



Remediation Management Services Company

4 Centerpointe Drive, Suite 200
La Palma, CA 90623
Room LPR 4-222
Office: (360) 594-7978
wade.melton@bp.com

January 28, 2021

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

Dear Mr. Fielder:

Please find the enclosed Semi-Annual Groundwater Monitoring Report – Second Half of 2020, that documents the results at ARCO Facility No. 5300 located at 710 15th Avenue, Longview, Washington.

Sincerely yours,

A handwritten signature in blue ink, appearing to read 'Wade Melton', on a light blue background.

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

cc: File, Antea Group



Semi-Annual Groundwater Monitoring Report

Second Half of 2020
ARCO Facility No. 5300
710 15th Avenue, Longview, Washington

Antea[®]Group

Understanding today.
Improving tomorrow.

PREPARED FOR

Remediation Management Services
Company

An affiliate of Atlantic Richfield Company
4 Centerpointe Drive, Suite 200
Room LPR-4-222
La Palma, CA 90623

PREPARED BY

Antea Group, Seattle WA
January 28, 2021
Project # 05300SA201

us.anteagroup.com

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Semi-Annual Groundwater Monitoring Report

Second Half of 2020

ARCO Facility No. 5300

710 15th Avenue, Longview, Washington

ARCO Facility No.	5300
Address	710 15th Avenue, Longview, Washington
Atlantic Richfield Project Manager	Wade Melton, +1 360 594 7978
Consulting Co. /Contact Person	Antea Group / Nolan Lewis, +1 503 863 2112
Consultant Project Number	05300SA201
Ecology Facility/Site ID No.	Washington State Department of Ecology / 41995646

WORK PERFORMED DURING SECOND HALF OF 2020

- Antea®Group (Antea Group) conducted quarterly groundwater monitoring and sampling on September 1, and December 2, 2020.
- Antea Group prepared a Semi-Annual Groundwater Monitoring Report.

WORK SCHEDULED FOR FIRST HALF OF 2021

- Antea Group will enroll the Site in the Pollution Liability Insurance Agency's (PLIA) Petroleum Technical Assistance Program (PTAP).
- Antea Group will submit a work plan to PLIA focused on addressing potential data gaps at the site.
- PLIA's review, comment, and approval of the work plan will be requested prior to initiating additional on-site work.

Current Phase of Project	Monitoring	
Frequency of Groundwater Sampling and Monitoring	Postponed pending PLIA intake, discussions, and work plan approval.	
Are LPH Present On-Site	No	
LPH Recovered this Reporting Period	None	
Cumulative LPH Recovered to Date	None	
Amount of Soil Removed to Date	9.91 tons (Dispenser Upgrades – Antea Group, December 2010)	
Current Remediation Techniques	Natural Attenuation	
Approximate Depth to Groundwater	September 1, 2020 December 2, 2020	11.40 – 12.45 ft bgs. 10.49 – 11.68 ft bgs.
Groundwater Gradient	September 1, 2020 December 2, 2020	southwest, 0.02 ft./linear ft. Southwest, 0.02 ft./linear ft.

REMARKS

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

Prepared by



Jonah Leurquin
Staff Professional

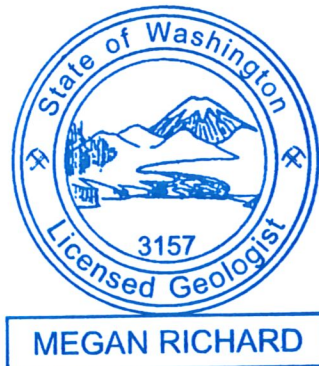
Date: January 28, 2021

Reviewed by:



Nolan Lewis
Project Manager

Date: January 28, 2021



Megan Richard, LG
Senior Project Manager

Date: January 26, 2021

cc: Mr. Aaren Fiedler, Washington Department of Ecology, Southwest Regional Office (Hardcopy, Electronic Copy)
Mr. Wade Melton, Remediation Management Services Company (Electronic copy, RMO upload)
File, Antea Group File, Antea Group

CONTACT INFORMATION

4006 148th Avenue NE
Redmond, WA 98025 USA

Toll Free +1 800 477 7411
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Tables

Table 1 - Groundwater Gauging Data

Table 2 - Groundwater Analytical Data

Table 1
Groundwater Gauging Data
ARCO Facility No. 5300
710 15th Avenue, Longview, WA

Well I.D.	Date	GROUNDWATER ELEVATION DATA					
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-1	9/6/2012	99.90	11.57	NP	--	88.33	--
MW-1	12/14/2012	99.90	10.45	NP	--	89.45	--
MW-1	1/9/2013	99.90	10.42	NP	--	89.48	--
MW-1	5/29/2013	99.90	10.68	NP	--	89.22	--
MW-1	8/20/2013	99.90	11.45	NP	--	88.45	--
MW-1	11/13/2013	99.90	11.08	NP	--	88.82	--
MW-1	2/19/2014	99.90	10.54	NP	--	89.36	--
MW-1	4/23/2014	99.90	10.40	NP	--	89.50	--
MW-1	8/7/2014	99.90	11.28	NP	--	88.62	--
MW-1	11/19/2014	99.90	11.12	NP	--	88.78	--
MW-1	2/25/2015	99.90	10.72	NP	--	89.18	--
MW-1	8/11/2015	99.90	11.84	NP	--	88.06	--
MW-1	2/3/2016	99.90	10.10	NP	--	89.80	--
MW-1	4/8/2016	99.90	10.20	NP	--	89.70	--
MW-1	9/20/2016	99.90	11.88	NP	--	88.02	--
MW-1	12/28/2016	99.90	10.18	NP	--	89.72	--
MW-1	3/24/2017	99.90	9.65	NP	--	90.25	--
MW-1	6/22/2017	99.90	10.42	NP	--	89.48	--
MW-1	9/29/2017	99.90	11.48	NP	--	88.42	--
MW-1	11/14/2017	99.90	10.91	NP	--	88.99	--
MW-1	2/26/2018	99.90	10.02	NP	--	89.88	--
MW-1	6/12/2018	99.90	10.61	NP	--	89.29	--
MW-1	8/14/2018	99.90	11.40	NP	--	88.50	--
MW-1	9/11/2018	99.90	11.42	NP	--	88.48	--
MW-1	11/29/2018	99.90	11.12	NP	--	88.78	--
MW-1	2/26/2019	99.90	10.49	NP	--	89.41	--
MW-1	5/16/2019	99.90	10.85	NP	--	89.05	--
MW-1	9/6/2019	99.90	11.78	NP	--	88.12	--
MW-1	1/6/2020	99.90	10.75	NP	--	89.15	--

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		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-1	3/18/2020	99.90	10.38	NP	--	89.52	--
MW-1	6/18/2020	99.90	10.46	NP	--	89.44	--
MW-1	9/1/2020	99.90	11.47	NP	--	88.43	--
MW-1	12/2/2020	99.90	10.79	NP	--	89.11	--
MW-2	9/6/2012	99.72	11.43	NP	--	88.29	--
MW-2	12/14/2012	99.72	10.45	NP	--	89.27	--
MW-2	1/9/2013	99.72	10.38	NP	--	89.34	--
MW-2	5/29/2013	99.72	10.66	NP	--	89.06	--
MW-2	8/20/2013	99.72	11.35	NP	--	88.37	--
MW-2	11/13/2013	99.72	11.02	NP	--	88.70	--
MW-2	2/19/2014	99.72	10.49	NP	--	89.23	--
MW-2	4/23/2014	99.72	10.38	NP	--	89.34	--
MW-2	8/7/2014	99.72	11.22	NP	--	88.50	--
MW-2	11/19/2014	99.72	11.03	NP	--	88.69	--
MW-2	2/25/2015	99.72	10.72	NP	--	89.00	--
MW-2	8/11/2015	99.72	11.74	NP	--	87.98	--
MW-2	2/3/2016	99.72	9.88	NP	--	89.84	--
MW-2	4/8/2016	99.72	10.13	NP	--	89.59	--
MW-2	9/20/2016	99.72	11.80	NP	--	87.92	--
MW-2	12/28/2016	99.72	10.11	NP	--	89.61	--
MW-2	3/24/2017	99.72	9.55	NP	--	90.17	--
MW-2	6/22/2017	99.72	10.35	NP	--	89.37	--
MW-2	9/29/2017	99.72	11.41	NP	--	88.31	--
MW-2	11/14/2017	99.72	10.48	NP	--	89.24	--
MW-2	2/26/2018	99.72	9.92	NP	--	89.80	--
MW-2	6/12/2018	99.72	10.56	NP	--	89.16	--
MW-2	8/14/2018	99.72	11.34	NP	--	88.38	--
MW-2	9/11/2018	99.72	11.32	NP	--	88.40	--

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		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-2	11/29/2018	99.72	11.10	NP	--	88.62	--
MW-2	2/26/2019	99.72	10.45	NP	--	89.27	--
MW-2	5/16/2019	99.72	10.78	NP	--	88.94	--
MW-2	9/6/2019	99.72	11.72	NP	--	88.00	--
MW-2	9/23/2019	99.72	11.53	NP	--	88.19	--
MW-2	10/28/2019	99.72	11.25	NP	--	88.47	--
MW-2	1/6/2020	99.72	10.68	NP	--	89.04	--
MW-2	3/18/2020	99.72	10.28	NP	--	89.44	--
MW-2	6/18/2020	99.72	10.42	NP	--	89.30	--
MW-2	9/1/2020	99.72	11.40	NP	--	88.32	--
MW-2	12/2/2020	99.72	10.49	NP	--	89.23	--
MW-3	9/6/2012	99.68	11.63	NP	--	88.05	--
MW-3	12/14/2012	99.68	10.51	NP	--	89.17	--
MW-3	1/9/2013	99.68	10.45	NP	--	89.23	--
MW-3	5/29/2013	99.68	10.81	NP	--	88.87	--
MW-3	8/20/2013	99.68	11.55	NP	--	88.13	--
MW-3	11/13/2013	99.68	11.10	NP	--	88.58	--
MW-3	2/19/2014	99.68	10.01	NP	--	89.67	--
MW-3	4/23/2014	99.68	10.47	NP	--	89.21	--
MW-3	8/7/2014	99.68	11.36	NP	--	88.32	--
MW-3	11/19/2014	99.68	11.10	NP	--	88.58	--
MW-3	2/25/2015	99.68	10.92	NP	--	88.76	--
MW-3	8/11/2015	99.68	11.94	NP	--	87.74	--
MW-3	2/3/2016	99.68	10.25	NP	--	89.43	--
MW-3	4/8/2016	99.68	10.44	NP	--	89.24	--
MW-3	9/20/2016	99.68	11.82	NP	--	87.86	--
MW-3	12/28/2016	99.68	10.20	NP	--	89.48	--
MW-3	3/24/2017	99.68	9.63	NP	--	90.05	--

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		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-3	6/22/2017	99.68	10.85	NP	--	88.83	--
MW-3	9/29/2017	99.68	11.64	NP	--	88.04	--
MW-3	11/14/2017	99.68	10.81	NP	--	88.87	--
MW-3	2/26/2018	99.68	9.95	NP	--	89.73	--
MW-3	6/12/2018	99.68	10.90	NP	--	88.78	--
MW-3	8/14/2018	99.68	11.56	NP	--	88.12	--
MW-3	9/11/2018	99.68	11.57	NP	--	88.11	--
MW-3	11/29/2018	99.68	11.12	NP	--	88.56	--
MW-3	2/26/2019	99.68	10.55	NP	--	89.13	--
MW-3	5/16/2019	99.68	11.00	NP	--	88.68	--
MW-3	9/6/2019	99.68	11.90	NP	--	87.78	--
MW-3	1/6/2020	99.68	10.17	NP	--	89.51	--
MW-3	3/18/2020	99.68	10.53	NP	--	89.15	--
MW-3	6/18/2020	99.68	10.72	NP	--	88.96	--
MW-3	9/1/2020	99.68	11.63	NP	--	88.05	--
MW-3	12/2/2020	99.68	10.70	NP	--	88.98	--
MW-4	9/6/2012	100.00	12.02	NP	--	87.98	--
MW-4	12/14/2012	100.00	11.03	NP	--	88.97	--
MW-4	1/9/2013	100.00	10.90	NP	--	89.10	--
MW-4	5/29/2013	100.00	11.28	NP	--	88.72	--
MW-4	8/20/2013	100.00	11.95	NP	--	88.05	--
MW-4	11/13/2013	100.00	11.69	NP	--	88.31	--
MW-4	2/19/2014	100.00	10.73	NP	--	89.27	--
MW-4	4/23/2014	100.00	11.14	NP	--	88.86	--
MW-4	8/7/2014	100.00	11.88	NP	--	88.12	--
MW-4	11/19/2014	100.00	11.71	NP	--	88.29	--
MW-4	2/25/2015	100.00	11.43	NP	--	88.57	--
MW-4	8/11/2015	100.00	12.25	NP	--	87.75	--

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		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-4	2/3/2016	100.00	10.65	NP	--	89.35	--
MW-4	4/8/2016	100.00	10.78	NP	--	89.22	--
MW-4	9/20/2016	100.00	12.40	NP	--	87.60	--
MW-4	12/28/2016	100.00	10.70	NP	--	89.30	--
MW-4	3/24/2017	100.00	10.11	NP	--	89.89	--
MW-4	6/22/2017	100.00	11.11	NP	--	88.89	--
MW-4	9/29/2017	100.00	12.01	NP	--	87.99	--
MW-4	11/14/2017	100.00	11.48	NP	--	88.52	--
MW-4	2/26/2018	100.00	10.48	NP	--	89.52	--
MW-4	6/12/2018	100.00	11.32	NP	--	88.68	--
MW-4	8/14/2018	100.00	11.97	NP	--	88.03	--
MW-4	9/11/2018	100.00	11.99	NP	--	88.01	--
MW-4	11/29/2018	100.00	11.71	NP	--	88.29	--
MW-4	2/26/2019	100.00	11.03	NP	--	88.97	--
MW-4	5/16/2019	100.00	11.39	NP	--	88.61	--
MW-4	9/6/2019	100.00	12.31	NP	--	87.69	--
MW-4	9/23/2019	100.00	12.15	NP	--	87.85	--
MW-4	10/28/2019	100.00	11.91	NP	--	88.09	--
MW-4	1/6/2020	100.00	11.61	NP	--	88.39	--
MW-4	3/18/2020	100.00	11.12	NP	--	88.88	--
MW-4	6/18/2020	100.00	11.10	NP	--	88.90	--
MW-4	9/1/2020	100.00	12.27	NP	--	87.73	--
MW-4	12/2/2020	100.00	11.57	NP	--	88.43	--
MW-5	4/8/2016	99.63	11.13	NP	--	88.50	--
MW-5	9/20/2016	99.63	12.40	NP	--	87.23	--
MW-5	12/28/2016	99.63	11.24	NP	--	88.39	--
MW-5	3/24/2017	99.63	10.70	NP	--	88.93	--
MW-5	6/22/2017	99.63	11.41	NP	--	88.22	--

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Well I.D.	Date	GROUNDWATER ELEVATION DATA					
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-5	9/29/2017	99.63	12.07	NP	--	87.56	--
MW-5	11/14/2017	99.63	11.69	NP	--	87.94	--
MW-5	2/26/2018	99.63	11.03	NP	--	88.60	--
MW-5	6/12/2018	99.63	11.50	NP	--	88.13	--
MW-5	8/14/2018	99.63	11.96	NP	--	87.67	--
MW-5	9/11/2018	99.63	12.10	NP	--	87.53	--
MW-5	11/29/2018	99.63	11.86	NP	--	87.77	--
MW-5	2/26/2019	99.63	11.43	NP	--	88.20	--
MW-5	5/16/2019	99.63	11.70	NP	--	87.93	--
MW-5	9/6/2019	99.63	12.30	NP	--	87.33	--
MW-5	9/23/2019	99.63	12.22	NP	--	87.41	--
MW-5	10/28/2019	99.63	12.00	NP	--	87.63	--
MW-5	1/6/2020	99.63	11.47	NP	--	88.16	--
MW-6	8/20/2013	99.76	11.63	NP	--	88.13	--
MW-6	11/13/2013	99.76	11.43	NP	--	88.33	--
MW-6	2/19/2014	99.76	10.51	NP	--	89.25	--
MW-6	4/23/2014	99.76	10.68	NP	--	89.08	--
MW-6	8/7/2014	99.76	11.60	NP	--	88.16	--
MW-6	11/19/2014	99.73	11.35	NP	--	88.38	--
MW-6	2/25/2015	99.73	11.04	NP	--	88.69	--
MW-6	8/11/2015	99.73	12.00	NP	--	87.73	--
MW-6	2/3/2016	99.73	10.13	NP	--	89.60	--
MW-6	4/8/2016	99.73	10.40	NP	--	89.33	--
MW-6	9/20/2016	99.73	12.11	NP	--	87.62	--
MW-6	12/28/2016	99.73	10.43	NP	--	89.30	--
MW-6	3/24/2017	99.73	9.76	NP	--	89.97	--
MW-6	6/22/2017	99.73	10.78	NP	--	88.95	--
MW-6	9/29/2017	99.73	11.70	NP	--	88.03	--

