



January 22, 2021

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

CC: Mike Droppo (Trans Mountain), Dale McClary (Trans Mountain), Cary Brown (AECOM), Demetrio Cabanillas (AECOM), Dan Heimbigner (Whatcom Environmental)

RE: AECOM Progress Report – July 1, 2020 to December 31, 2020
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: Mike Droppo
ECOLOGY CASE MGR: Cris Matthews
AECOM PM: Karen Mixon
AECOM PROJECT NO: 60628094

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.

Work Accomplished During Reporting Period:

DPE System Operation

From July 1 to December 31, 2020, the DPE system operated in 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. Due to significantly lower recoveries in late summer, the system operation approach was adjusted from full time operation to “pulsed” operation in late September. 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 generally short duration related to quarterly groundwater sampling and routine maintenance with longer shutdowns specifically related to pulsed operation. Through December 2020, the system has operated 86 percent of the time over nearly 5-1/2 years since startup on July 17, 2015. The operational efficiency was 87 percent when pulsed operation commenced in September 2020.

Month 2020	System Mode	Wells On-line
July	SVE	July 1 – 31, DPE 1, -2, and -3
August	SVE	August 1 – 31, DPE-1, -2, and -3
September	SVE	September 1 – 14, DPE-1, -2, and -3
	SVE	September 15 – 21, DPE-6, -7, and -8
	Shutdown	September 22, Preparation for Quarterly Groundwater Sampling
	Shutdown	September 23 – 30, System shutdown continued as part of pulsed operations
October	SVE	October 1 – 26, DPE-3, -5, -7, and -8
	Shutdown	October 26 – 31, Shutdown as part of pulsed operations
November	Shutdown	November 1 – 15, Shutdown as part of pulsed operations
	SVE	November 16 – 30, DPE-1 -2, -3, -4, -6, and -7
December	Shutdown	December 1 – 21, Shutdown as part of pulsed operations
	SVE	December 21 – 31, DPE-1, -2, -3, -4, -6, -7, and -8

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. Only one sample was collected for this reporting period as just 84 gallons of water was removed from the system during this period (one week in December only). There were no exceedances of indicator levels specified in the permit for treated groundwater samples collected during this period. As of January 4, 2021, approximately 200,871 gallons of water have been removed from the subsurface since the system was started in July 2015. A graph showing monthly groundwater volumes removed is included with this report. No measurable product has been observed or recovered by the system to date.

As of January 4, 2021, approximately 7,776 pounds (26.5 barrels) of 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 January 4, 2021 are attached to this report. Two separate mass removal calculations are completed for this project, each using a different set of data collected on a regular basis. The primary mass removal estimate (7,776 pounds) is based on calculations made using PID and flow measurements at the combined vapor monitoring point prior to the vapor GAC vessels (system cumulative). The second estimate calculates 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 8,209 pounds which is approximately 6 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 field instrument was conducted by Whatcom Environmental weekly when the system was operating to monitor the vapor GAC treatment system. The carbon is changed out if the PID measurements at the mid-treatment location exceeded 50 ppm. During this reporting period, there were no vapor GAC changeouts required.

Groundwater Monitoring

The well locations are shown on **Figure 1 Pump Station Area**. Wells MW-4, MW-6, MW-15, MW-16, and DPE-4 are intended to be sampled quarterly.

AECOM attempted to conduct quarterly groundwater sample collection on September 23, 2020; however, none of the monitoring wells contained adequate water volume to collect samples. Sampling was conducted on December 21, 2020 from one well. Based on the December water levels in the wells, only well MW-6 was sampled on this date. Water level data for the monitoring well network is provided in **Table 1** attached to this progress report.

AECOM completed the data review for the December 2020 groundwater sampling event. The summary data table (**Table 2**), data validation memo, and laboratory report are attached to this progress report. Petroleum hydrocarbons (gasoline-, diesel-, and motor oil range), BTEX, and PAHs were not detected in the sample collected from MW-6 in December.

Submittals/Agency Contacts:

- July 10, 2020 – AECOM submitted a progress report to Ecology for the period January 1 – June 30, 2020.
- July 14, 2020 – AECOM responded to questions from Cris Matthews (Ecology) to clarify information for the draft Environmental Covenant.
- July 31, 2020 – Cris Matthews forwarded draft final version of Environmental Covenant for review by Trans Mountain.
- September 1, 2020 – AECOM submitted responses on behalf of Trans Mountain to Ecology on the draft final Environmental Covenant.
- November 4, 2020 – Conference call with Cris Matthews, Mike Droppo (Trans Mountain), and Karen Mixon (AECOM) regarding process responsibilities and schedule for completion of the Environmental Covenant and As Built Report.
- November 11, 2020 – AECOM submitted updated title search and Exhibit A-2 associated with the Environmental Covenant to Ecology.
- November 23, 2020 – Email from Cris Matthews with formal correspondence to/from Ecology and Whatcom County regarding the Environmental Covenant.
- December 10, 2020 – AECOM provided clean copy of final Environmental Covenant to Trans Mountain and Ecology in preparation for final signatures.

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 December 21, 2020.

Plans for the Next Reporting Period:

The following are planned activities for the period from January 1 to June 30, 2021.

- Continue to operate and maintain the DPE system.
- Submit report summarizing additional groundwater data collection and evaluation based on the March 29, 2019 memorandum to assess perched groundwater conditions.

- Complete the Environmental Covenant associated with the site Cleanup Action and file with Whatcom County.
- Submit the Final As-Built Report to Ecology documenting the construction phase of the Cleanup Action.
- Collect 1st and 2nd quarter groundwater monitoring samples. Complete validation of the quarterly groundwater data and submit to Ecology with Progress Report on July 10, 2021.

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.

Attachments:

- Figure 1 – Pump Station Area
- DPE System Performance Graphs
- Table 1 – Monitoring Well Groundwater Elevation Data Summary
- Table 2 – Groundwater Monitoring Results
- Data Validation and ARI Lab Report (20L0393) – Quarterly Groundwater Samples – December 2020

