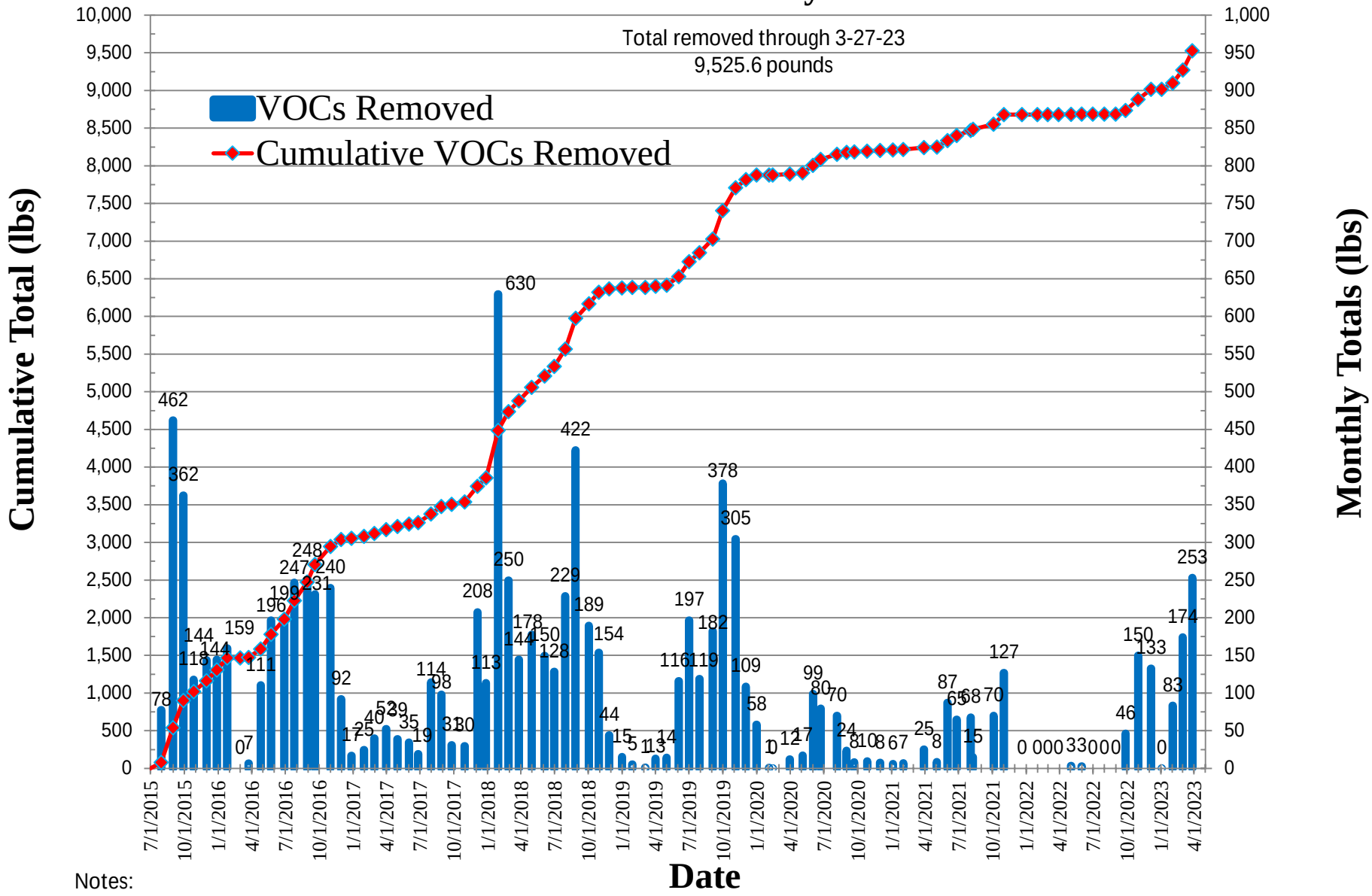


Notes:

1. Estimated mass removal from July 17, 2015 through March 27, 2023
2. The TOTAL represents the sum of all 10 individual wells
3. Mass removed from the PSB and PMS were calculated based on the mass removed from individual wells
4. DPE-1 through 4 are PSB wells, DPE-5 through 10 are PMS wells.

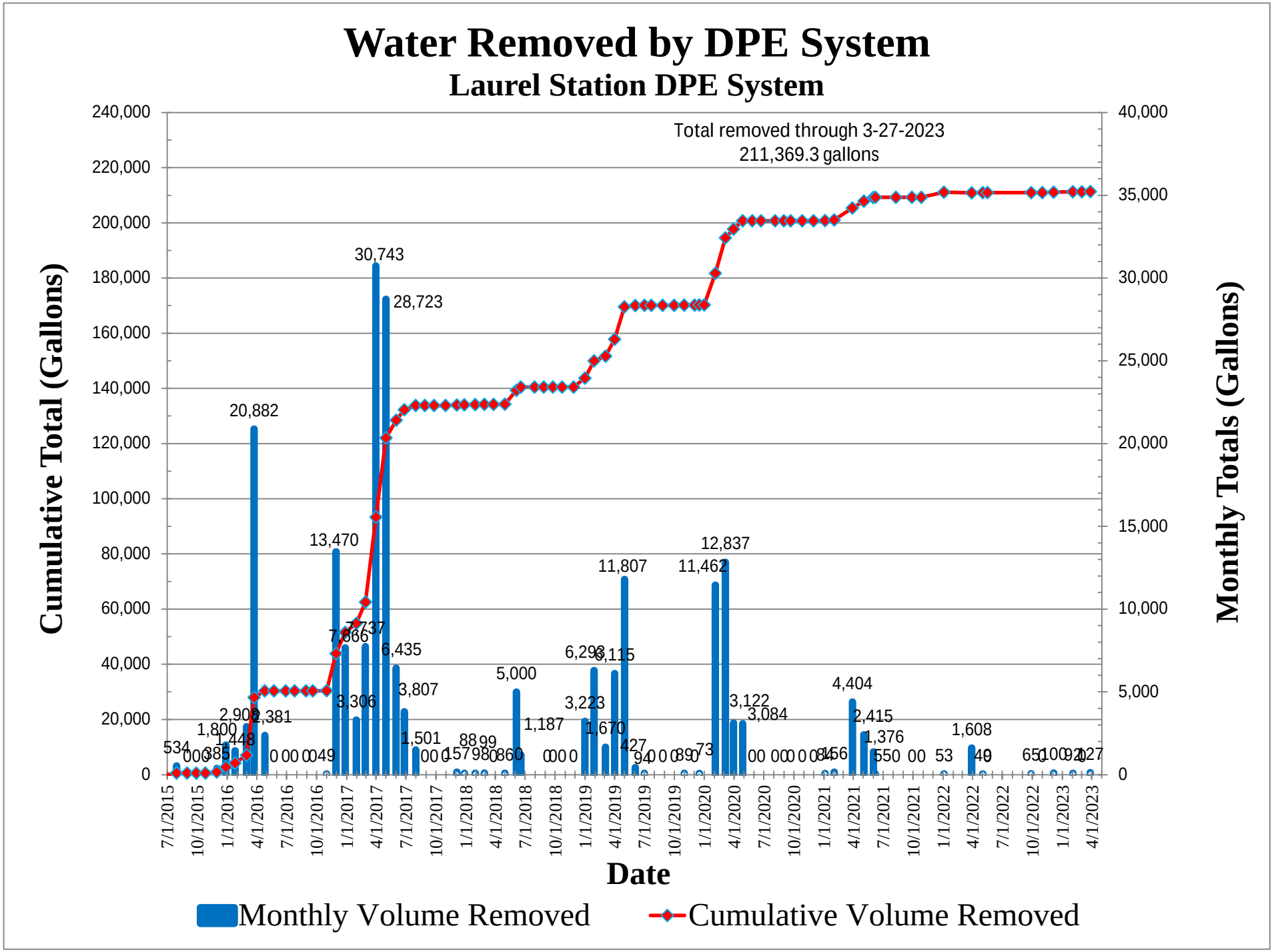
Mass Removed by DPE System

Laurel Station DPE System



Notes:

1. Data shown from July 17, 2015 through March 27, 2023, after approximately 7.5 years of operation.
2. The Cumulative Mass Removed is based on data taken from individual wells and added together.


Water Removed by DPE System
Laurel Station DPE System
Total removed through 3-27-2023
211,369.3 gallons
Cumulative Total (Gallons)
Monthly Totals (Gallons)
Date
Monthly Volume Removed
Cumulative Volume Removed

ATTACHMENT 2

DATA VALIDATION AND LABORATORY REPORTS

Memo

AECOM

1111 3rd Avenue, Suite 1600
Seattle, Washington 98101
206.438.2700 Telephone
206.438.2699 Fax

To:	Karen Mixon, Project Manager	**Info:**	Final
From:	Chelsey Cook, Chemist Lucy Panteleeff, Chemist	**Date:**	November 15, 2021
RE:	Data Quality Review Quarterly Groundwater Samples – September 2021 Laurel Station Cleanup Action		

The data quality review of 2 groundwater samples and 1 trip blank collected on September 29, 2021, has been completed. The samples were analyzed by Analytical Resources, Incorporated (ARI) located in Tukwila, Washington for benzene, toluene, ethylbenzene, m,p-xylene, and o-xylene (BTEX) by EPA Method 8260D, total petroleum hydrocarbons (TPHs) by Washington State Department of Ecology (Ecology) Methods NWTPH-Gx (gasoline-range TPH) and NWTPH-Dx (diesel-range and motor oil-range TPH), and/or polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270E-SIM. Samples were analyzed for the chemical constituents as described in the *Final Compliance Monitoring Plan, Laurel Station, 1009 East Smith Road, Bellingham, Washington* dated January 16, 2015 (CMP). Due to changes in laboratory procedures, NWTPH-Gx analysis was performed using GC/MS instrumentation instead of GC/FID.

The analyses were performed in general accordance with methods specified in EPA's *Test Methods for Evaluating Solid Waste (SW-846)* and Ecology's *Analytical Methods for Petroleum Hydrocarbons*, June 1997. The laboratory provided a full data package containing sample results and associated QA/QC data. The following samples are associated with ARI group 21J0004:

Sample ID	Laboratory ID
MW-06	21J0004-01
Dup-1	21J0004-02
TB (Trip Blank)	21J0004-03

The following comments refer to ARI's performance in meeting the quality control specifications described in the analytical methods. Data were qualified based on the method criteria and guidance provided in the EPA document *USEPA National Functional Guidelines for Organic Superfund Methods Data Review*, November 2020. Data qualifiers that may be assigned to data from this laboratory group include:

- U - The analyte was analyzed for but was not detected above the reported sample quantitation limit.
- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

- DNR - Do Not Report. Multiple results reported from different analytical dates and/or dilutions. Value from another analysis should be used.

Sample Receipt

Upon receipt by ARI, the sample jar information was compared to the chain-of-custody (COC) and the cooler temperature was recorded. The cooler was received at a temperature within the EPA-recommended limits of greater than 0°C and less than or equal to 6°C. No issues related to sample identification were noted by ARI. The laboratory noted that the trip blank was analyzed from a vial containing a large air bubble; therefore, the results for VOCs and gasoline-range TPH associated with the trip blank were qualified as estimated and flagged 'UJ'.

Organic Analyses

Samples were analyzed for BTEX, TPHs, and PAHs by the methods identified in the introduction to this report.

1. Holding Times – Acceptable

2. Instrument Performance and Calibrations (initial and continuing) – Acceptable

3. Blanks – Acceptable

4. Surrogates – Acceptable

5. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) – Acceptable

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

   General – MS/MSDs were not performed in association with these analyses. Accuracy and precision were assessed using the LCS/LCSDs.

7. Field Duplicate – Acceptable

   General – A field duplicate was submitted for MW-6 and identified as Dup-1. The results were comparable.

8. Reporting Limits – Acceptable

Overall Assessment of Data

The data reported in this laboratory group, as qualified, are considered usable for meeting project objectives. The completeness for laboratory group 21J0004 is 100%.

Table 1. Summary of Qualified Data

Sample ID	ARI ID	Analyte	Result	Units	Final Result
TB	21J0004-03	Gasoline-range TPH	0.100 U	ug/L	0.100 UJ
TB	21J0004-03	Benzene	0.20 U	ug/L	0.20 UJ
TB	21J0004-03	Toluene	0.20 U	ug/L	0.20 UJ
TB	21J0004-03	Ethylbenzene	0.20 U	ug/L	0.20 UJ
TB	21J0004-03	m,p-Xylene	0.40 U	ug/L	0.40 UJ
TB	21J0004-03	o-Xylene	0.20 U	ug/L	0.20 UJ

Analytical Resources, LLC
Analytical Chemists and Consultants

03 November 2021

Karen Mixon
AECOM
1111 Third Avenue, Suite 1600
Seattle, WA 98101

RE: Laurel Station

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
21J0004	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC

Kelly Bottem, Client Services Manager

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

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 210004	Turn-around Requested: Standard	Page: 1	of 1
ARI Client Company: AECOM	Phone: 206-438-2700	Date: 9-27-21	Ice Present?
Client Contact: Karen.Mixon@AECOM.com		No. of Coolers:	Cooler Temps: 2.7
Client Project Name: Laurel Station			
Client Project #: 60651171	Samplers: Bryan Darby		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: GX/BTEX	PAH	DX						Notes/Comments
MW-06	9-29-21	1135	GW	7	X	X	X						
DUP-1	"	0000	GW	7	X	X	X						
TB	"	0000	QC	1	X								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Bryan Darby	Printed Name: Dimitri Lamnatze	Printed Name:	Printed Name:
	Company: AECOM	Company: ARI	Company:	Company:
	Date & Time: 9-30-21 1115	Date & Time: 09/30/21 1115	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-06	21J0004-01	Water	29-Sep-2021 11:35	30-Sep-2021 11:15
Dup-1	21J0004-02	Water	29-Sep-2021 00:00	30-Sep-2021 11:15
TB	21J0004-03	Water	29-Sep-2021 11:35	30-Sep-2021 11:15

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

Work Order Case Narrative

Gasoline by NWTPH-g (GC/MS)

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

The samples were analyzed from vials that did not contain air bubbles.

Volatiles - EPA Method SW8260D

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

The sample 21J0004-03 was analyzed from a vial that contained a large air bubble.

Polynuclear Aromatic Hydrocarbons (PAH) - EPA Method SW8270E-SIM

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 10/1/2021 9:23:39AM

WORK ORDER

21J0004

Samples will be discarded 90 days after submission of a final report unless other instructions are received.

Client: AECOM
Project Manager: Kelly Bottem

Project: Laurel Station
Project Number: 60651171

Preservation Confirmation

Container ID	Container Type	pH
21J0004-01 A	Glass NM, Amber, 500 mL	
21J0004-01 B	Glass NM, Amber, 500 mL	
21J0004-01 C	Glass NM, Amber, 500 mL	
21J0004-01 D	Glass NM, Amber, 500 mL	
21J0004-01 E	VOA Vial, Clear, 40 mL, HCL	
21J0004-01 F	VOA Vial, Clear, 40 mL, HCL	
21J0004-01 G	VOA Vial, Clear, 40 mL, HCL	
21J0004-02 A	Glass NM, Amber, 500 mL	
21J0004-02 B	Glass NM, Amber, 500 mL	
21J0004-02 C	Glass NM, Amber, 500 mL	
21J0004-02 D	Glass NM, Amber, 500 mL	
21J0004-02 E	VOA Vial, Clear, 40 mL, HCL	
21J0004-02 F	VOA Vial, Clear, 40 mL, HCL	
21J0004-02 G	VOA Vial, Clear, 40 mL, HCL	
21J0004-03 A	VOA Vial, Clear, 40 mL, HCL	5.556

Preservation Confirmed By

10/01/2021
Date

Reviewed By

Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: AECOM

Project Name: Laurel Station

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 21J0004

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 2.7

Time 1115

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: D002565

Cooler Accepted by: DL Date: 04/30/21 Time: 1115

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used?	Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____		
Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA	06/18/2021	

Were the sample(s) split by ARI? NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: _____ Date: _____ Time: _____ Labels checked by: _____

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

vials w/ air bubbles marked on preservation sheet, lab to determine sizes.

By: JB Date: 10/01/2021

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

MW-06

21J0004-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 09/29/2021 11:35
Instrument: NT2 Analyst: PKC — Analyzed: 10/01/2021 19:32

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 21J0004-01 F
Preparation Batch: BJJ0022 — Sample Size: 10 mL
Prepared: 10/01/2021 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*107*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*100*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*89.4*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*101*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

MW-06

21J0004-01 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 09/29/2021 11:35
Instrument: NT2 Analyst: PKC — Analyzed: 10/01/2021 19:32

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 21J0004-01 F
Preparation Batch: BJJ0022 — Sample Size: 10 mL
Prepared: 10/01/2021 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*100*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*89.4*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

MW-06

21J0004-01 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 09/29/2021 11:35
Instrument: NT11 Analyst: VTS — Analyzed: 11/02/2021 15:31

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 21J0004-01 C 01
Preparation Batch: BJJ0129 — Sample Size: 500 mL
Prepared: 10/06/2021 — Final Volume: 0.5 mL

Sample Cleanup: Cleanup Method: Silica Gel — Extract ID: 21J0004-01 C 01
Cleanup Batch: CJK0014 — Initial Volume: 0.5 mL
Cleaned: 02-Nov-2021 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.010	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	0.010	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	0.010	ND	ug/L	U
Acenaphthylene	208-96-8	1	0.010	ND	ug/L	U
Acenaphthene	83-32-9	1	0.010	ND	ug/L	U
Dibenzofuran	132-64-9	1	0.010	ND	ug/L	U
Fluorene	86-73-7	1	0.010	ND	ug/L	U
Phenanthrene	85-01-8	1	0.010	ND	ug/L	U
Anthracene	120-12-7	1	0.010	ND	ug/L	U
Fluoranthene	206-44-0	1	0.010	ND	ug/L	U
Pyrene	129-00-0	1	0.010	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.010	ND	ug/L	U
Benzo(b)fluoranthene	205-99-2	1	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.010	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10			*42-120 %*	*80.6*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14			*29-120 %*	*75.9*	*%*	
Surrogate: Fluoranthene-d10			*57-120 %*	*95.0*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

MW-06

21J0004-01 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 09/29/2021 11:35
Instrument: FID4 Analyst: TWC — Analyzed: 10/07/2021 14:31

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 21J0004-01 A 01
Preparation Batch: BJJ0126 — Sample Size: 500 mL
Prepared: 10/06/2021 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*104*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

Dup-1

21J0004-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 09/29/2021 00:00
Instrument: NT2 Analyst: PKC — Analyzed: 10/01/2021 19:52

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 21J0004-02 E
Preparation Batch: BJJ0022 — Sample Size: 10 mL
Prepared: 10/01/2021 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*107*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*98.7*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*88.1*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*100*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

Dup-1

21J0004-02 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 09/29/2021 00:00
Instrument: NT2 Analyst: PKC — Analyzed: 10/01/2021 19:52

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 21J0004-02 E
Preparation Batch: BJJ0022 — Sample Size: 10 mL
Prepared: 10/01/2021 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*98.7*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*88.1*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

Dup-1

21J0004-02 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 09/29/2021 00:00
Instrument: NT11 Analyst: VTS — Analyzed: 11/02/2021 16:02

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 21J0004-02 C 01
Preparation Batch: BJJ0129 — Sample Size: 500 mL
Prepared: 10/06/2021 — Final Volume: 0.5 mL

Sample Cleanup: Cleanup Method: Silica Gel — Extract ID: 21J0004-02 C 01
Cleanup Batch: CJK0014 — Initial Volume: 0.5 mL
Cleaned: 02-Nov-2021 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.010	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	0.010	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	0.010	ND	ug/L	U
Acenaphthylene	208-96-8	1	0.010	ND	ug/L	U
Acenaphthene	83-32-9	1	0.010	ND	ug/L	U
Dibenzofuran	132-64-9	1	0.010	ND	ug/L	U
Fluorene	86-73-7	1	0.010	ND	ug/L	U
Phenanthrene	85-01-8	1	0.010	ND	ug/L	U
Anthracene	120-12-7	1	0.010	ND	ug/L	U
Fluoranthene	206-44-0	1	0.010	ND	ug/L	U
Pyrene	129-00-0	1	0.010	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.010	ND	ug/L	U
Benzo(b)fluoranthene	205-99-2	1	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.010	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10			*42-120 %*	*86.5*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14			*29-120 %*	*77.9*	*%*	
Surrogate: Fluoranthene-d10			*57-120 %*	*97.5*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

Dup-1

21J0004-02 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 09/29/2021 00:00
Instrument: FID4 Analyst: TWC — Analyzed: 10/07/2021 14:51

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 21J0004-02 A 01
Preparation Batch: BJJ0126 — Sample Size: 500 mL
Prepared: 10/06/2021 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*105*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

TB

21J0004-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 09/29/2021 11:35
Instrument: NT2 Analyst: PKC — Analyzed: 10/01/2021 20:13

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 21J0004-03 A
Preparation Batch: BJJ0022 — Sample Size: 10 mL
Prepared: 10/01/2021 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*106*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*99.0*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*92.7*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*99.6*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

TB

21J0004-03 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 09/29/2021 11:35

Instrument: NT2 Analyst: PKC — Analyzed: 10/01/2021 20:13

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 21J0004-03 A

Preparation Batch: BJJ0022 — Sample Size: 10 mL

Prepared: 10/01/2021 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*99.0*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*92.7*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BJJ0022 - EPA 5030C (Purge and Trap)

Instrument: NT2 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJJ0022-BLK1)				Prepared: 01-Oct-2021	Analyzed: 01-Oct-2021 13:04					
Gasoline Range Organics (Tol-Nap)	ND	100	ug/L							U
Surrogate: Toluene-d8	4.91		ug/L	*5.00*		*98.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.91		ug/L	*5.00*		*98.2*	*80-120*			
Blank (BJJ0022-BLK2)				Prepared: 01-Oct-2021	Analyzed: 01-Oct-2021 13:04					
Benzene	ND	0.20	ug/L							U
Toluene	ND	0.20	ug/L							U
Ethylbenzene	ND	0.20	ug/L							U
m,p-Xylene	ND	0.40	ug/L							U
o-Xylene	ND	0.20	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	4.98		ug/L	*5.00*		*99.6*	*80-129*			
Surrogate: Toluene-d8	4.91		ug/L	*5.00*		*98.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.91		ug/L	*5.00*		*98.2*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.01		ug/L	*5.00*		*100*	*80-120*			
LCS (BJJ0022-BS1)				Prepared: 01-Oct-2021	Analyzed: 01-Oct-2021 11:03					
Gasoline Range Organics (Tol-Nap)	1050	100	ug/L	1000		105	72-128			
Surrogate: Toluene-d8	5.06		ug/L	*5.00*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.79		ug/L	*5.00*		*95.9*	*80-120*			
LCS (BJJ0022-BS2)				Prepared: 01-Oct-2021	Analyzed: 01-Oct-2021 11:23					
Benzene	10.0	0.20	ug/L	10.0		100	80-120			
Toluene	10.1	0.20	ug/L	10.0		101	80-120			
Ethylbenzene	10.0	0.20	ug/L	10.0		100	80-120			
m,p-Xylene	20.9	0.40	ug/L	20.0		105	80-121			
o-Xylene	10.6	0.20	ug/L	10.0		106	80-121			
Surrogate: 1,2-Dichloroethane-d4	4.84		ug/L	*5.00*		*96.7*	*80-129*			
Surrogate: Toluene-d8	5.10		ug/L	*5.00*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.08		ug/L	*5.00*		*102*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.02		ug/L	*5.00*		*100*	*80-120*			
LCS Dup (BJJ0022-BSD1)				Prepared: 01-Oct-2021	Analyzed: 01-Oct-2021 11:44					
Gasoline Range Organics (Tol-Nap)	1020	100	ug/L	1000		102	72-128	3.30	30	
Surrogate: Toluene-d8	5.05		ug/L	*5.00*		*101*	*80-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BJJ0022 - EPA 5030C (Purge and Trap)