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		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-6	11/14/2017	99.73	11.16	NP	--	88.57	--
MW-6	2/26/2018	99.73	10.11	NP	--	89.62	--
MW-6	6/12/2018	99.73	10.95	NP	--	88.78	--
MW-6	8/14/2018	99.73	11.62	NP	--	88.11	--
MW-6	9/11/2018	99.73	11.65	NP	--	88.08	--
MW-6	11/29/2018	99.73	11.39	NP	--	88.34	--
MW-6	2/26/2019	99.73	10.66	NP	--	89.07	--
MW-6	5/16/2019	99.73	11.16	NP	--	88.57	--
MW-6	9/6/2019	99.73	11.98	NP	--	87.75	--
MW-6	1/6/2020	99.73	10.83	NP	--	88.90	--
MW-6	3/18/2020	99.73	10.50	NP	--	89.23	--
MW-6	6/18/2020	99.73	10.74	NP	--	88.99	--
MW-6	9/1/2020	99.73	11.68	NP	--	88.05	--
MW-6	12/2/2020	99.73	10.72	NP	--	89.01	--
MW-7	8/20/2013	100.27	12.40	NP	--	87.87	--
MW-7	11/13/2013	100.27	12.09	NP	--	88.18	--
MW-7	2/19/2014	100.27	10.91	NP	--	89.36	--
MW-7	4/23/2014	100.27	11.52	NP	--	88.75	--
MW-7	8/7/2014	100.27	12.35	NP	--	87.92	--
MW-7	11/19/2014	100.27	12.09	NP	--	88.18	--
MW-7	2/25/2015	100.27	11.83	NP	--	88.44	--
MW-7	8/11/2015	100.27	12.75	NP	--	87.52	--
MW-7	2/3/2016	100.27	11.00	NP	--	89.27	--
MW-7	4/8/2016	100.27	11.40	NP	--	88.87	--
MW-7	9/20/2016	100.27	12.73	NP	--	87.54	--
MW-7	12/28/2016	100.27	11.18	NP	--	89.09	--
MW-7	3/24/2017	100.27	10.70	NP	--	89.57	--
MW-7	6/22/2017	100.27	11.67	NP	--	88.60	--

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		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-7	9/29/2017	100.27	12.50	NP	--	87.77	--
MW-7	11/14/2017	100.27	11.90	NP	--	88.37	--
MW-7	2/26/2018	100.27	10.97	NP	--	89.30	--
MW-7	6/12/2018	100.27	11.88	NP	--	88.39	--
MW-7	8/14/2018	100.27	12.42	NP	--	87.85	--
MW-7	9/11/2018	100.27	12.45	NP	--	87.82	--
MW-7	11/29/2018	100.27	12.10	NP	--	88.17	--
MW-7	2/26/2019	100.27	11.55	NP	--	88.72	--
MW-7	5/16/2019	100.27	11.86	NP	--	88.41	--
MW-7	9/6/2019	100.27	12.72	NP	--	87.55	--
MW-7	9/23/2019	100.27	12.57	NP	--	87.70	--
MW-7	10/28/2019	100.27	12.40	NP	--	87.87	--
MW-7	1/6/2020	100.27	11.14	NP	--	89.13	--
MW-7	3/18/2020	100.27	11.47	NP	--	88.80	--
MW-7	6/18/2020	100.27	11.66	NP	--	88.61	--
MW-7	9/1/2020	100.27	12.45	NP	--	87.82	--
MW-7	12/2/2020	100.27	11.68	NP	--	88.59	--
MW-8	8/20/2013	100.00	12.04	NP	--	87.96	--
MW-8	11/13/2013	100.00	12.73	NP	--	87.27	--
MW-8	2/19/2014	100.00	10.29	NP	--	89.71	--
MW-8	4/23/2014	100.00	11.14	NP	--	88.86	--
MW-8	8/7/2014	100.00	11.94	NP	--	88.06	--
MW-8	11/19/2014	100.00	11.70	NP	--	88.30	--
MW-8	2/25/2015	100.00	11.50	NP	--	88.50	--
MW-8	8/11/2015	100.00	12.42	NP	--	87.58	--
MW-8	2/3/2016	100.00	10.65	NP	--	89.35	--
MW-8	4/8/2016	100.00	11.04	NP	--	88.96	--
MW-8	9/20/2016	100.00	12.37	NP	--	87.63	--

Table 1
Groundwater Gauging Data
ARCO Facility No. 5300
710 15th Avenue, Longview, WA

Well I.D.	Date	GROUNDWATER ELEVATION DATA					
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-8	12/28/2016	100.00	10.76	NP	--	89.24	--
MW-8	3/24/2017	100.00	10.26	NP	--	89.74	--
MW-8	6/22/2017	100.00	11.30	NP	--	88.70	--
MW-8	9/29/2017	100.00	12.15	NP	--	87.85	--
MW-8	11/14/2017	100.00	11.41	NP	--	88.59	--
MW-8	2/26/2018	100.00	10.55	NP	--	89.45	--
MW-8	6/12/2018	100.00	11.52	NP	--	88.48	--
MW-8	8/14/2018	100.00	12.07	NP	--	87.93	--
MW-8	9/11/2018	100.00	12.08	NP	--	87.92	--
MW-8	11/29/2018	100.00	11.70	NP	--	88.30	--
MW-8	2/26/2019	100.00	11.16	NP	--	88.84	--
MW-8	5/16/2019	100.00	11.53	NP	--	88.47	--
MW-8	9/6/2019	100.00	12.38	NP	--	87.62	--
MW-8	1/6/2020	100.00	10.28	NP	--	89.72	--
MW-8	3/18/2020	100.00	11.14	NP	--	88.86	--
MW-8	6/18/2020	100.00	11.34	NP	--	88.66	--
MW-8	9/1/2020	100.00	12.12	NP	--	87.88	--
MW-8	12/2/2020	100.00	11.28	NP	--	88.72	--

Notes:

TOC - Top of Casing

ft - feet

NP - No Product

LNAPL - Light Non-Aqueous Phase Liquid

* - Corrected for LNAPL if present (assumes LNAPL specific gravity = 0.75)

-- No Information Available

Table 2
Groundwater Analytical Data
Former BP Facility 5300
710 15th Avenue, Longview, WA

CONSTITUENT		B	T	E	X	MTBE	EDB	EDC	TPH-G	Lead (Total)	Lead (Dissolved)
UNIT		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MTCA METHOD A CLEANUP LEVELS		5	1000	700	1000	20	0.01	5	1000/800 ¹	15	15
Well ID	Date										
MW-1	9/6/2012	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50.0	50.6	--
MW-1	12/14/2012	< 1.0	< 1.0	< 1.0	< 3.0	--	< 0.01	< 1.0	< 100	< 3.0	--
MW-1	1/9/2013	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 1.0	< 1.0	< 80	11	--
MW-1	5/29/2013	< 0.50	< 0.50	< 0.50	< 1.00	< 0.50	< 0.0096	< 0.50	< 50	< 10	--
MW-1	8/20/2013	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.0096	< 0.50	< 50	< 10	< 10
MW-1	11/13/2013	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-1	2/19/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-1	4/23/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-1	8/7/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	8.1	< 2.0
MW-1	11/19/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-1	2/25/2015	< 2.0 *	< 2.0 *	< 3.0 *	< 3.0	< 1.0	--	--	< 100	< 2.0	< 2.0
MW-1	8/11/2015	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	190	< 2.0	< 2.0
MW-1	2/3/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0 *	--	--	< 50 *	< 2.0	< 2.0
MW-1	4/8/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	< 50	< 2.0	< 2.0
MW-1	9/20/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	< 50	< 2.0	< 2.0
MW-1	12/28/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	< 50	< 2.0	< 2.0
MW-1	3/24/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	< 50	< 4.0	< 4.0
MW-1	6/22/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 500	< 4.0	< 4.0
MW-1	9/29/2017	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	--	--	< 100	< 10.0	< 10.0
MW-1	11/14/2017	< 1.0 H1	< 1.0 H1	< 1.0 H1	< 3.0	< 1.0 H1 L1 SS	--	--	< 100	< 10.0	< 10.0
MW-1	2/26/2018	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	--	--	< 100	< 10.0	< 10.0
MW-1	6/12/2018	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	--	--	< 100	< 10.0	< 10.0
MW-1	8/14/2018	< 3.0	< 2.0 *	< 3.0	< 3.0	< 2.0 *	--	--	< 250	< 4.0	< 4.0
MW-1	9/11/2018	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-1	11/29/2018	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-1	2/26/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-1	5/16/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-1	9/6/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0

Table 2
Groundwater Analytical Data
Former BP Facility 5300
710 15th Avenue, Longview, WA

CONSTITUENT		B	T	E	X	MTBE	EDB	EDC	TPH-G	Lead (Total)	Lead (Dissolved)
UNIT		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MTCA METHOD A CLEANUP LEVELS		5	1000	700	1000	20	0.01	5	1000/800 ¹	15	15
MW-1	1/6/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-1	3/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-1	6/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-1	9/1/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-1	12/2/2020	< 3.0	< 2.0	< 3.0	< 3.0 *+	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-2	9/6/2012	< 1.0	< 1.0	< 1.0	< 3.0	2.6	< 0.010	< 1.0	< 50.0	15.8	--
MW-2	12/14/2012	< 1.0	< 1.0	< 1.0	< 3.0	--	< 0.01	< 1.0	< 100	< 3.0	--
MW-2	1/9/2013	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 1.0	< 1.0	< 80	< 1.0	--
MW-2	5/29/2013	< 0.50	< 0.50	< 0.50	< 1.00	0.66	< 0.0098	< 0.50	< 50	13.0	--
MW-2	8/20/2013	< 0.50	< 0.50	< 0.50	< 1.0	0.70	< 0.0097	< 0.50	< 50	< 10	< 10
MW-2	11/13/2013	< 1.0	2.8	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	7.8	< 2.0
MW-2	2/19/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-2	4/23/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-2	8/7/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-2	11/19/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-2	2/25/2015	< 2.0 *	< 2.0 *	< 3.0 *	< 3.0	< 1.0	--	--	< 100	< 2.0	< 2.0
MW-2	8/11/2015	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	65	< 2.0	< 2.0
MW-2	2/3/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0 *	--	--	< 50 *	< 2.0	< 2.0
MW-2	4/8/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	< 50	< 2.0	< 2.0
MW-2	9/20/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	< 50	< 2.0	< 2.0
MW-2	12/28/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	< 50	< 2.0	< 2.0
MW-2	3/24/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	< 50	< 4.0	< 4.0
MW-2	6/22/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 500	< 4.0	< 4.0
MW-2	9/29/2017	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	--	--	< 100	< 10.0	< 10.0
MW-2	11/14/2017	< 1.0 H1	< 1.0 H1	< 1.0 H1	< 3.0	< 1.0 H1 L1	--	--	< 100	< 10.0	< 10.0
MW-2	2/26/2018	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	--	--	< 100	< 10.0	< 10.0
MW-2	6/12/2018	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	--	--	< 100	< 10.0	< 10.0
MW-2	8/14/2018	< 3.0	< 2.0 *	< 3.0	< 3.0	< 2.0 *	--	--	< 250	< 4.0	< 4.0

Table 2
Groundwater Analytical Data
Former BP Facility 5300
710 15th Avenue, Longview, WA

CONSTITUENT		B	T	E	X	MTBE	EDB	EDC	TPH-G	Lead (Total)	Lead (Dissolved)
UNIT		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MTCA METHOD A CLEANUP LEVELS		5	1000	700	1000	20	0.01	5	1000/800 ¹	15	15
MW-2	9/11/2018	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-2	11/29/2018	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-2	2/26/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-2	5/16/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-2	9/6/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-2	9/23/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-2	10/28/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-2	1/6/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-2	3/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-2	6/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-2	9/1/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-2	12/2/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-3	9/6/2012	< 1.0	< 1.0	< 1.0	< 3.0	16.9	< 0.010	< 1.0	< 50.0	< 10.0	--
MW-3	12/14/2012	< 1.0	< 1.0	< 1.0	< 3.0	--	< 0.01	< 1.0	< 100	11.1	--
MW-3	1/9/2013	< 1.0	< 1.0	< 1.0	< 3.0	17	< 1.0	< 1.0	< 80	< 1.0	--
MW-3	5/29/2013	< 0.50	< 0.50	< 0.50	< 1.00	14	< 0.0097	< 0.50	< 50	10.7	--
MW-3	8/20/2013	< 0.50	< 0.50	< 0.50	< 1.0	7.9	< 0.0097	< 0.50	< 50	< 10	< 10
MW-3	11/13/2013	< 1.0	2.3	< 1.0	< 3.0	17	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-3	2/19/2014	< 1.0	< 1.0	< 1.0	< 3.0	11	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-3	4/23/2014	< 1.0	< 1.0	< 1.0	< 3.0	14	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-3	8/7/2014	< 1.0	< 1.0	< 1.0	< 3.0	25	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-3	11/19/2014	< 1.0	< 1.0	< 1.0	< 3.0	11	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-3	2/25/2015	< 2.0 *	< 2.0 *	< 3.0 *	< 3.0	8.1	--	--	< 100	< 2.0	< 2.0
MW-3	8/11/2015	< 2.0	< 2.0	< 3.0	< 3.0	3.8	--	--	54	< 2.0	< 2.0
MW-3	2/3/2016	< 2.0	< 2.0	< 3.0	< 3.0	4.8 H	--	--	< 50 *	< 2.0	< 2.0
MW-3	4/8/2016	< 2.0	< 2.0	< 3.0	< 3.0	7.9	--	--	< 50	< 2.0	< 2.0
MW-3	9/20/2016	< 2.0	< 2.0	< 3.0	< 3.0	8.6	--	--	< 50	< 2.0	< 2.0
MW-3	12/28/2016	< 2.0	< 2.0	< 3.0	< 3.0	13	--	--	< 50	< 2.0	< 2.0

Table 2
Groundwater Analytical Data
Former BP Facility 5300
710 15th Avenue, Longview, WA

CONSTITUENT		B	T	E	X	MTBE	EDB	EDC	TPH-G	Lead (Total)	Lead (Dissolved)
UNIT		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MTCA METHOD A CLEANUP LEVELS		5	1000	700	1000	20	0.01	5	1000/800 ¹	15	15
MW-3	3/24/2017	< 2.0	< 2.0	< 3.0	< 3.0	4.8	--	--	< 50	< 4.0	< 4.0
MW-3	6/22/2017	< 2.0	< 2.0	< 3.0	< 3.0	9.2	--	--	< 500	< 4.0	< 4.0
MW-3	9/29/2017	< 1.0	< 1.0	< 1.0	< 3.0	10.3	--	--	< 100	< 10.0	< 10.0
MW-3	11/14/2017	< 1.0 H1	< 1.0 H1	< 1.0 H1	< 3.0	5.4 H1 L1 SS	--	--	< 100	< 10.0	< 10.0
MW-3	2/26/2018	< 1.0	< 1.0	< 1.0	< 3.0	8.0	--	--	< 100	< 10.0	< 10.0
MW-3	6/12/2018	< 1.0	< 1.0	< 1.0	< 3.0	6.7	--	--	< 100	13.4	< 10.0
MW-3	8/14/2018	< 3.0	< 2.0 *	< 3.0	< 3.0	9.2 *	--	--	< 250	< 4.0	< 4.0
MW-3	9/11/2018	< 3.0	< 2.0	< 3.0	< 3.0	8.2	--	--	< 250	< 4.0	< 4.0
MW-3	11/29/2018	< 3.0	< 2.0	< 3.0	< 3.0	6.7	--	--	< 250	< 4.0	< 4.0
MW-3	2/26/2019	< 3.0	< 2.0	< 3.0	< 3.0	5.7	--	--	< 250	< 4.0	< 4.0
MW-3	5/16/2019	< 3.0	< 2.0	< 3.0	< 3.0	7.6	--	--	< 250	< 4.0	< 4.0
MW-3	9/6/2019	< 3.0	< 2.0	< 3.0	< 3.0	5.2	--	--	< 250	< 4.0	< 4.0
MW-3	1/6/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-3	3/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	4.6	--	--	< 250	< 4.0	< 4.0
MW-3	6/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	7.4	--	--	< 250	< 4.0	< 4.0
MW-3	9/1/2020	< 3.0	< 2.0	< 3.0	< 3.0	6.7	--	--	< 250	< 4.0	< 4.0
MW-3	12/2/2020	< 3.0	< 2.0	< 3.0	< 3.0	4.8	--	--	< 250	< 4.0	< 4.0
MW-4	9/6/2012	6.1	< 1.0	290	116	3.6	< 0.010	< 1.0	10,200	< 10.0	--
MW-4	12/14/2012	4.8	< 1.0	208	50.7	--	< 0.01	< 1.0	3,230	15.8	--
MW-4	1/9/2013	< 5.0	< 5.0	250	56	< 5.0	< 5.0	< 5.0	4,500	6.1	--
MW-4	5/29/2013	2.1	< 0.50	220	48.8	2.6	< 0.0095	< 0.50	4,500	14.7	--
MW-4	8/20/2013	1.6	< 0.50	240	47	< 2.4	< 0.0098	< 0.50	4,500	< 10	< 10
MW-4	11/13/2013	1.7	1.9	270	43	1.1	< 0.010	< 1.0	7,100	8.9	8.2
MW-4	2/19/2014	1.1	< 1.0	180	26	2.0	< 0.010	< 1.0	5,400	5.6	5.7
MW-4	4/23/2014	< 1.0	< 1.0	130	17	< 1.0	< 0.010	< 1.0	5,800	8.6	6.1
MW-4	8/7/2014	< 1.0	< 1.0	170	15	< 1.0	< 0.010	< 1.0	5,700	6.6	6.0
MW-4	11/19/2014	< 1.0	< 1.0	< 1.0	7.6	< 1.0	< 0.010	< 1.0	4,900	9.0	6.9
MW-4	2/25/2015	< 2.0 *	< 2.0 *	130	5.5	< 1.0	--	--	< 100	6.1	5.3