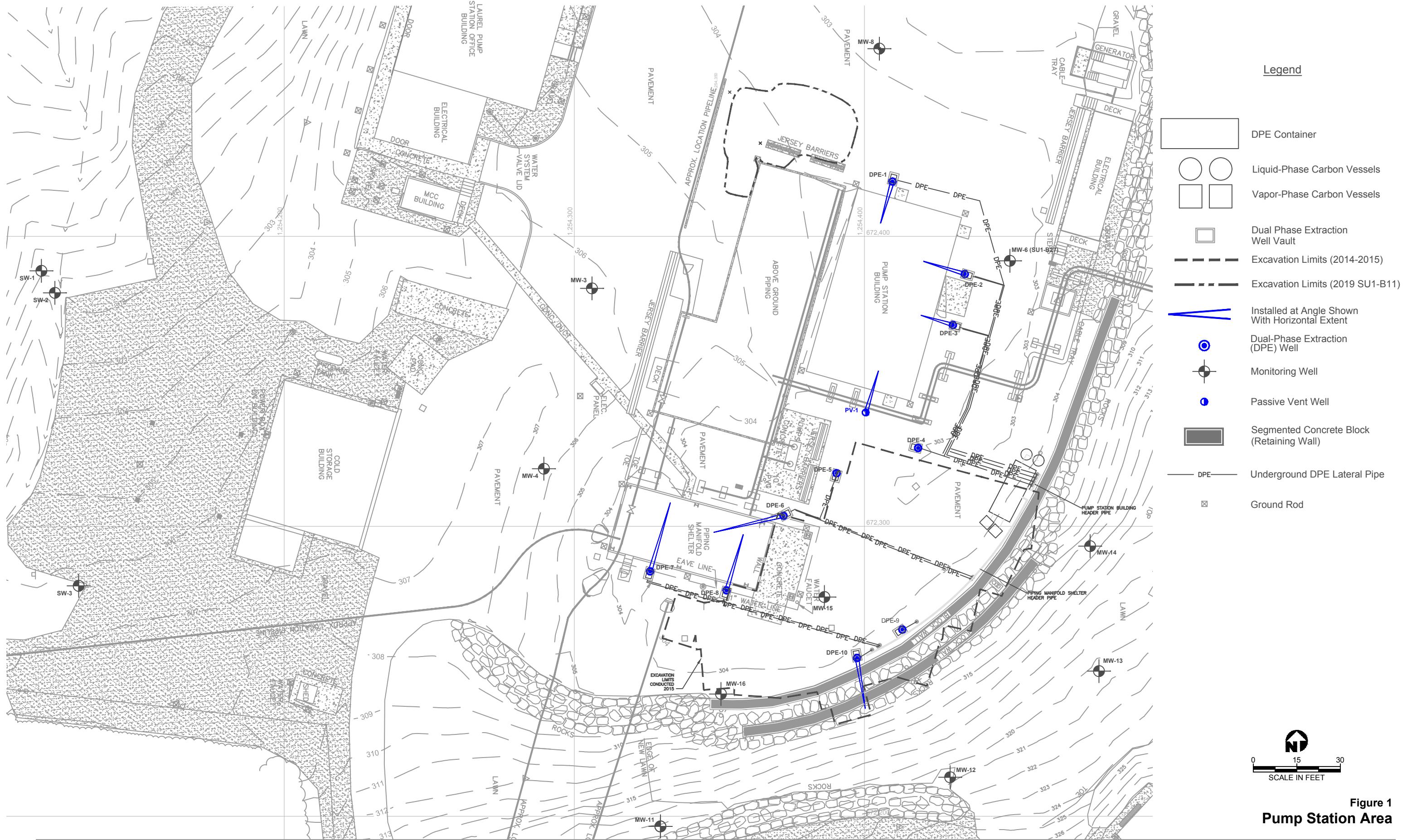
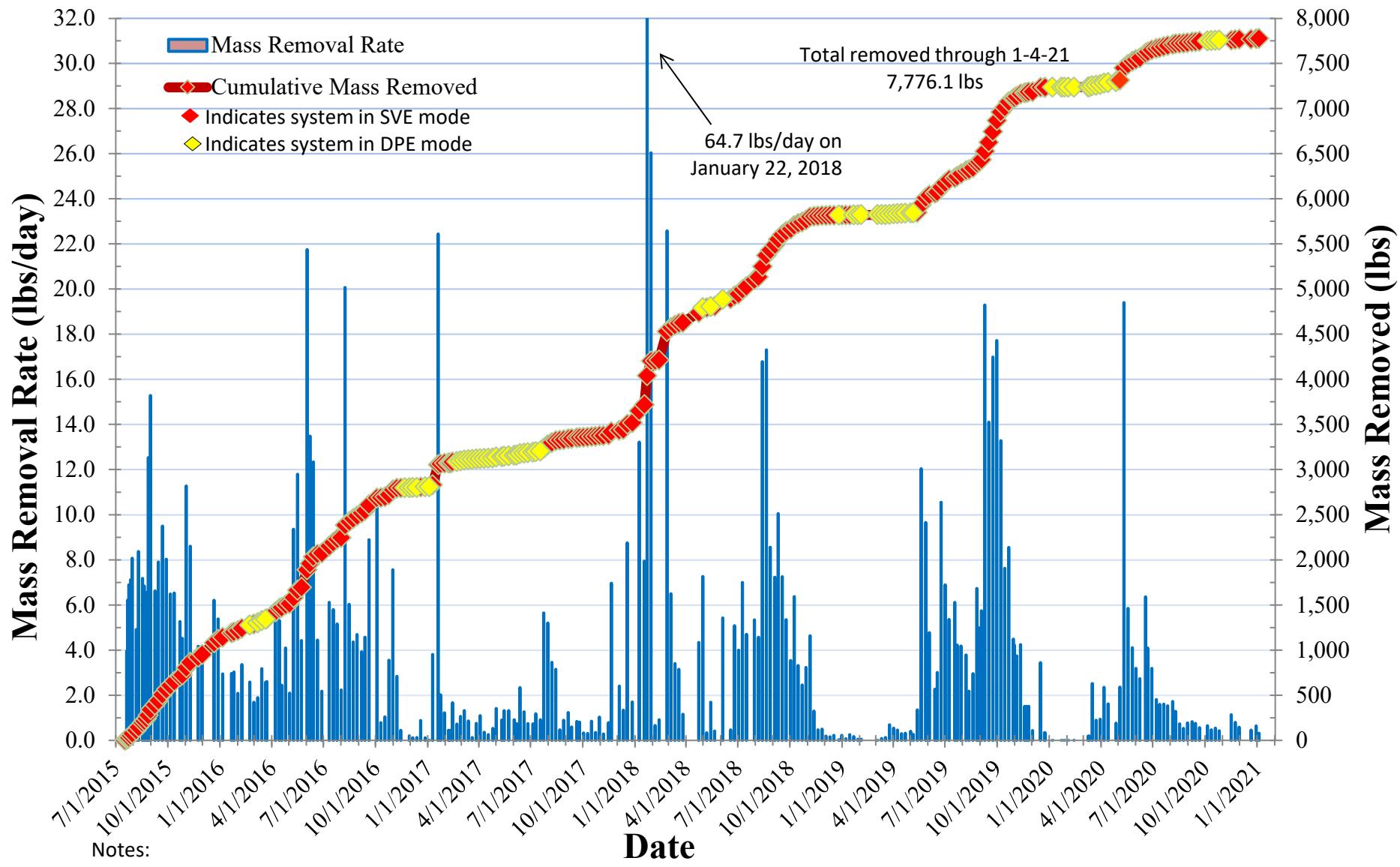