Instrument: NT2 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BJJ0022-BSD1)				Prepared: 01-Oct-2021 Analyzed: 01-Oct-2021 11:44						
Surrogate: 4-Bromofluorobenzene	5.00		ug/L	*5.00*		*100*	*80-120*			
LCS Dup (BJJ0022-BSD2)				Prepared: 01-Oct-2021 Analyzed: 01-Oct-2021 12:04						
Benzene	10.0	0.20	ug/L	10.0		100	80-120	0.46	30	
Toluene	9.99	0.20	ug/L	10.0		99.9	80-120	1.40	30	
Ethylbenzene	10.1	0.20	ug/L	10.0		101	80-120	0.74	30	
m,p-Xylene	20.9	0.40	ug/L	20.0		104	80-121	0.41	30	
o-Xylene	10.8	0.20	ug/L	10.0		108	80-121	1.57	30	
Surrogate: 1,2-Dichloroethane-d4	4.77		ug/L	*5.00*		*95.3*	*80-129*			
Surrogate: Toluene-d8	5.05		ug/L	*5.00*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.03		ug/L	*5.00*		*101*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.11		ug/L	*5.00*		*102*	*80-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BJJ0129 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJJ0129-BLK1)			Prepared: 06-Oct-2021 Analyzed: 02-Nov-2021 14:01							
Naphthalene	ND	0.010	ug/L							U
2-Methylnaphthalene	ND	0.010	ug/L							U
1-Methylnaphthalene	ND	0.010	ug/L							U
Acenaphthylene	ND	0.010	ug/L							U
Acenaphthene	ND	0.010	ug/L							U
Dibenzofuran	ND	0.010	ug/L							U
Fluorene	ND	0.010	ug/L							U
Phenanthrene	ND	0.010	ug/L							U
Anthracene	ND	0.010	ug/L							U
Fluoranthene	ND	0.010	ug/L							U
Pyrene	ND	0.010	ug/L							U
Benzo(a)anthracene	ND	0.010	ug/L							U
Chrysene	ND	0.010	ug/L							U
Benzo(b)fluoranthene	ND	0.010	ug/L							U
Benzo(k)fluoranthene	ND	0.010	ug/L							U
Benzo(a)pyrene	ND	0.010	ug/L							U
Indeno(1,2,3-cd)pyrene	ND	0.010	ug/L							U
Dibenzo(a,h)anthracene	ND	0.010	ug/L							U
Benzo(g,h,i)perylene	ND	0.010	ug/L							U
Surrogate: 2-Methylnaphthalene-d10	0.245		ug/L	*0.300*		*81.7*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.236		ug/L	*0.300*		*78.7*	*29-120*			
Surrogate: Fluoranthene-d10	0.282		ug/L	*0.300*		*94.0*	*57-120*			
LCS (BJJ0129-BS1)			Prepared: 06-Oct-2021 Analyzed: 02-Nov-2021 14:31							
Naphthalene	0.223	0.010	ug/L	0.300		74.2	37-120			
2-Methylnaphthalene	0.243	0.010	ug/L	0.300		80.9	37-120			
1-Methylnaphthalene	0.242	0.010	ug/L	0.300		80.8	29-120			
2-Chloronaphthalene	0.226	0.010	ug/L	0.300		75.2	30-160			
Biphenyl	0.237	0.010	ug/L	0.300		79.0	30-160			
2,6-Dimethylnaphthalene	0.234	0.010	ug/L	0.300		78.2	30-160			
Acenaphthylene	0.242	0.010	ug/L	0.300		80.7	41-120			
Acenaphthene	0.248	0.010	ug/L	0.300		82.5	41-120			
Dibenzofuran	0.237	0.010	ug/L	0.300		78.9	38-120			
2,3,5-Trimethylnaphthalene	0.243	0.010	ug/L	0.300		80.9	30-160			
Fluorene	0.252	0.010	ug/L	0.300		84.1	43-120			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BJJ0129 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BJJ0129-BS1)				Prepared: 06-Oct-2021	Analyzed: 02-Nov-2021 14:31					
Dibenzothiophene	0.247	0.010	ug/L	0.300		82.3	30-160			
Phenanthrene	0.252	0.010	ug/L	0.300		84.0	41-120			
Anthracene	0.234	0.010	ug/L	0.300		77.8	40-120			
Carbazole	0.261	0.010	ug/L	0.300		86.9	30-160			
Fluoranthene	0.261	0.010	ug/L	0.300		86.9	45-120			
Pyrene	0.258	0.010	ug/L	0.300		86.2	41-120			
1-Methylphenanthrene	0.272	0.010	ug/L	0.300		90.8	30-160			
Benzo(a)anthracene	0.256	0.010	ug/L	0.300		85.4	42-120			
Chrysene	0.242	0.010	ug/L	0.300		80.8	44-120			
Benzo(b)fluoranthene	0.264	0.010	ug/L	0.300		87.9	44-120			
Benzo(k)fluoranthene	0.245	0.010	ug/L	0.300		81.5	50-120			
Benzo(j)fluoranthene	0.228	0.010	ug/L	0.300		76.1	39-160			
Benzo(e)pyrene	0.247	0.010	ug/L	0.300		82.2	30-160			
Benzo(a)pyrene	0.211	0.010	ug/L	0.300		70.4	35-120			
Indeno(1,2,3-cd)pyrene	0.243	0.010	ug/L	0.300		80.8	37-120			
Dibenzo(a,h)anthracene	0.225	0.010	ug/L	0.300		75.1	34-120			
Benzo(g,h,i)perylene	0.197	0.010	ug/L	0.300		65.5	38-120			
Benzo(b)thiophene	0.229	0.010	ug/L	0.300		76.4	30-160			
Surrogate: 2-Methylnaphthalene-d10	0.256		ug/L	*0.300*		*85.4*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.223		ug/L	*0.300*		*74.2*	*29-120*			
Surrogate: Fluoranthene-d10	0.277		ug/L	*0.300*		*92.5*	*57-120*			
LCS Dup (BJJ0129-BSD1)				Prepared: 06-Oct-2021	Analyzed: 02-Nov-2021 15:02					
Naphthalene	0.240	0.010	ug/L	0.300		79.9	37-120	7.48	30	
2-Methylnaphthalene	0.262	0.010	ug/L	0.300		87.4	37-120	7.70	30	
1-Methylnaphthalene	0.262	0.010	ug/L	0.300		87.2	29-120	7.66	30	
2-Chloronaphthalene	0.247	0.010	ug/L	0.300		82.3	30-160	8.99	30	
Biphenyl	0.264	0.010	ug/L	0.300		87.9	30-160	10.70	30	
2,6-Dimethylnaphthalene	0.256	0.010	ug/L	0.300		85.5	30-160	8.96	30	
Acenaphthylene	0.265	0.010	ug/L	0.300		88.4	41-120	9.11	30	
Acenaphthene	0.271	0.010	ug/L	0.300		90.4	41-120	9.16	30	
Dibenzofuran	0.259	0.010	ug/L	0.300		86.5	38-120	9.14	30	
2,3,5-Trimethylnaphthalene	0.263	0.010	ug/L	0.300		87.8	30-160	8.20	30	
Fluorene	0.274	0.010	ug/L	0.300		91.3	43-120	8.19	30	
Dibenzothiophene	0.275	0.010	ug/L	0.300		91.7	30-160	10.90	30	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BJJ0129 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BJJ0129-BSD1)				Prepared: 06-Oct-2021 Analyzed: 02-Nov-2021 15:02						
Phenanthrene	0.277	0.010	ug/L	0.300		92.3	41-120	9.36	30	
Anthracene	0.262	0.010	ug/L	0.300		87.3	40-120	11.50	30	
Carbazole	0.290	0.010	ug/L	0.300		96.6	30-160	10.60	30	
Fluoranthene	0.286	0.010	ug/L	0.300		95.4	45-120	9.40	30	
Pyrene	0.279	0.010	ug/L	0.300		92.9	41-120	7.53	30	
1-Methylphenanthrene	0.296	0.010	ug/L	0.300		98.6	30-160	8.27	30	
Benzo(a)anthracene	0.278	0.010	ug/L	0.300		92.6	42-120	8.03	30	
Chrysene	0.268	0.010	ug/L	0.300		89.5	44-120	10.20	30	
Benzo(b)fluoranthene	0.289	0.010	ug/L	0.300		96.2	44-120	9.05	30	
Benzo(k)fluoranthene	0.270	0.010	ug/L	0.300		89.9	50-120	9.81	30	
Benzo(j)fluoranthene	0.254	0.010	ug/L	0.300		84.5	39-160	10.50	30	
Benzo(e)pyrene	0.272	0.010	ug/L	0.300		90.6	30-160	9.78	30	
Benzo(a)pyrene	0.239	0.010	ug/L	0.300		79.8	35-120	12.60	30	
Indeno(1,2,3-cd)pyrene	0.270	0.010	ug/L	0.300		90.0	37-120	10.70	30	
Dibenzo(a,h)anthracene	0.248	0.010	ug/L	0.300		82.8	34-120	9.72	30	
Benzo(g,h,i)perylene	0.223	0.010	ug/L	0.300		74.4	38-120	12.60	30	
Benzo(b)thiophene	0.249	0.010	ug/L	0.300		83.0	30-160	8.29	30	
Surrogate: 2-Methylnaphthalene-d10	0.272		ug/L	*0.300*		*90.7*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.242		ug/L	*0.300*		*80.8*	*29-120*			
Surrogate: Fluoranthene-d10	0.299		ug/L	*0.300*		*99.7*	*57-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BJJ0126 - EPA 3510C SepF

Instrument: FID4 Analyst: TWC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJJ0126-BLK1)				Prepared: 06-Oct-2021 Analyzed: 07-Oct-2021 13:31						
Diesel Range Organics (C12-C24)	ND	0.100	mg/L							U
Motor Oil Range Organics (C24-C38)	ND	0.200	mg/L							U
Surrogate: o-Terphenyl	0.219		mg/L	*0.225*		*97.5*	*50-150*			
LCS (BJJ0126-BS1)				Prepared: 06-Oct-2021 Analyzed: 07-Oct-2021 13:51						
Diesel Range Organics (C12-C24)	2.73	0.100	mg/L	3.00		91.1	56-120			
Surrogate: o-Terphenyl	0.255		mg/L	*0.225*		*114*	*50-150*			
LCS Dup (BJJ0126-BSD1)				Prepared: 06-Oct-2021 Analyzed: 07-Oct-2021 14:11						
Diesel Range Organics (C12-C24)	2.81	0.100	mg/L	3.00		93.6	56-120	2.77	30	
Surrogate: o-Terphenyl	0.252		mg/L	*0.225*		*112*	*50-150*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

Certified Analyses included in this Report

Analyte	Certifications
EPA 8260D in Water	
Chloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Acrolein	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Iodomethane	DoD-ELAP,NELAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Butanone	DoD-ELAP,NELAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

2-Hexanone	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
Styrene	DoD-ELAP,NELAP,WADOE
Bromoform	DoD-ELAP,NELAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,WADOE
n-Hexane	WADOE
2-Pentanone	WADOE

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

EPA 8270E-SIM in Water

Naphthalene	ADEC,DoD-ELAP,NELAP,WADOE
2-Methylnaphthalene	ADEC,DoD-ELAP,NELAP
1-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,WADOE
Biphenyl	NELAP
Acenaphthylene	ADEC,DoD-ELAP,NELAP,WADOE
Acenaphthene	ADEC,DoD-ELAP,NELAP,WADOE
Dibenzofuran	ADEC,DoD-ELAP,NELAP
Fluorene	ADEC,DoD-ELAP,NELAP,WADOE
Phenanthrene	ADEC,DoD-ELAP,NELAP,WADOE
Anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Carbazole	NELAP
Fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(a)anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Chrysene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(b)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(k)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(j)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(e)pyrene	NELAP
Benzo(a)pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Perylene	ADEC,NELAP
Indeno(1,2,3-cd)pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Dibenzo(a,h)anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(g,h,i)perylene	ADEC,DoD-ELAP,NELAP,WADOE

NWTPH-Dx in Water

Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C25)	DoD-ELAP
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Residual Range Organics (C23-C32)	DoD-ELAP
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE

NWTPHg in Water

Gasoline Range Organics (Tol-Nap)	WADOE,DoD-ELAP
Gasoline Range Organics (2MP-TMB)	WADOE,DoD-ELAP
Gasoline Range Organics (Tol-C12)	WADOE,DoD-ELAP
Gasoline Range Organics (C6-C10)	WADOE,ADEC,DoD-ELAP
Gasoline Range Organics (C5-C12)	WADOE,DoD-ELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/28/2022
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2022
WADOE	WA Dept of Ecology	C558	06/30/2022
WA-DW	Ecology - Drinking Water	C558	06/30/2022

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60651171	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	03-Nov-2021 14:04

Notes and Definitions

*	Flagged value is not within established control limits.
B	This analyte was detected in the method blank.
D	The reported value is from a dilution
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Memo

AECOM

1111 3rd Avenue, Suite 1600
Seattle, Washington 98101
206.438.2700 Telephone
206.438.2699 Fax

To:	Karen Mixon, Project Manager	**Info:**	Final
From:	Chelsey Cook, Chemist Lucy Panteleeff, Chemist	**Date:**	April 4, 2023
RE:	Data Quality Review Quarterly Groundwater Samples – December 2021 Laurel Station Cleanup Action		

The data quality review of 1 groundwater sample and 1 trip blank collected on December 15, 2021, has been completed. The samples were analyzed by Analytical Resources, Incorporated (ARI) located in Tukwila, Washington for benzene, toluene, ethylbenzene, m,p-xylene, and o-xylene (BTEX) by EPA Method 8260D, total petroleum hydrocarbons (TPHs) by Washington State Department of Ecology (Ecology) Methods NWTPH-Gx (gasoline-range TPH) and NWTPH-Dx (diesel-range and motor oil-range TPH), and/or polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270E-SIM. Samples were analyzed for the chemical constituents as described in the *Final Compliance Monitoring Plan, Laurel Station, 1009 East Smith Road, Bellingham, Washington* dated January 16, 2015 (CMP). Due to changes in laboratory procedures, NWTPH-Gx analysis was performed using GC/MS instrumentation instead of GC/FID.

The analyses were performed in general accordance with methods specified in EPA's *Test Methods for Evaluating Solid Waste (SW-846)* and Ecology's *Analytical Methods for Petroleum Hydrocarbons*, June 1997. The laboratory provided a full data package containing sample results and associated QA/QC data. The following samples are associated with ARI group 21L0257:

Sample ID	Laboratory ID
MW-6	21L0257-01
TB (Trip Blank)	21L0257-02

The following comments refer to ARI's performance in meeting the quality control specifications described in the analytical methods. Data were qualified based on the method criteria and guidance provided in the EPA document *USEPA National Functional Guidelines for Organic Superfund Methods Data Review*, November 2020. Data qualifiers that may be assigned to data from this laboratory group include:

- U - The analyte was analyzed for but was not detected above the reported sample quantitation limit.
- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

- DNR - Do Not Report. Multiple results reported from different analytical dates and/or dilutions. Value from another analysis should be used.

Sample Receipt

Upon receipt by ARI, the sample jar information was compared to the chain-of-custody (COC) and the cooler temperature was recorded. The cooler was received at a temperature within the EPA-recommended limits of greater than 0°C and less than or equal to 6°C. No issues related to sample identification were noted by ARI.

Organic Analyses

Samples were analyzed for BTEX, TPHs, and PAHs by the methods identified in the introduction to this report.

1. Holding Times – Acceptable

2. Instrument Performance and Calibrations (initial and continuing) – Acceptable

3. Blanks – Acceptable

4. Surrogates – Acceptable

5. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) – Acceptable

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

   General – MS/MSDs were not performed in association with these analyses. Accuracy and precision were assessed using the LCS/LCSDs.

7. Reporting Limits – Acceptable

Overall Assessment of Data

The data reported in this laboratory group are considered usable for meeting project objectives. The completeness for laboratory group 21L0257 is 100%.

Table 1. Summary of Qualified Data

Sample ID	ARI ID	Analyte	Result	Units	Final Result
No data were qualified in association with laboratory group 21L0257.					

Analytical Resources, LLC
Analytical Chemists and Consultants

05 January 2022

Karen Mixon
AECOM
1111 Third Avenue, Suite 1600
Seattle, WA 98101

RE: Laurel Station

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
21L0257	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC

Kelly Bottem, Client Services Manager

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

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21L0257	Turn-around Requested: Standard	Page: 1 of 1	
ARI Client Company: AECOM	Phone: 206-438-2700	Date: 12/15/21	Ice Present?
Client Contact: Karen Mixon		No. of Coolers:	Cooler Temps: 4.3
Client Project Name: Laurel Station			
Client Project #:	Samplers: Lucy Panteleeff		

Analytical Resources, LLC
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: NWTPH-Gx	BTEX	NWTPH-Dx	LL PAHs					Notes/Comments
MW-6	12/15/21	12:42	W	9	X	X	X	X					
Trip Blank	12/15/21	—	W	2	X	X							

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Lucy Panteleeff	Printed Name: Arden Paist	Printed Name:	Printed Name:
	Company: AECOM	Company: ARI	Company:	Company:
	Date & Time: 12/16/21 09:30	Date & Time: 12/16/21 1338	Date & Time:	Date & Time:

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-6	21L0257-01	Water	15-Dec-2021 12:42	16-Dec-2021 13:38
Trip Blank	21L0257-02	Water	14-Dec-2021 12:42	16-Dec-2021 13:38

AECOM	Project: Laurel Station	
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Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

Work Order Case Narrative

Gasoline by NWTPH-g (GC/MS)

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Volatiles - EPA Method SW8260D

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Polynuclear Aromatic Hydrocarbons (PAH) - EPA Method SW8270E-SIM

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

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The blank spike (BS/LCS) percent recoveries were within control limits.

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: AECOM Project Name: Laurel Station

COC No(s): NA Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Assigned ARI Job No: 21L0257 Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1500 4.3

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: D00256S

Cooler Accepted by: AP Date: 12/16/21 Time: 1338

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used?	Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA	12/14/21	

Were the sample(s) split by ARI? NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: CB Date: 12/20/21 Time: 13:08 Labels checked by: _____

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

MW-6

21L0257-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 12/15/2021 12:42
Instrument: NT2 Analyst: PKC — Analyzed: 12/20/2021 16:56

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 21L0257-01 H
Preparation Batch: BJL0464 — Sample Size: 10 mL
Prepared: 12/20/2021 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*121*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*99.9*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*85.6*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*98.8*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

MW-6

21L0257-01 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 12/15/2021 12:42
Instrument: NT2 Analyst: PKC — Analyzed: 12/20/2021 16:56

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 21L0257-01 H
Preparation Batch: BJL0464 — Sample Size: 10 mL
Prepared: 12/20/2021 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*99.9*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*85.6*	*%*	

AECOM	Project: Laurel Station	
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Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

MW-6

21L0257-01 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 12/15/2021 12:42
Instrument: NT11 Analyst: VTS — Analyzed: 12/28/2021 12:12

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF; Preparation Batch: BJL0494; Prepared: 12/21/2021; Sample Size: 500 mL; Final Volume: 0.5 mL — Extract ID: 21L0257-01 A 01

Sample Cleanup: Cleanup Method: Silica Gel; Cleanup Batch: CJL0153; Cleaned: 22-Dec-2021; Initial Volume: 0.5 mL; Final Volume: 0.5 mL — Extract ID: 21L0257-01 A 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.010	0.023	ug/L	
2-Methylnaphthalene	91-57-6	1	0.010	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	0.010	ND	ug/L	U
Acenaphthylene	208-96-8	1	0.010	ND	ug/L	U
Acenaphthene	83-32-9	1	0.010	ND	ug/L	U
Dibenzofuran	132-64-9	1	0.010	ND	ug/L	U
Fluorene	86-73-7	1	0.010	ND	ug/L	U
Phenanthrene	85-01-8	1	0.010	ND	ug/L	U
Anthracene	120-12-7	1	0.010	ND	ug/L	U
Fluoranthene	206-44-0	1	0.010	ND	ug/L	U
Pyrene	129-00-0	1	0.010	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.010	ND	ug/L	U
Benzo(b)fluoranthene	205-99-2	1	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.010	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10			*42-120 %*	*72.5*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14			*29-120 %*	*67.0*	*%*	
Surrogate: Fluoranthene-d10			*57-120 %*	*94.8*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
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Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

MW-6

21L0257-01 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 12/15/2021 12:42
Instrument: FID4 Analyst: JGR — Analyzed: 12/22/2021 18:23

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 21L0257-01 B 01
Preparation Batch: BJL0498 — Sample Size: 500 mL
Prepared: 12/21/2021 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*75.7*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

Trip Blank

21L0257-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 12/14/2021 12:42
Instrument: NT2 Analyst: PKC — Analyzed: 12/20/2021 17:17

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 21L0257-02 A
Preparation Batch: BJL0464 — Sample Size: 10 mL
Prepared: 12/20/2021 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*122*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*99.2*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*88.0*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*99.8*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

Trip Blank

21L0257-02 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 12/14/2021 12:42
Instrument: NT2 Analyst: PKC — Analyzed: 12/20/2021 17:17

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 21L0257-02 A
Preparation Batch: BJL0464 — Sample Size: 10 mL
Prepared: 12/20/2021 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*99.2*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*88.0*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BJL0464 - EPA 5030C (Purge and Trap)