Table 2
Groundwater Analytical Data
Former BP Facility 5300
710 15th Avenue, Longview, WA

CONSTITUENT		B	T	E	X	MTBE	EDB	EDC	TPH-G	Lead (Total)	Lead (Dissolved)
UNIT		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MTCA METHOD A CLEANUP LEVELS		5	1000	700	1000	20	0.01	5	1000/800 ¹	15	15
MW-4	8/11/2015	< 2.0	< 2.0	46	< 3.0	< 1.0	--	--	3,700	5.7	5.6
MW-4	2/3/2016	< 2.0	< 2.0	53	< 3.0	< 1.0 *	--	--	3,300 *	5.8	5.5
MW-4	4/8/2016	< 2.0	< 2.0	54	< 3.0	< 1.0	--	--	1,900	5.8	5.3
MW-4	9/20/2016	< 2.0	< 2.0	15	< 3.0	< 1.0	--	--	2,200	5.4	4.3
MW-4	12/28/2016	< 2.0	< 2.0	39	< 3.0	< 1.0	--	--	2,300	5.9	5.1
MW-4	3/24/2017	< 2.0	< 2.0	24	< 3.0	< 1.0	--	--	1,800	4.8	4.8
MW-4	6/22/2017	< 2.0	< 2.0	22	< 3.0	< 2.0	--	--	1,700	5.3	4.9
MW-4	9/29/2017	< 1.0	< 1.0	23.5	< 3.0	< 1.0	--	--	2,260	< 10.0	< 10.0
MW-4	11/14/2017	< 1.0 H1	< 1.0 H1	24.3 H1	< 3.0	< 1.0 H1 L1	--	--	2,300	< 10.0	< 10.0
MW-4	2/26/2018	< 1.0	< 1.0	12.4	< 3.0	< 1.0	--	--	2,240	< 10.0	< 10.0
MW-4	6/12/2018	< 1.0	< 1.0	7.3	< 3.0	< 1.0	--	--	2,140	< 10.0	< 10.0
MW-4	8/14/2018	< 3.0	< 2.0 *	11	< 3.0	< 2.0 *	--	--	2,200	5.1	5.0
MW-4	9/11/2018	< 3.0	< 2.0	60	< 3.0	< 2.0	--	--	3,600	30	28
MW-4	11/29/2018	< 3.0	< 2.0	43	< 3.0	< 2.0	--	--	2,800	10	10
MW-4	2/26/2019	< 3.0	< 2.0	23	< 3.0	< 2.0	--	--	1,400	6.4	5.5
MW-4	5/16/2019	< 3.0	< 2.0	30	< 3.0	< 2.0	--	--	2,000	6.5	6.1
MW-4	9/6/2019	< 3.0	< 2.0	25	< 3.0	< 2.0	--	--	2,300	6.1	5.8
MW-4	9/23/2019	< 3.0	< 2.0	15	< 3.0	< 2.0	--	--	1,600	5.4	< 4.0
MW-4	10/28/2019	< 15	< 10	< 15	< 15	< 10	--	--	< 5000	5.9	< 4.0
MW-4 ²	1/6/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	--	--
MW-4	1/6/2020	< 15	< 10	< 15	< 15	< 10	--	--	< 2500	< 4.0	< 4.0
MW-4 ²	3/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	--	--
MW-4	3/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-4 ²	6/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	--	--
MW-4	6/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-4 ²	9/1/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	--	--
MW-4	9/1/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-4 ²	12/2/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	--	--
MW-4	12/2/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0

Table 2
Groundwater Analytical Data
Former BP Facility 5300
710 15th Avenue, Longview, WA

CONSTITUENT		B	T	E	X	MTBE	EDB	EDC	TPH-G	Lead (Total)	Lead (Dissolved)
UNIT		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MTCA METHOD A CLEANUP LEVELS		5	1000	700	1000	20	0.01	5	1000/800 ¹	15	15
MW-5	4/8/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	270	< 2.0	< 2.0
MW-5	9/20/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	270	< 2.0	< 2.0
MW-5	12/28/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	480	< 2.0	< 2.0
MW-5	3/24/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	300	< 4.0	< 4.0
MW-5	6/22/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	670	< 4.0	< 4.0
MW-5	9/29/2017	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	--	--	483	< 10.0	< 10.0
MW-5	11/14/2017	< 1.0 H1	< 1.0 H1	< 1.0 H1	< 3.0	< 1.0 H1 L1	--	--	418	< 10.0	< 10.0
MW-5	2/26/2018	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	--	--	320	< 10.0	< 10.0
MW-5	6/12/2018	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	--	--	318	< 10.0	< 10.0
MW-5	8/14/2018	< 3.0	< 2.0 *	< 3.0	< 3.0	< 2.0 *	--	--	370	< 4.0	< 4.0
MW-5	9/11/2018	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-5	11/29/2018	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-5	2/26/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	310	< 4.0	< 4.0
MW-5	5/16/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	350	< 4.0	< 4.0
MW-5	9/6/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-5	9/23/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	310	< 4.0	< 4.0
MW-5	10/28/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	580	< 4.0	< 4.0
MW-5	1/6/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	790	< 4.0	< 4.0
MW-6	8/20/2013	< 0.50	< 0.50	1.9	< 1.0	4.9	< 0.0097	< 0.50	650	< 10	< 10
MW-6	11/13/2013	< 1.0	1.4	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	400	2.1	< 2.0
MW-6	2/19/2014	< 1.0	< 1.0	1.4	< 3.0	1.6	< 0.010	< 1.0	300	< 2.0	< 2.0
MW-6	4/23/2014	< 1.0	< 1.0	1.0	< 3.0	< 1.0	< 0.010	< 1.0	830	3.4	< 2.0
MW-6	8/7/2014	< 1.0	< 1.0	3.0	< 3.0	< 1.0	< 0.010	< 1.0	570	< 2.0	< 2.0
MW-6	11/19/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	220	< 2.0	< 2.0
MW-6	2/25/2015	< 2.0 *	< 2.0 *	< 3.0 *	< 3.0	< 1.0	--	--	370	< 2.0	< 2.0
MW-6	8/11/2015	< 2.0	< 2.0	< 3.0	< 3.0	2.2	--	--	88	< 2.0	< 2.0
MW-6	2/3/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0 H	--	--	140 *	< 2.0	< 2.0
MW-6	4/8/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	230	< 2.0	< 2.0

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CONSTITUENT		B	T	E	X	MTBE	EDB	EDC	TPH-G	Lead (Total)	Lead (Dissolved)
UNIT		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MTCA METHOD A CLEANUP LEVELS		5	1000	700	1000	20	0.01	5	1000/800 ¹	15	15
MW-6	9/20/2016	< 2.0	< 2.0	< 3.0	< 3.0	1.3	--	--	84	< 2.0	< 2.0
MW-6	12/28/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	97	< 2.0	< 2.0
MW-6	3/24/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	80	< 4.0	< 4.0
MW-6	6/22/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 500	< 4.0	< 4.0
MW-6	9/29/2017	< 1.0	< 1.0	< 1.0	< 3.0	2.3	--	--	149	< 10.0	< 10.0
MW-6	11/14/2017	< 1.0 H1	< 1.0 H1	< 1.0 H1	< 3.0	1.1 H1 L1 SS	--	--	190	< 10.0	< 10.0
MW-6	2/26/2018	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	--	--	< 100	< 10.0	< 10.0
MW-6	6/12/2018	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	--	--	133	< 10.0	< 10.0
MW-6	8/14/2018	< 3.0	< 2.0 *	< 3.0	< 3.0	< 2.0 *	--	--	< 250	< 4.0	< 4.0
MW-6	9/11/2018	< 3.0	< 2.0	< 3.0	< 3.0	2.7	--	--	< 250	< 4.0	< 4.0
MW-6	11/29/2018	< 3.0	< 2.0	< 3.0	< 3.0	3.1	--	--	< 250	< 4.0	< 4.0
MW-6	2/26/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-6	5/16/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-6	9/6/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-6	1/6/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-6	3/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-6	6/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-6	9/1/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-6	12/2/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-7	8/20/2013	< 0.50	< 0.50	< 0.50	< 1.0	2.0	< 0.0096	< 0.50	< 50	< 10	< 10
MW-7	11/13/2013	< 1.0	1.2	< 1.0	< 3.0	2.2	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-7	2/19/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-7	4/23/2014	< 1.0	< 1.0	< 1.0	< 3.0	2.2	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-7	8/7/2014	< 1.0	< 1.0	< 1.0	< 3.0	2.9	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-7	11/19/2014	< 1.0	< 1.0	< 1.0	< 3.0	3.2	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-7	2/25/2015	< 2.0 *	< 2.0 *	< 3.0 *	< 3.0	1.8	--	--	< 100	< 2.0	< 2.0
MW-7	8/11/2015	< 2.0	< 2.0	< 3.0	< 3.0	2.8	--	--	< 50	< 2.0	< 2.0
MW-7	2/3/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0 *	--	--	< 50 *	< 2.0	< 2.0

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710 15th Avenue, Longview, WA

CONSTITUENT		B	T	E	X	MTBE	EDB	EDC	TPH-G	Lead (Total)	Lead (Dissolved)
UNIT		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MTCA METHOD A CLEANUP LEVELS		5	1000	700	1000	20	0.01	5	1000/800 ¹	15	15
MW-7	4/8/2016	< 2.0	< 2.0	< 3.0	< 3.0	1.8	--	--	< 50	< 2.0	< 2.0
MW-7	9/20/2016	< 2.0	< 2.0	< 3.0	< 3.0	3.0	--	--	< 50	< 2.0	< 2.0
MW-7	12/28/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	< 50	< 2.0	< 2.0
MW-7	3/24/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	< 50	< 4.0	< 4.0
MW-7	6/22/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 500	< 4.0	< 4.0
MW-7	9/29/2017	< 1.0	< 1.0	< 1.0	< 3.0	3.9	--	--	< 100	< 10.0	< 10.0
MW-7	11/14/2017	< 1.0 H1	< 1.0 H1	< 1.0 H1	< 3.0	2.6 H1 L1 SS	--	--	< 100	< 10.0	< 10.0
MW-7	2/26/2018	< 1.0	< 1.0	< 1.0	< 3.0	1.3	--	--	< 100	< 10.0	< 10.0
MW-7	6/12/2018	< 1.0	< 1.0	< 1.0	< 3.0 RS	2.0	--	--	< 100	< 10.0	< 10.0
MW-7	8/14/2018	< 3.0	< 2.0 *	< 3.0	< 3.0	3.6 *	--	--	< 250	< 4.0	< 4.0
MW-7	9/11/2018	< 3.0	< 2.0	< 3.0	< 3.0	2.6	--	--	< 250	< 4.0	< 4.0
MW-7	11/29/2018	< 3.0	< 2.0	< 3.0	< 3.0	2.7	--	--	< 250	< 4.0	< 4.0
MW-7	2/26/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-7	5/16/2019	< 3.0	< 2.0	< 3.0	< 3.0	2.1	--	--	< 250	< 4.0	< 4.0
MW-7	9/6/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-7	9/23/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-7	10/28/2019	< 3.0	< 2.0	< 3.0	< 3.0	2.2	--	--	< 250	< 4.0	< 4.0
MW-7	1/6/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-7	3/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	2.1	--	--	< 250	< 4.0	< 4.0
MW-7	6/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	2.0	--	--	< 250	< 4.0	< 4.0
MW-7	9/1/2020	< 3.0	< 2.0	< 3.0	< 3.0	3.0	--	--	< 250	< 4.0	< 4.0
MW-7	12/2/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-8	8/20/2013	< 0.50	< 0.50	< 0.50	< 1.0	2.2	< 0.0097	< 0.50	< 50	< 10	< 10
MW-8	11/13/2013	< 1.0	1.0	< 1.0	< 3.0	2.3	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-8	2/19/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-8	4/23/2014	< 1.0	< 1.0	< 1.0	< 3.0	1.9	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-8	8/7/2014	< 1.0	< 1.0	< 1.0	< 3.0	1.8	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-8	11/19/2014	< 1.0	< 1.0	< 1.0	< 3.0	2.7	< 0.010	< 1.0	< 50	< 2.0	< 2.0

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710 15th Avenue, Longview, WA

CONSTITUENT		B	T	E	X	MTBE	EDB	EDC	TPH-G	Lead (Total)	Lead (Dissolved)
UNIT		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MTCA METHOD A CLEANUP LEVELS		5	1000	700	1000	20	0.01	5	1000/800 ¹	15	15
MW-8	2/25/2015	< 2.0 *	< 2.0 *	< 3.0 *	< 3.0	3.0	--	--	< 100	< 2.0	< 2.0
MW-8	8/11/2015	< 2.0	< 2.0	< 3.0	< 3.0	4.6	--	--	200	< 2.0	< 2.0
MW-8	2/3/2016	< 2.0	< 2.0	< 3.0	< 3.0	9.5 *	--	--	< 50 *	< 2.0	< 2.0
MW-8	4/8/2016	< 2.0	< 2.0	< 3.0	< 3.0	4.5	--	--	< 50	< 2.0	< 2.0
MW-8	9/20/2016	< 2.0	< 2.0	< 3.0	< 3.0	8.6	--	--	< 50	< 2.0	< 2.0
MW-8	12/28/2016	< 2.0	< 2.0	< 3.0	< 3.0	1.2	--	--	< 50	< 2.0	< 2.0
MW-8	3/24/2017	< 2.0	< 2.0	< 3.0	< 3.0	4.2	--	--	< 50	< 4.0	< 4.0
MW-8	6/22/2017	< 2.0	< 2.0	< 3.0	< 3.0	6.3	--	--	< 500	< 4.0	< 4.0
MW-8	9/29/2017	< 1.0	< 1.0	< 1.0	< 3.0	8.2	--	--	< 100	< 10.0	< 10.0
MW-8	11/14/2017	< 1.0 H1	< 1.0 H1	< 1.0 H1	< 3.0	6.6 H1 L1 SS	--	--	< 100	< 10.0	< 10.0
MW-8	2/26/2018	< 1.0	< 1.0	< 1.0	< 3.0	3.5	--	--	< 100	< 10.0	< 10.0
MW-8	6/12/2018	< 1.0	< 1.0 M1	< 1.0 M1	< 3.0	4.6	--	--	< 100	< 10.0	< 10.0
MW-8	8/14/2018	< 3.0	< 2.0 *	< 3.0	< 3.0	8.1 *	--	--	< 250	< 4.0	< 4.0
MW-8	9/11/2018	< 3.0	< 2.0	< 3.0	< 3.0	6.3	--	--	< 250	< 4.0	< 4.0
MW-8	11/29/2018	< 3.0	< 2.0	< 3.0	< 3.0	9.9	--	--	< 250	< 4.0	< 4.0
MW-8	2/26/2019	< 3.0	< 2.0	< 3.0	< 3.0	12	--	--	< 250	< 4.0	< 4.0
MW-8	5/16/2019	< 3.0	< 2.0	< 3.0	< 3.0	7.5	--	--	< 250	< 4.0	< 4.0
MW-8	9/6/2019	< 3.0	< 2.0	< 3.0	< 3.0	7.8	--	--	< 250	< 4.0	< 4.0
MW-8	1/6/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-8	3/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	9.8	--	--	< 250	< 4.0	< 4.0
MW-8	6/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	8.0	--	--	< 250	< 4.0	< 4.0
MW-8	9/1/2020	< 3.0	< 2.0	< 3.0	< 3.0	8.0	--	--	< 250	< 4.0	< 4.0
MW-8	12/2/2020	< 3.0	< 2.0	< 3.0	< 3.0	3.9	--	--	< 250	< 4.0	< 4.0

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Former BP Facility 5300
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CONSTITUENT	B	T	E	X	MTBE	EDB	EDC	TPH-G	Lead (Total)	Lead (Dissolved)
UNIT	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MTCA METHOD A CLEANUP LEVELS	5	1000	700	1000	20	0.01	5	1000/800 ¹	15	15

Notes:

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes, Total

MTBE = Methyl-tertiary-butyl ether

EDB = 1,2-Dibromoethane

EDC = 1,2-Dichloroethane

TPH-G = Total petroleum hydrocarbons as gasoline by Northwest Method NWTPH-Gx

TPH-D = Total petroleum hydrocarbons as diesel by Northwest Method NWTPH-Dx

TPH-O = Total petroleum hydrocarbons as oil by Northwest Method NWTPH-Dx

1,000/800¹ ug/L if no detectable levels of Benzene in the sample - otherwise 800 ug/L

NE = Not evaluated

<1.0 = Concentrations were not detected above the laboratory method reporting limit.

ug/L = Micrograms per liter (ppb)

ND = Not detected

-- = No value given/Not analyzed/Not applicable

MTCA = Model Toxics Control Act

Results in **bold** indicate concentrations in excess of MTCA Method A Cleanup Levels

² = Sample collected from a Passive Diffusion Bag (PDB)

* = LCS or LCSD is outside acceptance limits

L1 = Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

H1 = Analysis conducted outside the recognized method holding time.