Figure 1
Pump Station Area

**Laurel Station
Bellingham, Washington**

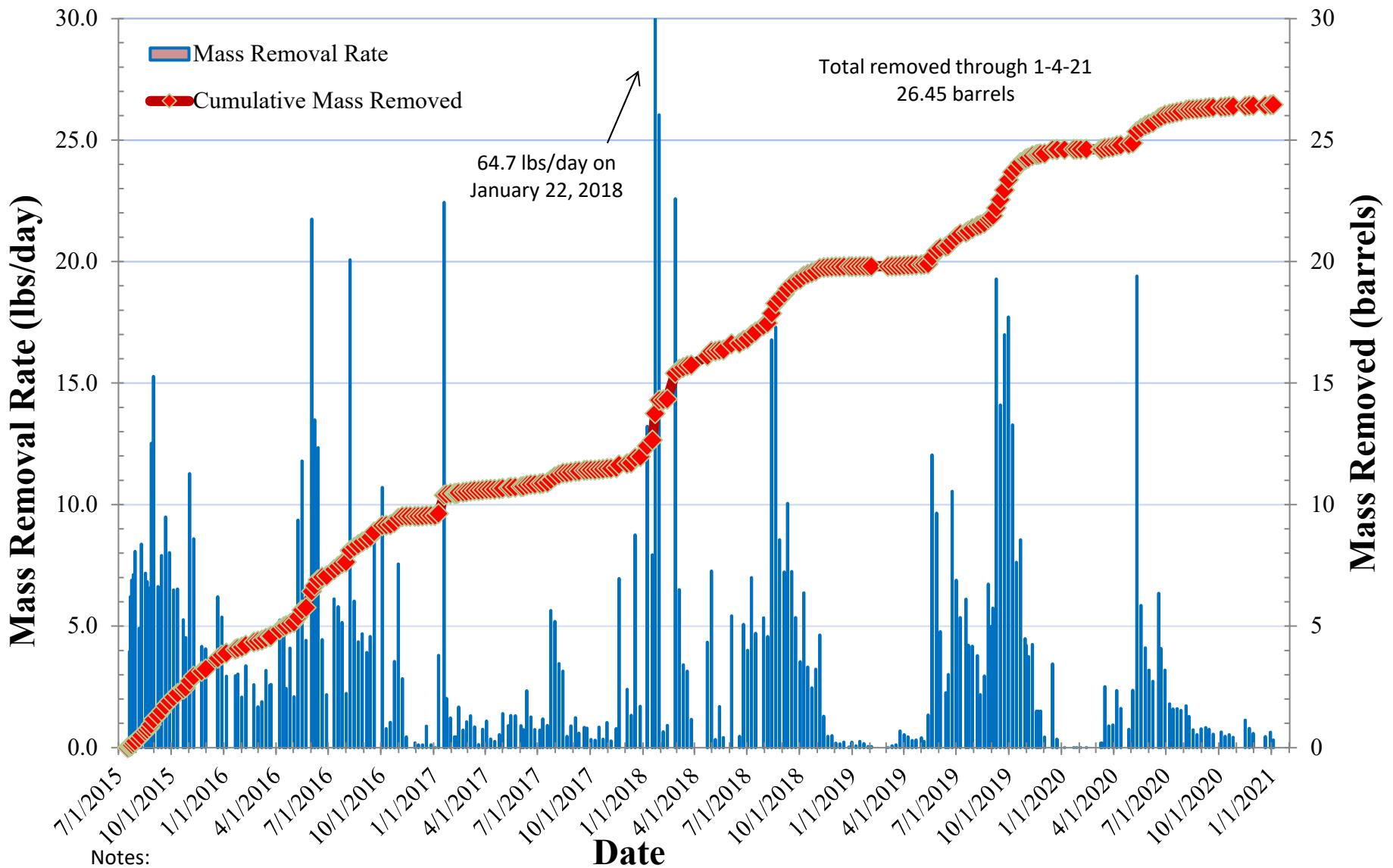
COMBINED SYSTEM MASS REMOVAL DATA

Laurel Station DPE System



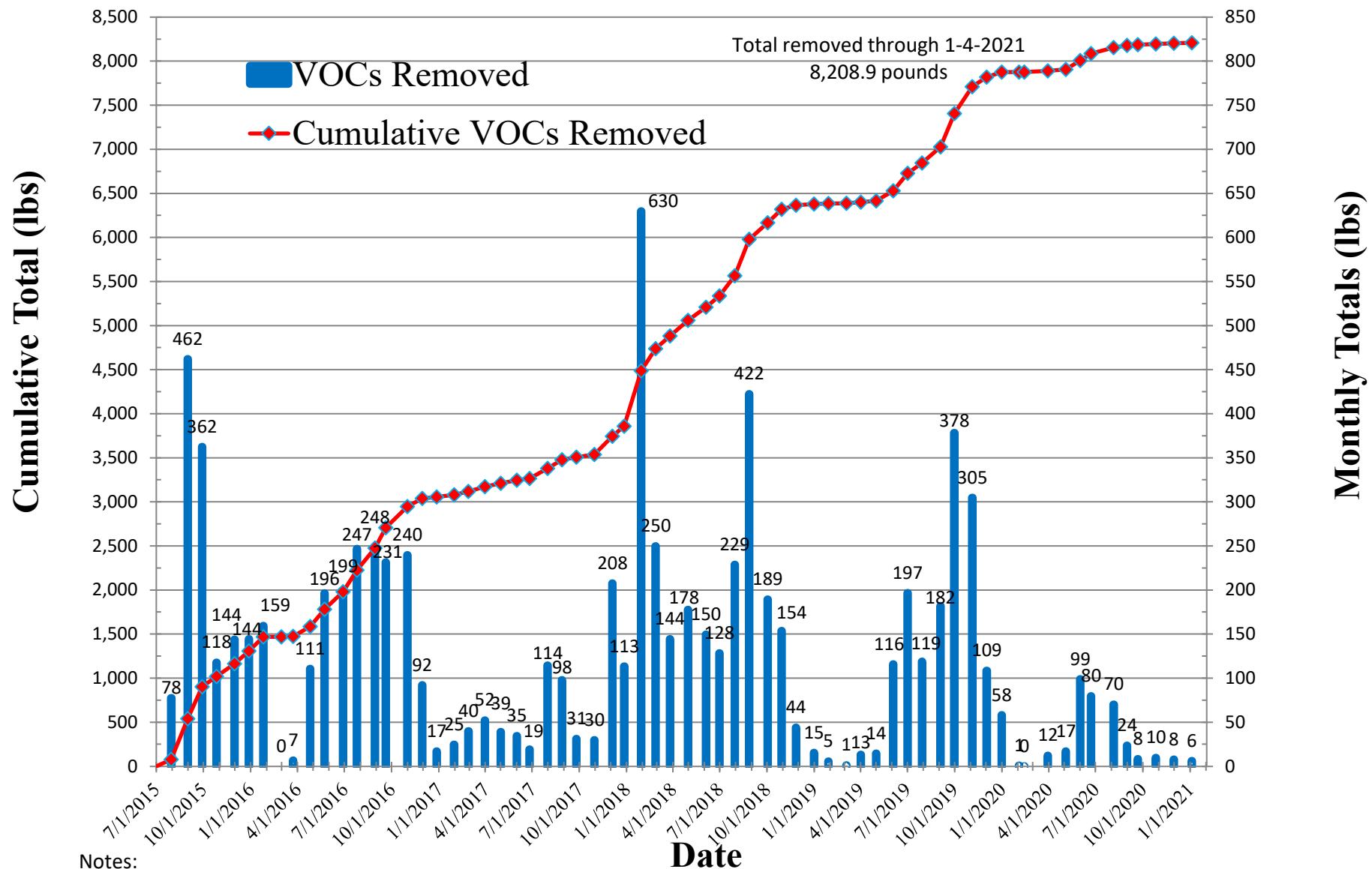
COMBINED SYSTEM MASS REMOVAL DATA

Laurel Station DPE System



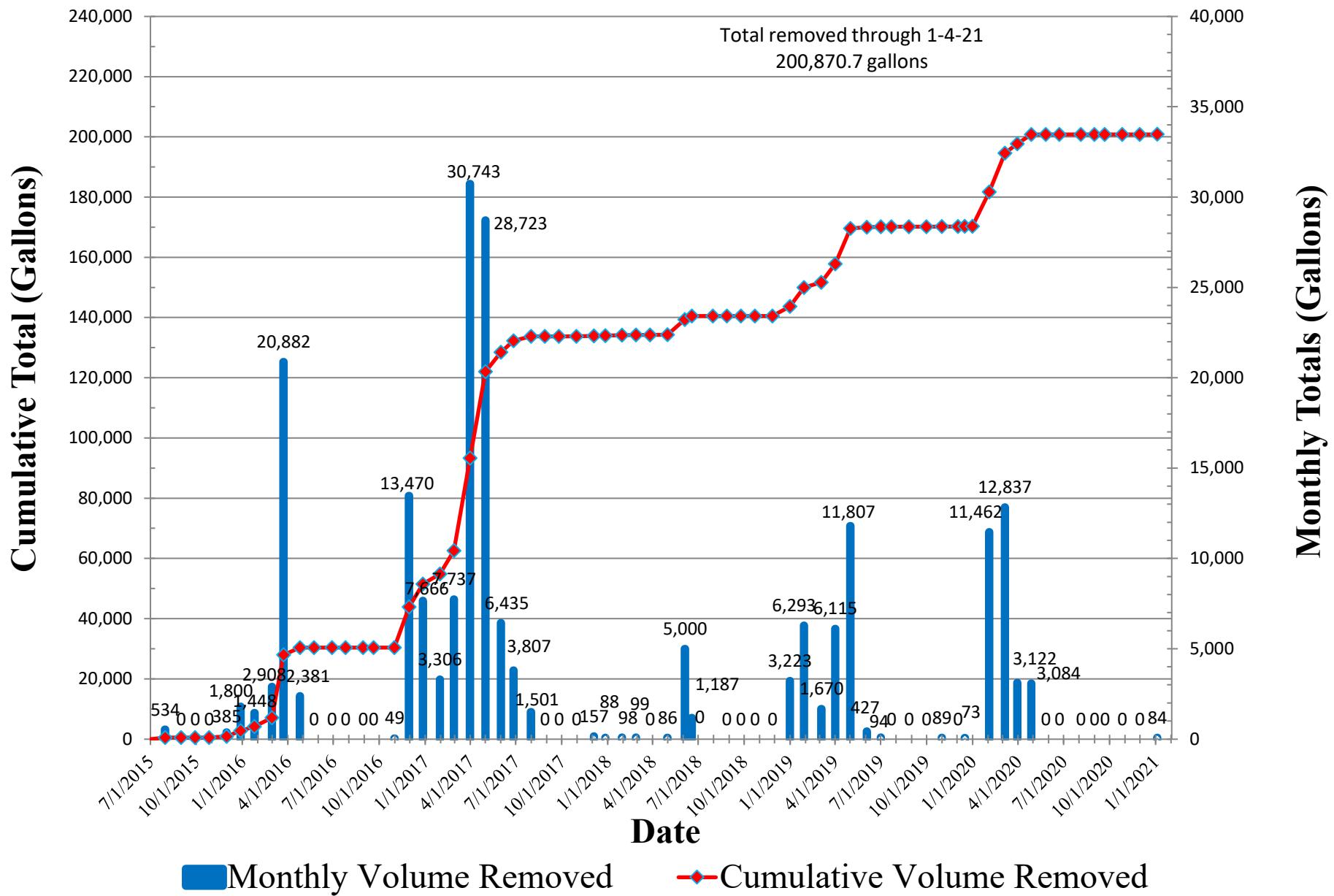
Mass Removed by DPE System

Laurel Station DPE System



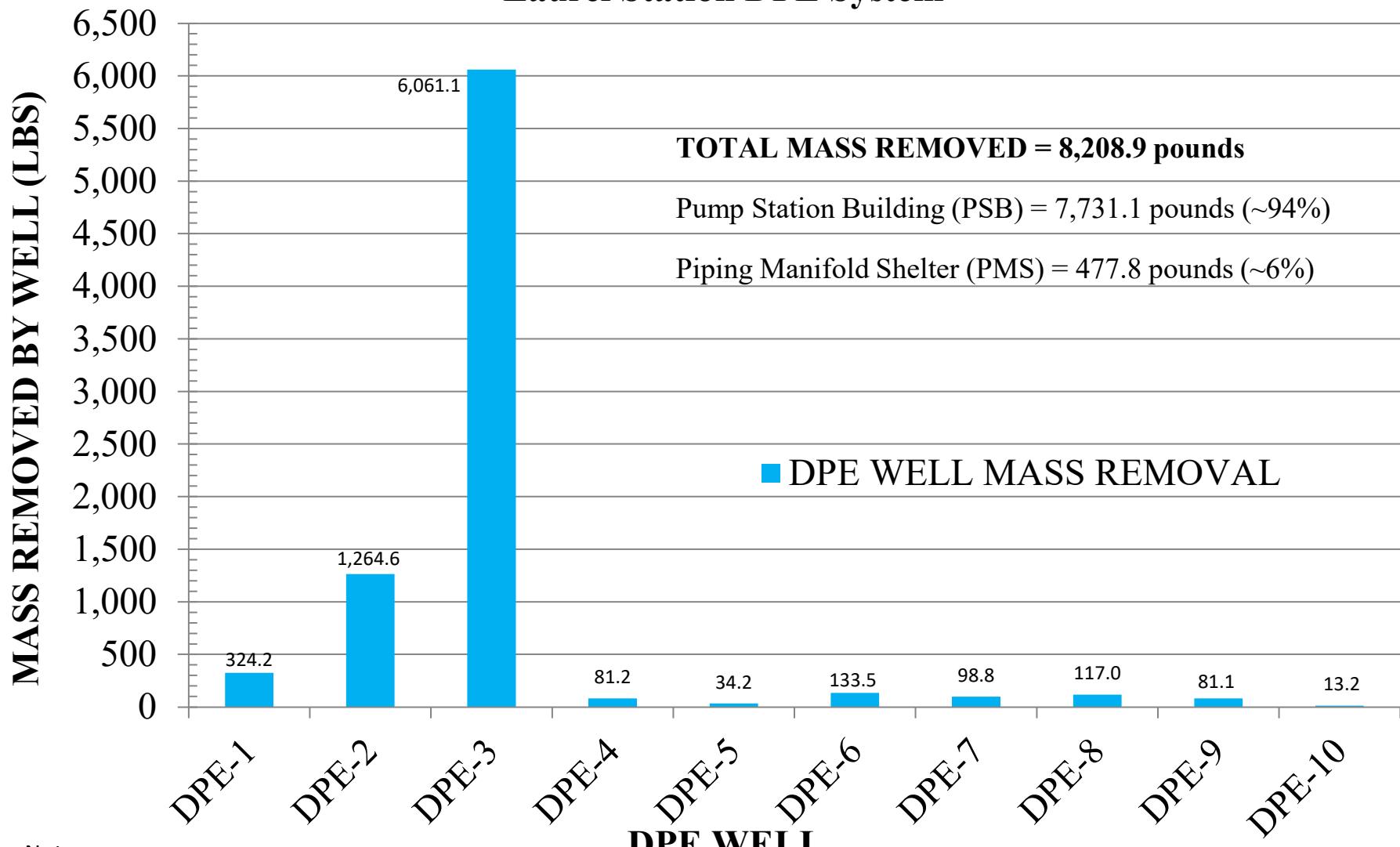
Water Removed by DPE System

Laurel Station DPE System



MASS REMOVAL DISTRIBUTION - Cumulative

Laurel Station DPE System



Notes:

1. Estimated mass removal from July 17, 2015 through January 4, 2021
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.