Instrument: NT2 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJL0464-BLK1)				Prepared: 20-Dec-2021		Analyzed: 20-Dec-2021 12:31				
Gasoline Range Organics (Tol-Nap)	ND	100	ug/L							U
Surrogate: Toluene-d8	4.91		ug/L	*5.00*		*98.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.60		ug/L	*5.00*		*91.9*	*80-120*			
Blank (BJL0464-BLK2)				Prepared: 20-Dec-2021		Analyzed: 20-Dec-2021 12:31				
Benzene	ND	0.20	ug/L							U
Toluene	ND	0.20	ug/L							U
Ethylbenzene	ND	0.20	ug/L							U
m,p-Xylene	ND	0.40	ug/L							U
o-Xylene	ND	0.20	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	5.91		ug/L	*5.00*		*118*	*80-129*			
Surrogate: Toluene-d8	4.91		ug/L	*5.00*		*98.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.60		ug/L	*5.00*		*91.9*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.91		ug/L	*5.00*		*98.1*	*80-120*			
LCS (BJL0464-BS1)				Prepared: 20-Dec-2021		Analyzed: 20-Dec-2021 10:22				
Gasoline Range Organics (Tol-Nap)	1080	100	ug/L	1000		108	72-128			
Surrogate: Toluene-d8	5.00		ug/L	*5.00*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.74		ug/L	*5.00*		*94.8*	*80-120*			
LCS (BJL0464-BS2)				Prepared: 20-Dec-2021		Analyzed: 20-Dec-2021 10:43				
Benzene	9.07	0.20	ug/L	10.0		90.7	80-120			
Toluene	8.72	0.20	ug/L	10.0		87.2	80-120			
Ethylbenzene	8.99	0.20	ug/L	10.0		89.9	80-120			
m,p-Xylene	17.9	0.40	ug/L	20.0		89.5	80-121			
o-Xylene	8.85	0.20	ug/L	10.0		88.5	80-121			
Surrogate: 1,2-Dichloroethane-d4	6.00		ug/L	*5.00*		*120*	*80-129*			
Surrogate: Toluene-d8	5.04		ug/L	*5.00*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.90		ug/L	*5.00*		*98.0*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.86		ug/L	*5.00*		*97.1*	*80-120*			
LCS Dup (BJL0464-BSD1)				Prepared: 20-Dec-2021		Analyzed: 20-Dec-2021 11:05				
Gasoline Range Organics (Tol-Nap)	1150	100	ug/L	1000		115	72-128	6.27	30	
Surrogate: Toluene-d8	5.12		ug/L	*5.00*		*102*	*80-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BJL0464 - EPA 5030C (Purge and Trap)

Instrument: NT2 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BJL0464-BSD1)				Prepared: 20-Dec-2021 Analyzed: 20-Dec-2021 11:05						
Surrogate: 4-Bromofluorobenzene	4.68		ug/L	*5.00*		*93.5*	*80-120*			
LCS Dup (BJL0464-BSD2)				Prepared: 20-Dec-2021 Analyzed: 20-Dec-2021 11:26						
Benzene	9.31	0.20	ug/L	10.0		93.1	80-120	2.68	30	
Toluene	9.09	0.20	ug/L	10.0		90.9	80-120	4.13	30	
Ethylbenzene	9.14	0.20	ug/L	10.0		91.4	80-120	1.63	30	
m,p-Xylene	18.4	0.40	ug/L	20.0		91.9	80-121	2.66	30	
o-Xylene	9.02	0.20	ug/L	10.0		90.2	80-121	1.83	30	
Surrogate: 1,2-Dichloroethane-d4	5.82		ug/L	*5.00*		*116*	*80-129*			
Surrogate: Toluene-d8	4.98		ug/L	*5.00*		*99.6*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.83		ug/L	*5.00*		*96.6*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.88		ug/L	*5.00*		*97.6*	*80-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BJL0494 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJL0494-BLK1)				Prepared: 21-Dec-2021 Analyzed: 28-Dec-2021 10:36						
Naphthalene	ND	0.010	ug/L							U
2-Methylnaphthalene	ND	0.010	ug/L							U
1-Methylnaphthalene	ND	0.010	ug/L							U
Acenaphthylene	ND	0.010	ug/L							U
Acenaphthene	ND	0.010	ug/L							U
Dibenzofuran	ND	0.010	ug/L							U
Fluorene	ND	0.010	ug/L							U
Phenanthrene	ND	0.010	ug/L							U
Anthracene	ND	0.010	ug/L							U
Fluoranthene	ND	0.010	ug/L							U
Pyrene	ND	0.010	ug/L							U
Benzo(a)anthracene	ND	0.010	ug/L							U
Chrysene	ND	0.010	ug/L							U
Benzo(b)fluoranthene	ND	0.010	ug/L							U
Benzo(k)fluoranthene	ND	0.010	ug/L							U
Benzo(a)pyrene	ND	0.010	ug/L							U
Indeno(1,2,3-cd)pyrene	ND	0.010	ug/L							U
Dibenzo(a,h)anthracene	ND	0.010	ug/L							U
Benzo(g,h,i)perylene	ND	0.010	ug/L							U
Surrogate: 2-Methylnaphthalene-d10	0.242		ug/L	*0.300*		*80.8*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.231		ug/L	*0.300*		*76.9*	*29-120*			
Surrogate: Fluoranthene-d10	0.279		ug/L	*0.300*		*93.1*	*57-120*			
LCS (BJL0494-BS1)				Prepared: 21-Dec-2021 Analyzed: 28-Dec-2021 11:08						
Naphthalene	0.238	0.010	ug/L	0.300		79.5	37-120			
2-Methylnaphthalene	0.248	0.010	ug/L	0.300		82.8	37-120			
1-Methylnaphthalene	0.248	0.010	ug/L	0.300		82.8	29-120			
2-Chloronaphthalene	0.236	0.010	ug/L	0.300		78.8	30-160			
Biphenyl	0.240	0.010	ug/L	0.300		79.8	30-160			
2,6-Dimethylnaphthalene	0.246	0.010	ug/L	0.300		81.9	30-160			
Acenaphthylene	0.232	0.010	ug/L	0.300		77.2	41-120			
Acenaphthene	0.242	0.010	ug/L	0.300		80.8	41-120			
Dibenzofuran	0.238	0.010	ug/L	0.300		79.3	38-120			
2,3,5-Trimethylnaphthalene	0.252	0.010	ug/L	0.300		84.0	30-160			
Fluorene	0.251	0.010	ug/L	0.300		83.7	43-120			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BJL0494 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BJL0494-BS1)				Prepared: 21-Dec-2021	Analyzed: 28-Dec-2021 11:08					
Dibenzothiophene	0.249	0.010	ug/L	0.300		82.9	30-160			
Phenanthrene	0.253	0.010	ug/L	0.300		84.2	41-120			
Anthracene	0.242	0.010	ug/L	0.300		80.7	40-120			
Carbazole	0.269	0.010	ug/L	0.300		89.6	30-160			
Fluoranthene	0.269	0.010	ug/L	0.300		89.7	45-120			
Pyrene	0.269	0.010	ug/L	0.300		89.8	41-120			
1-Methylphenanthrene	0.270	0.010	ug/L	0.300		89.9	30-160			
Benzo(a)anthracene	0.259	0.010	ug/L	0.300		86.4	42-120			
Chrysene	0.253	0.010	ug/L	0.300		84.4	44-120			
Benzo(b)fluoranthene	0.234	0.010	ug/L	0.300		78.1	44-120			
Benzo(k)fluoranthene	0.298	0.010	ug/L	0.300		99.2	50-120			
Benzo(j)fluoranthene	0.285	0.010	ug/L	0.300		95.0	39-160			
Benzo(e)pyrene	0.264	0.010	ug/L	0.300		88.1	30-160			
Benzo(a)pyrene	0.249	0.010	ug/L	0.300		82.9	35-120			
Indeno(1,2,3-cd)pyrene	0.237	0.010	ug/L	0.300		79.1	37-120			
Dibenzo(a,h)anthracene	0.235	0.010	ug/L	0.300		78.2	34-120			
Benzo(g,h,i)perylene	0.236	0.010	ug/L	0.300		78.6	38-120			
Benzo(b)thiophene	0.239	0.010	ug/L	0.300		79.6	30-160			
Surrogate: 2-Methylnaphthalene-d10	0.265		ug/L	*0.300*		*88.2*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.254		ug/L	*0.300*		*84.7*	*29-120*			
Surrogate: Fluoranthene-d10	0.287		ug/L	*0.300*		*95.6*	*57-120*			
LCS Dup (BJL0494-BSD1)				Prepared: 21-Dec-2021	Analyzed: 28-Dec-2021 11:40					
Naphthalene	0.232	0.010	ug/L	0.300		77.5	37-120	2.54	30	
2-Methylnaphthalene	0.240	0.010	ug/L	0.300		79.9	37-120	3.60	30	
1-Methylnaphthalene	0.241	0.010	ug/L	0.300		80.2	29-120	3.11	30	
2-Chloronaphthalene	0.232	0.010	ug/L	0.300		77.5	30-160	1.64	30	
Biphenyl	0.236	0.010	ug/L	0.300		78.6	30-160	1.62	30	
2,6-Dimethylnaphthalene	0.242	0.010	ug/L	0.300		80.8	30-160	1.36	30	
Acenaphthylene	0.232	0.010	ug/L	0.300		77.5	41-120	0.36	30	
Acenaphthene	0.242	0.010	ug/L	0.300		80.6	41-120	0.18	30	
Dibenzofuran	0.237	0.010	ug/L	0.300		78.9	38-120	0.54	30	
2,3,5-Trimethylnaphthalene	0.250	0.010	ug/L	0.300		83.4	30-160	0.69	30	
Fluorene	0.249	0.010	ug/L	0.300		83.0	43-120	0.91	30	
Dibenzothiophene	0.248	0.010	ug/L	0.300		82.7	30-160	0.32	30	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BJL0494 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BJL0494-BSD1)				Prepared: 21-Dec-2021 Analyzed: 28-Dec-2021 11:40						
Phenanthrene	0.252	0.010	ug/L	0.300		83.9	41-120	0.38	30	
Anthracene	0.242	0.010	ug/L	0.300		80.7	40-120	0.02	30	
Carbazole	0.268	0.010	ug/L	0.300		89.3	30-160	0.31	30	
Fluoranthene	0.270	0.010	ug/L	0.300		90.0	45-120	0.41	30	
Pyrene	0.268	0.010	ug/L	0.300		89.5	41-120	0.37	30	
1-Methylphenanthrene	0.269	0.010	ug/L	0.300		89.5	30-160	0.45	30	
Benzo(a)anthracene	0.271	0.010	ug/L	0.300		90.2	42-120	4.39	30	
Chrysene	0.262	0.010	ug/L	0.300		87.3	44-120	3.41	30	
Benzo(b)fluoranthene	0.239	0.010	ug/L	0.300		79.8	44-120	2.12	30	
Benzo(k)fluoranthene	0.309	0.010	ug/L	0.300		103	50-120	3.75	30	
Benzo(j)fluoranthene	0.291	0.010	ug/L	0.300		97.1	39-160	2.22	30	
Benzo(e)pyrene	0.271	0.010	ug/L	0.300		90.2	30-160	2.36	30	
Benzo(a)pyrene	0.255	0.010	ug/L	0.300		85.0	35-120	2.46	30	
Indeno(1,2,3-cd)pyrene	0.243	0.010	ug/L	0.300		80.9	37-120	2.30	30	
Dibenzo(a,h)anthracene	0.241	0.010	ug/L	0.300		80.3	34-120	2.64	30	
Benzo(g,h,i)perylene	0.249	0.010	ug/L	0.300		83.2	38-120	5.59	30	
Benzo(b)thiophene	0.233	0.010	ug/L	0.300		77.7	30-160	2.36	30	
Surrogate: 2-Methylnaphthalene-d10	0.247		ug/L	*0.300*		*82.5*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.248		ug/L	*0.300*		*82.5*	*29-120*			
Surrogate: Fluoranthene-d10	0.275		ug/L	*0.300*		*91.6*	*57-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BJL0498 - EPA 3510C SepF

Instrument: FID4 Analyst: JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJL0498-BLK1)				Prepared: 21-Dec-2021 Analyzed: 22-Dec-2021 17:25						
Diesel Range Organics (C12-C24)	ND	0.100	mg/L							U
Motor Oil Range Organics (C24-C38)	ND	0.200	mg/L							U
Surrogate: o-Terphenyl	0.194		mg/L	*0.225*		*86.0*	*50-150*			
LCS (BJL0498-BS1)				Prepared: 21-Dec-2021 Analyzed: 22-Dec-2021 17:44						
Diesel Range Organics (C12-C24)	2.76	0.100	mg/L	3.00		91.9	56-120			
Surrogate: o-Terphenyl	0.208		mg/L	*0.225*		*92.4*	*50-150*			
LCS Dup (BJL0498-BSD1)				Prepared: 21-Dec-2021 Analyzed: 22-Dec-2021 18:04						
Diesel Range Organics (C12-C24)	2.67	0.100	mg/L	3.00		89.1	56-120	3.12	30	
Surrogate: o-Terphenyl	0.199		mg/L	*0.225*		*88.4*	*50-150*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

Certified Analyses included in this Report

Analyte	Certifications
EPA 8260D in Water	
Chloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Acrolein	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Iodomethane	DoD-ELAP,NELAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Butanone	DoD-ELAP,NELAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

2-Hexanone	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
Styrene	DoD-ELAP,NELAP,WADOE
Bromoform	DoD-ELAP,NELAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,WADOE
n-Hexane	WADOE
2-Pentanone	WADOE

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

EPA 8270E-SIM in Water

Naphthalene	ADEC,DoD-ELAP,NELAP,WADOE
2-Methylnaphthalene	ADEC,DoD-ELAP,NELAP
1-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,WADOE
Biphenyl	NELAP
Acenaphthylene	ADEC,DoD-ELAP,NELAP,WADOE
Acenaphthene	ADEC,DoD-ELAP,NELAP,WADOE
Dibenzofuran	ADEC,DoD-ELAP,NELAP
Fluorene	ADEC,DoD-ELAP,NELAP,WADOE
Phenanthrene	ADEC,DoD-ELAP,NELAP,WADOE
Anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Carbazole	NELAP
Fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(a)anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Chrysene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(b)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(k)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(j)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(e)pyrene	NELAP
Benzo(a)pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Perylene	ADEC,NELAP
Indeno(1,2,3-cd)pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Dibenzo(a,h)anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(g,h,i)perylene	ADEC,DoD-ELAP,NELAP,WADOE

NWTPH-Dx in Water

Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C25)	DoD-ELAP
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Residual Range Organics (C23-C32)	DoD-ELAP
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE

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Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE

NWTPHg in Water

Gasoline Range Organics (Tol-Nap)	WADOE,DoD-ELAP
Gasoline Range Organics (2MP-TMB)	WADOE,DoD-ELAP
Gasoline Range Organics (Tol-C12)	WADOE,DoD-ELAP
Gasoline Range Organics (C6-C10)	WADOE,ADEC,DoD-ELAP
Gasoline Range Organics (C5-C12)	WADOE,DoD-ELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/28/2022
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2022
WADOE	WA Dept of Ecology	C558	06/30/2022
WA-DW	Ecology - Drinking Water	C558	06/30/2022

AECOM	Project: Laurel Station	
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Seattle WA, 98101	Project Manager: Karen Mixon	05-Jan-2022 08:07

Notes and Definitions

E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Memo

AECOM

1111 3rd Avenue, Suite 1600
Seattle, Washington 98101
206.438.2700 Telephone
206.438.2699 Fax

To:	Karen Mixon, Project Manager	**Info:**	Final
From:	Chelsey Cook, Chemist Lucy Panteleeff, Chemist	**Date:**	April 3, 2023
RE:	Data Quality Review Quarterly Groundwater Samples – March 2022 Laurel Station Cleanup Action		

The data quality review of 1 groundwater sample and 1 trip blank collected on March 28, 2022, has been completed. The samples were analyzed by Analytical Resources, Incorporated (ARI) located in Tukwila, Washington for benzene, toluene, ethylbenzene, m,p-xylene, and o-xylene (BTEX) by EPA Method 8260D, total petroleum hydrocarbons (TPHs) by Washington State Department of Ecology (Ecology) Methods NWTPH-Gx (gasoline-range TPH) and NWTPH-Dx (diesel-range and motor oil-range TPH), and/or polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270E-SIM. Samples were analyzed for the chemical constituents as described in the *Final Compliance Monitoring Plan, Laurel Station, 1009 East Smith Road, Bellingham, Washington* dated January 16, 2015 (CMP). Due to changes in laboratory procedures, NWTPH-Gx analysis was performed using GC/MS instrumentation instead of GC/FID.

The analyses were performed in general accordance with methods specified in EPA's *Test Methods for Evaluating Solid Waste (SW-846)* and Ecology's *Analytical Methods for Petroleum Hydrocarbons*, June 1997. The laboratory provided a full data package containing sample results and associated QA/QC data. The following samples are associated with ARI group 22C0511:

Sample ID	Laboratory ID
MW-6	22C0511-01
Trip Blank	22C0511-02

The following comments refer to ARI's performance in meeting the quality control specifications described in the analytical methods. Data were qualified based on the method criteria and guidance provided in the EPA document *USEPA National Functional Guidelines for Organic Superfund Methods Data Review*, November 2020. Data qualifiers that may be assigned to data from this laboratory group include:

- U - The analyte was analyzed for but was not detected above the reported sample quantitation limit.
- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

- DNR - Do Not Report. Multiple results reported from different analytical dates and/or dilutions. Value from another analysis should be used.

Sample Receipt

Upon receipt by ARI, the sample jar information was compared to the chain-of-custody (COC) and the cooler temperature was recorded. The cooler was received at a temperature within the EPA-recommended limits of greater than 0°C and less than or equal to 6°C. No issues related to sample identification were noted by ARI.

Organic Analyses

Samples were analyzed for BTEX, TPHs, and PAHs by the methods identified in the introduction to this report.

1. Holding Times – Acceptable

2. Instrument Performance and Calibrations (initial and continuing) – Acceptable except as noted below:

   PAHs by Method 8270E-SIM – The laboratory noted that the percent difference (%D) for benzo(j)fluoranthene in the continuing calibration verification (CCV) associated with analytical batch BKD0036 was above the method limits of ±20%. Benzo(j)fluoranthene was not detected in MW-6; therefore, data were not qualified based on this elevated CCV %D.

3. Blanks – Acceptable except as noted below:

   PAHs by Method 8270E-SIM – Naphthalene (0.002 ug/L) was detected in the method blank associated with analytical batch BKD0036 at a concentration between the method detection limit (MDL) and the laboratory reporting limit. The result for naphthalene in MW-6 was reported at a concentration between the MDL and reporting limits; therefore, the result for naphthalene in MW-6 was qualified as not detected and flagged 'U' at the reporting limit based on this method blank result.

4. Surrogates – Acceptable

5. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) – Acceptable

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) – Acceptable

   General – MS/MSDs were performed using MW-6. Results were acceptable.

7. Reporting Limits – Acceptable

Overall Assessment of Data

The data reported in this laboratory group, as qualified, are considered usable for meeting project objectives. The completeness for laboratory group 22C0511 is 100%.

Table 1. Summary of Qualified Data

Sample ID	ARI ID	Analyte	Result	Units	Final Result
MW-6	22C0511-01	Naphthalene	0.002 J	ug/L	0.010 U

Analytical Resources, LLC
Analytical Chemists and Consultants

22 April 2022

Karen Mixon
AECOM
1111 Third Avenue, Suite 1600
Seattle, WA 98101

RE: Laurel Station (Laurel Station)

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
22C0511	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC

Kelly Bottem, Client Services Manager

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

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 22C0511	Turn-around Requested: Standard
ARI Client Company: AECOM	Phone: 206-438-2700
Client Contact: Karen Mixon	
Client Project Name: Laurel Station	
Client Project #:	Samplers: Demetrio Cabanillas

Page: 1	of 1
Date: 3-28-2022	Ice Present? Y
No. of Coolers: 1	Cooler Temps: 4.4

Analytical Resources, LLC
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: NWTPH-Gx	BTEX	NWTPH-Dx	LL PAHs					Notes/Comments
MW-6	3/28/22	1145	W	21	X	X	X	X					MS/MSD
Trip Blank	3/28/22	—	W	2	X	X							

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Demetrio Cabanillas	Printed Name: BOB CONGLETON	Printed Name:	Printed Name:
	Company: AECOM	Company: ARI	Company:	Company:
	Date & Time: 3/29/2022 805	Date & Time: 3-29-22 805	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	22-Apr-2022 16:09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-6	22C0511-01	Water	28-Mar-2022 00:00	29-Mar-2022 08:05
Trip Blank	22C0511-02	Water	28-Mar-2022 00:00	29-Mar-2022 08:05

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	22-Apr-2022 16:09

Work Order Case Narrative

Gasoline by NWTPH-g (GC/MS)

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) spike recoveries and relative percent difference (RPD) were within advisory control limits.

Volatiles - EPA Method SW8260D

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) spike recoveries and relative percent difference (RPD) were within advisory control limits.

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

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The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

Polynuclear Aromatic Hydrocarbons (PAH) - EPA Method SW8270E-SIM

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements with the exception of all associated "Q" flagged analytes which ar out of control high in the CCAL. All associated samples that contain analyte have been flagged with a "Q" qualifer.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits.