SS = This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.

M1 = Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

H = Sample was prepped or analyzed beyond the specified holding time

RS = The RPD value in one of the constituent analytes was outside the control limits.

*+ = LCS and/or LCSD is outside acceptance limits, high biased.

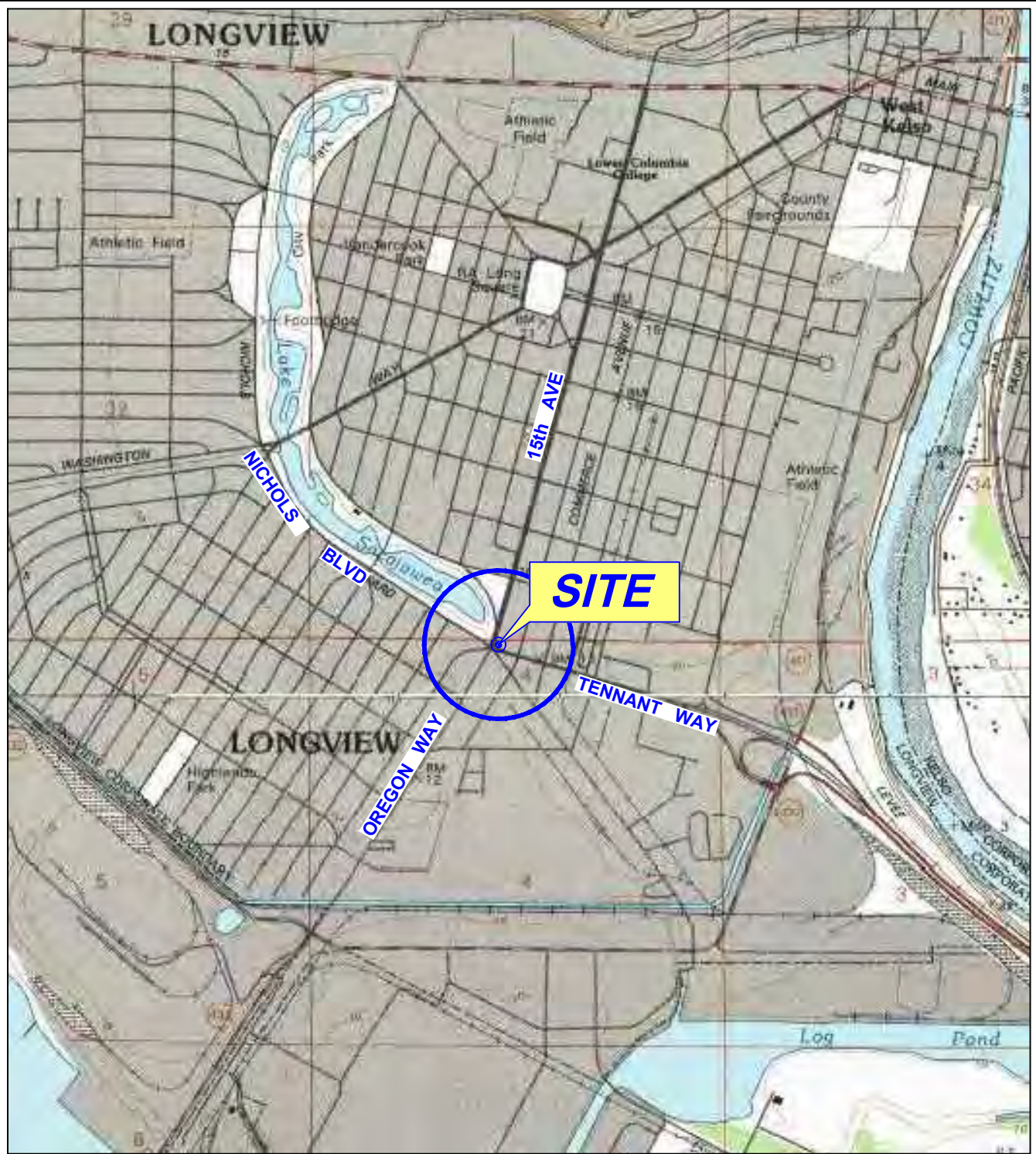
Figures

Figure 1 - Site Location Map

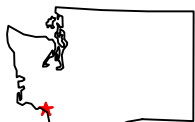
Figure 2 - Site Aerial Map

Figure 3 - Groundwater Analytical and Elevation Contour Map – September 1, 2020

Figure 4 - Groundwater Analytical and Elevation Contour Map – December 2, 2020



GENERAL NOTES:
 BASE MAP FROM TERRAIN NAVIGATOR PRO
 KELSO, WA. QUADRANGLE
 7.5 MINUTE TOPOGRAPHIC MAP
 1990



QUADRANGLE LOCATION

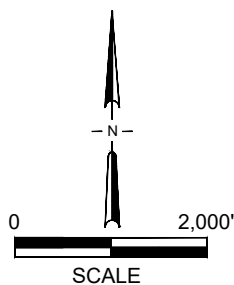
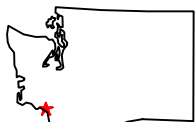


FIGURE 1
 SITE LOCATION MAP

ARCO FACILITY NO. 5300
 710 15th AVENUE
 LONGVIEW, WA.

PROJECT NO. 05300SA201	DRAWN BY KM/JH
FILE NO. 5300-SLM	PREPARED BY FS
REVISION NO. 1	REVIEWED BY MR





QUADRANGLE LOCATION

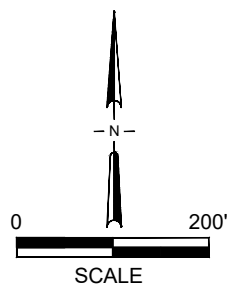
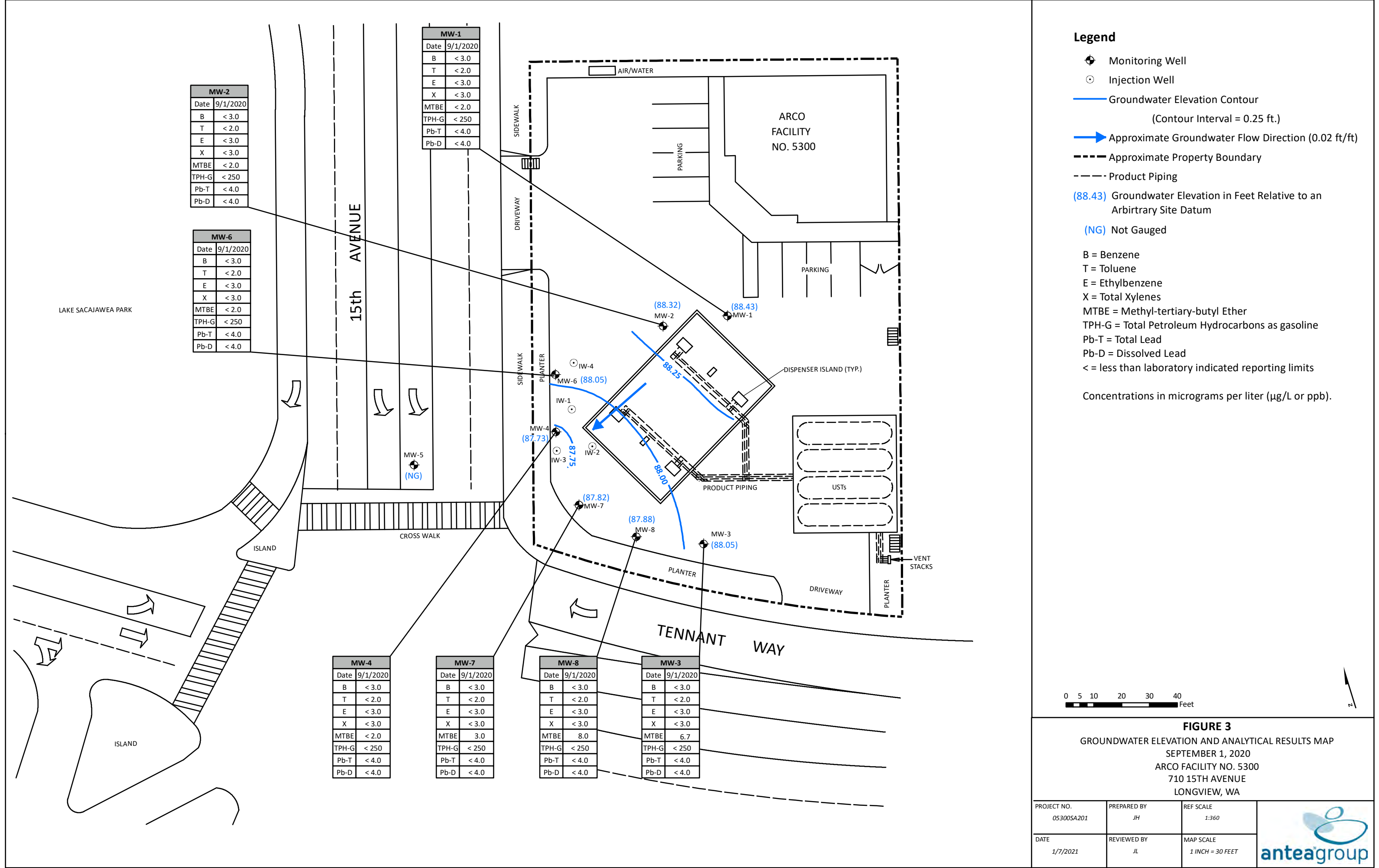


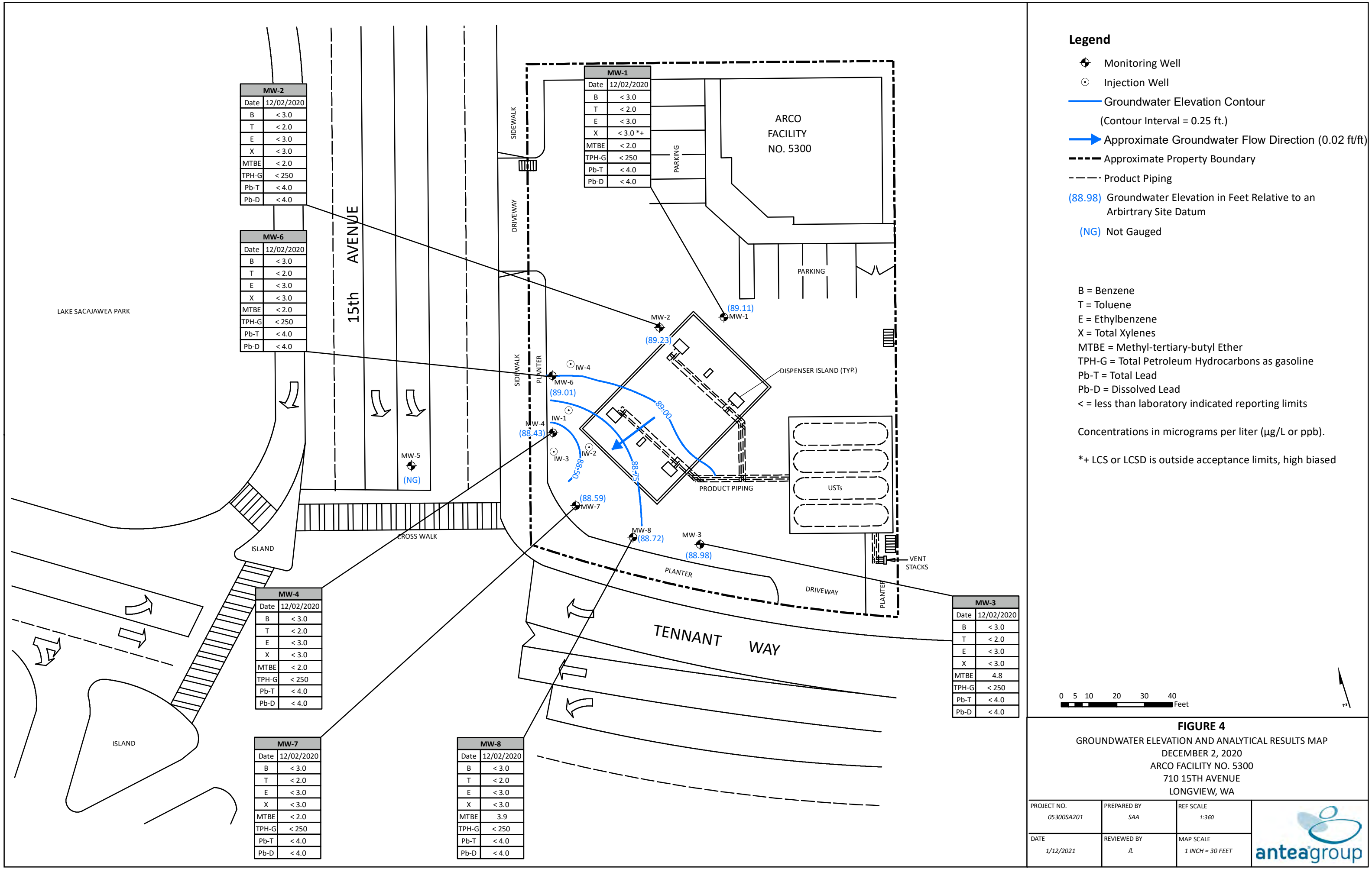
FIGURE 2
SITE AERIAL MAP

ARCO FACILITY NO. 5300
710 15th AVENUE
LONGVIEW, WA.

PROJECT NO. 05300SA201	DRAWN BY KM/JH
FILE NO. 5300-Sam	PREPARED BY JL
REVISION NO. 1	REVIEWED BY MR







Appendix A - Analytical Lab Reports and Chain-of-Custody Documentation

ANALYTICAL REPORT

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-97182-1
Client Project/Site: BP - ARCO 5300

For:

Antea USA Inc.
4006 148th Ave NE
Redmond, Washington 98052

Attn: Megan Richard



Authorized for release by:
9/10/2020 1:03:28 PM

Elaine Walker, Project Manager II
(253)248-4972
m.elaine.walker@eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

Glossary

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

Case Narrative

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

Job ID: 580-97182-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-97182-1

Receipt

Ten samples were received on 9/2/2020 10:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.9° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

Client Sample ID: MW-1_11.47-20200901

Lab Sample ID: 580-97182-1

No Detections.

Client Sample ID: MW-2_11.40-20200901

Lab Sample ID: 580-97182-2

No Detections.

Client Sample ID: MW-3_11.63-20200901

Lab Sample ID: 580-97182-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	6.7		2.0		ug/L	1		8260D	Total/NA

Client Sample ID: MW-4_12.27-20200901

Lab Sample ID: 580-97182-4

No Detections.

Client Sample ID: MW-6_11.68-20200901

Lab Sample ID: 580-97182-5

No Detections.

Client Sample ID: MW-7_12.45-20200901

Lab Sample ID: 580-97182-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	3.0		2.0		ug/L	1		8260D	Total/NA

Client Sample ID: MW-4_PDB-20200901

Lab Sample ID: 580-97182-7

No Detections.

Client Sample ID: MW-8_12.12-20200901

Lab Sample ID: 580-97182-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	8.0		2.0		ug/L	1		8260D	Total/NA

Client Sample ID: Trip Blank 1_20200901

Lab Sample ID: 580-97182-9

No Detections.