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				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				---	---	---
	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

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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)
SW-2	4/23/2015	49.75				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				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

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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	309.48	22 - 32	284.48 - 274.48	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				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

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				DRY	NC	NC
	3/20/2019	15.12				DRY	NC	NC
	4/5/2019	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
	11/30/2020	15.13				13.60	288.70	1.53
	12/21/2020	15.15				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)
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				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

Table 1
Monitoring Well Groundwater Elevation Data Summary
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-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				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

Table 1
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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-6	4/23/2015	26.55				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	NC	NC
	5/23/2016	26.84				DRY	NC	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	NC	NC
	5/26/2020	26.73				DRY	NC	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

Table 1
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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-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	302.24	23 - 38	279.24 - 264.24	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
	1/28/2019	37.26				37.03	265.21	0.23
	2/25/2019	37.31				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
	4/5/2019	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

Table 1
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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-II ^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	321.31	25 - 45	293.31 - 273.31	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				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
	4/5/2019	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	253.67	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	252.50	0.28
	11/30/2020	48.50				47.15	253.49	1.35
	12/21/2020	48.50				47.06	253.58	1.44

Table 1
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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-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	323.53	29 - 49	291.53 - 271.53	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				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

Table 1
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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	323.20	39 - 59	281.20 - 261.20	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				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

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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				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

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-15	4/23/2015	34.25				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

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					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

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)
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^aTotal depth was measured by sounding the wells prior to sampling and may differ from total depth as installed.

^bSource 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 Sample Date	Groundwater Cleanup Levels	MW4		MW-6					
		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
Total Petroleum Hydrocarbons (TPH, mg/L)									
Gasoline-range (Gx)	0.8/1.0 ^a	0.25 U	NA	0.25 U	0.25 U	0.10 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	0.11	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
Total TPH (Sum Dx, Oil-range, mg/L)	0.5	1.41	6.44	ND	ND	0.34	ND	0.11	ND
BTEX (ng/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
Toluene	640	0.20 U	NA	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
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
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
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
2-Methylnaphthalene	32	NA	NA	0.019	NA	0.010 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
Acenaphthylene	NE	NA	NA	0.010 U	NA	0.010 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
Benz(a)anthracene ¹	0.12	NA	NA	0.013	NA	0.010 U	0.10 U	0.10 U	0.10 U
Benz(b)fluoranthene ¹	0.12	NA	NA	0.011	NA	0.010 U	NA	NA	NA
Benz(k)fluoranthene ¹	1.2	NA	NA	0.010 U	NA	0.010 U	NA	NA	NA
Benz(a)pyrene ¹	0.12	NA	NA	0.012	NA	0.010 U	0.10 U	0.10 U	0.10 U
Benz(g,h,i)perylene	NE	NA	NA	0.010 U	NA	0.010 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
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
Dibenzofuran	16	NA	NA	0.010 U	NA	0.010 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
Fluorene	640	NA	NA	0.010 U	NA	0.010 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
Naphthalene	160	NA	NA	0.010 U	NA	0.010 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
Pyrene	480	NA	NA	0.022	NA	0.014	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
TTEC	0.12	NA	NA	0.015	NA	0.00012	NC	NC	NC

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

Sample ID Sample Date	Groundwater Cleanup Levels	MW-6 (continued)									
		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	0.393	0.757	0.117	ND		
BTEx (ng/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	
Benz(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	
Benz(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	
Benz(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	
Benz(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	
Benz(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 Benzofluoranthenes²	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 Sample Date	Groundwater Cleanup Levels	MW-6 (continued)									
		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 (ng/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	
Benz(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	
Benz(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	
Benz(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	
Benz(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	
Benz(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 Benzofluoranthenes²	0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	
TTEC	0.12	NC	NC	NC	NC	NC	NC	0.220	NC	NC	

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

Sample ID Sample Date	Groundwater Cleanup Levels	MW-6 (continued)							PV-1 4/24/15	DPE-1 4/24/15	4/24/15	DPE-2 5/8/19	5/8/19 (DUP)	DPE-3 4/23/15	DPE-4 4/24/15	
		12/18/19	3/5/20	3/5/20 (DUP)	6/17/20	12/21/20	12/21/20 (DUP)	4/24/15								
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	0.25 U	0.25 U	0.25 U	NA	NA	0.25 U	0.25 U		
Diesel-range (Dx)	NE	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.38	2.1	0.59	0.230	0.349	0.86	0.14		
Motor Oil-range	NE	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.20 U	0.23	0.200 U	0.200 U	0.200 U	0.82	0.20 U		
Total TPH (Sum Dx, Oil-range, mg/L)	0.5	ND	ND	ND	ND	ND	ND	0.38	2.64	0.82	0.230	0.349	1.68	0.14		
BTEX (ng/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	NA	NA	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	0.26	0.20 U	0.55	NA	NA	0.37	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	NA	NA	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	NA	NA	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	NA	NA	0.20 U	0.20 U		
Polyyclic 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	0.010 U	0.010	NA	NA	0.019	0.010 U		
2-Methylnaphthalene	32	0.021	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.022	0.010 U		
Acenaphthene	960	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U	0.010 U		
Acenaphthylene	NE	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U	0.010 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	0.010 U	0.010 U	NA	NA	0.010 U	0.010 U		
Benz(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	0.010 U	0.010 U	NA	NA	0.010 U	0.010 U		
Benz(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	0.010 U	0.015	0.010 U	NA	NA	0.016	0.010 U	
Benz(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	0.010 U	0.010 U	NA	NA	0.010 U	0.010 U		
Benz(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	0.010 U	0.010 U	NA	NA	0.010 U	0.010 U		
Benz(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	0.010 U	0.010 U	NA	NA	0.015	0.010 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	0.010 U	0.098	0.013	NA	NA	0.044	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	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U	0.010 U		
Dibenzofuran	16	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.012	0.010 U		
Fluoranthene	640	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U	0.010 U		
Fluorene	640	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.012	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	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U	0.010 U		
Naphthalene	160	0.119	0.031	0.027	0.013	0.010 U	0.010 U	0.010 U	0.010 U	0.021 U	0.031 U	NA	NA	0.010 U	0.019 U	
Phenanthrene	NE	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.013	0.010 U		
Pyrene	480	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.057	0.020	NA	NA	0.031	0.010 U	
Total Benzofluoranthenes ²	0.12	NA	NA	NA	NA	NA	NA	NA	0.020 U	0.020 U	0.020 U	NA	NA	0.020 U	0.020 U	
TTEC	0.12	NC	NC	NC	NC	NC	NC	NC	NC	0.0025	0.00013	NA	NA	0.0020	NC	

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

Sample ID Sample Date	Groundwater Cleanup Levels	DPE-5 4/24/15	DPE-5 5/8/19	DPE-7 5/8/19	DPE-8 4/23/15
Total Petroleum Hydrocarbons (TPH, mg/L)					
Gasoline-range (Gx)	0.8/1.0 ^a	0.25 U	NA	NA	0.25 U
Diesel-range (Dx)	NE	0.46	0.332	7.01	0.60
Motor Oil-range	NE	0.20 U	0.442	2.11	0.20 U
Total TPH (Sum Dx, Oil-range, mg/L)	0.5	0.46	0.774	9.12	0.60
BTEX (ug/L)					
Benzene	5	0.20 U	NA	NA	0.20 U
Toluene	640	0.20 U	NA	NA	0.44
Ethylbenzene	700	0.20 U	NA	NA	0.20 U
m,p-Xylene	1,600	0.40 U	NA	NA	0.40 U
o-Xylene	1,600	0.20 U	NA	NA	0.20 U
Polycyclic Aromatic Hydrocarbons (ug/L)					
1-Methylnaphthalene	1.51	0.010 U	NA	NA	0.010 U
2-Methylnaphthalene	32	0.010 U	NA	NA	0.010 U
Acenaphthene	960	0.010 U	NA	NA	0.010 U
Acenaphthylene	NE	0.010 U	NA	NA	0.010 U
Anthracene	4,800	0.010 U	NA	NA	0.010 U
Benz(a)anthracene ¹	0.12	0.010 U	NA	NA	0.010 U
Benz(b)fluoranthene ¹	0.12	0.010 U	NA	NA	0.010 U
Benz(k)fluoranthene ¹	1.2	0.010 U	NA	NA	0.010 U
Benz(a)pyrene ¹	0.12	0.010 U	NA	NA	0.010 U
Benz(g,h,i)perylene	NE	0.010 U	NA	NA	0.010 U
Chrysene ¹	12	0.010 U	NA	NA	0.011
Dibenz(a,h)anthracene ¹	0.012	0.010 U	NA	NA	0.010 U
Dibenzofuran	16	0.010 U	NA	NA	0.010 U
Fluoranthene	640	0.010 U	NA	NA	0.010 U
Fluorene	640	0.027	NA	NA	0.010 U
Indeno(1,2,3-cd)pyrene ¹	0.12	0.010 U	NA	NA	0.010 U
Naphthalene	160	0.033 U	NA	NA	0.020 U
Phenanthrene	NE	0.010 U	NA	NA	0.010 U
Pyrene	480	0.010 U	NA	NA	0.012
Total Benzofluoranthenes ²	0.12	0.020 U	NA	NA	0.020 U
TTEC	0.12	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.

UI - 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

¹This is considered a carcinogenic polycyclic aromatic hydrocarbon compound.