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: AECOM Project Name: Laurel Slaton

COC No(s): _____ NA Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 22C0511 Tracking No: _____ NA

Preliminary Examination Phase:

3C

Were intact, properly signed and dated custody seals attached to the outside of the cooler? YES NO

Were custody papers included with the cooler? ..... YES NO

Were custody papers properly filled out (ink, signed, etc.) ..... YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 805 4.4

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: IR09708

Cooler Accepted by: BOB CONGLETON Date: 3-29-22 Time: 805

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? ..... YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? ..... NA YES NO

How were bottles sealed in plastic bags? ..... Individually Grouped Not

Did all bottles arrive in good condition (unbroken)? ..... YES NO

Were all bottle labels complete and legible? ..... YES NO

Did the number of containers listed on COC match with the number of containers received? ..... YES NO

Did all bottle labels and tags agree with custody papers? ..... YES NO

Were all bottles used correct for the requested analyses? ..... YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ... NA YES NO

Were all VOC vials free of air bubbles? ..... NA YES NO

Was sufficient amount of sample sent in each bottle? ..... YES NO

Date VOC Trip Blank was made at ARI ..... NA 06/18/21

Were the sample(s) split by ARI? NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: [signature] Date: 03/29/22 Time: 17:27 Labels checked by: _____

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	22-Apr-2022 16:09

MW-6

22C0511-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 03/28/2022 00:00
Instrument: NT3 Analyst: PKC — Analyzed: 04/07/2022 13:18

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 22C0511-01 G
Preparation Batch: BKD0196 — Sample Size: 10 mL
Prepared: 04/07/2022 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*92.9*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*100*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*101*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*104*	*%*	

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MW-6

22C0511-01 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 03/28/2022 00:00
Instrument: NT3 Analyst: PKC — Analyzed: 04/07/2022 13:18

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 22C0511-01 G
Preparation Batch: BKD0196 — Sample Size: 10 mL
Prepared: 04/07/2022 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*100*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*101*	*%*	

AECOM	Project: Laurel Station	
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Seattle WA, 98101	Project Manager: Karen Mixon	22-Apr-2022 16:09

MW-6

22C0511-01 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 03/28/2022 00:00
Instrument: NT11 Analyst: VTS — Analyzed: 04/21/2022 11:51

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 22C0511-01 M 01
Preparation Batch: BKD0036 — Sample Size: 500 mL
Prepared: 04/04/2022 — Final Volume: 0.5 mL

Sample Cleanup: Cleanup Method: Silica Gel — Extract ID: 22C0511-01 M 01
Cleanup Batch: CKD0165 — Initial Volume: 0.5 mL
Cleaned: 21-Apr-2022 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.001	0.010	0.004	ug/L	J
2-Methylnaphthalene	91-57-6	1	0.001	0.010	0.002	ug/L	J
1-Methylnaphthalene	90-12-0	1	0.0009	0.010	0.001	ug/L	J
Acenaphthylene	208-96-8	1	0.002	0.010	ND	ug/L	U
Acenaphthene	83-32-9	1	0.003	0.010	ND	ug/L	U
Dibenzofuran	132-64-9	1	0.002	0.010	ND	ug/L	U
Fluorene	86-73-7	1	0.002	0.010	ND	ug/L	U
Phenanthrene	85-01-8	1	0.001	0.010	ND	ug/L	U
Anthracene	120-12-7	1	0.001	0.010	ND	ug/L	U
Carbazole	86-74-8	1	0.001	0.010	ND	ug/L	U
Fluoranthene	206-44-0	1	0.002	0.010	ND	ug/L	U
Pyrene	129-00-0	1	0.001	0.010	0.002	ug/L	J
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.0009	0.010	0.002	ug/L	J
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	ND	ug/L	U
Benzo(j)fluoranthene	205-82-3	1	0.002	0.010	ND	ug/L	U
Benzofluoranthenes, Total		1	0.004	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.002	0.010	ND	ug/L	U
Perylene	1985-5-0	1	0.006	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.001	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*79.4*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*111*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*97.5*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	22-Apr-2022 16:09

MW-6

22C0511-01 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 03/28/2022 00:00
Instrument: FID4 Analyst: CTO — Analyzed: 04/18/2022 13:58

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 22C0511-01 J 01
Preparation Batch: BKC0782 — Sample Size: 500 mL
Prepared: 03/31/2022 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*117*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	22-Apr-2022 16:09

Trip Blank

22C0511-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 03/28/2022 00:00

Instrument: NT3 Analyst: PKC — Analyzed: 04/07/2022 12:27

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 22C0511-02 B

Preparation Batch: BKD0196 — Sample Size: 10 mL

Prepared: 04/07/2022 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*98.4*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*100*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*96.0*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*99.4*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	22-Apr-2022 16:09

Trip Blank

22C0511-02 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 03/28/2022 00:00
Instrument: NT3 Analyst: PKC — Analyzed: 04/07/2022 12:27

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 22C0511-02 B
Preparation Batch: BKD0196 — Sample Size: 10 mL
Prepared: 04/07/2022 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*100*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*96.0*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	22-Apr-2022 16:09

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BKD0196 - EPA 5030C (Purge and Trap)

Instrument: NT3 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BKD0196-BLK1)				Prepared: 07-Apr-2022 Analyzed: 07-Apr-2022 12:02						
Gasoline Range Organics (Tol-Nap)	ND	100	ug/L							U
Surrogate: Toluene-d8	4.84		ug/L	*5.00*		*96.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.02		ug/L	*5.00*		*100*	*80-120*			
Blank (BKD0196-BLK2)				Prepared: 07-Apr-2022 Analyzed: 07-Apr-2022 12:02						
Benzene	ND	0.20	ug/L							U
Toluene	ND	0.20	ug/L							U
Ethylbenzene	ND	0.20	ug/L							U
m,p-Xylene	ND	0.40	ug/L							U
o-Xylene	ND	0.20	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	4.95		ug/L	*5.00*		*99.0*	*80-129*			
Surrogate: Toluene-d8	4.84		ug/L	*5.00*		*96.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.02		ug/L	*5.00*		*100*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.20		ug/L	*5.00*		*104*	*80-120*			
LCS (BKD0196-BS1)				Prepared: 07-Apr-2022 Analyzed: 07-Apr-2022 09:55						
Gasoline Range Organics (Tol-Nap)	899	100	ug/L	1000		89.9	72-128			
Surrogate: Toluene-d8	5.08		ug/L	*5.00*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.05		ug/L	*5.00*		*101*	*80-120*			
LCS (BKD0196-BS2)				Prepared: 07-Apr-2022 Analyzed: 07-Apr-2022 10:21						
Benzene	9.95	0.20	ug/L	10.0		99.5	80-120			
Toluene	9.65	0.20	ug/L	10.0		96.5	80-120			
Ethylbenzene	9.49	0.20	ug/L	10.0		94.9	80-120			
m,p-Xylene	19.6	0.40	ug/L	20.0		98.2	80-121			
o-Xylene	9.52	0.20	ug/L	10.0		95.2	80-121			
Surrogate: 1,2-Dichloroethane-d4	4.49		ug/L	*5.00*		*89.8*	*80-129*			
Surrogate: Toluene-d8	5.09		ug/L	*5.00*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.17		ug/L	*5.00*		*103*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.91		ug/L	*5.00*		*98.2*	*80-120*			
LCS Dup (BKD0196-BSD1)				Prepared: 07-Apr-2022 Analyzed: 07-Apr-2022 10:46						
Gasoline Range Organics (Tol-Nap)	844	100	ug/L	1000		84.4	72-128	6.29	30	
Surrogate: Toluene-d8	4.92		ug/L	*5.00*		*98.4*	*80-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	22-Apr-2022 16:09

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BKD0196 - EPA 5030C (Purge and Trap)

Instrument: NT3 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BKD0196-BSD1)				Prepared: 07-Apr-2022 Analyzed: 07-Apr-2022 10:46						
Surrogate: 4-Bromofluorobenzene	5.11		ug/L	*5.00*		*102*	*80-120*			
LCS Dup (BKD0196-BSD2)				Prepared: 07-Apr-2022 Analyzed: 07-Apr-2022 11:11						
Benzene	9.85	0.20	ug/L	10.0		98.5	80-120	1.08	30	
Toluene	9.75	0.20	ug/L	10.0		97.5	80-120	1.08	30	
Ethylbenzene	9.59	0.20	ug/L	10.0		95.9	80-120	1.09	30	
m,p-Xylene	19.5	0.40	ug/L	20.0		97.6	80-121	0.66	30	
o-Xylene	9.36	0.20	ug/L	10.0		93.6	80-121	1.78	30	
Surrogate: 1,2-Dichloroethane-d4	4.61		ug/L	*5.00*		*92.3*	*80-129*			
Surrogate: Toluene-d8	4.99		ug/L	*5.00*		*99.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.14		ug/L	*5.00*		*103*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.12		ug/L	*5.00*		*102*	*80-120*			
Matrix Spike (BKD0196-MS1)	**Source: 22C0511-01**			Prepared: 07-Apr-2022 Analyzed: 07-Apr-2022 13:43						
Gasoline Range Organics (Tol-Nap)	873	100	ug/L	1000	ND	87.3	72-128			
Surrogate: Toluene-d8	4.96		ug/L	*5.00*	*5.01*	*99.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.18		ug/L	*5.00*	*5.06*	*104*	*80-120*			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike (BKD0196-MS2)	**Source: 22C0511-01**			Prepared: 07-Apr-2022 Analyzed: 07-Apr-2022 14:33						
Benzene	10.5	0.20	ug/L	10.0	ND	105	80-120			
Toluene	10.2	0.20	ug/L	10.0	ND	102	80-120			
Ethylbenzene	9.80	0.20	ug/L	10.0	ND	98.0	80-120			
m,p-Xylene	20.3	0.40	ug/L	20.0	ND	102	80-121			
o-Xylene	9.87	0.20	ug/L	10.0	ND	98.7	80-121			
Surrogate: 1,2-Dichloroethane-d4	4.58		ug/L	*5.00*	*4.64*	*91.5*	*80-129*			
Surrogate: Toluene-d8	5.03		ug/L	*5.00*	*5.01*	*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.14		ug/L	*5.00*	*5.06*	*103*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.20		ug/L	*5.00*	*5.22*	*104*	*80-120*			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike Dup (BKD0196-MSD1)	**Source: 22C0511-01**			Prepared: 07-Apr-2022 Analyzed: 07-Apr-2022 14:08						
Gasoline Range Organics (Tol-Nap)	875	100	ug/L	1000	ND	87.5	72-128	0.19	30	
Surrogate: Toluene-d8	5.14		ug/L	*5.00*	*5.01*	*103*	*80-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	22-Apr-2022 16:09

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BKD0196 - EPA 5030C (Purge and Trap)

Instrument: NT3 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BKD0196-MSD1)	**Source: 22C0511-01**		Prepared: 07-Apr-2022 Analyzed: 07-Apr-2022 14:08							
Surrogate: 4-Bromofluorobenzene	5.20		ug/L	*5.00*	*5.06*	*104*	*80-120*			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike Dup (BKD0196-MSD2)	**Source: 22C0511-01**		Prepared: 07-Apr-2022 Analyzed: 07-Apr-2022 14:58							
Benzene	9.87	0.20	ug/L	10.0	ND	98.7	80-120	6.28	30	
Toluene	9.70	0.20	ug/L	10.0	ND	97.0	80-120	4.58	30	
Ethylbenzene	9.52	0.20	ug/L	10.0	ND	95.2	80-120	2.81	30	
m,p-Xylene	19.7	0.40	ug/L	20.0	ND	98.6	80-121	3.12	30	
o-Xylene	9.57	0.20	ug/L	10.0	ND	95.7	80-121	3.08	30	
Surrogate: 1,2-Dichloroethane-d4	4.60		ug/L	*5.00*	*4.64*	*92.0*	*80-129*			
Surrogate: Toluene-d8	4.91		ug/L	*5.00*	*5.01*	*98.3*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.22		ug/L	*5.00*	*5.06*	*104*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.15		ug/L	*5.00*	*5.22*	*103*	*80-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	22-Apr-2022 16:09

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BKD0036 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BKD0036-BLK1)				Prepared: 04-Apr-2022 Analyzed: 21-Apr-2022 10:15							
Naphthalene	0.002	0.001	0.010	ug/L							J
2-Methylnaphthalene	ND	0.001	0.010	ug/L							U
1-Methylnaphthalene	ND	0.0009	0.010	ug/L							U
Acenaphthylene	ND	0.002	0.010	ug/L							U
Acenaphthene	ND	0.003	0.010	ug/L							U
Dibenzofuran	ND	0.002	0.010	ug/L							U
Fluorene	ND	0.002	0.010	ug/L							U
Phenanthrene	ND	0.001	0.010	ug/L							U
Anthracene	ND	0.001	0.010	ug/L							U
Carbazole	ND	0.001	0.010	ug/L							U
Fluoranthene	ND	0.002	0.010	ug/L							U
Pyrene	ND	0.001	0.010	ug/L							U
Benzo(a)anthracene	ND	0.0008	0.010	ug/L							U
Chrysene	ND	0.0009	0.010	ug/L							U
Benzo(b)fluoranthene	ND	0.0005	0.010	ug/L							U
Benzo(k)fluoranthene	ND	0.003	0.010	ug/L							U
Benzo(j)fluoranthene	ND	0.002	0.010	ug/L							U
Benzofluoranthenes, Total	ND	0.004	0.010	ug/L							U
Benzo(a)pyrene	ND	0.002	0.010	ug/L							U
Perylene	ND	0.006	0.010	ug/L							U
Indeno(1,2,3-cd)pyrene	ND	0.001	0.010	ug/L							U
Dibenzo(a,h)anthracene	ND	0.001	0.010	ug/L							U
Benzo(g,h,i)perylene	ND	0.001	0.010	ug/L							U
Surrogate: 2-Methylnaphthalene-d10	0.207			ug/L	*0.300*		*68.9*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.240			ug/L	*0.300*		*80.1*	*29-120*			
Surrogate: Fluoranthene-d10	0.249			ug/L	*0.300*		*83.0*	*57-120*			
LCS (BKD0036-BS1)				Prepared: 04-Apr-2022 Analyzed: 21-Apr-2022 10:47							
Naphthalene	0.238	0.001	0.010	ug/L	0.300		79.4	37-120			
2-Methylnaphthalene	0.245	0.001	0.010	ug/L	0.300		81.7	37-120			
1-Methylnaphthalene	0.243	0.0009	0.010	ug/L	0.300		81.1	29-120			
Acenaphthylene	0.232	0.002	0.010	ug/L	0.300		77.3	41-120			
Acenaphthene	0.242	0.003	0.010	ug/L	0.300		80.8	41-120			
Dibenzofuran	0.260	0.002	0.010	ug/L	0.300		86.5	38-120			
Fluorene	0.253	0.002	0.010	ug/L	0.300		84.3	43-120			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	22-Apr-2022 16:09

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BKD0036 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BKD0036-BS1)				Prepared: 04-Apr-2022 Analyzed: 21-Apr-2022 10:47							
Phenanthrene	0.257	0.001	0.010	ug/L	0.300		85.7	41-120			
Anthracene	0.239	0.001	0.010	ug/L	0.300		79.7	40-120			
Carbazole	0.268	0.001	0.010	ug/L	0.300		89.5	30-160			
Fluoranthene	0.283	0.002	0.010	ug/L	0.300		94.3	45-120			
Pyrene	0.284	0.001	0.010	ug/L	0.300		94.8	41-120			
Benzo(a)anthracene	0.271	0.0008	0.010	ug/L	0.300		90.3	42-120			
Chrysene	0.267	0.0009	0.010	ug/L	0.300		89.1	44-120			
Benzo(b)fluoranthene	0.228	0.0005	0.010	ug/L	0.300		76.0	44-120			
Benzo(k)fluoranthene	0.308	0.003	0.010	ug/L	0.300		103	50-120			
Benzo(j)fluoranthene	0.308	0.002	0.010	ug/L	0.300		103	39-160			Q
Benzofluoranthenes, Total	0.844	0.004	0.010	ug/L	0.900		93.8	46-120			
Benzo(a)pyrene	0.234	0.002	0.010	ug/L	0.300		78.1	35-120			
Perylene	0.217	0.006	0.010	ug/L	0.300		72.3	30-160			
Indeno(1,2,3-cd)pyrene	0.264	0.001	0.010	ug/L	0.300		88.2	37-120			
Dibenzo(a,h)anthracene	0.248	0.001	0.010	ug/L	0.300		82.7	34-120			
Benzo(g,h,i)perylene	0.260	0.001	0.010	ug/L	0.300		86.8	38-120			
Surrogate: 2-Methylnaphthalene-d10	0.246			ug/L	*0.300*		*82.0*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.296			ug/L	*0.300*		*98.7*	*29-120*			
Surrogate: Fluoranthene-d10	0.281			ug/L	*0.300*		*93.8*	*57-120*			
LCS Dup (BKD0036-BSD1)				Prepared: 04-Apr-2022 Analyzed: 21-Apr-2022 11:19							
Naphthalene	0.197	0.001	0.010	ug/L	0.300		65.7	37-120	18.90	30	
2-Methylnaphthalene	0.202	0.001	0.010	ug/L	0.300		67.2	37-120	19.40	30	
1-Methylnaphthalene	0.202	0.0009	0.010	ug/L	0.300		67.2	29-120	18.70	30	
Acenaphthylene	0.199	0.002	0.010	ug/L	0.300		66.3	41-120	15.30	30	
Acenaphthene	0.205	0.003	0.010	ug/L	0.300		68.4	41-120	16.70	30	
Dibenzofuran	0.218	0.002	0.010	ug/L	0.300		72.7	38-120	17.40	30	
Fluorene	0.223	0.002	0.010	ug/L	0.300		74.5	43-120	12.40	30	
Phenanthrene	0.218	0.001	0.010	ug/L	0.300		72.6	41-120	16.50	30	
Anthracene	0.189	0.001	0.010	ug/L	0.300		63.1	40-120	23.30	30	
Carbazole	0.234	0.001	0.010	ug/L	0.300		78.1	30-160	13.60	30	
Fluoranthene	0.242	0.002	0.010	ug/L	0.300		80.7	45-120	15.60	30	
Pyrene	0.251	0.001	0.010	ug/L	0.300		83.8	41-120	12.30	30	
Benzo(a)anthracene	0.240	0.0008	0.010	ug/L	0.300		80.1	42-120	11.90	30	
Chrysene	0.231	0.0009	0.010	ug/L	0.300		77.0	44-120	14.60	30	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	22-Apr-2022 16:09

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BKD0036 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BKD0036-BSD1)					Prepared: 04-Apr-2022 Analyzed: 21-Apr-2022 11:19						
Benzo(b)fluoranthene	0.232	0.0005	0.010	ug/L	0.300		77.5	44-120	1.94	30	
Benzo(k)fluoranthene	0.228	0.003	0.010	ug/L	0.300		76.1	50-120	29.70	30	
Benzo(j)fluoranthene	0.250	0.002	0.010	ug/L	0.300		83.4	39-160	20.80	30	Q
Benzofluoranthenes, Total	0.711	0.004	0.010	ug/L	0.900		79.0	46-120	17.10	30	
Benzo(a)pyrene	0.188	0.002	0.010	ug/L	0.300		62.7	35-120	21.80	30	
Perylene	0.198	0.006	0.010	ug/L	0.300		66.0	30-160	9.03	30	
Indeno(1,2,3-cd)pyrene	0.234	0.001	0.010	ug/L	0.300		77.9	37-120	12.40	30	
Dibenzo(a,h)anthracene	0.213	0.001	0.010	ug/L	0.300		71.0	34-120	15.30	30	
Benzo(g,h,i)perylene	0.222	0.001	0.010	ug/L	0.300		74.0	38-120	15.90	30	
Surrogate: 2-Methylnaphthalene-d10	0.200			ug/L	*0.300*		*66.8*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.256			ug/L	*0.300*		*85.5*	*29-120*			
Surrogate: Fluoranthene-d10	0.244			ug/L	*0.300*		*81.3*	*57-120*			
Matrix Spike (BKD0036-MS1)		**Source: 22C0511-01**			Prepared: 04-Apr-2022 Analyzed: 21-Apr-2022 12:24						
Naphthalene	0.224	0.001	0.010	ug/L	0.300	0.004	73.5	37-120			
2-Methylnaphthalene	0.231	0.001	0.010	ug/L	0.300	0.002	76.5	37-120			
1-Methylnaphthalene	0.232	0.0009	0.010	ug/L	0.300	0.001	77.0	29-120			
Acenaphthylene	0.229	0.002	0.010	ug/L	0.300	ND	76.2	41-120			
Acenaphthene	0.233	0.003	0.010	ug/L	0.300	ND	77.8	41-120			
Dibenzofuran	0.245	0.002	0.010	ug/L	0.300	ND	81.6	38-120			
Fluorene	0.248	0.002	0.010	ug/L	0.300	ND	82.7	43-120			
Phenanthrene	0.245	0.001	0.010	ug/L	0.300	ND	81.7	41-120			
Anthracene	0.241	0.001	0.010	ug/L	0.300	ND	80.4	40-120			
Carbazole	0.270	0.001	0.010	ug/L	0.300	ND	90.1	30-160			
Fluoranthene	0.275	0.002	0.010	ug/L	0.300	ND	91.8	45-120			
Pyrene	0.283	0.001	0.010	ug/L	0.300	0.002	93.5	41-120			
Benzo(a)anthracene	0.279	0.0008	0.010	ug/L	0.300	ND	92.9	42-120			
Chrysene	0.263	0.0009	0.010	ug/L	0.300	0.002	86.9	44-120			
Benzo(b)fluoranthene	0.271	0.0005	0.010	ug/L	0.300	ND	90.3	44-120			
Benzo(k)fluoranthene	0.263	0.003	0.010	ug/L	0.300	ND	87.7	50-120			
Benzo(j)fluoranthene	0.283	0.002	0.010	ug/L	0.300	ND	94.4	39-160			Q
Benzofluoranthenes, Total	0.817	0.004	0.010	ug/L	0.900	ND	90.8	46-120			
Benzo(a)pyrene	0.259	0.002	0.010	ug/L	0.300	ND	86.4	35-120			
Perylene	0.257	0.006	0.010	ug/L	0.300	ND	85.7	30-160			
Indeno(1,2,3-cd)pyrene	0.276	0.001	0.010	ug/L	0.300	ND	91.9	37-120			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	22-Apr-2022 16:09

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BKD0036 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BKD0036-MS1)	**Source: 22C0511-01**			Prepared: 04-Apr-2022 Analyzed: 21-Apr-2022 12:24							
Dibenzo(a,h)anthracene	0.281	0.001	0.010	ug/L	0.300	ND	93.5	34-120			
Benzo(g,h,i)perylene	0.266	0.001	0.010	ug/L	0.300	ND	88.7	38-120			
Surrogate: 2-Methylnaphthalene-d10	0.226			ug/L	*0.300*	*0.238*	*75.4*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.320			ug/L	*0.300*	*0.332*	*107*	*29-120*			
Surrogate: Fluoranthene-d10	0.274			ug/L	*0.300*	*0.293*	*91.3*	*57-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Matrix Spike Dup (BKD0036-MSD1)	**Source: 22C0511-01**			Prepared: 04-Apr-2022 Analyzed: 21-Apr-2022 12:56							
Naphthalene	0.251	0.001	0.010	ug/L	0.300	0.004	82.4	37-120	11.30	30	
2-Methylnaphthalene	0.256	0.001	0.010	ug/L	0.300	0.002	84.7	37-120	10.20	30	
1-Methylnaphthalene	0.256	0.0009	0.010	ug/L	0.300	0.001	85.0	29-120	9.79	30	
Acenaphthylene	0.249	0.002	0.010	ug/L	0.300	ND	83.1	41-120	8.61	30	
Acenaphthene	0.255	0.003	0.010	ug/L	0.300	ND	85.1	41-120	9.02	30	
Dibenzofuran	0.267	0.002	0.010	ug/L	0.300	ND	89.0	38-120	8.59	30	
Fluorene	0.273	0.002	0.010	ug/L	0.300	ND	90.8	43-120	9.40	30	
Phenanthrene	0.266	0.001	0.010	ug/L	0.300	ND	88.7	41-120	8.23	30	
Anthracene	0.255	0.001	0.010	ug/L	0.300	ND	85.2	40-120	5.70	30	
Carbazole	0.297	0.001	0.010	ug/L	0.300	ND	99.0	30-160	9.50	30	
Fluoranthene	0.302	0.002	0.010	ug/L	0.300	ND	101	45-120	9.14	30	
Pyrene	0.306	0.001	0.010	ug/L	0.300	0.002	101	41-120	8.03	30	
Benzo(a)anthracene	0.304	0.0008	0.010	ug/L	0.300	ND	101	42-120	8.58	30	
Chrysene	0.287	0.0009	0.010	ug/L	0.300	0.002	94.8	44-120	8.68	30	
Benzo(b)fluoranthene	0.304	0.0005	0.010	ug/L	0.300	ND	101	44-120	11.50	30	
Benzo(k)fluoranthene	0.291	0.003	0.010	ug/L	0.300	ND	96.9	50-120	10.00	30	
Benzo(j)fluoranthene	0.308	0.002	0.010	ug/L	0.300	ND	103	39-160	8.52	30	Q
Benzofluoranthenes, Total	0.903	0.004	0.010	ug/L	0.900	ND	100	46-120	10.00	30	
Benzo(a)pyrene	0.268	0.002	0.010	ug/L	0.300	ND	89.4	35-120	3.36	30	
Perylene	0.274	0.006	0.010	ug/L	0.300	ND	91.2	30-160	6.22	30	
Indeno(1,2,3-cd)pyrene	0.308	0.001	0.010	ug/L	0.300	ND	103	37-120	11.10	30	
Dibenzo(a,h)anthracene	0.311	0.001	0.010	ug/L	0.300	ND	104	34-120	10.40	30	
Benzo(g,h,i)perylene	0.292	0.001	0.010	ug/L	0.300	ND	97.4	38-120	9.32	30	
Surrogate: 2-Methylnaphthalene-d10	0.250			ug/L	*0.300*	*0.238*	*83.3*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.355			ug/L	*0.300*	*0.332*	*118*	*29-120*			
Surrogate: Fluoranthene-d10	0.297			ug/L	*0.300*	*0.293*	*99.0*	*57-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	22-Apr-2022 16:09