Client Sample ID: PDB Blank_20200901

Lab Sample ID: 580-97182-10

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

Client Sample ID: MW-1_11.47-20200901

Lab Sample ID: 580-97182-1

Date Collected: 09/01/20 12:15

Matrix: Water

Date Received: 09/02/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		2.0		ug/L			09/04/20 06:21	1
Benzene	ND		3.0		ug/L			09/04/20 06:21	1
Toluene	ND		2.0		ug/L			09/04/20 06:21	1
Ethylbenzene	ND		3.0		ug/L			09/04/20 06:21	1
Xylenes, Total	ND		3.0		ug/L			09/04/20 06:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 120		09/04/20 06:21	1
1,2-Dichloroethane-d4 (Surr)	93		80 - 126		09/04/20 06:21	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/04/20 06:21	1
Dibromofluoromethane (Surr)	101		80 - 120		09/04/20 06:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			09/05/20 00:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		50 - 150					09/05/20 00:38	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		09/03/20 11:24	09/04/20 15:44	5

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		09/03/20 16:54	09/04/20 22:28	5

Client Sample ID: MW-2_11.40-20200901

Lab Sample ID: 580-97182-2

Date Collected: 09/01/20 12:50

Matrix: Water

Date Received: 09/02/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		2.0		ug/L			09/04/20 06:46	1
Benzene	ND		3.0		ug/L			09/04/20 06:46	1
Toluene	ND		2.0		ug/L			09/04/20 06:46	1
Ethylbenzene	ND		3.0		ug/L			09/04/20 06:46	1
Xylenes, Total	ND		3.0		ug/L			09/04/20 06:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 120		09/04/20 06:46	1
1,2-Dichloroethane-d4 (Surr)	94		80 - 126		09/04/20 06:46	1
4-Bromofluorobenzene (Surr)	97		80 - 120		09/04/20 06:46	1
Dibromofluoromethane (Surr)	98		80 - 120		09/04/20 06:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			09/05/20 01:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		50 - 150					09/05/20 01:02	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

Client Sample ID: MW-2_11.40-20200901

Lab Sample ID: 580-97182-2

Date Collected: 09/01/20 12:50

Matrix: Water

Date Received: 09/02/20 10:00

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		09/03/20 11:24	09/04/20 15:48	5

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		09/03/20 16:54	09/04/20 22:31	5

Client Sample ID: MW-3_11.63-20200901

Lab Sample ID: 580-97182-3

Date Collected: 09/01/20 15:30

Matrix: Water

Date Received: 09/02/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	6.7		2.0		ug/L			09/04/20 07:11	1
Benzene	ND		3.0		ug/L			09/04/20 07:11	1
Toluene	ND		2.0		ug/L			09/04/20 07:11	1
Ethylbenzene	ND		3.0		ug/L			09/04/20 07:11	1
Xylenes, Total	ND		3.0		ug/L			09/04/20 07:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120		09/04/20 07:11	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 126		09/04/20 07:11	1
4-Bromofluorobenzene (Surr)	101		80 - 120		09/04/20 07:11	1
Dibromofluoromethane (Surr)	104		80 - 120		09/04/20 07:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			09/05/20 01:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		50 - 150		09/05/20 01:27	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		09/03/20 11:24	09/04/20 15:52	5

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		09/03/20 16:54	09/04/20 22:35	5

Client Sample ID: MW-4_12.27-20200901

Lab Sample ID: 580-97182-4

Date Collected: 09/01/20 14:00

Matrix: Water

Date Received: 09/02/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		2.0		ug/L			09/04/20 07:36	1
Benzene	ND		3.0		ug/L			09/04/20 07:36	1
Toluene	ND		2.0		ug/L			09/04/20 07:36	1
Ethylbenzene	ND		3.0		ug/L			09/04/20 07:36	1
Xylenes, Total	ND		3.0		ug/L			09/04/20 07:36	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

Client Sample ID: MW-4_12.27-20200901

Lab Sample ID: 580-97182-4

Date Collected: 09/01/20 14:00

Matrix: Water

Date Received: 09/02/20 10:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	112		80 - 120		09/04/20 07:36	1
1,2-Dichloroethane-d4 (Surr)	94		80 - 126		09/04/20 07:36	1
4-Bromofluorobenzene (Surr)	85		80 - 120		09/04/20 07:36	1
Dibromofluoromethane (Surr)	101		80 - 120		09/04/20 07:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			09/05/20 01:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	75		50 - 150		09/05/20 01:51	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		09/03/20 11:24	09/04/20 15:55	5

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		09/03/20 16:54	09/04/20 22:39	5

Client Sample ID: MW-6_11.68-20200901

Lab Sample ID: 580-97182-5

Date Collected: 09/01/20 13:15

Matrix: Water

Date Received: 09/02/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		2.0		ug/L			09/04/20 08:00	1
Benzene	ND		3.0		ug/L			09/04/20 08:00	1
Toluene	ND		2.0		ug/L			09/04/20 08:00	1
Ethylbenzene	ND		3.0		ug/L			09/04/20 08:00	1
Xylenes, Total	ND		3.0		ug/L			09/04/20 08:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 120		09/04/20 08:00	1
1,2-Dichloroethane-d4 (Surr)	93		80 - 126		09/04/20 08:00	1
4-Bromofluorobenzene (Surr)	97		80 - 120		09/04/20 08:00	1
Dibromofluoromethane (Surr)	91		80 - 120		09/04/20 08:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			09/05/20 02:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		50 - 150		09/05/20 02:16	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		09/03/20 11:24	09/04/20 15:59	5

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		09/03/20 16:54	09/04/20 22:58	5

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

Client Sample ID: MW-7_12.45-20200901

Lab Sample ID: 580-97182-6

Date Collected: 09/01/20 14:30

Matrix: Water

Date Received: 09/02/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	3.0		2.0		ug/L			09/04/20 08:25	1
Benzene	ND		3.0		ug/L			09/04/20 08:25	1
Toluene	ND		2.0		ug/L			09/04/20 08:25	1
Ethylbenzene	ND		3.0		ug/L			09/04/20 08:25	1
Xylenes, Total	ND		3.0		ug/L			09/04/20 08:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 120		09/04/20 08:25	1
1,2-Dichloroethane-d4 (Surr)	110		80 - 126		09/04/20 08:25	1
4-Bromofluorobenzene (Surr)	97		80 - 120		09/04/20 08:25	1
Dibromofluoromethane (Surr)	108		80 - 120		09/04/20 08:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			09/05/20 02:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		50 - 150					09/05/20 02:40	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		09/03/20 11:24	09/04/20 16:03	5

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		09/03/20 16:54	09/04/20 23:02	5

Client Sample ID: MW-4_PDB-20200901

Lab Sample ID: 580-97182-7

Date Collected: 09/01/20 13:30

Matrix: Water

Date Received: 09/02/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		2.0		ug/L			09/04/20 08:50	1
Benzene	ND		3.0		ug/L			09/04/20 08:50	1
Toluene	ND		2.0		ug/L			09/04/20 08:50	1
Ethylbenzene	ND		3.0		ug/L			09/04/20 08:50	1
Xylenes, Total	ND		3.0		ug/L			09/04/20 08:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		80 - 120		09/04/20 08:50	1
1,2-Dichloroethane-d4 (Surr)	96		80 - 126		09/04/20 08:50	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/04/20 08:50	1
Dibromofluoromethane (Surr)	101		80 - 120		09/04/20 08:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			09/05/20 03:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		50 - 150					09/05/20 03:29	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

Client Sample ID: MW-8_12.12-20200901

Lab Sample ID: 580-97182-8

Date Collected: 09/01/20 15:00

Matrix: Water

Date Received: 09/02/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	8.0		2.0		ug/L			09/04/20 09:15	1
Benzene	ND		3.0		ug/L			09/04/20 09:15	1
Toluene	ND		2.0		ug/L			09/04/20 09:15	1
Ethylbenzene	ND		3.0		ug/L			09/04/20 09:15	1
Xylenes, Total	ND		3.0		ug/L			09/04/20 09:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 120		09/04/20 09:15	1
1,2-Dichloroethane-d4 (Surr)	95		80 - 126		09/04/20 09:15	1
4-Bromofluorobenzene (Surr)	96		80 - 120		09/04/20 09:15	1
Dibromofluoromethane (Surr)	100		80 - 120		09/04/20 09:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			09/05/20 03:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		50 - 150					09/05/20 03:54	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		09/03/20 11:24	09/04/20 16:07	5

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		09/03/20 16:54	09/04/20 23:06	5

Client Sample ID: Trip Blank 1_20200901

Lab Sample ID: 580-97182-9

Date Collected: 09/01/20 00:01

Matrix: Water

Date Received: 09/02/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			09/04/20 01:19	1
Toluene	ND		2.0		ug/L			09/04/20 01:19	1
Ethylbenzene	ND		3.0		ug/L			09/04/20 01:19	1
Xylenes, Total	ND		3.0		ug/L			09/04/20 01:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 120		09/04/20 01:19	1
1,2-Dichloroethane-d4 (Surr)	95		80 - 126		09/04/20 01:19	1
4-Bromofluorobenzene (Surr)	97		80 - 120		09/04/20 01:19	1
Dibromofluoromethane (Surr)	101		80 - 120		09/04/20 01:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			09/05/20 00:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		50 - 150					09/05/20 00:13	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

Client Sample ID: PDB Blank_20200901

Lab Sample ID: 580-97182-10

Date Collected: 09/01/20 13:35

Matrix: Water

Date Received: 09/02/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		2.0		ug/L			09/04/20 01:45	1
Benzene	ND		3.0		ug/L			09/04/20 01:45	1
Toluene	ND		2.0		ug/L			09/04/20 01:45	1
Ethylbenzene	ND		3.0		ug/L			09/04/20 01:45	1
Xylenes, Total	ND		3.0		ug/L			09/04/20 01:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 120		09/04/20 01:45	1
1,2-Dichloroethane-d4 (Surr)	96		80 - 126		09/04/20 01:45	1
4-Bromofluorobenzene (Surr)	96		80 - 120		09/04/20 01:45	1
Dibromofluoromethane (Surr)	102		80 - 120		09/04/20 01:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			09/05/20 04:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		50 - 150					09/05/20 04:18	1

Surrogate Summary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TOL (80-120)	DCA (80-126)	BFB (80-120)	DBFM (80-120)
580-97182-1	MW-1_11.47-20200901	102	93	98	101
580-97182-2	MW-2_11.40-20200901	105	94	97	98
580-97182-3	MW-3_11.63-20200901	101	105	101	104
580-97182-4	MW-4_12.27-20200901	112	94	85	101
580-97182-5	MW-6_11.68-20200901	105	93	97	91
580-97182-6	MW-7_12.45-20200901	103	110	97	108
580-97182-7	MW-4_PDB-20200901	106	96	99	101
580-97182-8	MW-8_12.12-20200901	105	95	96	100
580-97182-9	Trip Blank 1_20200901	105	95	97	101
580-97182-10	PDB Blank_20200901	103	96	96	102
LCS 580-337473/6	Lab Control Sample	105	94	100	102
LCSD 580-337473/7	Lab Control Sample Dup	104	98	97	102
MB 580-337473/5	Method Blank	103	95	96	102

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB2 (50-150)			
580-97182-1	MW-1_11.47-20200901	82			
580-97182-2	MW-2_11.40-20200901	81			
580-97182-3	MW-3_11.63-20200901	86			
580-97182-4	MW-4_12.27-20200901	75			
580-97182-5	MW-6_11.68-20200901	84			
580-97182-6	MW-7_12.45-20200901	83			
580-97182-7	MW-4_PDB-20200901	86			
580-97182-8	MW-8_12.12-20200901	76			
580-97182-9	Trip Blank 1_20200901	82			
580-97182-10	PDB Blank_20200901	79			
LCS 580-337561/32	Lab Control Sample	87			
LCSD 580-337561/33	Lab Control Sample Dup	88			
MB 580-337561/31	Method Blank	87			

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

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

Lab Sample ID: MB 580-337473/5

Matrix: Water

Analysis Batch: 337473

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		2.0		ug/L			09/04/20 00:03	1
Benzene	ND		3.0		ug/L			09/04/20 00:03	1
Toluene	ND		2.0		ug/L			09/04/20 00:03	1
Ethylbenzene	ND		3.0		ug/L			09/04/20 00:03	1
Xylenes, Total	ND		3.0		ug/L			09/04/20 00:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 120		09/04/20 00:03	1
1,2-Dichloroethane-d4 (Surr)	95		80 - 126		09/04/20 00:03	1
4-Bromofluorobenzene (Surr)	96		80 - 120		09/04/20 00:03	1
Dibromofluoromethane (Surr)	102		80 - 120		09/04/20 00:03	1

Lab Sample ID: LCS 580-337473/6

Matrix: Water

Analysis Batch: 337473

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	10.0	9.92		ug/L		99	72 - 130
Benzene	10.0	10.3		ug/L		103	82 - 122
Toluene	10.0	10.2		ug/L		102	80 - 120
Ethylbenzene	10.0	9.86		ug/L		99	80 - 120
m-Xylene & p-Xylene	10.0	9.49		ug/L		95	80 - 120
o-Xylene	10.0	9.66		ug/L		97	80 - 125
Xylenes, Total	20.0	19.2		ug/L		96	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	105		80 - 120
1,2-Dichloroethane-d4 (Surr)	94		80 - 126
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120

Lab Sample ID: LCSD 580-337473/7

Matrix: Water

Analysis Batch: 337473

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	10.0	10.0		ug/L		100	72 - 130	1	18
Benzene	10.0	9.95		ug/L		99	82 - 122	4	14
Toluene	10.0	10.1		ug/L		101	80 - 120	1	13
Ethylbenzene	10.0	9.44		ug/L		94	80 - 120	4	14
m-Xylene & p-Xylene	10.0	9.21		ug/L		92	80 - 120	3	14
o-Xylene	10.0	9.48		ug/L		95	80 - 125	2	16
Xylenes, Total	20.0	18.7		ug/L		93	80 - 120	2	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	98		80 - 126

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

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

Lab Sample ID: LCSD 580-337473/7

Matrix: Water

Analysis Batch: 337473

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120

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

Lab Sample ID: MB 580-337561/31

Matrix: Water

Analysis Batch: 337561

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			09/04/20 23:00	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		50 - 150					09/04/20 23:00	1

Lab Sample ID: LCS 580-337561/32

Matrix: Water

Analysis Batch: 337561

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	1000	878		ug/L		88	79 - 120
Surrogate	%Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	87		50 - 150				

Lab Sample ID: LCSD 580-337561/33

Matrix: Water

Analysis Batch: 337561

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline	1000	832		ug/L		83	79 - 120	5	10
Surrogate	%Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	88		50 - 150						

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 580-337439/14-A

Matrix: Water

Analysis Batch: 337661

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 337439

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.80		ug/L		09/03/20 11:24	09/04/20 14:55	1

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QC Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-337439/15-A
Matrix: Water
Analysis Batch: 337661

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 337439

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1000	936		ug/L		94	80 - 120

Lab Sample ID: LCSD 580-337439/16-A
Matrix: Water
Analysis Batch: 337661

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 337439

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	1000	935		ug/L		93	80 - 120	0	20

Lab Sample ID: MB 580-337496/18-A
Matrix: Water
Analysis Batch: 337673

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 337496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		09/03/20 16:54	09/04/20 21:23	5

Lab Sample ID: LCS 580-337496/19-A
Matrix: Water
Analysis Batch: 337673

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 337496

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1000	1000		ug/L		100	80 - 120

Lab Sample ID: LCSD 580-337496/20-A
Matrix: Water
Analysis Batch: 337673

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 337496

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	1000	1010		ug/L		101	80 - 120	1	20

QC Association Summary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

GC/MS VOA

Analysis Batch: 337473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-97182-1	MW-1_11.47-20200901	Total/NA	Water	8260D	
580-97182-2	MW-2_11.40-20200901	Total/NA	Water	8260D	
580-97182-3	MW-3_11.63-20200901	Total/NA	Water	8260D	
580-97182-4	MW-4_12.27-20200901	Total/NA	Water	8260D	
580-97182-5	MW-6_11.68-20200901	Total/NA	Water	8260D	
580-97182-6	MW-7_12.45-20200901	Total/NA	Water	8260D	
580-97182-7	MW-4_PDB-20200901	Total/NA	Water	8260D	
580-97182-8	MW-8_12.12-20200901	Total/NA	Water	8260D	
580-97182-9	Trip Blank 1_20200901	Total/NA	Water	8260D	
580-97182-10	PDB Blank_20200901	Total/NA	Water	8260D	
MB 580-337473/5	Method Blank	Total/NA	Water	8260D	
LCS 580-337473/6	Lab Control Sample	Total/NA	Water	8260D	
LCSD 580-337473/7	Lab Control Sample Dup	Total/NA	Water	8260D	

GC VOA

Analysis Batch: 337561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-97182-1	MW-1_11.47-20200901	Total/NA	Water	NWTPH-Gx	
580-97182-2	MW-2_11.40-20200901	Total/NA	Water	NWTPH-Gx	
580-97182-3	MW-3_11.63-20200901	Total/NA	Water	NWTPH-Gx	
580-97182-4	MW-4_12.27-20200901	Total/NA	Water	NWTPH-Gx	
580-97182-5	MW-6_11.68-20200901	Total/NA	Water	NWTPH-Gx	
580-97182-6	MW-7_12.45-20200901	Total/NA	Water	NWTPH-Gx	
580-97182-7	MW-4_PDB-20200901	Total/NA	Water	NWTPH-Gx	
580-97182-8	MW-8_12.12-20200901	Total/NA	Water	NWTPH-Gx	
580-97182-9	Trip Blank 1_20200901	Total/NA	Water	NWTPH-Gx	
580-97182-10	PDB Blank_20200901	Total/NA	Water	NWTPH-Gx	
MB 580-337561/31	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 580-337561/32	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 580-337561/33	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

Metals

Prep Batch: 337439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-97182-1	MW-1_11.47-20200901	Total Recoverable	Water	3005A	
580-97182-2	MW-2_11.40-20200901	Total Recoverable	Water	3005A	
580-97182-3	MW-3_11.63-20200901	Total Recoverable	Water	3005A	
580-97182-4	MW-4_12.27-20200901	Total Recoverable	Water	3005A	
580-97182-5	MW-6_11.68-20200901	Total Recoverable	Water	3005A	
580-97182-6	MW-7_12.45-20200901	Total Recoverable	Water	3005A	
580-97182-8	MW-8_12.12-20200901	Total Recoverable	Water	3005A	
MB 580-337439/14-A	Method Blank	Total Recoverable	Water	3005A	
LCS 580-337439/15-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 580-337439/16-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	

Prep Batch: 337496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-97182-1	MW-1_11.47-20200901	Dissolved	Water	3005A	
580-97182-2	MW-2_11.40-20200901	Dissolved	Water	3005A	
580-97182-3	MW-3_11.63-20200901	Dissolved	Water	3005A	

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QC Association Summary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

Metals (Continued)