²Total benzo fluoranthenes 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.

Memo



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 **Date:** January 12, 2021

RE: Lucy Panteleeff, Chemist

Data Quality Review
Quarterly Groundwater Samples – December 2020
Laurel Station Cleanup Action

The data quality review of 1 groundwater sample, 1 field duplicate, and 1 trip blank collected on December 21, 2020, 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 EPA methods used for BTEX and PAH analysis were updated to most current methods (EPA Method 8260D and EPA 8270E).

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 20L0393:

Sample ID	Laboratory ID
MW-6	20L0393-01
DUP-1 (Field duplicate of MW-6)	20L0393-02
Trip Blank	20L0393-03

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*, January 2017. 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.

Data Quality Review
Quarterly Groundwater Samples – December 2020
Laurel Station Cleanup Action

- 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 sample analyses were not indicated on the COC. The samples analyses were logged per AECOM instruction.

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-SIM – The laboratory noted that the percent difference for dibenzo(a,h)anthracene (low) was outside of the method limits of $\pm 20\%$ in the continuing calibration verification (CCV) associated with analytical batch BIL0670. The results for dibenzo(a,h)anthracene in MW-6 and DUP-1 were qualified as estimated and flagged ‘UJ’ based on this CCV result.

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) – Acceptable

VOCs by Method 8260D – An MS/MSD was not performed in association with this analysis. Accuracy and precision were assessed using the LCS/LCSD results.

Gasoline-Range TPH by Method NWTPH-Gx – An MS/MSD was not performed in association with this analysis. Accuracy and precision were assessed using the LCS/LCSD results.

Diesel and Motor Oil-Range TPHs by Method NWTPH-Dx – An MS/MSD was not performed in association with this analysis. Accuracy and precision were assessed using the LCS/LCSD results.

PAHs by Method 8270D-SIM – An MS/MSD was performed using MW-6. Results were acceptable.

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 are considered usable for meeting project objectives. The completeness for laboratory group 20L0393 is 100%.

Data Quality Review
Quarterly Groundwater Samples – December 2020
Laurel Station Cleanup Action

Table 1. Summary of Qualified Data

Sample ID	ARI ID	Analyte	Result	Units	Final Result
MW-6	20L0393-01	Dibenzo(a,h)anthracene	0.010 U	ug/L	0.010 UJ
DUP-1	20L0393-02	Dibenzo(a,h)anthracene	0.010 U	ug/L	0.010 UJ



Analytical Resources, Incorporated
Analytical Chemists and Consultants

06 January 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)
20L0393

Associated SDG ID(s)
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, Inc.

A handwritten signature in blue ink that appears to read "Karen Mixon".

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.



Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 20L0393	Turn-around Requested: Standard
--	---

ARI Client Company: AECOM	Phone: 206-438-2700
-------------------------------------	-------------------------------

Client Contact: Karen Mixon

Client Project Name: Laurel Station Groundwater Sampling
--

Client Project #: U060628j	Samplers: Bryan Darby
--------------------------------------	---------------------------------

Sample ID	Date	Time	Matrix	No. Containers
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MW-6	12/21/20	1355	W	7
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DVP-1	12/21/20	0000	W	7
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TRIP BLANK				
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Page: 1 of 1

Date: 12/21/20 Ice Present?

No. of Coolers: 1 Cooler Temps: 0.9



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

Analysis Requested

BTEx 8260	GX	GX NwTPH - PAH's PAH's 8270 8251M	Px					
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Comments/Special Instructions	Relinquished by: (Signature) BD	Received by: (Signature) Samantha Colon	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Bryan Darby	Printed Name: Samantha Colon	Printed Name:	Printed Name:
	Company: AECOM	Company: ARI	Company:	Company:
	Date & Time: 12/22/20 19:30	Date & Time: 12/23/2020 0810	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, notwithstanding 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
1111 Third Avenue, Suite 1600
Seattle WA, 98101

Project: Laurel Station
Project Number: 60606281
Project Manager: Karen Mixon

Reported:
06-Jan-2021 14:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-6	20L0393-01	Water	21-Dec-2020 13:55	23-Dec-2020 08:10
DUP-1	20L0393-02	Water	21-Dec-2020 00:00	23-Dec-2020 08:10
Trip Blank	20L0393-03	Water	21-Dec-2020 13:55	23-Dec-2020 08:10



AECOM

1111 Third Avenue, Suite 1600
Seattle WA, 98101

Project: Laurel Station

Project Number: 60606281
Project Manager: Karen Mixon

Reported:
06-Jan-2021 14:10

Work Order Case Narrative

Gasoline by NWTPH-q (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 analytes which are out of control low in the CCAL. All associated samples that contain analyte have been flagged with a "Q" qualifier.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.



AECOM

1111 Third Avenue, Suite 1600
Seattle WA, 98101

Project: Laurel Station

Project Number: 60606281
Project Manager: Karen Mixon

Reported:
06-Jan-2021 14:10

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.

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

COC No(s): _____ NA

Assigned ARI Job No: 20L0393

Project Name: Laurel Station Groundwater Sampling

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

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 0810

0.9

Temp Gun ID#: DOO 5206

Cooler Accepted by: SC Date: 12/23/2020 Time: 0810

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: Inflated trash bag

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 3/21/2020

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

Samples Logged by: SC Date: 12/23/2020 Time: 0937 Labels checked by: SC

**** 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:



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Project: Laurel Station
Project Number: 60606281
Project Manager: Karen Mixon

Reported:
06-Jan-2021 14:10

MW-6
20L0393-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 12/21/2020 13:55
Instrument: NT3 Analyst: PKC Analyzed: 12/23/2020 14:33

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 20L0393-01 F
Preparation Batch: BIL0652 Sample Size: 10 mL
Prepared: 12/23/2020 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
<i>Surrogate: 1,2-Dichloroethane-d4</i>			80-129 %	101	%	
<i>Surrogate: Toluene-d8</i>			80-120 %	100	%	
<i>Surrogate: 4-Bromofluorobenzene</i>			80-120 %	98.4	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			80-120 %	98.7	%	



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Project: Laurel Station
Project Number: 60606281
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Reported:
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MW-6
20L0393-01 (Water)

Volatile Organic Compounds

Method: NWTPHg Sampled: 12/21/2020 13:55
Instrument: NT3 Analyst: PKC Analyzed: 12/23/2020 14:33

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 20L0393-01 F
Preparation Batch: BIL0652 Sample Size: 10 mL
Prepared: 12/23/2020 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
<i>Surrogate: Toluene-d8</i>			80-120 %	100	%	
<i>Surrogate: 4-Bromofluorobenzene</i>			80-120 %	98.4	%	



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Project Manager: Karen Mixon

Reported:
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MW-6
20L0393-01 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM Sampled: 12/21/2020 13:55
Instrument: NT11 Analyst: VTS Analyzed: 01/05/2021 19:25

Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BIL0670 Prepared: 12/24/2020	Sample Size: 500 mL Final Volume: 0.5 mL	Extract ID: 20L0393-01 A 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CJA0009 Cleaned: 04-Jan-2021	Initial Volume: 0.5 mL Final Volume: 0.5 mL	Extract ID: 20L0393-01 A 01

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
Benz(a)anthracene	56-55-3	1	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.010	ND	ug/L	U
Benz(b)fluoranthene	205-99-2	1	0.010	ND	ug/L	U
Benz(k)fluoranthene	207-08-9	1	0.010	ND	ug/L	U
Benz(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
Benz(g,h,i)perylene	191-24-2	1	0.010	ND	ug/L	U
<i>Surrogate: 2-Methylnaphthalene-d10</i>			42-120 %	72.6	%	
<i>Surrogate: Dibenzo[a,h]anthracene-d14</i>			29-120 %	46.2	%	
<i>Surrogate: Fluoranthene-d10</i>			57-120 %	82.5	%	



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Project Manager: Karen Mixon

Reported:

MW-6

20L0393-01 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx Sampled: 12/21/2020 13:55

Instrument: FID4 Analyst: CTO Analyzed: 12/31/2020 19:40

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 20L0393-01 D 02
Preparation Batch: BIL0682 Sample Size: 500 mL
Prepared: 12/28/2020 Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit				Notes
			Result	Units			
Diesel Range Organics (C12-C24)		DRO	1	0.100	ND	mg/L	U
Motor Oil Range Organics (C24-C38)		RR0	1	0.200	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>				50-150 %	90.8	%	



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Reported:
06-Jan-2021 14:10

DUP-1
20L0393-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 12/21/2020 00:00
Instrument: NT3 Analyst: PKC Analyzed: 12/23/2020 14:58

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 20L0393-02 F
Preparation Batch: BIL0652 Sample Size: 10 mL
Prepared: 12/23/2020 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
<i>Surrogate: 1,2-Dichloroethane-d4</i>			80-120 %	105	%	
<i>Surrogate: Toluene-d8</i>			80-120 %	96.6	%	
<i>Surrogate: 4-Bromofluorobenzene</i>			80-120 %	97.7	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			80-120 %	104	%	



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Reported:
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DUP-1
20L0393-02 (Water)

Volatile Organic Compounds

Method: NWTPHg Sampled: 12/21/2020 00:00
Instrument: NT3 Analyst: PKC Analyzed: 12/23/2020 14:58

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 20L0393-02 F
Preparation Batch: BIL0652 Sample Size: 10 mL
Prepared: 12/23/2020 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
<i>Surrogate: Toluene-d8</i>			80-120 %	96.6	%	
<i>Surrogate: 4-Bromofluorobenzene</i>			80-120 %	97.7	%	



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Reported:
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DUP-1
20L0393-02 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM Sampled: 12/21/2020 00:00
Instrument: NT11 Analyst: VTS Analyzed: 01/05/2021 19:58

Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BIL0670 Prepared: 12/24/2020	Sample Size: 500 mL Final Volume: 0.5 mL	Extract ID: 20L0393-02 A 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CJA0009 Cleaned: 04-Jan-2021	Initial Volume: 0.5 mL Final Volume: 0.5 mL	Extract ID: 20L0393-02 A 01

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
Benz(a)anthracene	56-55-3	1	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.010	ND	ug/L	U
Benz(b)fluoranthene	205-99-2	1	0.010	ND	ug/L	U
Benz(k)fluoranthene	207-08-9	1	0.010	ND	ug/L	U
Benz(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
Benz(g,h,i)perylene	191-24-2	1	0.010	ND	ug/L	U
<i>Surrogate: 2-Methylnaphthalene-d10</i>			42-120 %	67.3	%	
<i>Surrogate: Dibenzo[a,h]anthracene-d14</i>			29-120 %	42.0	%	
<i>Surrogate: Fluoranthene-d10</i>			57-120 %	78.7	%	



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Reported:
06-Jan-2021 14:10

DUP-1
20L0393-02 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx				Sampled: 12/21/2020 00:00
Instrument: FID4	Analyst: CTO			Analyzed: 12/31/2020 20:00
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BIL0682 Prepared: 12/28/2020			Extract ID: 20L0393-02 C 01
			Sample Size: 500 mL 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
<i>Surrogate: o-Terphenyl</i>			50-150 %	89.5 %



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Reported:
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Trip Blank
20L0393-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 12/21/2020 13:55
Instrument: NT3 Analyst: PKC Analyzed: 12/23/2020 12:47

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 20L0393-03 A
Preparation Batch: BIL0652 Sample Size: 10 mL
Prepared: 12/23/2020 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
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-120 %</i>	<i>98.3</i>	%	
<i>Surrogate: Toluene-d8</i>			<i>80-120 %</i>	<i>99.9</i>	%	
<i>Surrogate: 4-Bromofluorobenzene</i>			<i>80-120 %</i>	<i>99.4</i>	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			<i>80-120 %</i>	<i>97.3</i>	%	



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Reported:
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Trip Blank
20L0393-03 (Water)

Volatile Organic Compounds

Method: NWTPHg	Sampled: 12/21/2020 13:55
Instrument: NT3 Analyst: PKC	Analyzed: 12/23/2020 12:47
Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap)	Extract ID: 20L0393-03 A
Preparation Batch: BIL0652	Sample Size: 10 mL
Prepared: 12/23/2020	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
<i>Surrogate: Toluene-d8</i>			80-120 %	99.9	%	
<i>Surrogate: 4-Bromofluorobenzene</i>			80-120 %	99.4	%	



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Volatile Organic Compounds - Quality Control

Batch BIL0652 - EPA 5030C (Purge and Trap)

Instrument: NT3 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD RPD	RPD Limit	Notes
Blank (BIL0652-BLK1)										
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
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.09		ug/L	5.00	102		80-129			
<i>Surrogate: Toluene-d8</i>	4.89		ug/L	5.00	97.8		80-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.80		ug/L	5.00	96.0		80-120			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	4.99		ug/L	5.00	99.9		80-120			
Blank (BIL0652-BLK2)										
Gasoline Range Organics (Tol-Nap)	ND	100	ug/L							U
<i>Surrogate: Toluene-d8</i>	4.89		ug/L	5.00	97.8		80-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.80		ug/L	5.00	96.0		80-120			
LCS (BIL0652-BS1)										
Benzene	9.11	0.20	ug/L	10.0		91.1	80-120			
Toluene	9.19	0.20	ug/L	10.0		91.9	80-120			
Ethylbenzene	9.13	0.20	ug/L	10.0		91.3	80-120			
m,p-Xylene	21.4	0.40	ug/L	20.0		107	80-121			
o-Xylene	8.94	0.20	ug/L	10.0		89.4	80-121			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.64		ug/L	5.00	92.8		80-129			
<i>Surrogate: Toluene-d8</i>	5.02		ug/L	5.00	100		80-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.91		ug/L	5.00	98.1		80-120			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	4.85		ug/L	5.00	97.1		80-120			
LCS (BIL0652-BS2)										
Gasoline Range Organics (Tol-Nap)	965	100	ug/L	1000		96.5	72-128			
<i>Surrogate: Toluene-d8</i>	5.21		ug/L	5.00	104		80-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	5.07		ug/L	5.00	101		80-120			
LCS Dup (BIL0652-BSD1)										
Benzene	9.27	0.20	ug/L	10.0		92.7	80-120	1.80	30	
Toluene	9.36	0.20	ug/L	10.0		93.6	80-120	1.79	30	



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Volatile Organic Compounds - Quality Control

Batch BIL0652 - 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	RPD Limit	Notes
LCS Dup (BIL0652-BSD1) Prepared: 23-Dec-2020 Analyzed: 23-Dec-2020 10:10										
Ethylbenzene	9.39	0.20	ug/L	10.0	93.9	80-120	2.77	30		
m,p-Xylene	21.4	0.40	ug/L	20.0	107	80-121	0.18	30		
o-Xylene	9.12	0.20	ug/L	10.0	91.2	80-121	1.92	30		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.15		ug/L	5.00	103	80-129				
<i>Surrogate: Toluene-d8</i>	4.95		ug/L	5.00	99.0	80-120				
<i>Surrogate: 4-Bromofluorobenzene</i>	5.10		ug/L	5.00	102	80-120				
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	4.85		ug/L	5.00	97.0	80-120				
LCS Dup (BIL0652-BSD2) Prepared: 23-Dec-2020 Analyzed: 23-Dec-2020 11:02										
Gasoline Range Organics (Tol-Nap)	920	100	ug/L	1000	92.0	72-128	4.76	30		
<i>Surrogate: Toluene-d8</i>	4.99		ug/L	5.00	99.7	80-120				
<i>Surrogate: 4-Bromofluorobenzene</i>	4.63		ug/L	5.00	92.6	80-120				



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Reported:
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Semivolatile Organic Compounds - SIM - Quality Control

Batch BIL0670 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD RPD	RPD Limit	Notes
Blank (BIL0670-BLK1)										
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
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.208		ug/L	0.300	69.5		42-120			
<i>Surrogate: Dibenzo[a,h]anthracene-d14</i>	0.109		ug/L	0.300	36.4		29-120			
<i>Surrogate: Fluoranthene-d10</i>	0.232		ug/L	0.300	77.3		57-120			

LCS (BIL0670-BS1)										
Naphthalene	0.219	0.010	ug/L	0.300	73.2		37-120			
2-Methylnaphthalene	0.223	0.010	ug/L	0.300	74.4		37-120			
1-Methylnaphthalene	0.226	0.010	ug/L	0.300	75.4		29-120			
Acenaphthylene	0.211	0.010	ug/L	0.300	70.4		41-120			
Acenaphthene	0.217	0.010	ug/L	0.300	72.4		41-120			
Dibenzofuran	0.216	0.010	ug/L	0.300	72.1		38-120			
Fluorene	0.220	0.010	ug/L	0.300	73.2		43-120			
Phenanthrene	0.208	0.010	ug/L	0.300	69.3		41-120			
Anthracene	0.215	0.010	ug/L	0.300	71.7		40-120			
Fluoranthene	0.238	0.010	ug/L	0.300	79.4		45-120			
Pyrene	0.239	0.010	ug/L	0.300	79.7		41-120			



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Project Manager: Karen Mixon

Reported:
06-Jan-2021 14:10

Semivolatile Organic Compounds - SIM - Quality Control

Batch BIL0670 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Notes
LCS (BIL0670-BS1)										
Benzo(a)anthracene	0.235	0.010	ug/L	0.300	78.5	42-120				
Chrysene	0.236	0.010	ug/L	0.300	78.8	44-120				
Benzo(b)fluoranthene	0.228	0.010	ug/L	0.300	75.9	44-120				
Benzo(k)fluoranthene	0.228	0.010	ug/L	0.300	76.0	50-120				
Benzo(a)pyrene	0.224	0.010	ug/L	0.300	74.6	35-120				
Indeno(1,2,3-cd)pyrene	0.182	0.010	ug/L	0.300	60.7	37-120				
Dibenzo(a,h)anthracene	0.154	0.010	ug/L	0.300	51.2	34-120				Q
Benzo(g,h,i)perylene	0.185	0.010	ug/L	0.300	61.7	38-120				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.222		ug/L	0.300	74.0	42-120				
<i>Surrogate: Dibenzo[a,h]anthracene-d14</i>	0.152		ug/L	0.300	50.6	29-120				
<i>Surrogate: Fluoranthene-d10</i>	0.239		ug/L	0.300	79.6	57-120				
LCS Dup (BIL0670-BSD1)										
Naphthalene	0.238	0.010	ug/L	0.300	79.2	37-120	7.95	30		
2-Methylnaphthalene	0.240	0.010	ug/L	0.300	80.2	37-120	7.40	30		
1-Methylnaphthalene	0.243	0.010	ug/L	0.300	81.0	29-120	7.12	30		
Acenaphthylene	0.229	0.010	ug/L	0.300	76.2	41-120	7.87	30		
Acenaphthene	0.235	0.010	ug/L	0.300	78.3	41-120	7.87	30		
Dibenzofuran	0.235	0.010	ug/L	0.300	78.3	38-120	8.24	30		
Fluorene	0.238	0.010	ug/L	0.300	79.4	43-120	8.02	30		
Phenanthrene	0.234	0.010	ug/L	0.300	78.1	41-120	12.00	30		
Anthracene	0.238	0.010	ug/L	0.300	79.3	40-120	10.00	30		
Fluoranthene	0.268	0.010	ug/L	0.300	89.2	45-120	11.60	30		
Pyrene	0.267	0.010	ug/L	0.300	89.0	41-120	11.10	30		
Benzo(a)anthracene	0.257	0.010	ug/L	0.300	85.6	42-120	8.62	30		
Chrysene	0.261	0.010	ug/L	0.300	87.1	44-120	10.00	30		
Benzo(b)fluoranthene	0.248	0.010	ug/L	0.300	82.5	44-120	8.43	30		
Benzo(k)fluoranthene	0.251	0.010	ug/L	0.300	83.6	50-120	9.62	30		
Benzo(a)pyrene	0.240	0.010	ug/L	0.300	80.1	35-120	7.12	30		
Indeno(1,2,3-cd)pyrene	0.197	0.010	ug/L	0.300	65.7	37-120	7.93	30		
Dibenzo(a,h)anthracene	0.160	0.010	ug/L	0.300	53.3	34-120	4.06	30		Q
Benzo(g,h,i)perylene	0.202	0.010	ug/L	0.300	67.5	38-120	8.91	30		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.234		ug/L	0.300	78.1	42-120				
<i>Surrogate: Dibenzo[a,h]anthracene-d14</i>	0.156		ug/L	0.300	52.0	29-120				