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BKD0036 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	22-Apr-2022 16:09

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BKC0782 - EPA 3510C SepF

Instrument: FID4 Analyst: CTO

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BKC0782-BLK1)				Prepared: 31-Mar-2022 Analyzed: 15-Apr-2022 11:41						
Diesel Range Organics (C12-C24)	ND	0.100	mg/L							U
Motor Oil Range Organics (C24-C38)	ND	0.200	mg/L							U
Surrogate: o-Terphenyl	0.220		mg/L	*0.225*		*97.8*	*50-150*			
LCS (BKC0782-BS1)				Prepared: 31-Mar-2022 Analyzed: 15-Apr-2022 12:00						
Diesel Range Organics (C12-C24)	2.77	0.100	mg/L	3.00		92.4	56-120			
Surrogate: o-Terphenyl	0.217		mg/L	*0.225*		*96.5*	*50-150*			
LCS Dup (BKC0782-BSD1)				Prepared: 31-Mar-2022 Analyzed: 15-Apr-2022 12:40						
Diesel Range Organics (C12-C24)	3.13	0.100	mg/L	3.00		104	56-120	12.00	30	
Surrogate: o-Terphenyl	0.229		mg/L	*0.225*		*102*	*50-150*			
Matrix Spike (BKC0782-MS1)	**Source: 22C0511-01**			Prepared: 31-Mar-2022 Analyzed: 18-Apr-2022 14:18						
Diesel Range Organics (C12-C24)	3.30	0.100	mg/L	3.00	ND	109	56-120			
Surrogate: o-Terphenyl	0.247		mg/L	*0.225*	*0.264*	*110*	*50-150*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Matrix Spike Dup (BKC0782-MSD1)	**Source: 22C0511-01**			Prepared: 31-Mar-2022 Analyzed: 18-Apr-2022 14:38						
Diesel Range Organics (C12-C24)	3.04	0.100	mg/L	3.00	ND	100	56-120	8.08	30	
Surrogate: o-Terphenyl	0.238		mg/L	*0.225*	*0.264*	*106*	*50-150*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

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Certified Analyses included in this Report

Analyte	Certifications
EPA 8260D in Water	
Chloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Acrolein	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Iodomethane	DoD-ELAP,NELAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Butanone	DoD-ELAP,NELAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE

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2-Hexanone	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
Styrene	DoD-ELAP,NELAP,WADOE
Bromoform	DoD-ELAP,NELAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,WADOE
n-Hexane	WADOE
2-Pentanone	WADOE

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EPA 8270E-SIM in Water

Naphthalene	ADEC,DoD-ELAP,NELAP,WADOE
2-Methylnaphthalene	ADEC,DoD-ELAP,NELAP
1-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,WADOE
Biphenyl	NELAP
Acenaphthylene	ADEC,DoD-ELAP,NELAP,WADOE
Acenaphthene	ADEC,DoD-ELAP,NELAP,WADOE
Dibenzofuran	ADEC,DoD-ELAP,NELAP
Fluorene	ADEC,DoD-ELAP,NELAP,WADOE
Phenanthrene	ADEC,DoD-ELAP,NELAP,WADOE
Anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Carbazole	NELAP
Fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(a)anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Chrysene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(b)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(k)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(j)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(e)pyrene	NELAP
Benzo(a)pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Perylene	ADEC,NELAP
Indeno(1,2,3-cd)pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Dibenzo(a,h)anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(g,h,i)perylene	ADEC,DoD-ELAP,NELAP,WADOE

NWTPH-Dx in Water

Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C25)	DoD-ELAP
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Residual Range Organics (C23-C32)	DoD-ELAP
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE

AECOM	Project: Laurel Station	
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Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE

NWTPHg in Water

Gasoline Range Organics (Tol-Nap)	WADOE,DoD-ELAP
Gasoline Range Organics (2MP-TMB)	WADOE,DoD-ELAP
Gasoline Range Organics (Tol-C12)	WADOE,DoD-ELAP
Gasoline Range Organics (C6-C10)	WADOE,ADEC,DoD-ELAP
Gasoline Range Organics (C5-C12)	WADOE,DoD-ELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2022
WADOE	WA Dept of Ecology	C558	06/30/2022
WA-DW	Ecology - Drinking Water	C558	06/30/2022

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	22-Apr-2022 16:09

Notes and Definitions

*	Flagged value is not within established control limits.
D	The reported value is from a dilution
J	Estimated concentration value detected below the reporting limit.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Memo

AECOM

1111 3rd Avenue, Suite 1600
Seattle, Washington 98101
206.438.2700 Telephone
206.438.2699 Fax

To:	Karen Mixon, Project Manager	**Info:**	Final
From:	Chelsey Cook, Chemist Lucy Panteleeff, Chemist	**Date:**	April 4, 2023
RE:	Data Quality Review Quarterly Groundwater Samples – July 2022 Laurel Station Cleanup Action		

The data quality review of 1 groundwater sample and 1 trip blank collected on July 5, 2022, has been completed. The samples were analyzed by Analytical Resources, Incorporated (ARI) located in Tukwila, Washington for benzene, toluene, ethylbenzene, m,p-xylene, and o-xylene (BTEX) by EPA Method 8260D and total petroleum hydrocarbon (TPH) by Washington State Department of Ecology (Ecology) Method NWTPH-Gx (gasoline-range TPH). Samples were analyzed for the chemical constituents as described in the *Final Compliance Monitoring Plan, Laurel Station, 1009 East Smith Road, Bellingham, Washington* dated January 16, 2015 (CMP). Due to changes in laboratory procedures, NWTPH-Gx analysis was performed using GC/MS instrumentation instead of GC/FID.

The analyses were performed in general accordance with methods specified in EPA's *Test Methods for Evaluating Solid Waste (SW-846)* and Ecology's *Analytical Methods for Petroleum Hydrocarbons*, June 1997. The laboratory provided a full data package containing sample results and associated QA/QC data. The following samples are associated with ARI group 22G0060:

Sample ID	Laboratory ID
MW-6	22G0060-01
Trip Blank	22G0060-02

The following comments refer to ARI's performance in meeting the quality control specifications described in the analytical methods. Data were qualified based on the method criteria and guidance provided in the EPA document *USEPA National Functional Guidelines for Organic Superfund Methods Data Review*, November 2020. Data qualifiers that may be assigned to data from this laboratory group include:

- U - The analyte was analyzed for but was not detected above the reported sample quantitation limit.
- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
- DNR - Do Not Report. Multiple results reported from different analytical dates and/or dilutions. Value from another analysis should be used.

Sample Receipt

Upon receipt by ARI, the sample jar information was compared to the chain-of-custody (COC) and the cooler temperature was recorded. The cooler was received at a temperature within the EPA-recommended limits of greater than 0°C and less than or equal to 6°C. The sample date on the COC was listed incorrectly as 6/5/22. The sample was logged correctly by the laboratory using a sample date of 7/5/22.

Due to low sample volume, MW-6 was not analyzed for NWTPH-Dx (diesel-range and motor oil-range TPH) and polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270E-SIM.

Organic Analyses

Samples were analyzed for BTEX and Gasoline-range TPH by the methods identified in the introduction to this report.

1. Holding Times – Acceptable

2. Instrument Performance and Calibrations (initial and continuing) – Acceptable

3. Blanks – Acceptable

4. Surrogates – Acceptable

5. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) – Acceptable

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

   General – MS/MSDs were not performed in association with these analyses. Accuracy and precision were assessed using the LCS/LCSDs.

7. Reporting Limits – Acceptable

Overall Assessment of Data

The data reported in this laboratory group are considered usable for meeting project objectives. The completeness for laboratory group 22G0060 is 100%.

Table 1. Summary of Qualified Data

Sample ID	ARI ID	Analyte	Result	Units	Final Result
No data were qualified in association with laboratory group 22G0060.					

Analytical Resources, LLC
Analytical Chemists and Consultants

08 July 2022

Karen Mixon
AECOM
1111 Third Avenue, Suite 1600
Seattle, WA 98101

RE: Laurel Station (Laurel Station)

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
22G0060	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC

Kelly Bottem, Client Services Manager

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

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 22G0060	Turn-around Requested: Standard	Page: 1 of 1	
ARI Client Company: AECOM	Phone: 206-438-2700	Date: 6/6/22	Ice Present? Yes
Client Contact: Karen Mixon		No. of Coolers: 1	Cooler Temps: 1.9
Client Project Name: Laurel Station			
Client Project #:	Samplers: D Behrens		

Analytical Resources, LLC
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: NWTPH-Dx	Analysis Requested: BTEX	Analysis Requested	Analysis Requested	Analysis Requested	Analysis Requested	Analysis Requested	Analysis Requested	Notes/Comments
MW-6	6/5/22	1535	GW	3	X	X							
Trip Blank	6/5/22	-	GW	2	X	X							

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: David Behrens	Printed Name: Rowan miller	Printed Name:	Printed Name:
	Company: AECOM	Company: ARI	Company:	Company:
	Date & Time: 7/6/22 1635	Date & Time: 7/6/22 1635	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	08-Jul-2022 10:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-6	22G0060-01	Water	05-Jul-2022 15:35	06-Jul-2022 16:35
Trip Blank	22G0060-02	Water	05-Jul-2022 15:35	06-Jul-2022 16:35

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	08-Jul-2022 10:59

Work Order Case Narrative

Volatiles - EPA Method SW8260D

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Gasoline by NWTPH-g (GC/MS)

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: AECOM Project Name: Laurel Station

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other: _____

Assigned ARI Job No: 22G0060 Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1675 1.9

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 2565

Cooler Accepted by: [signature] Date: 7/6/22 Time: 1635

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ...	Bubble Wrap (Wet Ice) Gel Packs (Baggies) Foam Block Paper Other: _____		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
How were bottles sealed in plastic bags?	Individually	(Grouped)	Not
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ...	NA	(YES)	NO
Were all VOC vials free of air bubbles?	NA	YES	(NO)
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Were the sample(s) split by ARI? (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: HN Date: 07/07/22 Time: 8:21 Labels checked by: _____

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	08-Jul-2022 10:59

MW-6

22G0060-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 07/05/2022 15:35
Instrument: NT3 Analyst: PKC — Analyzed: 07/07/2022 13:42

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 22G0060-01 A
Preparation Batch: BKG0112 — Sample Size: 10 mL
Prepared: 07/07/2022 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*100*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*101*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*104*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*102*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	08-Jul-2022 10:59

MW-6

22G0060-01 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 07/05/2022 15:35
Instrument: NT3 Analyst: PKC — Analyzed: 07/07/2022 13:42

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 22G0060-01 A
Preparation Batch: BKG0112 — Sample Size: 10 mL
Prepared: 07/07/2022 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*101*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*104*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	08-Jul-2022 10:59

Trip Blank

22G0060-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 07/05/2022 15:35

Instrument: NT3 Analyst: PKC — Analyzed: 07/07/2022 12:11

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 22G0060-02 A

Preparation Batch: BKG0112 — Sample Size: 10 mL

Prepared: 07/07/2022 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*101*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*98.9*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*102*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*94.5*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	08-Jul-2022 10:59

Trip Blank

22G0060-02 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 07/05/2022 15:35
Instrument: NT3 Analyst: PKC — Analyzed: 07/07/2022 12:11

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 22G0060-02 A
Preparation Batch: BKG0112 — Sample Size: 10 mL
Prepared: 07/07/2022 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*98.9*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*102*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	08-Jul-2022 10:59

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BKG0112 - EPA 5030C (Purge and Trap)

Instrument: NT3 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BKG0112-BLK1)				Prepared: 07-Jul-2022 Analyzed: 07-Jul-2022 11:49						
Gasoline Range Organics (Tol-Nap)	ND	100	ug/L							U
Surrogate: Toluene-d8	5.10		ug/L	*5.00*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.19		ug/L	*5.00*		*104*	*80-120*			
Blank (BKG0112-BLK2)				Prepared: 07-Jul-2022 Analyzed: 07-Jul-2022 11:49						
Benzene	ND	0.20	ug/L							U
Toluene	ND	0.20	ug/L							U
Ethylbenzene	ND	0.20	ug/L							U
m,p-Xylene	ND	0.40	ug/L							U
o-Xylene	ND	0.20	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	4.92		ug/L	*5.00*		*98.4*	*80-129*			
Surrogate: Toluene-d8	5.10		ug/L	*5.00*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.19		ug/L	*5.00*		*104*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.00		ug/L	*5.00*		*100*	*80-120*			
LCS (BKG0112-BS1)				Prepared: 07-Jul-2022 Analyzed: 07-Jul-2022 09:58						
Gasoline Range Organics (Tol-Nap)	1030	100	ug/L	1000		103	72-128			
Surrogate: Toluene-d8	4.97		ug/L	*5.00*		*99.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.06		ug/L	*5.00*		*101*	*80-120*			
LCS (BKG0112-BS2)				Prepared: 07-Jul-2022 Analyzed: 07-Jul-2022 10:20						
Benzene	9.76	0.20	ug/L	10.0		97.6	80-120			
Toluene	9.71	0.20	ug/L	10.0		97.1	80-120			
Ethylbenzene	9.69	0.20	ug/L	10.0		96.9	80-120			
m,p-Xylene	19.6	0.40	ug/L	20.0		97.9	80-121			
o-Xylene	9.67	0.20	ug/L	10.0		96.7	80-121			
Surrogate: 1,2-Dichloroethane-d4	4.73		ug/L	*5.00*		*94.7*	*80-129*			
Surrogate: Toluene-d8	5.07		ug/L	*5.00*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.10		ug/L	*5.00*		*102*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.04		ug/L	*5.00*		*101*	*80-120*			
LCS Dup (BKG0112-BSD1)				Prepared: 07-Jul-2022 Analyzed: 07-Jul-2022 10:42						
Gasoline Range Organics (Tol-Nap)	984	100	ug/L	1000		98.4	72-128	4.72	30	
Surrogate: Toluene-d8	5.03		ug/L	*5.00*		*101*	*80-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	08-Jul-2022 10:59

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BKG0112 - EPA 5030C (Purge and Trap)

Instrument: NT3 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BKG0112-BSD1)				Prepared: 07-Jul-2022 Analyzed: 07-Jul-2022 10:42						
Surrogate: 4-Bromofluorobenzene	5.02		ug/L	*5.00*		*100*	*80-120*			
LCS Dup (BKG0112-BSD2)				Prepared: 07-Jul-2022 Analyzed: 07-Jul-2022 11:05						
Benzene	9.59	0.20	ug/L	10.0		95.9	80-120	1.72	30	
Toluene	9.25	0.20	ug/L	10.0		92.5	80-120	4.85	30	
Ethylbenzene	9.27	0.20	ug/L	10.0		92.7	80-120	4.39	30	
m,p-Xylene	19.1	0.40	ug/L	20.0		95.4	80-121	2.63	30	
o-Xylene	9.45	0.20	ug/L	10.0		94.5	80-121	2.23	30	
Surrogate: 1,2-Dichloroethane-d4	4.69		ug/L	*5.00*		*93.8*	*80-129*			
Surrogate: Toluene-d8	4.93		ug/L	*5.00*		*98.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.19		ug/L	*5.00*		*104*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.80		ug/L	*5.00*		*96.0*	*80-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	08-Jul-2022 10:59

Certified Analyses included in this Report

Analyte	Certifications
EPA 8260D in Water	
Chloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Acrolein	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Iodomethane	DoD-ELAP,NELAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Butanone	DoD-ELAP,NELAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE

AECOM	Project: Laurel Station	
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Seattle WA, 98101	Project Manager: Karen Mixon	08-Jul-2022 10:59

2-Hexanone	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
Styrene	DoD-ELAP,NELAP,WADOE
Bromoform	DoD-ELAP,NELAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,WADOE
n-Hexane	WADOE
2-Pentanone	WADOE

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	08-Jul-2022 10:59

NWTPHg in Water

Gasoline Range Organics (Tol-Nap)	WADOE,DoD-ELAP
Gasoline Range Organics (2MP-TMB)	WADOE,DoD-ELAP
Gasoline Range Organics (Tol-C12)	WADOE,DoD-ELAP
Gasoline Range Organics (C6-C10)	WADOE,ADEC,DoD-ELAP
Gasoline Range Organics (C5-C12)	WADOE,DoD-ELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2023

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	08-Jul-2022 10:59

Notes and Definitions

U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Memo

AECOM

1111 3rd Avenue, Suite 1600
Seattle, Washington 98101
206.438.2700 Telephone
206.438.2699 Fax

To:	Karen Mixon, Project Manager	**Info:**	Final
From:	Chelsey Cook, Chemist Lucy Panteleeff, Chemist	**Date:**	April 4, 2023
RE:	Data Quality Review Quarterly Groundwater Samples – December 2022 Laurel Station Cleanup Action		

The data quality review of 1 groundwater sample, 1 field duplicate, and 1 trip blank collected on December 28, 2022, has been completed. The samples were analyzed by Analytical Resources, Incorporated (ARI) located in Tukwila, Washington for benzene, toluene, ethylbenzene, m,p-xylene, and o-xylene (BTEX) by EPA Method 8260D, total petroleum hydrocarbons (TPHs) by Washington State Department of Ecology (Ecology) Methods NWTPH-Gx (gasoline-range TPH) and NWTPH-Dx (diesel-range and motor oil-range TPH), and/or polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270E-SIM. Samples were analyzed for the chemical constituents as described in the *Final Compliance Monitoring Plan, Laurel Station, 1009 East Smith Road, Bellingham, Washington* dated January 16, 2015 (CMP). Due to changes in laboratory procedures, NWTPH-Gx analysis was performed using GC/MS instrumentation instead of GC/FID.

The analyses were performed in general accordance with methods specified in EPA's *Test Methods for Evaluating Solid Waste (SW-846)* and Ecology's *Analytical Methods for Petroleum Hydrocarbons*, June 1997. The laboratory provided a full data package containing sample results and associated QA/QC data. The following samples are associated with ARI group 22L0636:

Sample ID	Laboratory ID
MW-6	22L0636-01
DUP-1 (Field duplicate of MW-6)	22L0636-02
Trip Blank	22L0636-03

The following comments refer to ARI's performance in meeting the quality control specifications described in the analytical methods. Data were qualified based on the method criteria and guidance provided in the EPA document *USEPA National Functional Guidelines for Organic Superfund Methods Data Review*, November 2020. Data qualifiers that may be assigned to data from this laboratory group include:

- U - The analyte was analyzed for but was not detected above the reported sample quantitation limit.
- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

- DNR - Do Not Report. Multiple results reported from different analytical dates and/or dilutions. Value from another analysis should be used.

Sample Receipt

Upon receipt by ARI, the sample jar information was compared to the chain-of-custody (COC) and the cooler temperature was recorded. The cooler was received at a temperature within the EPA-recommended limits of greater than 0°C and less than or equal to 6°C. No issues related to sample identification were noted by ARI.

Organic Analyses

Samples were analyzed for BTEX, TPHs, and PAHs by the methods identified in the introduction to this report.

1. Holding Times – Acceptable

2. Instrument Performance and Calibrations (initial and continuing) – Acceptable except as noted below:

   PAHs by Method 8270D – The laboratory noted that the percent difference (%D) for benzo(b)fluoranthene in the initial calibration verification (ICV) associated with analytical batch BKL0731 was below the method limits of ±20%. The results for benzo(b)fluoranthene in MW-6 and Dup-1 were qualified as estimated and flagged 'UJ' based on this CCV %D.

3. Blanks – Acceptable

4. Surrogates – Acceptable

5. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) – Acceptable

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

   General – MS/MSDs were not performed in association with these analyses. Accuracy and precision were assessed using the LCS/LCSDs.

7. Field Duplicate – Acceptable

   A field duplicate was collected for MW-6 and identified as DUP-1. Results were comparable.

8. Reporting Limits – Acceptable

Overall Assessment of Data

The data reported in this laboratory group, as qualified, are considered usable for meeting project objectives. The completeness for laboratory group 22L0636 is 100%.