Prep Batch: 337496 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-97182-4	MW-4_12.27-20200901	Dissolved	Water	3005A	
580-97182-5	MW-6_11.68-20200901	Dissolved	Water	3005A	
580-97182-6	MW-7_12.45-20200901	Dissolved	Water	3005A	
580-97182-8	MW-8_12.12-20200901	Dissolved	Water	3005A	
MB 580-337496/18-A	Method Blank	Total Recoverable	Water	3005A	
LCS 580-337496/19-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 580-337496/20-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	

Analysis Batch: 337661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-97182-1	MW-1_11.47-20200901	Total Recoverable	Water	6020B	337439
580-97182-2	MW-2_11.40-20200901	Total Recoverable	Water	6020B	337439
580-97182-3	MW-3_11.63-20200901	Total Recoverable	Water	6020B	337439
580-97182-4	MW-4_12.27-20200901	Total Recoverable	Water	6020B	337439
580-97182-5	MW-6_11.68-20200901	Total Recoverable	Water	6020B	337439
580-97182-6	MW-7_12.45-20200901	Total Recoverable	Water	6020B	337439
580-97182-8	MW-8_12.12-20200901	Total Recoverable	Water	6020B	337439
MB 580-337439/14-A	Method Blank	Total Recoverable	Water	6020B	337439
LCS 580-337439/15-A	Lab Control Sample	Total Recoverable	Water	6020B	337439
LCSD 580-337439/16-A	Lab Control Sample Dup	Total Recoverable	Water	6020B	337439

Analysis Batch: 337673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-97182-1	MW-1_11.47-20200901	Dissolved	Water	6020B	337496
580-97182-2	MW-2_11.40-20200901	Dissolved	Water	6020B	337496
580-97182-3	MW-3_11.63-20200901	Dissolved	Water	6020B	337496
580-97182-4	MW-4_12.27-20200901	Dissolved	Water	6020B	337496
580-97182-5	MW-6_11.68-20200901	Dissolved	Water	6020B	337496
580-97182-6	MW-7_12.45-20200901	Dissolved	Water	6020B	337496
580-97182-8	MW-8_12.12-20200901	Dissolved	Water	6020B	337496
MB 580-337496/18-A	Method Blank	Total Recoverable	Water	6020B	337496
LCS 580-337496/19-A	Lab Control Sample	Total Recoverable	Water	6020B	337496
LCSD 580-337496/20-A	Lab Control Sample Dup	Total Recoverable	Water	6020B	337496

Lab Chronicle

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

Client Sample ID: MW-1_11.47-20200901

Lab Sample ID: 580-97182-1

Date Collected: 09/01/20 12:15

Matrix: Water

Date Received: 09/02/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	337473	09/04/20 06:21	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	337561	09/05/20 00:38	DCV	TAL SEA
Dissolved	Prep	3005A			337496	09/03/20 16:54	ART	TAL SEA
Dissolved	Analysis	6020B		5	337673	09/04/20 22:28	FCW	TAL SEA
Total Recoverable	Prep	3005A			337439	09/03/20 11:24	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	337661	09/04/20 15:44	FCW	TAL SEA

Client Sample ID: MW-2_11.40-20200901

Lab Sample ID: 580-97182-2

Date Collected: 09/01/20 12:50

Matrix: Water

Date Received: 09/02/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	337473	09/04/20 06:46	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	337561	09/05/20 01:02	DCV	TAL SEA
Dissolved	Prep	3005A			337496	09/03/20 16:54	ART	TAL SEA
Dissolved	Analysis	6020B		5	337673	09/04/20 22:31	FCW	TAL SEA
Total Recoverable	Prep	3005A			337439	09/03/20 11:24	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	337661	09/04/20 15:48	FCW	TAL SEA

Client Sample ID: MW-3_11.63-20200901

Lab Sample ID: 580-97182-3

Date Collected: 09/01/20 15:30

Matrix: Water

Date Received: 09/02/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	337473	09/04/20 07:11	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	337561	09/05/20 01:27	DCV	TAL SEA
Dissolved	Prep	3005A			337496	09/03/20 16:54	ART	TAL SEA
Dissolved	Analysis	6020B		5	337673	09/04/20 22:35	FCW	TAL SEA
Total Recoverable	Prep	3005A			337439	09/03/20 11:24	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	337661	09/04/20 15:52	FCW	TAL SEA

Client Sample ID: MW-4_12.27-20200901

Lab Sample ID: 580-97182-4

Date Collected: 09/01/20 14:00

Matrix: Water

Date Received: 09/02/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	337473	09/04/20 07:36	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	337561	09/05/20 01:51	DCV	TAL SEA
Dissolved	Prep	3005A			337496	09/03/20 16:54	ART	TAL SEA
Dissolved	Analysis	6020B		5	337673	09/04/20 22:39	FCW	TAL SEA
Total Recoverable	Prep	3005A			337439	09/03/20 11:24	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	337661	09/04/20 15:55	FCW	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

Client Sample ID: MW-6_11.68-20200901

Lab Sample ID: 580-97182-5

Date Collected: 09/01/20 13:15

Matrix: Water

Date Received: 09/02/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	337473	09/04/20 08:00	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	337561	09/05/20 02:16	DCV	TAL SEA
Dissolved	Prep	3005A			337496	09/03/20 16:54	ART	TAL SEA
Dissolved	Analysis	6020B		5	337673	09/04/20 22:58	FCW	TAL SEA
Total Recoverable	Prep	3005A			337439	09/03/20 11:24	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	337661	09/04/20 15:59	FCW	TAL SEA

Client Sample ID: MW-7_12.45-20200901

Lab Sample ID: 580-97182-6

Date Collected: 09/01/20 14:30

Matrix: Water

Date Received: 09/02/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	337473	09/04/20 08:25	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	337561	09/05/20 02:40	DCV	TAL SEA
Dissolved	Prep	3005A			337496	09/03/20 16:54	ART	TAL SEA
Dissolved	Analysis	6020B		5	337673	09/04/20 23:02	FCW	TAL SEA
Total Recoverable	Prep	3005A			337439	09/03/20 11:24	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	337661	09/04/20 16:03	FCW	TAL SEA

Client Sample ID: MW-4_PDB-20200901

Lab Sample ID: 580-97182-7

Date Collected: 09/01/20 13:30

Matrix: Water

Date Received: 09/02/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	337473	09/04/20 08:50	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	337561	09/05/20 03:29	DCV	TAL SEA

Client Sample ID: MW-8_12.12-20200901

Lab Sample ID: 580-97182-8

Date Collected: 09/01/20 15:00

Matrix: Water

Date Received: 09/02/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	337473	09/04/20 09:15	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	337561	09/05/20 03:54	DCV	TAL SEA
Dissolved	Prep	3005A			337496	09/03/20 16:54	ART	TAL SEA
Dissolved	Analysis	6020B		5	337673	09/04/20 23:06	FCW	TAL SEA
Total Recoverable	Prep	3005A			337439	09/03/20 11:24	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	337661	09/04/20 16:07	FCW	TAL SEA

Client Sample ID: Trip Blank 1_20200901

Lab Sample ID: 580-97182-9

Date Collected: 09/01/20 00:01

Matrix: Water

Date Received: 09/02/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	337473	09/04/20 01:19	DCV	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

Client Sample ID: Trip Blank 1_20200901

Lab Sample ID: 580-97182-9

Date Collected: 09/01/20 00:01

Matrix: Water

Date Received: 09/02/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	337561	09/05/20 00:13	DCV	TAL SEA

Client Sample ID: PDB Blank_20200901

Lab Sample ID: 580-97182-10

Date Collected: 09/01/20 13:35

Matrix: Water

Date Received: 09/02/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	337473	09/04/20 01:45	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	337561	09/05/20 04:18	DCV	TAL SEA

Laboratory References:

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

Accreditation/Certification Summary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

Laboratory: Eurofins TestAmerica, Seattle

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

Authority	Program	Identification Number	Expiration Date
Washington	State	C553	02-18-21

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Method Summary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	TAL SEA
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC)	NWTPH	TAL SEA
6020B	Metals (ICP/MS)	SW846	TAL SEA
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SEA
5030B	Purge and Trap	SW846	TAL SEA

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

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

Laboratory References:

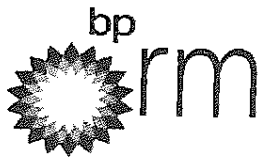
TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-97182-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-97182-1	MW-1_11.47-20200901	Water	09/01/20 12:15	09/02/20 10:00	
580-97182-2	MW-2_11.40-20200901	Water	09/01/20 12:50	09/02/20 10:00	
580-97182-3	MW-3_11.63-20200901	Water	09/01/20 15:30	09/02/20 10:00	
580-97182-4	MW-4_12.27-20200901	Water	09/01/20 14:00	09/02/20 10:00	
580-97182-5	MW-6_11.68-20200901	Water	09/01/20 13:15	09/02/20 10:00	
580-97182-6	MW-7_12.45-20200901	Water	09/01/20 14:30	09/02/20 10:00	
580-97182-7	MW-4_PDB-20200901	Water	09/01/20 13:30	09/02/20 10:00	
580-97182-8	MW-8_12.12-20200901	Water	09/01/20 15:00	09/02/20 10:00	
580-97182-9	Trip Blank 1_20200901	Water	09/01/20 00:01	09/02/20 10:00	
580-97182-10	PDB Blank_20200901	Water	09/01/20 13:35	09/02/20 10:00	



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

Page 1 of 2

BP Site Node Path: BP 5300

Req Due Date (mm/dd/yy): Standard TAT

Rush TAT Yes No X

BP/RM Facility No: BP Facility No. 5300

Lab Work Order Number:

Lab Name: Test America, Inc.		BP/ARC Facility Address: 710 15th Street		Consultant/Contractor: Antea Group														
Lab Address: Tacoma, WA		City, State, ZIP Code: Longview, Washington		Consultant/Contractor Project No: 05300SA201.20100														
Lab PM: Elaine Walker		Washington State Department of Ecology		Address: 4006 148th Ave NE, Redmond, WA 98052														
Lab Phone: 253.248.4972		California Global ID No.: NA		Consultant/Contractor PM: Megan Richard														
Lab Shipping Acct: NA		Enfos Proposal No: WR826968 / 009V4-0010		Phone: 425-498-7711 Email: Megan.Richard@anteagroup.com														
Lab Bottle Order No: NA		Accounting Mode: Provision X OOC-BU OOC-RM		Send/Submit EDD to: Megan.Richard@anteagroup.com														
Other Info: elaine.walker@testamericainc.com		Stage 2_Select (20) Activity Additional Data Collection (100)		Invoice To: BP-RM BP/ARC X														
BP/RM PM: Wade Melton		Sample Details		Requested Analyses														
PM Phone: 360-594-7978		Report Type & QC Level		Limited (Standard) Package														
PM Email: wade.melton@bp.com		Limited Plus Package		Full Package														
Loc: 580		97182																
Lab No.	Sample Description	Date	Time	Field Matrix	Start Depth	End Depth	Depth Unit	Grab (G) or Composite (C)	Total Number of Containers	Analysis	BTEX by EPA Method 8260B	MTBE by EPA Method 8260B	NWTPH-Gx	NWTPH-D w/ silica gel	Pb-D Non Field Filtered	Pb-T by EPA 6010B	EOB by EPA 8011	EOC by EPA 8260
	MW-1_11.47-20200901	9/1/2020	1215	W				G	8		X	X	X		X	X		
	MW-2_11.40-20200901		1250	W				G	8		X	X	X		X	X		
	MW-3_11.62-20200901		1530	W				G	8		X	X	X		X	X		
	MW-4_12.27-20200901		1400	W				G	8		X	X	X		X	X		
	MW-6_11.68-20200901		1315	W				G	8		X	X	X		X	X		
	MW-7_12.45-20200901		1430	W				G	8		X	X	X		X	X		
	MW-4_PDB3-20200901		1330	W				G	6		X	X	X					
Sampler's Name: Jeffrey Karambolas		Relinquished By / Affiliation		Date		Time		Accepted By / Affiliation		Date		Time						
Sampler's Company: Antea Group								Tom B / Antea		9/2/20		1000						
Ship Method: FedEx		Ship Date: 9/1/2020																
Shipment Tracking No:																		
Special Instructions:																		
THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No Temp Blank: Yes / No Cooler Temp on Receipt: °F/C Trip Blank: Yes / No MS/MSD Sample Submitted: Yes / No																		

BP LaMP Soil/H2O COC July 2018



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

Page 2 of 2

BP Site Node Path: BP 5300

Req Due Date (mm/dd/yy): Standard TAT

Rush TAT Yes No X

BP/RM Facility No: BP Facility No. 5300

Lab Work Order Number:

Lab Name: Test America, Inc.		BP/ARC Facility Address: 710 15th Street		Consultant/Contractor: Antea Group									
Lab Address: Tacoma, WA		City, State, ZIP Code: Longview, Washington		Consultant/Contractor Project No: 05300SA201.20100									
Lab PM: Elaine Walker		Washington State Department of Ecology		Address: 4006 148th Ave NE, Redmond, WA 98052									
Lab Phone: 253.248.4972		California Global ID No.: NA		Consultant/Contractor PM: Megan Richard									
Lab Shipping Acct: NA		Enfos Proposal No: WR826968 / 009V4-0010		Phone: 425-498-7711 Email: Megan.Richard@anteagroup.com									
Lab Bottle Order No: NA		Accounting Mode: Provision <u> X </u> OOC-BU <u> </u> OOC-RM <u> </u>		Send/Submit EDD to: Megan.Richard@anteagroup.com									
Other Info: elaine.walker@testamericainc.com		Stage <u> 2 </u> Select (20) Activity <u> </u> Additional Data Collection (100)		Invoice To: <u> </u> BP-RM <u> </u> BP/ARC <u>X</u>									
BP/RM PM: Wade Melton		Sample Details		Requested Analyses									
PM Phone: 360-594-7978				Report Type & QC Level									
PM Email: wade.melton@bp.com				Limited (Standard) Package <u> </u>									
				Limited Plus Package <u> </u>									
				Full Package <u> </u>									
Lab No.	Sample Description	Date	Time	Field Matrix	Start Depth	End Depth	Depth Unit	Grab (G) or Composite (C)	Total Number of Containers	Analysis	Fit	Pres	Comments
	MW-8_12.12.2020	9/1/2020	1500	W				G	8	X X X X			
	Trip Blank_1	9/1/2020		W				G	6	X X X			
	MW-4-PDB												
	PDB Blank_2020	9/1/2020	1335	W				G	4	X X X			
Therm. ID: <u>A2</u> Cor: <u>0.9</u> ° Unc: <u>1.0</u> °													
Cooler Desc: <u>Large Blue</u>													
Packing: <u>bag</u> FedEx: <u>PO</u>													
Cust. Seal: Yes <u>No</u> X UPS: <u> </u>													
Blue Ice, <u>Wet</u> Dry, None Lab Cour: <u> </u>													
Other: <u> </u>													
Sampler's Name: <u>Jeffrey Karamba</u>		Relinquished By / Affiliation		Date	Time	Accepted By / Affiliation		Date	Time				
Sampler's Company: Antea Group						<u>Tom Blank</u>		<u>9/2/20</u>	<u>1000</u>				
Ship Method: <u>FedEx</u> Ship Date: <u>9/1/2020</u>													
Shipment Tracking No:													
Special Instructions:													
THIS LINE - LAB USE ONLY: Custody Seals in Place: Yes / No Temp Blank: Yes / No Cooler Temp on Receipt: <u> </u> °F/C Trip Blank: Yes / No MS/MSD Sample Submitted: Yes / No													

BP LaMP Soil/H2O COC July 2018

Login Sample Receipt Checklist

Client: Antea USA Inc.