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Project: Laurel Station
Project Number: 60606281
Project Manager: Karen Mixon

Reported:
06-Jan-2021 14:10

Semivolatile Organic Compounds - SIM - Quality Control

Batch BIL0670 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Notes
LCS Dup (BIL0670-BSD1) Prepared: 24-Dec-2020 Analyzed: 05-Jan-2021 18:53										
Surrogate: Fluoranthene-d10	0.264		ug/L	0.300	88.1		57-120			
Matrix Spike (BIL0670-MS1) Source: 20L0393-01 Prepared: 24-Dec-2020 Analyzed: 05-Jan-2021 20:31										
Naphthalene	0.225	0.010	ug/L	0.300	ND	73.5	37-120			
2-Methylnaphthalene	0.230	0.010	ug/L	0.300	ND	75.7	37-120			
1-Methylnaphthalene	0.230	0.010	ug/L	0.300	ND	76.1	29-120			
Acenaphthylene	0.212	0.010	ug/L	0.300	ND	70.7	41-120			
Acenaphthene	0.222	0.010	ug/L	0.300	ND	74.0	41-120			
Dibenzofuran	0.218	0.010	ug/L	0.300	ND	72.6	38-120			
Fluorene	0.222	0.010	ug/L	0.300	ND	74.1	43-120			
Phenanthrene	0.207	0.010	ug/L	0.300	ND	68.7	41-120			
Anthracene	0.218	0.010	ug/L	0.300	ND	72.6	40-120			
Fluoranthene	0.240	0.010	ug/L	0.300	ND	80.0	45-120			
Pyrene	0.244	0.010	ug/L	0.300	ND	81.3	41-120			
Benzo(a)anthracene	0.240	0.010	ug/L	0.300	ND	79.9	42-120			
Chrysene	0.241	0.010	ug/L	0.300	ND	80.2	44-120			
Benzo(b)fluoranthene	0.228	0.010	ug/L	0.300	ND	76.0	44-120			
Benzo(k)fluoranthene	0.245	0.010	ug/L	0.300	ND	81.7	50-120			
Benzo(a)pyrene	0.228	0.010	ug/L	0.300	ND	76.0	35-120			
Indeno(1,2,3-cd)pyrene	0.183	0.010	ug/L	0.300	ND	61.0	37-120			
Dibenzo(a,h)anthracene	0.164	0.010	ug/L	0.300	ND	54.6	34-120			
Benzo(g,h,i)perylene	0.183	0.010	ug/L	0.300	ND	60.9	38-120			Q
Surrogate: 2-Methylnaphthalene-d10	0.220		ug/L	0.300	0.218	73.3	42-120			
Surrogate: Dibenzo[a,h]anthracene-d14	0.155		ug/L	0.300	0.139	51.5	29-120			
Surrogate: Fluoranthene-d10	0.240		ug/L	0.300	0.248	79.9	57-120			

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

Matrix Spike Dup (BIL0670-MSD1)	Source: 20L0393-01	Prepared: 24-Dec-2020 Analyzed: 05-Jan-2021 21:03							
Naphthalene	0.222	0.010	ug/L	0.300	ND	72.6	37-120	1.22	30
2-Methylnaphthalene	0.226	0.010	ug/L	0.300	ND	74.5	37-120	1.60	30
1-Methylnaphthalene	0.227	0.010	ug/L	0.300	ND	75.0	29-120	1.36	30
Acenaphthylene	0.209	0.010	ug/L	0.300	ND	69.7	41-120	1.32	30
Acenaphthene	0.219	0.010	ug/L	0.300	ND	73.0	41-120	1.36	30
Dibenzofuran	0.214	0.010	ug/L	0.300	ND	71.4	38-120	1.65	30
Fluorene	0.221	0.010	ug/L	0.300	ND	73.8	43-120	0.52	30



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Semivolatile Organic Compounds - SIM - Quality Control

Batch BIL0670 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Notes
Matrix Spike Dup (BIL0670-MSD1)										
Phenanthrene	0.207	0.010	ug/L	0.300	ND	68.4	41-120	0.33	30	
Anthracene	0.223	0.010	ug/L	0.300	ND	74.3	40-120	2.23	30	
Fluoranthene	0.239	0.010	ug/L	0.300	ND	79.8	45-120	0.28	30	
Pyrene	0.243	0.010	ug/L	0.300	ND	80.9	41-120	0.43	30	
Benzo(a)anthracene	0.237	0.010	ug/L	0.300	ND	79.1	42-120	1.02	30	
Chrysene	0.241	0.010	ug/L	0.300	ND	80.3	44-120	0.17	30	
Benzo(b)fluoranthene	0.228	0.010	ug/L	0.300	ND	76.1	44-120	0.17	30	
Benzo(k)fluoranthene	0.227	0.010	ug/L	0.300	ND	75.7	50-120	7.62	30	
Benzo(a)pyrene	0.216	0.010	ug/L	0.300	ND	72.0	35-120	5.35	30	
Indeno(1,2,3-cd)pyrene	0.182	0.010	ug/L	0.300	ND	60.6	37-120	0.63	30	
Dibenz(a,h)anthracene	0.164	0.010	ug/L	0.300	ND	54.7	34-120	0.18	30	Q
Benzo(g,h,i)perylene	0.184	0.010	ug/L	0.300	ND	61.2	38-120	0.43	30	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.220		ug/L	0.300	0.218	73.2	42-120			
<i>Surrogate: Dibenzo[a,h]anthracene-d14</i>	0.155		ug/L	0.300	0.139	51.5	29-120			
<i>Surrogate: Fluoranthene-d10</i>	0.242		ug/L	0.300	0.248	80.5	57-120			

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



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Petroleum Hydrocarbons - Quality Control

Batch BIL0682 - EPA 3510C SepF

Instrument: FID4 Analyst: CTO

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD RPD	RPD Limit	Notes
Blank (BIL0682-BLK1) Prepared: 28-Dec-2020 Analyzed: 31-Dec-2020 18:38										
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	0.192		mg/L	0.225		85.2		50-150		
LCS (BIL0682-BS1) Prepared: 28-Dec-2020 Analyzed: 31-Dec-2020 18:59										
Diesel Range Organics (C12-C24)	2.52	0.100	mg/L	3.00		84.0	56-120			
Surrogate: o-Terphenyl	0.208		mg/L	0.225		92.4	50-150			
LCS Dup (BIL0682-BSD1) Prepared: 28-Dec-2020 Analyzed: 31-Dec-2020 19:19										
Diesel Range Organics (C12-C24)	2.52	0.100	mg/L	3.00		84.1	56-120	0.11	30	
Surrogate: o-Terphenyl	0.214		mg/L	0.225		94.9	50-150			



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Certified Analyses included in this Report

Analyte	Certifications
EPA 8260D in Water	
Chloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Chloromethane	DoD-ELAP,ADEC,NELAP,CALAP
Chloromethane	DoD-ELAP,ADEC,CALAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,CALAP
Vinyl Chloride	DoD-ELAP,ADEC,CALAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Bromomethane	DoD-ELAP,ADEC,CALAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,CALAP
Bromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,CALAP
Chloroethane	DoD-ELAP,ADEC,CALAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,CALAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,CALAP
Acrolein	DoD-ELAP,NELAP,CALAP
Acrolein	DoD-ELAP,NELAP,WADOE
Acrolein	DoD-ELAP,NELAP,CALAP,WADOE
Acrolein	DoD-ELAP,CALAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,CALAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,CALAP
Acetone	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acetone	DoD-ELAP,ADEC,CALAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE



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1,1-Dichloroethene	DoD-ELAP,ADEC,CALAP,WADOE
Iodomethane	DoD-ELAP,NELAP,CALAP
Iodomethane	DoD-ELAP,CALAP,WADOE
Iodomethane	DoD-ELAP,NELAP,WADOE
Iodomethane	DoD-ELAP,NELAP,CALAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,CALAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,CALAP
Methylene Chloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,CALAP
Acrylonitrile	DoD-ELAP,CALAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,CALAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,WADOE
Carbon Disulfide	DoD-ELAP,CALAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,CALAP
Carbon Disulfide	DoD-ELAP,NELAP,CALAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,CALAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,CALAP
Vinyl Acetate	DoD-ELAP,CALAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,CALAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,CALAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP
2-Butanone	DoD-ELAP,CALAP,WADOE
2-Butanone	DoD-ELAP,NELAP,CALAP,WADOE
2-Butanone	DoD-ELAP,NELAP,CALAP
2-Butanone	DoD-ELAP,NELAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP
2,2-Dichloropropane	DoD-ELAP,ADEC,CALAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,CALAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE



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cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Chloroform	DoD-ELAP,ADEC,CALAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,CALAP
Chloroform	DoD-ELAP,ADEC,NELAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP
Bromochloromethane	DoD-ELAP,ADEC,CALAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,CALAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP
1,1-Dichloropropene	DoD-ELAP,ADEC,CALAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,CALAP
Carbon tetrachloride	DoD-ELAP,ADEC,CALAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,2-Dichloroethane	DoD-ELAP,ADEC,CALAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Benzene	DoD-ELAP,ADEC,CALAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,CALAP
Benzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,CALAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,CALAP
Trichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,CALAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,CALAP



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Bromodichloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,CALAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,CALAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,CALAP
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,CALAP
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,CALAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,CALAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,CALAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,CALAP
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,CALAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP
Toluene	DoD-ELAP,ADEC,CALAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,CALAP
Toluene	DoD-ELAP,ADEC,NELAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,CALAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP
2-Hexanone	DoD-ELAP,CALAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,CALAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,CALAP
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,CALAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP
1,3-Dichloropropane	DoD-ELAP,ADEC,CALAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE



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Tetrachloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,CALAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,CALAP
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,CALAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,CALAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,CALAP
1,2-Dibromoethane	DoD-ELAP,CALAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,CALAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP
Chlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,CALAP
Ethylbenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,CALAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,CALAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,CALAP
m,p-Xylene	DoD-ELAP,ADEC,CALAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
o-Xylene	DoD-ELAP,ADEC,CALAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,CALAP
o-Xylene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Styrene	DoD-ELAP,NELAP,WADOE
Styrene	DoD-ELAP,NELAP,CALAP,WADOE
Styrene	DoD-ELAP,CALAP,WADOE
Styrene	DoD-ELAP,NELAP,CALAP
Bromoform	DoD-ELAP,NELAP,WADOE
Bromoform	DoD-ELAP,CALAP,WADOE
Bromoform	DoD-ELAP,NELAP,CALAP



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Bromoform	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,CALAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,CALAP
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,CALAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,CALAP
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,CALAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,CALAP
n-Propylbenzene	DoD-ELAP,CALAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,CALAP,WADOE
Bromobenzene	DoD-ELAP,CALAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,CALAP
Isopropyl Benzene	DoD-ELAP,NELAP,CALAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,WADOE
Isopropyl Benzene	DoD-ELAP,CALAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,CALAP
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,CALAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,CALAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP
t-Butylbenzene	DoD-ELAP,CALAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,CALAP
t-Butylbenzene	DoD-ELAP,NELAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,CALAP



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1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,CALAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,CALAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,CALAP
s-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,CALAP
s-Butylbenzene	DoD-ELAP,CALAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,CALAP
4-Isopropyl Toluene	DoD-ELAP,CALAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,CALAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP
1,3-Dichlorobenzene	DoD-ELAP,ADEC,CALAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP
1,4-Dichlorobenzene	DoD-ELAP,ADEC,CALAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,WADOE
n-Butylbenzene	DoD-ELAP,CALAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,CALAP
n-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,CALAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,CALAP
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,CALAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,CALAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,CALAP



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Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,CALAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,CALAP
Naphthalene	DoD-ELAP,ADEC,NELAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Naphthalene	DoD-ELAP,ADEC,CALAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,CALAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,CALAP
Dichlorodifluoromethane	DoD-ELAP,ADEC,CALAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,CALAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,CALAP
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
n-Hexane	WADOE
n-Hexane	WADOE
n-Hexane	
n-Hexane	WADOE
2-Pentanone	WADOE
2-Pentanone	WADOE
2-Pentanone	
2-Pentanone	WADOE

EPA 8270E-SIM in Water

Naphthalene	ADEC,DoD-ELAP,NELAP,WADOE
Naphthalene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Naphthalene	ADEC,DoD-ELAP,CALAP,WADOE
Naphthalene	ADEC,DoD-ELAP,NELAP,CALAP
2-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,CALAP
2-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,CALAP
2-Methylnaphthalene	ADEC,DoD-ELAP,CALAP
2-Methylnaphthalene	ADEC,DoD-ELAP,NELAP
1-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
1-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,CALAP
1-Methylnaphthalene	ADEC,DoD-ELAP,CALAP,WADOE



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1-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,WADOE
Biphenyl	NELAP
Acenaphthylene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Acenaphthylene	ADEC,DoD-ELAP,NELAP,WADOE
Acenaphthylene	ADEC,DoD-ELAP,CALAP,WADOE
Acenaphthylene	ADEC,DoD-ELAP,NELAP,CALAP
Acenaphthene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Acenaphthene	ADEC,DoD-ELAP,NELAP,CALAP
Acenaphthene	ADEC,DoD-ELAP,CALAP,WADOE
Acenaphthene	ADEC,DoD-ELAP,NELAP,WADOE
Dibenzofuran	ADEC,DoD-ELAP,CALAP
Dibenzofuran	ADEC,DoD-ELAP,NELAP,CALAP
Dibenzofuran	ADEC,DoD-ELAP,NELAP,CALAP
Dibenzofuran	ADEC,DoD-ELAP,NELAP
Fluorene	ADEC,DoD-ELAP,NELAP,WADOE
Fluorene	ADEC,DoD-ELAP,NELAP,CALAP
Fluorene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Fluorene	ADEC,DoD-ELAP,CALAP,WADOE
Phenanthrene	ADEC,DoD-ELAP,NELAP,CALAP
Phenanthrene	ADEC,DoD-ELAP,CALAP,WADOE
Phenanthrene	ADEC,DoD-ELAP,NELAP,WADOE
Phenanthrene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Anthracene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Anthracene	ADEC,DoD-ELAP,CALAP,WADOE
Anthracene	ADEC,DoD-ELAP,NELAP,CALAP
Carbazole	NELAP
Carbazole	NELAP
Carbazole	NELAP
Fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Fluoranthene	ADEC,DoD-ELAP,CALAP,WADOE
Fluoranthene	ADEC,DoD-ELAP,NELAP,CALAP
Fluoranthene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Pyrene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Pyrene	ADEC,DoD-ELAP,CALAP,WADOE



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Pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Pyrene	ADEC,DoD-ELAP,NELAP,CALAP
Benzo(a)anthracene	ADEC,DoD-ELAP,CALAP,WADOE
Benzo(a)anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(a)anthracene	ADEC,DoD-ELAP,NELAP,CALAP
Benzo(a)anthracene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Chrysene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Chrysene	ADEC,DoD-ELAP,NELAP,CALAP
Chrysene	ADEC,DoD-ELAP,CALAP,WADOE
Chrysene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(b)fluoranthene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(b)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(b)fluoranthene	ADEC,DoD-ELAP,CALAP,WADOE
Benzo(b)fluoranthene	ADEC,DoD-ELAP,NELAP,CALAP
Benzo(k)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(k)fluoranthene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(k)fluoranthene	ADEC,DoD-ELAP,NELAP,CALAP
Benzo(j)fluoranthene	ADEC,DoD-ELAP,WADOE
Benzo(j)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(j)fluoranthene	ADEC,DoD-ELAP,NELAP
Benzo(j)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(e)pyrene	NELAP
Benzo(e)pyrene	NELAP
Benzo(e)pyrene	NELAP
Benzo(e)pyrene	
Benzo(a)pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(a)pyrene	ADEC,DoD-ELAP,CALAP,WADOE
Benzo(a)pyrene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(a)pyrene	ADEC,DoD-ELAP,NELAP,CALAP
Perylene	ADEC,NELAP
Perylene	ADEC,CALAP
Perylene	ADEC,NELAP,CALAP
Perylene	ADEC,NELAP,CALAP
Indeno(1,2,3-cd)pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Indeno(1,2,3-cd)pyrene	ADEC,DoD-ELAP,CALAP,WADOE
Indeno(1,2,3-cd)pyrene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Indeno(1,2,3-cd)pyrene	ADEC,DoD-ELAP,NELAP,CALAP
Dibenzo(a,h)anthracene	ADEC,DoD-ELAP,NELAP,WADOE



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Dibenzo(a,h)anthracene	ADEC,DoD-ELAP,CALAP,WADOE
Dibenzo(a,h)anthracene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Dibenzo(a,h)anthracene	ADEC,DoD-ELAP,NELAP,CALAP
Benzo(g,h,i)perylene	ADEC,DoD-ELAP,NELAP,CALAP
Benzo(g,h,i)perylene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(g,h,i)perylene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(g,h,i)perylene	ADEC,DoD-ELAP,CALAP,WADOE

NWTPH-Dx in Water

Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C25)	DoD-ELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP
Diesel Range Organics (Tol-C18)	DoD-ELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,WADOE
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C25)	DoD-ELAP
Diesel Range Organics (C12-C25)	DoD-ELAP
Diesel Range Organics (C12-C25)	DoD-ELAP
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP



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Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP
Motor Oil Range Organics (C25-C36)	DoD-ELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP
Motor Oil Range Organics (C24-C40)	DoD-ELAP,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
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,WADOE
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP
JP8 Range Organics (C8-C18)	DoD-ELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP
JP4 Range Organics (Tol-C14)	DoD-ELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE



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Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP
Jet-A Range Organics (C10-C18)	DoD-ELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP

NWTPHg in Water

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



AECOM

1111 Third Avenue, Suite 1600
Seattle WA, 98101

Project: Laurel Station

Project Number: 60606281
Project Manager: Karen Mixon

Reported:
06-Jan-2021 14:10

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	01/31/2021
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	01/01/2021



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06-Jan-2021 14:10

Notes and Definitions

- * Flagged value is not within established control limits.
- D The reported value is from a 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.