Table 1. Summary of Qualified Data

Sample ID	ARI ID	Analyte	Result	Units	Final Result
MW-6	22L0636-01	Benzo(b)fluoranthene	0.010 U	ug/L	0.010 UJ
Dup-1	22L0636-02	Benzo(b)fluoranthene	0.010 U	ug/L	0.010 UJ

Analytical Resources, LLC
Analytical Chemists and Consultants

24 January 2023

Karen Mixon
AECOM
1111 Third Avenue, Suite 1600
Seattle, WA 98101

RE: Laurel Station (Laurel Station)

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
22L0636	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC

Kelly Bottem, Client Services Manager

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

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 22L0636	Turn-around Requested: Standard
ARI Client Company: AECOM	Phone:
Client Contact: Karen Mixon	
Client Project Name: Laurel Station	
Client Project #: 60691215.	Samplers: LP

Page: 1	of 1
Date: 12/28/2022	Ice Present?
No. of Coolers:	Cooler Temps: 3.9°C

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: NWTPH-Gx/BTEX 8260	Analysis Requested: NWTPH-Dx	Analysis Requested: LL PAH 8270 SIM	Notes/Comments
MW-6	12/28/22	12:49	W	7	X	X	X	
DUP-1	1	0:00	1	6	1	1	1	* one voa may not be properly preserved only took 2 VOA on duplicate.
Trip Blank	1	0:00	1	1	1			

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Lucy Pantaleeff	Printed Name: Isamene Beasley	Printed Name:	Printed Name:
	Company: AECOM	Company: ARI	Company:	Company:
	Date & Time: 12/29/22 11:35	Date & Time: 12/29/22 1135	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-6	22L0636-01	Water	28-Dec-2022 12:49	29-Dec-2022 11:35
Dup-1	22L0636-02	Water	28-Dec-2022 00:00	29-Dec-2022 11:35
Trip Blank	22L0636-03	Water	28-Dec-2022 00:00	29-Dec-2022 11:35

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

Work Order Case Narrative

Gasoline by NWTPH-g (GC/MS)

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Volatiles - EPA Method SW8260D

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Polynuclear Aromatic Hydrocarbons (PAH) - EPA Method SW8270E-SIM

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements with the exception of all associated "Q" flagged analaytes which are out of control low in the CCAL. All associated samples that contain analyte have been flagged with a "Q" qualifer.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

Analytical Resources, LLC
Analytical Chemists and Consultants

Printed: 12/29/2022 3:51:33PM

WORK ORDER

22L0636

Samples will be discarded 90 days after submission of a final report unless other instructions are received

Client: AECOM | **Project Manager:** Kelly Bottem

Project: Laurel Station | **Project Number:** Laurel Station

Preservation Confirmation

Container ID	Container Type	pH
22L0636-01 A	Glass NM, Amber, 500 mL	
22L0636-01 B	Glass NM, Amber, 500 mL	
22L0636-01 C	Glass NM, Amber, 500 mL	
22L0636-01 D	Glass NM, Amber, 500 mL	
22L0636-01 E	VOA Vial, Amber, 40 mL, HCL	
22L0636-01 F	VOA Vial, Amber, 40 mL, HCL	
22L0636-01 G	VOA Vial, Amber, 40 mL, HCL	
22L0636-02 A	Glass NM, Amber, 500 mL	
22L0636-02 B	Glass NM, Amber, 500 mL	
22L0636-02 C	Glass NM, Amber, 500 mL	
22L0636-02 D	Glass NM, Amber, 500 mL	
22L0636-02 E	VOA Vial, Amber, 40 mL, HCL	Rbbk
22L0636-02 F	VOA Vial, Clear, 40 mL, HCL	
22L0636-03 A	VOA Vial, Clear, 40 mL, HCL	

JSm
Preservation Confirmed By

12/29/22
Date

Reviewed By

Date

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: AECOM Project Name: Laurel Station

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 224636 Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 3.9 °C

Time 1135

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: IR00970B

Cooler Accepted by: _____ Date: 12/29/22 Time: 1135

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used?	(Bubble Wrap) Wet Ice (Gel Packs) Baggies (Foam Block) Paper Other: _____		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
How were bottles sealed in plastic bags?	Individually	Grouped	(Not)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	(NA)	YES	NO
Were all VOC vials free of air bubbles?	NA	(YES) 33	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	NA	12/07/2021	

Were the sample(s) split by ARI? (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JS Date: 12/29/22 Time: 1549 Labels checked by: JS

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

vials w/air bubbles marked on preservation sheet, lab to determine sizes.

By: JS Date: 12/29/22

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

MW-6

22L0636-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 12/28/2022 12:49
Instrument: NT3 Analyst: PKC — Analyzed: 01/04/2023 15:31

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 22L0636-01 E
Preparation Batch: BLA0054 — Sample Size: 10 mL
Prepared: 01/04/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*115*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*99.7*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*98.7*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*102*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

MW-6

22L0636-01 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 12/28/2022 12:49
Instrument: NT3 Analyst: PKC — Analyzed: 01/04/2023 15:31

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 22L0636-01 E
Preparation Batch: BLA0054 — Sample Size: 10 mL
Prepared: 01/04/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*99.7*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*98.7*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

MW-6

22L0636-01 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 12/28/2022 12:49
Instrument: NT18 Analyst: VTS — Analyzed: 01/19/2023 14:01

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF; Preparation Batch: BKL0731; Prepared: 01/04/2023; Sample Size: 500 mL; Final Volume: 0.5 mL — Extract ID: 22L0636-01 A 01

Sample Cleanup: Cleanup Method: Silica Gel; Cleanup Batch: CLA0085; Cleaned: 09-Jan-2023; Initial Volume: 0.5 uL; Final Volume: 0.5 uL — Extract ID: 22L0636-01 A 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.010	0.026	ug/L	
2-Methylnaphthalene	91-57-6	1	0.010	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	0.010	ND	ug/L	U
Acenaphthylene	208-96-8	1	0.010	ND	ug/L	U
Acenaphthene	83-32-9	1	0.010	ND	ug/L	U
Dibenzofuran	132-64-9	1	0.010	ND	ug/L	U
Fluorene	86-73-7	1	0.010	ND	ug/L	U
Phenanthrene	85-01-8	1	0.010	ND	ug/L	U
Anthracene	120-12-7	1	0.010	ND	ug/L	U
Fluoranthene	206-44-0	1	0.010	ND	ug/L	U
Pyrene	129-00-0	1	0.010	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.010	ND	ug/L	U
Benzo(b)fluoranthene	205-99-2	1	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.010	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10			*42-120 %*	*50.7*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14			*29-120 %*	*47.2*	*%*	
Surrogate: Fluoranthene-d10			*57-120 %*	*65.1*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

MW-6

22L0636-01 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 12/28/2022 12:49
Instrument: FID4 Analyst: AA — Analyzed: 01/10/2023 16:45

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 22L0636-01 B 01
Preparation Batch: BKL0735 — Sample Size: 500 mL
Prepared: 01/03/2023 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*102*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

Dup-1

22L0636-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 12/28/2022 00:00
Instrument: NT3 Analyst: PKC — Analyzed: 01/04/2023 15:54

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 22L0636-02 F
Preparation Batch: BLA0054 — Sample Size: 10 mL
Prepared: 01/04/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*108*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*99.5*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*96.2*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*101*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

Dup-1

22L0636-02 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 12/28/2022 00:00
Instrument: NT3 Analyst: PKC — Analyzed: 01/04/2023 15:54

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 22L0636-02 F
Preparation Batch: BLA0054 — Sample Size: 10 mL
Prepared: 01/04/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*99.5*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*96.2*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

Dup-1

22L0636-02 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 12/28/2022 00:00
Instrument: NT18 Analyst: VTS — Analyzed: 01/19/2023 14:33

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF; Preparation Batch: BKL0731; Prepared: 01/04/2023; Sample Size: 500 mL; Final Volume: 0.5 mL — Extract ID: 22L0636-02 A 01

Sample Cleanup: Cleanup Method: Silica Gel; Cleanup Batch: CLA0085; Cleaned: 09-Jan-2023; Initial Volume: 0.5 uL; Final Volume: 0.5 uL — Extract ID: 22L0636-02 A 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.010	0.026	ug/L	
2-Methylnaphthalene	91-57-6	1	0.010	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	0.010	ND	ug/L	U
Acenaphthylene	208-96-8	1	0.010	ND	ug/L	U
Acenaphthene	83-32-9	1	0.010	ND	ug/L	U
Dibenzofuran	132-64-9	1	0.010	ND	ug/L	U
Fluorene	86-73-7	1	0.010	ND	ug/L	U
Phenanthrene	85-01-8	1	0.010	ND	ug/L	U
Anthracene	120-12-7	1	0.010	ND	ug/L	U
Fluoranthene	206-44-0	1	0.010	ND	ug/L	U
Pyrene	129-00-0	1	0.010	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.010	ND	ug/L	U
Benzo(b)fluoranthene	205-99-2	1	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.010	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10			*42-120 %*	*49.6*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14			*29-120 %*	*49.4*	*%*	
Surrogate: Fluoranthene-d10			*57-120 %*	*68.2*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

Dup-1

22L0636-02 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 12/28/2022 00:00
Instrument: FID4 Analyst: AA — Analyzed: 01/10/2023 17:04

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 22L0636-02 B 01
Preparation Batch: BKL0735 — Sample Size: 500 mL
Prepared: 01/03/2023 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*101*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

Trip Blank

22L0636-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 12/28/2022 00:00
Instrument: NT3 Analyst: PKC — Analyzed: 01/04/2023 13:14

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 22L0636-03 A
Preparation Batch: BLA0054 — Sample Size: 10 mL
Prepared: 01/04/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*108*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*99.7*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*97.4*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*97.4*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

Trip Blank

22L0636-03 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 12/28/2022 00:00
Instrument: NT3 Analyst: PKC — Analyzed: 01/04/2023 13:14

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 22L0636-03 A
Preparation Batch: BLA0054 — Sample Size: 10 mL
Prepared: 01/04/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*99.7*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*97.4*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLA0054 - NWTPHg

Instrument: NT3 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLA0054-BLK1)				Prepared: 04-Jan-2023 Analyzed: 04-Jan-2023 12:28						
Gasoline Range Organics (Tol-Nap)	ND	100	ug/L							U
Surrogate: Toluene-d8	5.02		ug/L	*5.00*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.97		ug/L	*5.00*		*99.4*	*80-120*			
Blank (BLA0054-BLK2)				Prepared: 04-Jan-2023 Analyzed: 04-Jan-2023 12:28						
Benzene	ND	0.20	ug/L							U
Toluene	ND	0.20	ug/L							U
Ethylbenzene	ND	0.20	ug/L							U
m,p-Xylene	ND	0.40	ug/L							U
o-Xylene	ND	0.20	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	5.19		ug/L	*5.00*		*104*	*80-129*			
Surrogate: Toluene-d8	5.02		ug/L	*5.00*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.97		ug/L	*5.00*		*99.4*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.97		ug/L	*5.00*		*99.3*	*80-120*			
LCS (BLA0054-BS1)				Prepared: 04-Jan-2023 Analyzed: 04-Jan-2023 10:37						
Gasoline Range Organics (Tol-Nap)	1080	100	ug/L	1000		108	72-128			
Surrogate: Toluene-d8	5.05		ug/L	*5.00*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.92		ug/L	*5.00*		*98.5*	*80-120*			
LCS (BLA0054-BS2)				Prepared: 04-Jan-2023 Analyzed: 04-Jan-2023 10:59						
Benzene	9.04	0.20	ug/L	10.0		90.4	80-120			
Toluene	8.91	0.20	ug/L	10.0		89.1	80-120			
Ethylbenzene	8.78	0.20	ug/L	10.0		87.8	80-120			
m,p-Xylene	18.6	0.40	ug/L	20.0		93.0	80-121			
o-Xylene	8.97	0.20	ug/L	10.0		89.7	80-121			
Surrogate: 1,2-Dichloroethane-d4	5.04		ug/L	*5.00*		*101*	*80-129*			
Surrogate: Toluene-d8	5.17		ug/L	*5.00*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.92		ug/L	*5.00*		*98.3*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.04		ug/L	*5.00*		*101*	*80-120*			
LCS Dup (BLA0054-BSD1)				Prepared: 04-Jan-2023 Analyzed: 04-Jan-2023 11:21						
Gasoline Range Organics (Tol-Nap)	1020	100	ug/L	1000		102	72-128	5.69	30	
Surrogate: Toluene-d8	4.95		ug/L	*5.00*		*98.9*	*80-120*			

AECOM	Project: Laurel Station	
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Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLA0054 - NWTPHg

Instrument: NT3 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BLA0054-BSD1)				Prepared: 04-Jan-2023 Analyzed: 04-Jan-2023 11:21						
Surrogate: 4-Bromofluorobenzene	4.90		ug/L	*5.00*		*97.9*	*80-120*			
LCS Dup (BLA0054-BSD2)				Prepared: 04-Jan-2023 Analyzed: 04-Jan-2023 11:43						
Benzene	10.1	0.20	ug/L	10.0		101	80-120	11.40	30	
Toluene	10.1	0.20	ug/L	10.0		101	80-120	12.60	30	
Ethylbenzene	9.85	0.20	ug/L	10.0		98.5	80-120	11.50	30	
m,p-Xylene	20.8	0.40	ug/L	20.0		104	80-121	11.30	30	
o-Xylene	10.1	0.20	ug/L	10.0		101	80-121	12.00	30	
Surrogate: 1,2-Dichloroethane-d4	5.20		ug/L	*5.00*		*104*	*80-129*			
Surrogate: Toluene-d8	5.12		ug/L	*5.00*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.83		ug/L	*5.00*		*96.6*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.09		ug/L	*5.00*		*102*	*80-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BKL0731 - EPA 8270E-SIM

Instrument: NT18 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BKL0731-BLK1)			Prepared: 04-Jan-2023 Analyzed: 20-Jan-2023 13:17							
Naphthalene	ND	0.010	ug/L							U
2-Methylnaphthalene	ND	0.010	ug/L							U
1-Methylnaphthalene	ND	0.010	ug/L							U
Acenaphthylene	ND	0.010	ug/L							U
Acenaphthene	ND	0.010	ug/L							U
Dibenzofuran	ND	0.010	ug/L							U
Fluorene	ND	0.010	ug/L							U
Phenanthrene	ND	0.010	ug/L							U
Anthracene	ND	0.010	ug/L							U
Fluoranthene	ND	0.010	ug/L							U
Pyrene	ND	0.010	ug/L							U
Benzo(a)anthracene	ND	0.010	ug/L							U
Chrysene	ND	0.010	ug/L							U
Benzo(b)fluoranthene	ND	0.010	ug/L							U
Benzo(k)fluoranthene	ND	0.010	ug/L							U
Benzo(a)pyrene	ND	0.010	ug/L							U
Indeno(1,2,3-cd)pyrene	ND	0.010	ug/L							U
Dibenzo(a,h)anthracene	ND	0.010	ug/L							U
Benzo(g,h,i)perylene	ND	0.010	ug/L							U
Surrogate: 2-Methylnaphthalene-d10	0.154		ug/L	*0.300*		*51.3*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.135		ug/L	*0.300*		*45.1*	*29-120*			
Surrogate: Fluoranthene-d10	0.195		ug/L	*0.300*		*64.9*	*57-120*			
LCS (BKL0731-BS1)			Prepared: 04-Jan-2023 Analyzed: 20-Jan-2023 13:49							
Naphthalene	0.199	0.010	ug/L	0.300		66.4	37-120			
2-Methylnaphthalene	0.208	0.010	ug/L	0.300		69.2	37-120			
1-Methylnaphthalene	0.225	0.010	ug/L	0.300		75.1	29-120			
2-Chloronaphthalene	0.184	0.010	ug/L	0.300		61.5	30-160			
Biphenyl	0.220	0.010	ug/L	0.300		73.2	30-160			
2,6-Dimethylnaphthalene	0.195	0.010	ug/L	0.300		65.0	30-160			
Acenaphthylene	0.199	0.010	ug/L	0.300		66.3	41-120			
Acenaphthene	0.214	0.010	ug/L	0.300		71.5	41-120			
Dibenzofuran	0.228	0.010	ug/L	0.300		75.9	38-120			
2,3,5-Trimethylnaphthalene	0.217	0.010	ug/L	0.300		72.2	30-160			
Fluorene	0.234	0.010	ug/L	0.300		77.9	43-120			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BKL0731 - EPA 8270E-SIM

Instrument: NT18 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BKL0731-BS1)				Prepared: 04-Jan-2023 Analyzed: 20-Jan-2023 13:49						
Dibenzothiophene	0.202	0.010	ug/L	0.300		67.5	30-160			
Phenanthrene	0.208	0.010	ug/L	0.300		69.2	41-120			
Anthracene	0.217	0.010	ug/L	0.300		72.2	40-120			
Carbazole	0.226	0.010	ug/L	0.300		75.2	30-160			
Fluoranthene	0.231	0.010	ug/L	0.300		77.1	45-120			
Pyrene	0.231	0.010	ug/L	0.300		77.2	41-120			
1-Methylphenanthrene	0.237	0.010	ug/L	0.300		78.9	30-160			
Benzo(a)anthracene	0.219	0.010	ug/L	0.300		73.2	42-120			
Chrysene	0.227	0.010	ug/L	0.300		75.5	44-120			
Benzo(b)fluoranthene	0.198	0.010	ug/L	0.300		66.0	44-120			Q
Benzo(k)fluoranthene	0.212	0.010	ug/L	0.300		70.6	50-120			
Benzo(j)fluoranthene	0.247	0.010	ug/L	0.300		82.4	39-160			
Benzo(e)pyrene	0.213	0.010	ug/L	0.300		71.0	30-160			
Benzo(a)pyrene	0.184	0.010	ug/L	0.300		61.5	35-120			
Indeno(1,2,3-cd)pyrene	0.210	0.010	ug/L	0.300		69.9	37-120			
Dibenzo(a,h)anthracene	0.197	0.010	ug/L	0.300		65.6	34-120			
Benzo(g,h,i)perylene	0.206	0.010	ug/L	0.300		68.5	38-120			
Benzo(b)thiophene	0.208	0.010	ug/L	0.300		69.4	30-160			
Surrogate: 2-Methylnaphthalene-d10	0.171		ug/L	*0.300*		*57.0*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.137		ug/L	*0.300*		*45.7*	*29-120*			
Surrogate: Fluoranthene-d10	0.185		ug/L	*0.300*		*61.8*	*57-120*			
LCS Dup (BKL0731-BSD1)				Prepared: 04-Jan-2023 Analyzed: 20-Jan-2023 14:21						
Naphthalene	0.216	0.010	ug/L	0.300		71.8	37-120	7.90	30	
2-Methylnaphthalene	0.224	0.010	ug/L	0.300		74.8	37-120	7.75	30	
1-Methylnaphthalene	0.240	0.010	ug/L	0.300		80.1	29-120	6.38	30	
2-Chloronaphthalene	0.198	0.010	ug/L	0.300		65.9	30-160	6.91	30	
Biphenyl	0.235	0.010	ug/L	0.300		78.3	30-160	6.81	30	
2,6-Dimethylnaphthalene	0.210	0.010	ug/L	0.300		69.9	30-160	7.35	30	
Acenaphthylene	0.208	0.010	ug/L	0.300		69.5	41-120	4.70	30	
Acenaphthene	0.231	0.010	ug/L	0.300		76.8	41-120	7.25	30	
Dibenzofuran	0.241	0.010	ug/L	0.300		80.3	38-120	5.67	30	
2,3,5-Trimethylnaphthalene	0.233	0.010	ug/L	0.300		77.5	30-160	7.17	30	
Fluorene	0.247	0.010	ug/L	0.300		82.4	43-120	5.64	30	
Dibenzothiophene	0.222	0.010	ug/L	0.300		73.9	30-160	9.02	30	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BKL0731 - EPA 8270E-SIM

Instrument: NT18 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BKL0731-BSD1)				Prepared: 04-Jan-2023 Analyzed: 20-Jan-2023 14:21						
Phenanthrene	0.224	0.010	ug/L	0.300		74.7	41-120	7.60	30	
Anthracene	0.236	0.010	ug/L	0.300		78.6	40-120	8.48	30	
Carbazole	0.247	0.010	ug/L	0.300		82.5	30-160	9.16	30	
Fluoranthene	0.251	0.010	ug/L	0.300		83.7	45-120	8.18	30	
Pyrene	0.250	0.010	ug/L	0.300		83.4	41-120	7.77	30	
1-Methylphenanthrene	0.257	0.010	ug/L	0.300		85.8	30-160	8.32	30	
Benzo(a)anthracene	0.237	0.010	ug/L	0.300		78.9	42-120	7.58	30	
Chrysene	0.246	0.010	ug/L	0.300		82.0	44-120	8.17	30	
Benzo(b)fluoranthene	0.214	0.010	ug/L	0.300		71.5	44-120	7.98	30	Q
Benzo(k)fluoranthene	0.234	0.010	ug/L	0.300		78.0	50-120	9.96	30	
Benzo(j)fluoranthene	0.271	0.010	ug/L	0.300		90.2	39-160	9.06	30	
Benzo(e)pyrene	0.233	0.010	ug/L	0.300		77.6	30-160	8.79	30	
Benzo(a)pyrene	0.201	0.010	ug/L	0.300		67.1	35-120	8.82	30	
Indeno(1,2,3-cd)pyrene	0.228	0.010	ug/L	0.300		75.9	37-120	8.20	30	
Dibenzo(a,h)anthracene	0.213	0.010	ug/L	0.300		71.0	34-120	7.82	30	
Benzo(g,h,i)perylene	0.223	0.010	ug/L	0.300		74.5	38-120	8.36	30	
Benzo(b)thiophene	0.226	0.010	ug/L	0.300		75.2	30-160	8.05	30	
Surrogate: 2-Methylnaphthalene-d10	0.180		ug/L	*0.300*		*60.0*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.144		ug/L	*0.300*		*48.0*	*29-120*			
Surrogate: Fluoranthene-d10	0.194		ug/L	*0.300*		*64.7*	*57-120*			

AECOM	Project: Laurel Station	
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Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BKL0735 - NWTPH-Dx

Instrument: FID4 Analyst: AA

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BKL0735-BLK1)				Prepared: 03-Jan-2023	Analyzed: 10-Jan-2023 14:48					
Diesel Range Organics (C12-C24)	ND	0.100	mg/L							U
Motor Oil Range Organics (C24-C38)	ND	0.200	mg/L							U
Surrogate: o-Terphenyl	0.198		mg/L	*0.225*		*88.1*	*50-150*			
LCS (BKL0735-BS1)				Prepared: 03-Jan-2023	Analyzed: 10-Jan-2023 15:07					
Diesel Range Organics (C12-C24)	2.44	0.100	mg/L	3.00		81.3	56-120			
Surrogate: o-Terphenyl	0.227		mg/L	*0.225*		*101*	*50-150*			
LCS Dup (BKL0735-BSD1)				Prepared: 03-Jan-2023	Analyzed: 10-Jan-2023 15:27					
Diesel Range Organics (C12-C24)	2.55	0.100	mg/L	3.00		84.9	56-120	4.43	30	
Surrogate: o-Terphenyl	0.232		mg/L	*0.225*		*103*	*50-150*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

Certified Analyses included in this Report

Analyte	Certifications
EPA 8260D in Water	
Chloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Acrolein	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Iodomethane	DoD-ELAP,NELAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Butanone	DoD-ELAP,NELAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE

AECOM	Project: Laurel Station	
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2-Hexanone	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
Styrene	DoD-ELAP,NELAP,WADOE
Bromoform	DoD-ELAP,NELAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,WADOE
n-Hexane	WADOE
2-Pentanone	WADOE

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

EPA 8270E-SIM in Water

Naphthalene	ADEC,DoD-ELAP,NELAP,WADOE
2-Methylnaphthalene	ADEC,DoD-ELAP,NELAP
1-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,WADOE
Biphenyl	NELAP
Acenaphthylene	ADEC,DoD-ELAP,NELAP,WADOE
Acenaphthene	ADEC,DoD-ELAP,NELAP,WADOE
Dibenzofuran	ADEC,DoD-ELAP,NELAP
Fluorene	ADEC,DoD-ELAP,NELAP,WADOE
Phenanthrene	ADEC,DoD-ELAP,NELAP,WADOE
Anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Carbazole	NELAP
Fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(a)anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Chrysene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(b)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(k)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(j)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(e)pyrene	NELAP
Benzo(a)pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Perylene	ADEC,NELAP
Indeno(1,2,3-cd)pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Dibenzo(a,h)anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(g,h,i)perylene	ADEC,DoD-ELAP,NELAP,WADOE

NWTPH-Dx in Water

Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C25)	DoD-ELAP
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Residual Range Organics (C23-C32)	DoD-ELAP
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE

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Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE

NWTPHg in Water

Gasoline Range Organics (Tol-Nap)	WADOE,DoD-ELAP
Gasoline Range Organics (2MP-TMB)	WADOE,DoD-ELAP
Gasoline Range Organics (Tol-C12)	WADOE,DoD-ELAP
Gasoline Range Organics (C6-C10)	WADOE,ADEC,DoD-ELAP
Gasoline Range Organics (C5-C12)	WADOE,DoD-ELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program, PJLA Testing	66169	02/28/2023
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2023
WADOE	WA Dept of Ecology	C558	06/30/2023
WA-DW	Ecology - Drinking Water	C558	06/30/2023

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: Laurel Station	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	24-Jan-2023 12:56

Notes and Definitions

*	Flagged value is not within established control limits.
D	The reported value is from a dilution
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
H	Hold time violation - Hold time was exceeded.
J	Estimated concentration value detected below the reporting limit.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Memo

AECOM

1111 3rd Avenue, Suite 1600
Seattle, Washington 98101
206.438.2700 Telephone
206.438.2699 Fax

To:	Karen Mixon, Project Manager	**Info:**	Final
From:	Chelsey Cook, Chemist Lucy Panteleeff, Chemist	**Date:**	April 13, 2023
RE:	Data Quality Review Quarterly Groundwater Samples – March 2023 Laurel Station Cleanup Action		

The data quality review of 2 groundwater samples, 1 field duplicate, and 1 trip blank collected on March 30, 2023, has been completed. The samples were analyzed by Analytical Resources, LLC located in Tukwila, Washington for benzene, toluene, ethylbenzene, m,p-xylene, and o-xylene (BTEX) by EPA Method 8260D, total petroleum hydrocarbons (TPHs) by Washington State Department of Ecology (Ecology) Methods NWTPH-Gx (gasoline-range TPH) and NWTPH-Dx (diesel-range and motor oil-range TPH), and/or polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270E-SIM. Samples were analyzed for the chemical constituents as described in the *Final Compliance Monitoring Plan, Laurel Station, 1009 East Smith Road, Bellingham, Washington* dated January 16, 2015 (CMP). Due to changes in laboratory procedures, NWTPH-Gx analysis was performed using GC/MS instrumentation instead of GC/FID.