Job Number: 580-97182-1

Login Number: 97182

List Source: Eurofins TestAmerica, Seattle

List Number: 1

Creator: Hobbs, Kenneth F

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

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-97182-1

SDG No.: _____

Batch Number: 337473 Batch Start Date: 09/03/20 22:45 Batch Analyst: Vaughan, Dmitra CBatch Method: 8260D Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS 00001	VOAMasterMix 00058	
MB 580-337473/5		8260D		5 mL	5 mL		2 uL		
LCS 580-337473/6		8260D		5 mL	5 mL		2 uL	20 uL	
LCSD 580-337473/7		8260D		5 mL	5 mL		2 uL	20 uL	
580-97182-A-9	Trip Blank 1 20200901	8260D	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-A-10	PDB Blank 20200901	8260D	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-H-1	MW-1_11.47-20200 901	8260D	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-H-2	MW-2_11.40-20200 901	8260D	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-H-3	MW-3_11.63-20200 901	8260D	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-H-4	MW-4_12.27-20200 901	8260D	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-H-5	MW-6_11.68-20200 901	8260D	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-H-6	MW-7_12.45-20200 901	8260D	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-D-7	MW-4_PDB-2020090 1	8260D	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-D-8	MW-8_12.12-20200 901	8260D	T	5 mL	5 mL	<2 SU	2 uL		

Batch Notes

Vial Lot Number 0103101F

Basis	Basis Description
T	Total/NA

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

8260D

Page 1 of 1

GC VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-97182-1

SDG No.: _____

Batch Number: 337561 Batch Start Date: 09/04/20 11:31 Batch Analyst: Vaughan, Dmitra CBatch Method: NWTPH-Gx Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	BFBGRO ARCHON 00044	GRO_LCS 00063	
MB 580-337561/31		NWTPH-Gx		5 mL	5 mL		2 uL		
LCS 580-337561/32		NWTPH-Gx		5 mL	5 mL		2 uL	50 uL	
LCSD 580-337561/33		NWTPH-Gx		5 mL	5 mL		2 uL	50 uL	
580-97182-B-9	Trip Blank 1 20200901	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-D-1	MW-1_11.47-20200 901	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-E-2	MW-2_11.40-20200 901	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-E-3	MW-3_11.63-20200 901	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-E-4	MW-4_12.27-20200 901	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-D-5	MW-6_11.68-20200 901	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-E-6	MW-7_12.45-20200 901	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-A-7	MW-4_PDB-2020090 1	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-D-8	MW-8_12.12-20200 901	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		
580-97182-B-10	PDB Blank 20200901	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		

Batch Notes

Vial Lot Number	0103101F
-----------------	----------

Basis	Basis Description
T	Total/NA

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

NWTPH-Gx

Page 1 of 1

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-97182-1

SDG No.: _____

Batch Number: 337439 Batch Start Date: 09/03/20 11:24 Batch Analyst: Tubens, Andrea RBatch Method: 3005A Batch End Date: 09/03/20 15:39

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ICP CAL 1 00009	ICP CAL 2 00008	MET Spike 3C 00022	
580-97182-B-1	MW-1_11.47-20200 901	3005A, 6020B	R	50 mL	50 mL				
580-97182-B-2	MW-2_11.40-20200 901	3005A, 6020B	R	50 mL	50 mL				
580-97182-B-3	MW-3_11.63-20200 901	3005A, 6020B	R	50 mL	50 mL				
580-97182-B-4	MW-4_12.27-20200 901	3005A, 6020B	R	50 mL	50 mL				
580-97182-B-5	MW-6_11.68-20200 901	3005A, 6020B	R	50 mL	50 mL				
580-97182-B-6	MW-7_12.45-20200 901	3005A, 6020B	R	50 mL	50 mL				
580-97182-B-8	MW-8_12.12-20200 901	3005A, 6020B	R	50 mL	50 mL				
MB 580-337439/14		3005A, 6020B		50 mL	50 mL				
LCS 580-337439/15		3005A, 6020B		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
LCSD 580-337439/16		3005A, 6020B		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	

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

6020B

Page 1 of 2

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-97182-1

SDG No.: _____

Batch Number: 337439 Batch Start Date: 09/03/20 11:24 Batch Analyst: Tubens, Andrea RBatch Method: 3005A Batch End Date: 09/03/20 15:39

Batch Notes	
Temperature - Corrected - End	97.3 Degrees C
Temperature - Corrected - Start	94.3 Degrees C
Digestion End Time	09/03/2020 15:39
Digestion Start Time	09/03/2020 11:39
Digestion Unit ID	block d
Hydrochloric Acid ID	2665870
Nitric Acid ID	2646721
Pipette/Syringe/Dispenser ID	METALS-PREP-2
Analyst ID - Spike Analyst	AT
Sufficient Volume for Batch QC	yes
Thermometer ID	700396
Digestion Tube/Cup ID	2535260
Temperature - Uncorrected - End	99 Degrees C
Temperature - Uncorrected - Start	94 Degrees C

Basis	Basis Description
R	Total Recoverable

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

6020B

Page 2 of 2

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-97182-1

SDG No.: _____

Batch Number: 337496 Batch Start Date: 09/03/20 16:54 Batch Analyst: Tubens, Andrea RBatch Method: 3005A Batch End Date: 09/03/20 21:31

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ICP CAL 1 00009	ICP CAL 2 00008	MET Spike 3C 00022	
580-97182-A-1	MW-1_11.47-20200 901	3005A, 6020B	D	50 mL	50 mL				
580-97182-A-2	MW-2_11.40-20200 901	3005A, 6020B	D	50 mL	50 mL				
580-97182-A-3	MW-3_11.63-20200 901	3005A, 6020B	D	50 mL	50 mL				
580-97182-A-4	MW-4_12.27-20200 901	3005A, 6020B	D	50 mL	50 mL				
580-97182-A-5	MW-6_11.68-20200 901	3005A, 6020B	D	50 mL	50 mL				
580-97182-A-6	MW-7_12.45-20200 901	3005A, 6020B	D	50 mL	50 mL				
580-97182-A-8	MW-8_12.12-20200 901	3005A, 6020B	D	50 mL	50 mL				
MB 580-337496/18		3005A, 6020B		50 mL	50 mL				
LCS 580-337496/19		3005A, 6020B		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
LCSD 580-337496/20		3005A, 6020B		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	

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

6020B

Page 1 of 2

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-97182-1

SDG No.: _____

Batch Number: 337496 Batch Start Date: 09/03/20 16:54 Batch Analyst: Tubens, Andrea RBatch Method: 3005A Batch End Date: 09/03/20 21:31

Batch Notes	
Temperature - Corrected - End	93.3 Degrees C
Temperature - Corrected - Start	93.3 Degrees C
Digestion End Time	09/03/2020 21:31
Digestion Start Time	09/03/2020 17:31
Digestion Unit ID	block d
Hydrochloric Acid ID	2665870
Nitric Acid ID	2646721
Pipette/Syringe/Dispenser ID	METALS-PREP-2
Analyst ID - Spike Analyst	AT
Sufficient Volume for Batch QC	yes
Thermometer ID	700396
Digestion Tube/Cup ID	2535260
Temperature - Uncorrected - End	93 Degrees C
Temperature - Uncorrected - Start	93 Degrees C

Basis	Basis Description
D	Dissolved

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

6020B

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ANALYTICAL REPORT

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-99461-1
Client Project/Site: BP - ARCO 5300

For:

Antea USA Inc.
4006 148th Ave NE
Redmond, Washington 98052

Attn: Megan Richard



Authorized for release by:
12/17/2020 10:39:45 AM

Elaine Walker, Project Manager II
(253)248-4972
m.elaine.walker@eurofinset.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
S1+	Surrogate recovery exceeds control limits, high biased.
X	Surrogate recovery exceeds control limits

Glossary

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

Case Narrative

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

Job ID: 580-99461-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-99461-1

Receipt

Ten samples were received on 12/3/2020 9:45 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.6° C.

GC/MS VOA

Method 8260D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 580-345499 recovered outside control limits for the following analytes: Xylenes, Total. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: Surrogate recovery was outside control limits for the following sample: MW-1_10.79_20201202. The surrogates were biased high and the sample was ND; therefore the data has been reported.

Method 8260D: Surrogate recovery was outside control limits for the following samples: MW-2_10.49_20201202 (580-99461-2), MW-3_10.70_20201202 (580-99461-3), MW-4_11.57_20201202 (580-99461-4), MW-6_10.72_20201202 (580-99461-5), MW-7_11.68_20201202 (580-99461-6), MW-4_PDB_20201202 (580-99461-7) and Trip Blank_1_20201202 (580-99461-9). 4-Bromofluorobenzene (Surr) recovered low but is not chemically associated with the reported compounds, therefore data have been reported.

Method 8260D: The method blank contained Ethylbenzene and Xylenes, Total above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

Client Sample ID: MW-1_10.79_20201202

Lab Sample ID: 580-99461-1

No Detections.

Client Sample ID: MW-2_10.49_20201202

Lab Sample ID: 580-99461-2

No Detections.

Client Sample ID: MW-3_10.70_20201202

Lab Sample ID: 580-99461-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	4.8		2.0		ug/L	1		8260D	Total/NA

Client Sample ID: MW-4_11.57_20201202

Lab Sample ID: 580-99461-4

No Detections.

Client Sample ID: MW-6_10.72_20201202

Lab Sample ID: 580-99461-5

No Detections.

Client Sample ID: MW-7_11.68_20201202

Lab Sample ID: 580-99461-6

No Detections.

Client Sample ID: MW-4_PDB_20201202

Lab Sample ID: 580-99461-7

No Detections.

Client Sample ID: MW-8_11.28_20201202

Lab Sample ID: 580-99461-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	3.9		2.0		ug/L	1		8260D	Total/NA

Client Sample ID: Trip Blank_1_20201202

Lab Sample ID: 580-99461-9

No Detections.

Client Sample ID: PDB Blank_20201202

Lab Sample ID: 580-99461-10

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

Client Sample ID: MW-1_10.79_20201202

Lab Sample ID: 580-99461-1

Date Collected: 12/02/20 10:20

Matrix: Water

Date Received: 12/03/20 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		2.0		ug/L			12/15/20 00:41	1
Benzene	ND		3.0		ug/L			12/15/20 00:41	1
Toluene	ND		2.0		ug/L			12/15/20 00:41	1
Ethylbenzene	ND		3.0		ug/L			12/15/20 00:41	1
Xylenes, Total	ND	+	3.0		ug/L			12/15/20 00:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	118		80 - 120		12/15/20 00:41	1
1,2-Dichloroethane-d4 (Surr)	140	S1+	80 - 126		12/15/20 00:41	1
4-Bromofluorobenzene (Surr)	94		80 - 120		12/15/20 00:41	1
Dibromofluoromethane (Surr)	131	S1+	80 - 120		12/15/20 00:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			12/07/20 21:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		50 - 150					12/07/20 21:20	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		12/11/20 11:00	12/11/20 17:45	5

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		12/11/20 17:09	12/14/20 11:11	5

Client Sample ID: MW-2_10.49_20201202

Lab Sample ID: 580-99461-2

Date Collected: 12/02/20 11:00

Matrix: Water

Date Received: 12/03/20 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		2.0		ug/L			12/07/20 15:08	1
Benzene	ND		3.0		ug/L			12/07/20 15:08	1
Toluene	ND		2.0		ug/L			12/07/20 15:08	1
Ethylbenzene	ND		3.0		ug/L			12/07/20 15:08	1
Xylenes, Total	ND		3.0		ug/L			12/07/20 15:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		80 - 120		12/07/20 15:08	1
1,2-Dichloroethane-d4 (Surr)	118		80 - 126		12/07/20 15:08	1
4-Bromofluorobenzene (Surr)	74	X	80 - 120		12/07/20 15:08	1
Dibromofluoromethane (Surr)	123	X	80 - 120		12/07/20 15:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			12/07/20 21:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		50 - 150					12/07/20 21:44	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

Client Sample ID: MW-2_10.49_20201202

Lab Sample ID: 580-99461-2

Date Collected: 12/02/20 11:00

Matrix: Water

Date Received: 12/03/20 09:45

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		12/11/20 11:00	12/11/20 17:49	5

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		12/11/20 17:09	12/14/20 14:08	5

Client Sample ID: MW-3_10.70_20201202

Lab Sample ID: 580-99461-3

Date Collected: 12/02/20 14:10

Matrix: Water

Date Received: 12/03/20 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	4.8		2.0		ug/L			12/07/20 15:34	1
Benzene	ND		3.0		ug/L			12/07/20 15:34	1
Toluene	ND		2.0		ug/L			12/07/20 15:34	1
Ethylbenzene	ND		3.0		ug/L			12/07/20 15:34	1
Xylenes, Total	ND		3.0		ug/L			12/07/20 15:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 120		12/07/20 15:34	1
1,2-Dichloroethane-d4 (Surr)	115		80 - 126		12/07/20 15:34	1
4-Bromofluorobenzene (Surr)	79	X	80 - 120		12/07/20 15:34	1
Dibromofluoromethane (Surr)	117		80 - 120		12/07/20 15:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			12/07/20 22:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		50 - 150		12/07/20 22:08	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		12/11/20 17:09	12/14/20 14:11	5

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		12/11/20 11:00	12/11/20 17:53	5

Client Sample ID: MW-4_11.57_20201202

Lab Sample ID: 580-99461-4

Date Collected: 12/02/20 12:25

Matrix: Water

Date Received: 12/03/20 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		2.0		ug/L			12/07/20 15:59	1
Benzene	ND		3.0		ug/L			12/07/20 15:59	1
Toluene	ND		2.0		ug/L			12/07/20 15:59	1
Ethylbenzene	ND		3.0		ug/L			12/07/20 15:59	1
Xylenes, Total	ND		3.0		ug/L			12/07/20 15:59	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

Client Sample ID: MW-4_11.57_20201202

Lab Sample ID: 580-99461-4

Date Collected: 12/02/20 12:25

Matrix: Water

Date Received: 12/03/20 09:45

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 120		12/07/20 15:59	1
1,2-Dichloroethane-d4 (Surr)	113		80 - 126		12/07/20 15:59	1
4-Bromofluorobenzene (Surr)	77	X	80 - 120		12/07/20 15:59	1
Dibromofluoromethane (Surr)	114		80 - 120		12/07/20 15:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			12/07/20 22:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		50 - 150		12/07/20 22:33	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		12/11/20 11:00	12/11/20 17:56	5

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		12/11/20 17:09	12/14/20 14:15	5

Client Sample ID: MW-6_10.72_20201202

Lab Sample ID: 580-99461-5

Date Collected: 12/02/20 11:35

Matrix: Water

Date Received: 12/03/20 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		2.0		ug/L			12/07/20 16:23	1
Benzene	ND		3.0		ug/L			12/07/20 16:23	1
Toluene	ND		2.0		ug/L			12/07/20 16:23	1
Ethylbenzene	ND		3.0		ug/L			12/07/20 16:23	1
Xylenes, Total	ND		3.0		ug/L			12/07/20 16:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		80 - 120		12/07/20 16:23	1
1,2-Dichloroethane-d4 (Surr)	110		80 - 126		12/07/20 16:23	1
4-Bromofluorobenzene (Surr)	78	X	80 - 120		12/07/20 16:23	1
Dibromofluoromethane (Surr)	114		80 - 120		12/07/20 16:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			12/07/20 22:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		50 - 150		12/07/20 22:57	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		12/11/20 17:09	12/14/20 14:19	5

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		12/11/20 11:00	12/11/20 18:00	5

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

Client Sample ID: MW-7_11.68_20201202

Lab Sample ID: 580-99461-6

Date Collected: 12/02/20 13:00

Matrix: Water

Date Received: 12/03/20 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		2.0		ug/L			12/07/20 16:49	1
Benzene	ND		3.0		ug/L			12/07/20 16:49	1
Toluene	ND		2.0		ug/L			12/07/20 16:49	1
Ethylbenzene	ND		3.0		ug/L			12/07/20 16:49	1
Xylenes, Total	ND		3.0		ug/L			12/07/20 16:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120		12/07/20 16:49	1
1,2-Dichloroethane-d4 (Surr)	122		80 - 126		12/07/20 16:49	1
4-Bromofluorobenzene (Surr)	77	X	80 - 120		12/07/20 16:49	1
Dibromofluoromethane (Surr)	118		80 - 120		12/07/20 16:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			12/08/20 16:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		50 - 150					12/08/20 16:46	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		12/11/20 11:00	12/11/20 18:04	5

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		12/11/20 17:10	12/14/20 14:22	5

Client Sample ID: MW-4_PDB_20201202

Lab Sample ID: 580-99461-7

Date Collected: 12/02/20 12:00

Matrix: Water

Date Received: 12/03/20 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		2.0		ug/L			12/07/20 17:14	1
Benzene	ND		3.0		ug/L			12/07/20 17:14	1
Toluene	ND		2.0		ug/L			12/07/20 17:14	1
Ethylbenzene	ND		3.0		ug/L			12/07/20 17:14	1
Xylenes, Total	ND		3.0		ug/L			12/07/20 17:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 120		12/07/20 17:14	1
1,2-Dichloroethane-d4 (Surr)	117		80 - 126		12/07/20 17:14	1
4-Bromofluorobenzene (Surr)	79	X	80 - 120		12/07/20 17:14	1
Dibromofluoromethane (Surr)	115		80 - 120		12/07/20 17:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			12/08/20 17:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		50 - 150					12/08/20 17:11	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

Client Sample ID: MW-8_11.28_20201202

Lab Sample ID: 580-99461-8

Date Collected: 12/02/20 13:35

Matrix: Water

Date Received: 12/03/20 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	3.9		2.0		ug/L			12/07/20 17:39	1
Benzene	ND		3.0		ug/L			12/07/20 17:39	1
Toluene	ND		2.0		ug/L			12/07/20 17:39	1
Ethylbenzene	ND		3.0		ug/L			12/07/20 17:39	1
Xylenes, Total	ND		3.0		ug/L			12/07/20 17:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 120		12/07/20 17:39	1
1,2-Dichloroethane-d4 (Surr)	119		80 - 126		12/07/20 17:39	1
4-Bromofluorobenzene (Surr)	80		80 - 120		12/07/20 17:39	1
Dibromofluoromethane (Surr)	116		80 - 120		12/07/20 17:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			12/08/20 17:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		50 - 150					12/08/20 17:59	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		12/11/20 17:10	12/14/20 14:26	5

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		12/11/20 11:00	12/11/20 18:07	5