The analyses were performed in general accordance with methods specified in EPA's *Test Methods for Evaluating Solid Waste (SW-846)* and Ecology's *Analytical Methods for Petroleum Hydrocarbons*, June 1997. The laboratory provided a full data package containing sample results and associated QA/QC data. The following samples are associated with ARI group 23C0764:

Sample ID	Laboratory ID
MW-6	23C0764-01
DPE-3	23C0764-02
DUP-1 (Field duplicate of DPE-3)	23C0764-03
Trip Blank	23C0764-04

The following comments refer to ARI's performance in meeting the quality control specifications described in the analytical methods. Data were qualified based on the method criteria and guidance provided in the EPA document *USEPA National Functional Guidelines for Organic Superfund Methods Data Review*, November 2020. Data qualifiers that may be assigned to data from this laboratory group include:

- U - The analyte was analyzed for but was not detected above the reported sample quantitation limit.
- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

- DNR - Do Not Report. Multiple results reported from different analytical dates and/or dilutions. Value from another analysis should be used.

Sample Receipt

Upon receipt by ARI, the sample jar information was compared to the chain-of-custody (COC) and the cooler temperature was recorded. The cooler was received at a temperature within the EPA-recommended limits of greater than 0°C and less than or equal to 6°C. No issues related to sample identification were noted by ARI. Samples DPE-3 and DUP-1 were submitted to the laboratory on hold, as indicated on the COC. On April 6, 2023, AECOM gave ARI authorization to analyze those samples for BTEX, TPHs, and PAHs.

Organic Analyses

Samples were analyzed for BTEX, TPHs, and PAHs by the methods identified in the introduction to this report.

1. Holding Times – Acceptable

2. Instrument Performance and Calibrations (initial and continuing) – Acceptable except as noted below:

   PAHs by Method 8270E-SIM – The percent difference for dibenzo(a,h)anthracene (-25.1%) in the initial calibration verification (ICV) associated with the calibration curve performed on instrument NT18 on April 6, 2023 was outside of the method limit of 20%. Dibenzo(a,h)anthracene was not detected in the associated samples. The results for dibenzo(a,h)anthracene in samples MW-6, DPE-3, and DUP-1 were qualified as estimated and flagged 'UJ'.

3. Blanks – Acceptable except as noted below:

   PAHs by Method 8270E-SIM – Naphthalene was detected in the method blanks associated with analytical batches BLD0014 (0.025 ug/L) and BLD0146 (0.016 ug/L) at concentrations greater than the reporting limits. Naphthalene was detected in MW-6 at a concentration below the method blank detection; therefore, the result was qualified as non-detect and flagged 'U' at the result. Naphthalene was detected in DPE-3 and DUP-1 at concentrations less than two times the method blank detections; therefore, the results were qualified as estimated and flagged 'J'.

4. Surrogates – Acceptable

5. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) – Acceptable

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

   General – MS/MSDs were not performed in association with these analyses. Accuracy and precision were assessed using the LCS/LCSDs.

7. Field Duplicate – Acceptable

   A field duplicate was collected for DPE-3 and identified as DUP-1. Results were comparable.

8. Reporting Limits – Acceptable

Overall Assessment of Data

The data reported in this laboratory group, as qualified, are considered usable for meeting project objectives. The completeness for laboratory group 23C0764 is 100%.

Table 1. Summary of Qualified Data

Sample ID	ARI ID	Analyte	Result	Units	Final Result
MW-6	23C0764 -01	Naphthalene	0.019	ug/L	0.019 U
DPE-3	23C0764-02	Naphthalene	0.020	ug/L	0.020 J
DUP-1	23C0764 -03	Naphthalene	0.020	ug/L	0.020 J
MW-6	23C0764 -01	Dibenzo(a,h)anthracene	0.010 U	ug/L	0.010 UJ
DPE-3	23C0764-02	Dibenzo(a,h)anthracene	0.010 U	ug/L	0.010 UJ
DUP-1	23C0764 -03	Dibenzo(a,h)anthracene	0.010 U	ug/L	0.010 UJ

Analytical Resources, LLC
Analytical Chemists and Consultants
Tukwila, WA

12 April 2023

Karen Mixon
AECOM
1111 Third Avenue, Suite 1600
Seattle, WA 98101

RE: Laurel Station (60691215)

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
23C0764	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC

Kelly Bottem, Client Services Manager

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

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

Chain of Custody Record & Laboratory Analysis Request

AR Assigned Number: 2360764	Turn-around Requested: Standard
AR Client Company: AECOM	Phone: 206.438.2700
Client Contact: Karen Mixon	
Client Project Name: Laurel Station	
Client Project #: 60691215	Samplers: DB

Date: 3/30/23
Page: 1 of 1
No. of Coolers: 1 Cooler Temps: 1.1

Analytical Resources, LLC
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6202 (fax)

Sample ID	Date	Time	Matrix	No. Containers	NWTPH-GX/ BTEX 8260	NWTPH-DX	LL PAH 8270 SIM						Notes/Comments
MW-6	03/30/23	14:00	W	7	✔	✔	✔						
DPE-3	03/30/23	15:00	W	7									Hold
DUP-1	03/30/23	00:00	W	7									Hold
Trip Blank	03/30/23	00:00	W	1	✔								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: David Behrens	Printed Name: Jacob Shelton	Printed Name:	Printed Name:
	Company: AECOM	Company: AR LLC	Company:	Company:
	Date & Time: 3/31/23 1252	Date & Time: 03/31/23 1252	Date & Time:	Date & Time:

Limits of Liability: *Analytical Resources, LLC (AR) will perform all requested services in accordance with appropriate methodology following AR Standard Operating Procedures and the AR Quality Assurance Program. This program meets standards for the industry. The total liability of AR, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by AR release AR from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between AR and the Client.*

Sample Retention Policy: Unless specified by work order or contract, all water/soil samples submitted to AR will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hard copy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-6	23C0764-01	Water	30-Mar-2023 14:00	31-Mar-2023 12:52
DPE-3	23C0764-02	Water	30-Mar-2023 15:00	31-Mar-2023 12:52
DUP-1	23C0764-03	Water	30-Mar-2023 00:00	31-Mar-2023 12:52
Trip Blank	23C0764-04	Water	30-Mar-2023 00:00	31-Mar-2023 12:52

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

Work Order Case Narrative

Gasoline by NWTPH-g (GC/MS)

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Volatiles - EPA Method SW8260D

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Polynuclear Aromatic Hydrocarbons (PAH) - EPA Method SW8270E-SIM

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) contain naphthalene. Associated samples that contain naphthalene have been flagged with a "B"

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qualifer.

The blank spike (BS/LCS) percent recoveries were within control limits.

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: AECOM

Project Name: Laurel Station

COC No(s): NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Assigned ARI Job No: 23C0764

Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time	1252	1.1				

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: IR#97

Cooler Accepted by: JS Date: 03/31/23 Time: 1252

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used?	Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA	03/03/21	

Were the sample(s) split by ARI? NA YES Date/Time: Equipment: Split by:

Samples Logged by: Date: 03/31/23 Time: 13:50 Labels checked by: TTS

** ***Notify Project Manager of discrepancies or concerns*** **

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

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Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

MW-6

23C0764-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 03/30/2023 14:00
Instrument: NT3 Analyst: TWC — Analyzed: 03/31/2023 19:16

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 23C0764-01 A
Preparation Batch: BLC0853 — Sample Size: 10 mL
Prepared: 03/31/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*109*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*99.4*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*94.6*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*110*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

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MW-6

23C0764-01 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 03/30/2023 14:00
Instrument: NT3 Analyst: TWC — Analyzed: 03/31/2023 19:16

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 23C0764-01 A
Preparation Batch: BLC0853 — Sample Size: 10 mL
Prepared: 03/31/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*99.4*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*94.6*	*%*	

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MW-6

23C0764-01 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 03/30/2023 14:00
Instrument: NT18 Analyst: VTS — Analyzed: 04/07/2023 20:03

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 23C0764-01 F 01
Preparation Batch: BLD0014 — Sample Size: 500 mL
Prepared: 04/04/2023 — Final Volume: 0.5 mL

Sample Cleanup: Cleanup Method: Silica Gel — Extract ID: 23C0764-01 F 01
Cleanup Batch: CLD0049 — Initial Volume: 0.5 uL
Cleaned: 07-Apr-2023 — Final Volume: 0.5 uL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.010	0.019	ug/L	B
2-Methylnaphthalene	91-57-6	1	0.010	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	0.010	ND	ug/L	U
Acenaphthylene	208-96-8	1	0.010	ND	ug/L	U
Acenaphthene	83-32-9	1	0.010	ND	ug/L	U
Dibenzofuran	132-64-9	1	0.010	ND	ug/L	U
Fluorene	86-73-7	1	0.010	ND	ug/L	U
Phenanthrene	85-01-8	1	0.010	ND	ug/L	U
Anthracene	120-12-7	1	0.010	ND	ug/L	U
Fluoranthene	206-44-0	1	0.010	ND	ug/L	U
Pyrene	129-00-0	1	0.010	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.010	ND	ug/L	U
Benzo(b)fluoranthene	205-99-2	1	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.010	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10			*42-120 %*	*64.8*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14			*29-120 %*	*55.1*	*%*	
Surrogate: Fluoranthene-d10			*57-120 %*	*85.8*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

MW-6

23C0764-01 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 03/30/2023 14:00
Instrument: FID4 Analyst: AA — Analyzed: 04/05/2023 13:30

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 23C0764-01 D 01
Preparation Batch: BLD0007 — Sample Size: 500 mL
Prepared: 04/03/2023 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*104*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

DPE-3

23C0764-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 03/30/2023 15:00
Instrument: NT2 Analyst: PKC — Analyzed: 04/06/2023 12:24

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 23C0764-02 A
Preparation Batch: BLD0147 — Sample Size: 10 mL
Prepared: 04/06/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*104*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*98.6*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*98.4*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*99.4*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

DPE-3

23C0764-02 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 03/30/2023 15:00
Instrument: NT2 Analyst: PKC — Analyzed: 04/06/2023 12:24

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 23C0764-02 A
Preparation Batch: BLD0147 — Sample Size: 10 mL
Prepared: 04/06/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*98.6*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*98.4*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

DPE-3

23C0764-02 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 03/30/2023 15:00
Instrument: NT18 Analyst: VTS — Analyzed: 04/11/2023 15:27

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 23C0764-02 F 01
Preparation Batch: BLD0146 — Sample Size: 500 mL
Prepared: 04/06/2023 — Final Volume: 0.5 mL

Sample Cleanup: Cleanup Method: Silica Gel — Extract ID: 23C0764-02 F 01
Cleanup Batch: CLD0055 — Initial Volume: 0.5 uL
Cleaned: 11-Apr-2023 — Final Volume: 0.5 uL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.010	0.020	ug/L	B
2-Methylnaphthalene	91-57-6	1	0.010	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	0.010	ND	ug/L	U
Acenaphthylene	208-96-8	1	0.010	ND	ug/L	U
Acenaphthene	83-32-9	1	0.010	ND	ug/L	U
Dibenzofuran	132-64-9	1	0.010	ND	ug/L	U
Fluorene	86-73-7	1	0.010	ND	ug/L	U
Phenanthrene	85-01-8	1	0.010	ND	ug/L	U
Anthracene	120-12-7	1	0.010	ND	ug/L	U
Fluoranthene	206-44-0	1	0.010	ND	ug/L	U
Pyrene	129-00-0	1	0.010	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.010	ND	ug/L	U
Benzo(b)fluoranthene	205-99-2	1	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.010	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10			*42-120 %*	*71.6*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14			*29-120 %*	*58.1*	*%*	
Surrogate: Fluoranthene-d10			*57-120 %*	*98.6*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

DPE-3

23C0764-02 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 03/30/2023 15:00
Instrument: FID4 Analyst: AA — Analyzed: 04/12/2023 00:11

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 23C0764-02 D 01
Preparation Batch: BLD0145 — Sample Size: 500 mL
Prepared: 04/06/2023 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	0.247	mg/L	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*98.8*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

DUP-1

23C0764-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 03/30/2023 00:00
Instrument: NT2 Analyst: PKC — Analyzed: 04/06/2023 12:45

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 23C0764-03 B
Preparation Batch: BLD0147 — Sample Size: 10 mL
Prepared: 04/06/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*109*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*98.5*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*95.6*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*98.2*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

DUP-1

23C0764-03 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 03/30/2023 00:00
Instrument: NT2 Analyst: PKC — Analyzed: 04/06/2023 12:45

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 23C0764-03 B
Preparation Batch: BLD0147 — Sample Size: 10 mL
Prepared: 04/06/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*98.5*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*95.6*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

DUP-1

23C0764-03 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 03/30/2023 00:00
Instrument: NT18 Analyst: VTS — Analyzed: 04/11/2023 15:59

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 23C0764-03 F 01
Preparation Batch: BLD0146 — Sample Size: 500 mL
Prepared: 04/06/2023 — Final Volume: 0.5 mL

Sample Cleanup: Cleanup Method: Silica Gel — Extract ID: 23C0764-03 F 01
Cleanup Batch: CLD0055 — Initial Volume: 0.5 uL
Cleaned: 11-Apr-2023 — Final Volume: 0.5 uL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.010	0.020	ug/L	B
2-Methylnaphthalene	91-57-6	1	0.010	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	0.010	ND	ug/L	U
Acenaphthylene	208-96-8	1	0.010	ND	ug/L	U
Acenaphthene	83-32-9	1	0.010	ND	ug/L	U
Dibenzofuran	132-64-9	1	0.010	ND	ug/L	U
Fluorene	86-73-7	1	0.010	ND	ug/L	U
Phenanthrene	85-01-8	1	0.010	ND	ug/L	U
Anthracene	120-12-7	1	0.010	ND	ug/L	U
Fluoranthene	206-44-0	1	0.010	ND	ug/L	U
Pyrene	129-00-0	1	0.010	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.010	ND	ug/L	U
Benzo(b)fluoranthene	205-99-2	1	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.010	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10			*42-120 %*	*71.5*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14			*29-120 %*	*56.9*	*%*	
Surrogate: Fluoranthene-d10			*57-120 %*	*95.2*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

DUP-1

23C0764-03 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 03/30/2023 00:00
Instrument: FID4 Analyst: AA — Analyzed: 04/12/2023 00:31

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 23C0764-03 D 01
Preparation Batch: BLD0145 — Sample Size: 500 mL
Prepared: 04/06/2023 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	0.274	mg/L	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	0.201	mg/L	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*97.4*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

Trip Blank

23C0764-04 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 03/30/2023 00:00
Instrument: NT3 Analyst: TWC — Analyzed: 03/31/2023 18:10

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 23C0764-04 A
Preparation Batch: BLC0853 — Sample Size: 10 mL
Prepared: 03/31/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*105*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*102*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*94.2*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*104*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

Trip Blank

23C0764-04 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 03/30/2023 00:00

Instrument: NT3 Analyst: TWC — Analyzed: 03/31/2023 18:10

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 23C0764-04 A

Preparation Batch: BLC0853 — Sample Size: 10 mL

Prepared: 03/31/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*102*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*94.2*	*%*	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLC0853 - NWTPHg

Instrument: NT3 Analyst: TWC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLC0853-BLK1)				Prepared: 31-Mar-2023 Analyzed: 31-Mar-2023 13:15						
Gasoline Range Organics (Tol-Nap)	ND	100	ug/L							U
Surrogate: Toluene-d8	4.92		ug/L	*5.00*		*98.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.71		ug/L	*5.00*		*94.2*	*80-120*			
Blank (BLC0853-BLK2)				Prepared: 31-Mar-2023 Analyzed: 31-Mar-2023 13:15						
Benzene	ND	0.20	ug/L							U
Toluene	ND	0.20	ug/L							U
Ethylbenzene	ND	0.20	ug/L							U
m,p-Xylene	ND	0.40	ug/L							U
o-Xylene	ND	0.20	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	5.16		ug/L	*5.00*		*103*	*80-129*			
Surrogate: Toluene-d8	4.92		ug/L	*5.00*		*98.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.71		ug/L	*5.00*		*94.2*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.10		ug/L	*5.00*		*102*	*80-120*			
LCS (BLC0853-BS1)				Prepared: 31-Mar-2023 Analyzed: 31-Mar-2023 11:24						
Gasoline Range Organics (Tol-Nap)	1040	100	ug/L	1000		104	72-128			
Surrogate: Toluene-d8	4.92		ug/L	*5.00*		*98.3*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.89		ug/L	*5.00*		*97.8*	*80-120*			
LCS (BLC0853-BS2)				Prepared: 31-Mar-2023 Analyzed: 31-Mar-2023 11:46						
Benzene	11.1	0.20	ug/L	10.0		111	80-120			
Toluene	11.1	0.20	ug/L	10.0		111	80-120			
Ethylbenzene	10.9	0.20	ug/L	10.0		109	80-120			
m,p-Xylene	22.6	0.40	ug/L	20.0		113	80-121			
o-Xylene	10.9	0.20	ug/L	10.0		109	80-121			
Surrogate: 1,2-Dichloroethane-d4	5.20		ug/L	*5.00*		*104*	*80-129*			
Surrogate: Toluene-d8	5.02		ug/L	*5.00*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.80		ug/L	*5.00*		*96.1*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.95		ug/L	*5.00*		*98.9*	*80-120*			
LCS Dup (BLC0853-BSD1)				Prepared: 31-Mar-2023 Analyzed: 31-Mar-2023 12:08						
Gasoline Range Organics (Tol-Nap)	967	100	ug/L	1000		96.7	72-128	7.02	30	
Surrogate: Toluene-d8	4.93		ug/L	*5.00*		*98.7*	*80-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLC0853 - NWTPHg

Instrument: NT3 Analyst: TWC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BLC0853-BSD1)				Prepared: 31-Mar-2023 Analyzed: 31-Mar-2023 12:08						
Surrogate: 4-Bromofluorobenzene	4.93		ug/L	*5.00*		*98.5*	*80-120*			
LCS Dup (BLC0853-BSD2)				Prepared: 31-Mar-2023 Analyzed: 31-Mar-2023 12:30						
Benzene	10.8	0.20	ug/L	10.0		108	80-120	2.65	30	
Toluene	10.8	0.20	ug/L	10.0		108	80-120	2.34	30	
Ethylbenzene	10.9	0.20	ug/L	10.0		109	80-120	0.12	30	
m,p-Xylene	22.1	0.40	ug/L	20.0		111	80-121	1.93	30	
o-Xylene	11.0	0.20	ug/L	10.0		110	80-121	0.66	30	
Surrogate: 1,2-Dichloroethane-d4	4.91		ug/L	*5.00*		*98.2*	*80-129*			
Surrogate: Toluene-d8	5.11		ug/L	*5.00*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.92		ug/L	*5.00*		*98.3*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.95		ug/L	*5.00*		*99.0*	*80-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLD0147 - NWTPHg

Instrument: NT2 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLD0147-BLK1)				Prepared: 06-Apr-2023	Analyzed: 06-Apr-2023 12:04					
Gasoline Range Organics (Tol-Nap)	ND	100	ug/L							U
Surrogate: Toluene-d8	4.92		ug/L	*5.00*		*98.4*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.86		ug/L	*5.00*		*97.2*	*80-120*			
Blank (BLD0147-BLK2)				Prepared: 06-Apr-2023	Analyzed: 06-Apr-2023 12:04					
Benzene	ND	0.20	ug/L							U
Toluene	ND	0.20	ug/L							U
Ethylbenzene	ND	0.20	ug/L							U
m,p-Xylene	ND	0.40	ug/L							U
o-Xylene	ND	0.20	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	5.17		ug/L	*5.00*		*103*	*80-129*			
Surrogate: Toluene-d8	4.92		ug/L	*5.00*		*98.4*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.86		ug/L	*5.00*		*97.2*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.91		ug/L	*5.00*		*98.2*	*80-120*			
LCS (BLD0147-BS1)				Prepared: 06-Apr-2023	Analyzed: 06-Apr-2023 10:22					
Gasoline Range Organics (Tol-Nap)	1010	100	ug/L	1000		101	72-128			
Surrogate: Toluene-d8	5.11		ug/L	*5.00*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.07		ug/L	*5.00*		*101*	*80-120*			
LCS (BLD0147-BS2)				Prepared: 06-Apr-2023	Analyzed: 06-Apr-2023 10:42					
Benzene	9.76	0.20	ug/L	10.0		97.6	80-120			
Toluene	9.66	0.20	ug/L	10.0		96.6	80-120			
Ethylbenzene	9.91	0.20	ug/L	10.0		99.1	80-120			
m,p-Xylene	20.5	0.40	ug/L	20.0		103	80-121			
o-Xylene	10.1	0.20	ug/L	10.0		101	80-121			
Surrogate: 1,2-Dichloroethane-d4	4.96		ug/L	*5.00*		*99.2*	*80-129*			
Surrogate: Toluene-d8	4.98		ug/L	*5.00*		*99.6*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.15		ug/L	*5.00*		*103*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.92		ug/L	*5.00*		*98.3*	*80-120*			
LCS Dup (BLD0147-BSD1)				Prepared: 06-Apr-2023	Analyzed: 06-Apr-2023 11:03					
Gasoline Range Organics (Tol-Nap)	826	100	ug/L	1000		82.6	72-128	20.50	30	
Surrogate: Toluene-d8	5.06		ug/L	*5.00*		*101*	*80-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLD0147 - NWTPHg

Instrument: NT2 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BLD0147-BSD1)				Prepared: 06-Apr-2023 Analyzed: 06-Apr-2023 11:03						
Surrogate: 4-Bromofluorobenzene	5.25		ug/L	*5.00*		*105*	*80-120*			
LCS Dup (BLD0147-BSD2)				Prepared: 06-Apr-2023 Analyzed: 06-Apr-2023 11:23						
Benzene	9.45	0.20	ug/L	10.0		94.5	80-120	3.26	30	
Toluene	9.38	0.20	ug/L	10.0		93.8	80-120	3.03	30	
Ethylbenzene	9.49	0.20	ug/L	10.0		94.9	80-120	4.34	30	
m,p-Xylene	19.9	0.40	ug/L	20.0		99.3	80-121	3.29	30	
o-Xylene	9.92	0.20	ug/L	10.0		99.2	80-121	2.16	30	
Surrogate: 1,2-Dichloroethane-d4	4.78		ug/L	*5.00*		*95.7*	*80-129*			
Surrogate: Toluene-d8	5.04		ug/L	*5.00*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.24		ug/L	*5.00*		*105*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.99		ug/L	*5.00*		*99.9*	*80-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BLD0014 - EPA 8270E-SIM

Instrument: NT18 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLD0014-BLK1)				Prepared: 04-Apr-2023 Analyzed: 07-Apr-2023 17:54						
Naphthalene	0.025	0.010	ug/L							
2-Methylnaphthalene	ND	0.010	ug/L							U
1-Methylnaphthalene	ND	0.010	ug/L							U
Acenaphthylene	ND	0.010	ug/L							U
Acenaphthene	ND	0.010	ug/L							U
Dibenzofuran	ND	0.010	ug/L							U
Fluorene	ND	0.010	ug/L							U
Phenanthrene	ND	0.010	ug/L							U
Anthracene	ND	0.010	ug/L							U
Fluoranthene	ND	0.010	ug/L							U
Pyrene	ND	0.010	ug/L							U
Benzo(a)anthracene	ND	0.010	ug/L							U
Chrysene	ND	0.010	ug/L							U
Benzo(b)fluoranthene	ND	0.010	ug/L							U
Benzo(k)fluoranthene	ND	0.010	ug/L							U
Benzo(a)pyrene	ND	0.010	ug/L							U
Indeno(1,2,3-cd)pyrene	ND	0.010	ug/L							U
Dibenzo(a,h)anthracene	ND	0.010	ug/L							U
Benzo(g,h,i)perylene	ND	0.010	ug/L							U
Surrogate: 2-Methylnaphthalene-d10	0.178		ug/L	*0.300*		*59.2*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.152		ug/L	*0.300*		*50.5*	*29-120*			
Surrogate: Fluoranthene-d10	0.240		ug/L	*0.300*		*80.0*	*57-120*			
LCS (BLD0014-BS1)				Prepared: 04-Apr-2023 Analyzed: 07-Apr-2023 18:27						
Naphthalene	0.238	0.010	ug/L	0.300		79.4	37-120			B
2-Methylnaphthalene	0.237	0.010	ug/L	0.300		78.9	37-120			
1-Methylnaphthalene	0.245	0.010	ug/L	0.300		81.6	29-120			
2-Chloronaphthalene	0.205	0.010	ug/L	0.300		68.4	30-160			
Biphenyl	0.225	0.010	ug/L	0.300		74.9	30-160			
2,6-Dimethylnaphthalene	0.229	0.010	ug/L	0.300		76.4	30-160			
Acenaphthylene	0.281	0.010	ug/L	0.300		93.6	41-120			
Acenaphthene	0.238	0.010	ug/L	0.300		79.4	41-120			
Dibenzofuran	0.235	0.010	ug/L	0.300		78.2	38-120			
2,3,5-Trimethylnaphthalene	0.247	0.010	ug/L	0.300		82.3	30-160			
Fluorene	0.282	0.010	ug/L	0.300		93.8	43-120			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BLD0014 - EPA 8270E-SIM

Instrument: NT18 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BLD0014-BS1)				Prepared: 04-Apr-2023	Analyzed: 07-Apr-2023 18:27					
Dibenzothiophene	0.256	0.010	ug/L	0.300		85.2	30-160			
Phenanthrene	0.248	0.010	ug/L	0.300		82.7	41-120			
Anthracene	0.266	0.010	ug/L	0.300		88.8	40-120			
Carbazole	0.300	0.010	ug/L	0.300		99.9	30-160			
Fluoranthene	0.272	0.010	ug/L	0.300		90.8	45-120			
Pyrene	0.288	0.010	ug/L	0.300		96.0	41-120			
1-Methylphenanthrene	0.284	0.010	ug/L	0.300		94.5	30-160			
Benzo(a)anthracene	0.318	0.010	ug/L	0.300		106	42-120			
Chrysene	0.248	0.010	ug/L	0.300		82.6	44-120			
Benzo(b)fluoranthene	0.264	0.010	ug/L	0.300		87.9	44-120			
Benzo(k)fluoranthene	0.234	0.010	ug/L	0.300		77.9	50-120			
Benzo(j)fluoranthene	0.227	0.010	ug/L	0.300		75.7	39-160			
Benzo(e)pyrene	0.231	0.010	ug/L	0.300		77.1	30-160			
Benzo(a)pyrene	0.230	0.010	ug/L	0.300		76.6	35-120			
Indeno(1,2,3-cd)pyrene	0.232	0.010	ug/L	0.300		77.2	37-120			
Dibenzo(a,h)anthracene	0.231	0.010	ug/L	0.300		77.1	34-120			
Benzo(g,h,i)perylene	0.240	0.010	ug/L	0.300		80.1	38-120			
Benzo(b)thiophene	0.236	0.010	ug/L	0.300		78.6	30-160			
Surrogate: 2-Methylnaphthalene-d10	0.197		ug/L	*0.300*		*65.8*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.168		ug/L	*0.300*		*55.9*	*29-120*			
Surrogate: Fluoranthene-d10	0.251		ug/L	*0.300*		*83.5*	*57-120*			
LCS Dup (BLD0014-BSD1)				Prepared: 04-Apr-2023	Analyzed: 07-Apr-2023 18:59					
Naphthalene	0.236	0.010	ug/L	0.300		78.7	37-120	0.88	30	B
2-Methylnaphthalene	0.240	0.010	ug/L	0.300		80.1	37-120	1.52	30	
1-Methylnaphthalene	0.242	0.010	ug/L	0.300		80.7	29-120	1.07	30	
2-Chloronaphthalene	0.209	0.010	ug/L	0.300		69.5	30-160	1.71	30	
Biphenyl	0.231	0.010	ug/L	0.300		76.9	30-160	2.55	30	
2,6-Dimethylnaphthalene	0.236	0.010	ug/L	0.300		78.5	30-160	2.66	30	
Acenaphthylene	0.289	0.010	ug/L	0.300		96.3	41-120	2.79	30	
Acenaphthene	0.244	0.010	ug/L	0.300		81.3	41-120	2.35	30	
Dibenzofuran	0.240	0.010	ug/L	0.300		79.9	38-120	2.17	30	
2,3,5-Trimethylnaphthalene	0.260	0.010	ug/L	0.300		86.6	30-160	5.05	30	
Fluorene	0.284	0.010	ug/L	0.300		94.7	43-120	0.86	30	
Dibenzothiophene	0.258	0.010	ug/L	0.300		86.1	30-160	1.13	30	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BLD0014 - EPA 8270E-SIM

Instrument: NT18 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BLD0014-BSD1)				Prepared: 04-Apr-2023 Analyzed: 07-Apr-2023 18:59						
Phenanthrene	0.257	0.010	ug/L	0.300		85.5	41-120	3.41	30	
Anthracene	0.271	0.010	ug/L	0.300		90.5	40-120	1.87	30	
Carbazole	0.303	0.010	ug/L	0.300		101	30-160	1.18	30	
Fluoranthene	0.279	0.010	ug/L	0.300		92.9	45-120	2.28	30	
Pyrene	0.296	0.010	ug/L	0.300		98.5	41-120	2.56	30	
1-Methylphenanthrene	0.286	0.010	ug/L	0.300		95.3	30-160	0.80	30	
Benzo(a)anthracene	0.328	0.010	ug/L	0.300		109	42-120	2.91	30	
Chrysene	0.252	0.010	ug/L	0.300		84.2	44-120	1.85	30	
Benzo(b)fluoranthene	0.266	0.010	ug/L	0.300		88.8	44-120	1.01	30	
Benzo(k)fluoranthene	0.234	0.010	ug/L	0.300		78.0	50-120	0.11	30	
Benzo(j)fluoranthene	0.221	0.010	ug/L	0.300		73.7	39-160	2.70	30	
Benzo(e)pyrene	0.231	0.010	ug/L	0.300		77.1	30-160	0.01	30	
Benzo(a)pyrene	0.231	0.010	ug/L	0.300		77.0	35-120	0.41	30	
Indeno(1,2,3-cd)pyrene	0.226	0.010	ug/L	0.300		75.2	37-120	2.63	30	
Dibenzo(a,h)anthracene	0.192	0.010	ug/L	0.300		64.1	34-120	18.40	30	
Benzo(g,h,i)perylene	0.230	0.010	ug/L	0.300		76.6	38-120	4.50	30	
Benzo(b)thiophene	0.234	0.010	ug/L	0.300		78.0	30-160	0.83	30	
Surrogate: 2-Methylnaphthalene-d10	0.191		ug/L	*0.300*		*63.7*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.146		ug/L	*0.300*		*48.5*	*29-120*			
Surrogate: Fluoranthene-d10	0.247		ug/L	*0.300*		*82.5*	*57-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BLD0146 - EPA 8270E-SIM

Instrument: NT18 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLD0146-BLK1)				Prepared: 06-Apr-2023 Analyzed: 11-Apr-2023 13:51						
Naphthalene	0.016	0.010	ug/L							
2-Methylnaphthalene	ND	0.010	ug/L							U
1-Methylnaphthalene	ND	0.010	ug/L							U
Acenaphthylene	ND	0.010	ug/L							U
Acenaphthene	ND	0.010	ug/L							U
Dibenzofuran	ND	0.010	ug/L							U
Fluorene	ND	0.010	ug/L							U
Phenanthrene	ND	0.010	ug/L							U
Anthracene	ND	0.010	ug/L							U
Fluoranthene	ND	0.010	ug/L							U
Pyrene	ND	0.010	ug/L							U
Benzo(a)anthracene	ND	0.010	ug/L							U
Chrysene	ND	0.010	ug/L							U
Benzo(b)fluoranthene	ND	0.010	ug/L							U
Benzo(k)fluoranthene	ND	0.010	ug/L							U
Benzo(a)pyrene	ND	0.010	ug/L							U
Indeno(1,2,3-cd)pyrene	ND	0.010	ug/L							U
Dibenzo(a,h)anthracene	ND	0.010	ug/L							U
Benzo(g,h,i)perylene	ND	0.010	ug/L							U
Surrogate: 2-Methylnaphthalene-d10	0.186		ug/L	*0.300*		*62.0*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.164		ug/L	*0.300*		*54.8*	*29-120*			
Surrogate: Fluoranthene-d10	0.245		ug/L	*0.300*		*81.5*	*57-120*			
LCS (BLD0146-BS1)				Prepared: 06-Apr-2023 Analyzed: 11-Apr-2023 14:23						
Naphthalene	0.251	0.010	ug/L	0.300		83.5	37-120			B
2-Methylnaphthalene	0.261	0.010	ug/L	0.300		86.9	37-120			
1-Methylnaphthalene	0.267	0.010	ug/L	0.300		89.0	29-120			
2-Chloronaphthalene	0.228	0.010	ug/L	0.300		76.1	30-160			
Biphenyl	0.251	0.010	ug/L	0.300		83.8	30-160			
2,6-Dimethylnaphthalene	0.257	0.010	ug/L	0.300		85.6	30-160			
Acenaphthylene	0.300	0.010	ug/L	0.300		100	41-120			
Acenaphthene	0.266	0.010	ug/L	0.300		88.5	41-120			
Dibenzofuran	0.262	0.010	ug/L	0.300		87.4	38-120			
2,3,5-Trimethylnaphthalene	0.274	0.010	ug/L	0.300		91.4	30-160			
Fluorene	0.298	0.010	ug/L	0.300		99.2	43-120			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BLD0146 - EPA 8270E-SIM

Instrument: NT18 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BLD0146-BS1)				Prepared: 06-Apr-2023 Analyzed: 11-Apr-2023 14:23						
Dibenzothiophene	0.279	0.010	ug/L	0.300		92.9	30-160			
Phenanthrene	0.281	0.010	ug/L	0.300		93.6	41-120			
Anthracene	0.313	0.010	ug/L	0.300		104	40-120			
Carbazole	0.320	0.010	ug/L	0.300		107	30-160			
Fluoranthene	0.294	0.010	ug/L	0.300		97.9	45-120			
Pyrene	0.308	0.010	ug/L	0.300		103	41-120			
1-Methylphenanthrene	0.307	0.010	ug/L	0.300		102	30-160			
Benzo(a)anthracene	0.336	0.010	ug/L	0.300		112	42-120			
Chrysene	0.275	0.010	ug/L	0.300		91.8	44-120			
Benzo(b)fluoranthene	0.285	0.010	ug/L	0.300		94.9	44-120			
Benzo(k)fluoranthene	0.268	0.010	ug/L	0.300		89.4	50-120			
Benzo(j)fluoranthene	0.271	0.010	ug/L	0.300		90.4	39-160			
Benzo(e)pyrene	0.267	0.010	ug/L	0.300		89.0	30-160			
Benzo(a)pyrene	0.276	0.010	ug/L	0.300		92.0	35-120			
Indeno(1,2,3-cd)pyrene	0.253	0.010	ug/L	0.300		84.5	37-120			
Dibenzo(a,h)anthracene	0.253	0.010	ug/L	0.300		84.5	34-120			
Benzo(g,h,i)perylene	0.273	0.010	ug/L	0.300		91.1	38-120			
Benzo(b)thiophene	0.255	0.010	ug/L	0.300		85.1	30-160			
Surrogate: 2-Methylnaphthalene-d10	0.205		ug/L	*0.300*		*68.5*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.175		ug/L	*0.300*		*58.3*	*29-120*			
Surrogate: Fluoranthene-d10	0.250		ug/L	*0.300*		*83.3*	*57-120*			
LCS Dup (BLD0146-BSD1)				Prepared: 06-Apr-2023 Analyzed: 11-Apr-2023 14:55						
Naphthalene	0.257	0.010	ug/L	0.300		85.6	37-120	2.51	30	B
2-Methylnaphthalene	0.264	0.010	ug/L	0.300		87.9	37-120	1.19	30	
1-Methylnaphthalene	0.264	0.010	ug/L	0.300		87.9	29-120	1.23	30	
2-Chloronaphthalene	0.232	0.010	ug/L	0.300		77.2	30-160	1.50	30	
Biphenyl	0.255	0.010	ug/L	0.300		84.9	30-160	1.28	30	
2,6-Dimethylnaphthalene	0.261	0.010	ug/L	0.300		87.0	30-160	1.63	30	
Acenaphthylene	0.305	0.010	ug/L	0.300		102	41-120	1.60	30	
Acenaphthene	0.267	0.010	ug/L	0.300		89.0	41-120	0.54	30	
Dibenzofuran	0.267	0.010	ug/L	0.300		88.9	38-120	1.69	30	
2,3,5-Trimethylnaphthalene	0.279	0.010	ug/L	0.300		93.0	30-160	1.67	30	
Fluorene	0.307	0.010	ug/L	0.300		102	43-120	3.10	30	
Dibenzothiophene	0.285	0.010	ug/L	0.300		94.9	30-160	2.10	30	

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BLD0146 - EPA 8270E-SIM

Instrument: NT18 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BLD0146-BSD1)				Prepared: 06-Apr-2023 Analyzed: 11-Apr-2023 14:55						
Phenanthrene	0.285	0.010	ug/L	0.300		95.2	41-120	1.60	30	
Anthracene	0.319	0.010	ug/L	0.300		106	40-120	1.94	30	
Carbazole	0.330	0.010	ug/L	0.300		110	30-160	3.31	30	
Fluoranthene	0.300	0.010	ug/L	0.300		100	45-120	2.16	30	
Pyrene	0.314	0.010	ug/L	0.300		105	41-120	1.88	30	
1-Methylphenanthrene	0.312	0.010	ug/L	0.300		104	30-160	1.62	30	
Benzo(a)anthracene	0.350	0.010	ug/L	0.300		117	42-120	4.09	30	
Chrysene	0.278	0.010	ug/L	0.300		92.6	44-120	0.90	30	
Benzo(b)fluoranthene	0.290	0.010	ug/L	0.300		96.7	44-120	1.95	30	
Benzo(k)fluoranthene	0.275	0.010	ug/L	0.300		91.7	50-120	2.51	30	
Benzo(j)fluoranthene	0.273	0.010	ug/L	0.300		91.0	39-160	0.65	30	
Benzo(e)pyrene	0.267	0.010	ug/L	0.300		89.2	30-160	0.15	30	
Benzo(a)pyrene	0.282	0.010	ug/L	0.300		94.1	35-120	2.23	30	
Indeno(1,2,3-cd)pyrene	0.255	0.010	ug/L	0.300		84.9	37-120	0.53	30	
Dibenzo(a,h)anthracene	0.254	0.010	ug/L	0.300		84.8	34-120	0.36	30	
Benzo(g,h,i)perylene	0.273	0.010	ug/L	0.300		91.0	38-120	0.13	30	
Benzo(b)thiophene	0.256	0.010	ug/L	0.300		85.4	30-160	0.33	30	
Surrogate: 2-Methylnaphthalene-d10	0.211		ug/L	*0.300*		*70.3*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.180		ug/L	*0.300*		*59.9*	*29-120*			
Surrogate: Fluoranthene-d10	0.262		ug/L	*0.300*		*87.5*	*57-120*			

AECOM	Project: Laurel Station	
1111 Third Avenue, Suite 1600	Project Number: 60691215	**Reported:**
Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BLD0007 - NWTPH-Dx

Instrument: FID4 Analyst: AA

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLD0007-BLK1)				Prepared: 03-Apr-2023 Analyzed: 05-Apr-2023 09:36						
Diesel Range Organics (C12-C24)	ND	0.100	mg/L							U
Motor Oil Range Organics (C24-C38)	ND	0.200	mg/L							U
Surrogate: o-Terphenyl	0.235		mg/L	*0.225*		*104*	*50-150*			
LCS (BLD0007-BS1)				Prepared: 03-Apr-2023 Analyzed: 05-Apr-2023 09:55						
Diesel Range Organics (C12-C24)	2.69	0.100	mg/L	3.00		89.8	56-120			
Surrogate: o-Terphenyl	0.246		mg/L	*0.225*		*109*	*50-150*			
LCS Dup (BLD0007-BSD1)				Prepared: 03-Apr-2023 Analyzed: 05-Apr-2023 10:15						
Diesel Range Organics (C12-C24)	2.65	0.100	mg/L	3.00		88.4	56-120	1.62	30	
Surrogate: o-Terphenyl	0.238		mg/L	*0.225*		*106*	*50-150*			

AECOM	Project: Laurel Station	
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Seattle WA, 98101	Project Manager: Karen Mixon	12-Apr-2023 16:23

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BLD0145 - NWTPH-Dx

Instrument: FID4 Analyst: AA

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLD0145-BLK1)				Prepared: 06-Apr-2023 Analyzed: 11-Apr-2023 22:53						
Diesel Range Organics (C12-C24)	ND	0.100	mg/L							U
Motor Oil Range Organics (C24-C38)	ND	0.200	mg/L							U
Surrogate: o-Terphenyl	0.208		mg/L	*0.225*		*92.4*	*50-150*			
LCS (BLD0145-BS1)				Prepared: 06-Apr-2023 Analyzed: 11-Apr-2023 23:12						
Diesel Range Organics (C12-C24)	2.80	0.100	mg/L	3.00		93.2	56-120			
Surrogate: o-Terphenyl	0.215		mg/L	*0.225*		*95.6*	*50-150*			
LCS Dup (BLD0145-BSD1)				Prepared: 06-Apr-2023 Analyzed: 11-Apr-2023 23:32						
Diesel Range Organics (C12-C24)	2.85	0.100	mg/L	3.00		95.0	56-120	1.91	30	
Surrogate: o-Terphenyl	0.220		mg/L	*0.225*		*98.0*	*50-150*			

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Certified Analyses included in this Report

Analyte	Certifications
EPA 8260D in Water	
Benzene	DoD-ELAP,ADEC,NELAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
EPA 8270E-SIM in Water	
Naphthalene	ADEC,DoD-ELAP,NELAP,WADOE
2-Methylnaphthalene	ADEC,DoD-ELAP,NELAP
1-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,WADOE
Acenaphthylene	ADEC,DoD-ELAP,NELAP,WADOE
Acenaphthene	ADEC,DoD-ELAP,NELAP,WADOE
Dibenzofuran	ADEC,DoD-ELAP,NELAP
Fluorene	ADEC,DoD-ELAP,NELAP,WADOE
Phenanthrene	ADEC,DoD-ELAP,NELAP,WADOE
Anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(a)anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Chrysene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(b)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(k)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(a)pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Indeno(1,2,3-cd)pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Dibenzo(a,h)anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(g,h,i)perylene	ADEC,DoD-ELAP,NELAP,WADOE
NWTPH-Dx in Water	
Diesel Range Organics (C12-C2	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-	DoD-ELAP,NELAP,WADOE
NWTPHg in Water	

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Gasoline Range Organics (Tol-N WADOE,DoD-ELAP

Code	Description	Number	Expires
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2023
WADOE	WA Dept of Ecology	C558	06/30/2023
WA-DW	Ecology - Drinking Water	C558	06/30/2023

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Notes and Definitions

*	Flagged value is not within established control limits.
B	This analyte was detected in the method blank.
D	The reported value is from a dilution
D1	Surrogate was not detected due to sample extract dilution
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.