Client Sample ID: Trip Blank_1_20201202

Lab Sample ID: 580-99461-9

Date Collected: 12/02/20 00:01

Matrix: Water

Date Received: 12/03/20 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			12/07/20 13:03	1
Toluene	ND		2.0		ug/L			12/07/20 13:03	1
Ethylbenzene	ND		3.0		ug/L			12/07/20 13:03	1
Xylenes, Total	ND		3.0		ug/L			12/07/20 13:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		80 - 120		12/07/20 13:03	1
1,2-Dichloroethane-d4 (Surr)	115		80 - 126		12/07/20 13:03	1
4-Bromofluorobenzene (Surr)	79	X	80 - 120		12/07/20 13:03	1
Dibromofluoromethane (Surr)	115		80 - 120		12/07/20 13:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			12/08/20 16:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		50 - 150					12/08/20 16:22	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

Client Sample ID: PDB Blank_20201202

Lab Sample ID: 580-99461-10

Date Collected: 12/02/20 11:50

Matrix: Water

Date Received: 12/03/20 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			12/08/20 13:30	1
Toluene	ND		2.0		ug/L			12/08/20 13:30	1
Ethylbenzene	ND		3.0		ug/L			12/08/20 13:30	1
Xylenes, Total	ND		3.0		ug/L			12/08/20 13:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		12/08/20 13:30	1
1,2-Dichloroethane-d4 (Surr)	103		80 - 126		12/08/20 13:30	1
4-Bromofluorobenzene (Surr)	89		80 - 120		12/08/20 13:30	1
Dibromofluoromethane (Surr)	108		80 - 120		12/08/20 13:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			12/08/20 15:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		50 - 150		12/08/20 15:58	1

Surrogate Summary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TOL (80-120)	DCA (80-126)	BFB (80-120)	DBFM (80-120)
580-99461-1	MW-1_10.79_20201202	118	140 S1+	94	131 S1+
580-99461-2	MW-2_10.49_20201202	108	118	74 X	123 X
580-99461-3	MW-3_10.70_20201202	102	115	79 X	117
580-99461-4	MW-4_11.57_20201202	105	113	77 X	114
580-99461-5	MW-6_10.72_20201202	106	110	78 X	114
580-99461-6	MW-7_11.68_20201202	100	122	77 X	118
580-99461-7	MW-4_PDB_20201202	102	117	79 X	115
580-99461-8	MW-8_11.28_20201202	102	119	80	116
580-99461-9	Trip Blank_1_20201202	104	115	79 X	115
580-99461-10	PDB Blank_20201202	99	103	89	108
LCS 580-344922/6	Lab Control Sample	104	102	90	106
LCS 580-345120/6	Lab Control Sample	104	101	92	104
LCS 580-345499/16	Lab Control Sample	98	101	101	116
LCSD 580-344922/7	Lab Control Sample Dup	103	101	90	106
LCSD 580-345120/7	Lab Control Sample Dup	103	98	92	103
LCSD 580-345499/17	Lab Control Sample Dup	101	101	93	106
MB 580-344922/5	Method Blank	99	117	81	115
MB 580-345120/5	Method Blank	103	111	85	110
MB 580-345499/15	Method Blank	92	98	88	105

Surrogate Legend

TOL = Toluene-d8 (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB2 (50-150)	TFT2 (50-150)
580-99461-1	MW-1_10.79_20201202	95	
580-99461-2	MW-2_10.49_20201202	90	
580-99461-3	MW-3_10.70_20201202	96	
580-99461-4	MW-4_11.57_20201202	88	
580-99461-5	MW-6_10.72_20201202	91	
580-99461-6	MW-7_11.68_20201202	87	
580-99461-7	MW-4_PDB_20201202	87	
580-99461-8	MW-8_11.28_20201202	84	
580-99461-9	Trip Blank_1_20201202	87	
580-99461-10	PDB Blank_20201202	90	
LCS 580-344952/5	Lab Control Sample	99	
LCS 580-345067/33	Lab Control Sample	94	
LCS 580-345067/5	Lab Control Sample	93	
LCSD 580-344952/6	Lab Control Sample Dup	100	
LCSD 580-345067/34	Lab Control Sample Dup	92	
LCSD 580-345067/6	Lab Control Sample Dup	96	68
MB 580-344952/4	Method Blank	90	
MB 580-345067/32	Method Blank	92	

Eurofins TestAmerica, Seattle

Surrogate Summary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB2 (50-150)	TFT2 (50-150)
MB 580-345067/4	Method Blank	86	

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

TFT = Trifluorotoluene (Surr)

QC Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

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

Lab Sample ID: MB 580-344922/5

Matrix: Water

Analysis Batch: 344922

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		2.0		ug/L			12/07/20 10:58	1
Benzene	ND		3.0		ug/L			12/07/20 10:58	1
Toluene	ND		2.0		ug/L			12/07/20 10:58	1
Ethylbenzene	ND		3.0		ug/L			12/07/20 10:58	1
Xylenes, Total	ND		3.0		ug/L			12/07/20 10:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		12/07/20 10:58	1
1,2-Dichloroethane-d4 (Surr)	117		80 - 126		12/07/20 10:58	1
4-Bromofluorobenzene (Surr)	81		80 - 120		12/07/20 10:58	1
Dibromofluoromethane (Surr)	115		80 - 120		12/07/20 10:58	1

Lab Sample ID: LCS 580-344922/6

Matrix: Water

Analysis Batch: 344922

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	10.0	8.72		ug/L		87	72 - 130
Benzene	10.0	11.0		ug/L		110	82 - 122
Toluene	10.0	9.73		ug/L		97	80 - 120
Ethylbenzene	10.0	9.35		ug/L		93	80 - 120
Xylenes, Total	20.0	18.1		ug/L		91	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	102		80 - 126
4-Bromofluorobenzene (Surr)	90		80 - 120
Dibromofluoromethane (Surr)	106		80 - 120

Lab Sample ID: LCSD 580-344922/7

Matrix: Water

Analysis Batch: 344922

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	10.0	8.60		ug/L		86	72 - 130	1	18
Benzene	10.0	10.7		ug/L		107	82 - 122	3	14
Toluene	10.0	9.48		ug/L		95	80 - 120	3	13
Ethylbenzene	10.0	9.19		ug/L		92	80 - 120	2	14
Xylenes, Total	20.0	17.8		ug/L		89	80 - 120	2	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	103		80 - 120
1,2-Dichloroethane-d4 (Surr)	101		80 - 126
4-Bromofluorobenzene (Surr)	90		80 - 120
Dibromofluoromethane (Surr)	106		80 - 120

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QC Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

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

Lab Sample ID: MB 580-345120/5

Matrix: Water

Analysis Batch: 345120

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			12/08/20 11:24	1
Toluene	ND		2.0		ug/L			12/08/20 11:24	1
Ethylbenzene	ND		3.0		ug/L			12/08/20 11:24	1
Xylenes, Total	ND		3.0		ug/L			12/08/20 11:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 120		12/08/20 11:24	1
1,2-Dichloroethane-d4 (Surr)	111		80 - 126		12/08/20 11:24	1
4-Bromofluorobenzene (Surr)	85		80 - 120		12/08/20 11:24	1
Dibromofluoromethane (Surr)	110		80 - 120		12/08/20 11:24	1

Lab Sample ID: LCS 580-345120/6

Matrix: Water

Analysis Batch: 345120

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	10.7		ug/L		107	82 - 122
Toluene	10.0	9.77		ug/L		98	80 - 120
Ethylbenzene	10.0	9.39		ug/L		94	80 - 120
Xylenes, Total	20.0	18.6		ug/L		93	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	101		80 - 126
4-Bromofluorobenzene (Surr)	92		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120

Lab Sample ID: LCSD 580-345120/7

Matrix: Water

Analysis Batch: 345120

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	10.0	10.4		ug/L		104	82 - 122	3	14
Toluene	10.0	9.73		ug/L		97	80 - 120	0	13
Ethylbenzene	10.0	9.44		ug/L		94	80 - 120	1	14
Xylenes, Total	20.0	18.5		ug/L		93	80 - 120	0	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	103		80 - 120
1,2-Dichloroethane-d4 (Surr)	98		80 - 126
4-Bromofluorobenzene (Surr)	92		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

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

Lab Sample ID: MB 580-345499/15

Matrix: Water

Analysis Batch: 345499

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		2.0		ug/L			12/14/20 18:50	1
Benzene	ND		3.0		ug/L			12/14/20 18:50	1
Toluene	ND		2.0		ug/L			12/14/20 18:50	1
Ethylbenzene	3.09		3.0		ug/L			12/14/20 18:50	1
Xylenes, Total	3.14		3.0		ug/L			12/14/20 18:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	92		80 - 120		12/14/20 18:50	1
1,2-Dichloroethane-d4 (Surr)	98		80 - 126		12/14/20 18:50	1
4-Bromofluorobenzene (Surr)	88		80 - 120		12/14/20 18:50	1
Dibromofluoromethane (Surr)	105		80 - 120		12/14/20 18:50	1

Lab Sample ID: LCS 580-345499/16

Matrix: Water

Analysis Batch: 345499

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	10.0	9.89		ug/L		99	72 - 130
Benzene	10.0	10.9		ug/L		109	82 - 122
Toluene	10.0	10.7		ug/L		107	80 - 120
Ethylbenzene	10.0	11.7		ug/L		117	80 - 120
Xylenes, Total	20.0	25.7	*+	ug/L		129	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	98		80 - 120
1,2-Dichloroethane-d4 (Surr)	101		80 - 126
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	116		80 - 120

Lab Sample ID: LCSD 580-345499/17

Matrix: Water

Analysis Batch: 345499

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	10.0	9.93		ug/L		99	72 - 130	0	18
Benzene	10.0	10.7		ug/L		107	82 - 122	2	14
Toluene	10.0	10.4		ug/L		104	80 - 120	3	13
Ethylbenzene	10.0	11.4		ug/L		114	80 - 120	2	14
Xylenes, Total	20.0	26.3	*+	ug/L		132	80 - 120	2	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	101		80 - 126
4-Bromofluorobenzene (Surr)	93		80 - 120
Dibromofluoromethane (Surr)	106		80 - 120

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

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

Lab Sample ID: MB 580-344952/4

Matrix: Water

Analysis Batch: 344952

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			12/07/20 10:43	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		50 - 150					12/07/20 10:43	1

Lab Sample ID: LCS 580-344952/5

Matrix: Water

Analysis Batch: 344952

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	1000	941		ug/L		94	79 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	99		50 - 150				

Lab Sample ID: LCSD 580-344952/6

Matrix: Water

Analysis Batch: 344952

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline	1000	934		ug/L		93	79 - 120	1	10
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	100		50 - 150						

Lab Sample ID: MB 580-345067/32

Matrix: Water

Analysis Batch: 345067

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			12/09/20 01:43	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		50 - 150					12/09/20 01:43	1

Lab Sample ID: MB 580-345067/4

Matrix: Water

Analysis Batch: 345067

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			12/08/20 13:32	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		50 - 150					12/08/20 13:32	1

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

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

Lab Sample ID: LCS 580-345067/33

Matrix: Water

Analysis Batch: 345067

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			1000	869		ug/L		87	79 - 120		
Surrogate		LCS %Recovery	LCS Qualifier	Limits							
4-Bromofluorobenzene (Surr)		94		50 - 150							

Lab Sample ID: LCS 580-345067/5

Matrix: Water

Analysis Batch: 345067

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

			Spike	LCS	LCS				%Rec.		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline			1000	849		ug/L		85	79 - 120		
			LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	93		50 - 150								

Lab Sample ID: LCSD 580-345067/34

Matrix: Water

Analysis Batch: 345067

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline			1000	876		ug/L	-	88	79 - 120	1	10
Surrogate	LCSD	LCSD									
	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	92		50 - 150								

Lab Sample ID: LCSD 580-345067/6

Matrix: Water

Analysis Batch: 345067

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

			Spike	LCSD	LCSD				%Rec.	RPD	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline			1000	933		ug/L	-	93	79 - 120	9	10
Surrogate	LCSD	LCSD									
	%Recovery	Qualifier	Limits								
	4-Bromofluorobenzene (Surr)	96	50 - 150								
	Trifluorotoluene (Surr)	68	50 - 150								

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 580-345353/23-A

Matrix: Water

Analysis Batch: 345455

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 345353

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.80		ug/L		12/11/20 11:00	12/11/20 16:57	1

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-345353/24-A
Matrix: Water
Analysis Batch: 345455

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 345353

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1000	1010		ug/L		101	80 - 120

Lab Sample ID: LCSD 580-345353/25-A
Matrix: Water
Analysis Batch: 345455

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 345353

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	1000	1010		ug/L		101	80 - 120	0	20

Lab Sample ID: MB 580-345400/23-A
Matrix: Water
Analysis Batch: 345568

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 345400

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.80		ug/L		12/11/20 17:10	12/14/20 11:03	1

Lab Sample ID: LCS 580-345400/24-A
Matrix: Water
Analysis Batch: 345568

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 345400

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1000	964		ug/L		96	80 - 120

Lab Sample ID: LCSD 580-345400/25-A
Matrix: Water
Analysis Batch: 345568

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 345400

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	1000	965		ug/L		96	80 - 120	0	20

Lab Sample ID: 580-99461-1 MS
Matrix: Water
Analysis Batch: 345568

Client Sample ID: MW-1_10.79_20201202
Prep Type: Dissolved
Prep Batch: 345400

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	ND		1000	989		ug/L		99	80 - 120

Lab Sample ID: 580-99461-1 MSD
Matrix: Water
Analysis Batch: 345568

Client Sample ID: MW-1_10.79_20201202
Prep Type: Dissolved
Prep Batch: 345400

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	ND		1000	971		ug/L		97	80 - 120	2	20

Lab Sample ID: 580-99461-1 DU
Matrix: Water
Analysis Batch: 345568

Client Sample ID: MW-1_10.79_20201202
Prep Type: Dissolved
Prep Batch: 345400

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Lead	ND		ND		ug/L		NC	20

Eurofins TestAmerica, Seattle

QC Association Summary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

GC/MS VOA

Analysis Batch: 344922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-99461-2	MW-2_10.49_20201202	Total/NA	Water	8260D	
580-99461-3	MW-3_10.70_20201202	Total/NA	Water	8260D	
580-99461-4	MW-4_11.57_20201202	Total/NA	Water	8260D	
580-99461-5	MW-6_10.72_20201202	Total/NA	Water	8260D	
580-99461-6	MW-7_11.68_20201202	Total/NA	Water	8260D	
580-99461-7	MW-4_PDB_20201202	Total/NA	Water	8260D	
580-99461-8	MW-8_11.28_20201202	Total/NA	Water	8260D	
580-99461-9	Trip Blank_1_20201202	Total/NA	Water	8260D	
MB 580-344922/5	Method Blank	Total/NA	Water	8260D	
LCS 580-344922/6	Lab Control Sample	Total/NA	Water	8260D	
LCSD 580-344922/7	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 345120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-99461-10	PDB Blank_20201202	Total/NA	Water	8260D	
MB 580-345120/5	Method Blank	Total/NA	Water	8260D	
LCS 580-345120/6	Lab Control Sample	Total/NA	Water	8260D	
LCSD 580-345120/7	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 345499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-99461-1	MW-1_10.79_20201202	Total/NA	Water	8260D	
MB 580-345499/15	Method Blank	Total/NA	Water	8260D	
LCS 580-345499/16	Lab Control Sample	Total/NA	Water	8260D	
LCSD 580-345499/17	Lab Control Sample Dup	Total/NA	Water	8260D	

GC VOA

Analysis Batch: 344952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-99461-1	MW-1_10.79_20201202	Total/NA	Water	NWTPH-Gx	
580-99461-2	MW-2_10.49_20201202	Total/NA	Water	NWTPH-Gx	
580-99461-3	MW-3_10.70_20201202	Total/NA	Water	NWTPH-Gx	
580-99461-4	MW-4_11.57_20201202	Total/NA	Water	NWTPH-Gx	
580-99461-5	MW-6_10.72_20201202	Total/NA	Water	NWTPH-Gx	
MB 580-344952/4	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 580-344952/5	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 580-344952/6	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

Analysis Batch: 345067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-99461-6	MW-7_11.68_20201202	Total/NA	Water	NWTPH-Gx	
580-99461-7	MW-4_PDB_20201202	Total/NA	Water	NWTPH-Gx	
580-99461-8	MW-8_11.28_20201202	Total/NA	Water	NWTPH-Gx	
580-99461-9	Trip Blank_1_20201202	Total/NA	Water	NWTPH-Gx	
580-99461-10	PDB Blank_20201202	Total/NA	Water	NWTPH-Gx	
MB 580-345067/32	Method Blank	Total/NA	Water	NWTPH-Gx	
MB 580-345067/4	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 580-345067/33	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCS 580-345067/5	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 580-345067/34	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

Eurofins TestAmerica, Seattle

QC Association Summary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

GC VOA (Continued)

Analysis Batch: 345067 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 580-345067/6	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

Metals

Prep Batch: 345353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-99461-1	MW-1_10.79_20201202	Total Recoverable	Water	3005A	
580-99461-2	MW-2_10.49_20201202	Total Recoverable	Water	3005A	
580-99461-3	MW-3_10.70_20201202	Dissolved	Water	3005A	
580-99461-4	MW-4_11.57_20201202	Total Recoverable	Water	3005A	
580-99461-5	MW-6_10.72_20201202	Dissolved	Water	3005A	
580-99461-6	MW-7_11.68_20201202	Total Recoverable	Water	3005A	
580-99461-8	MW-8_11.28_20201202	Dissolved	Water	3005A	
MB 580-345353/23-A	Method Blank	Total Recoverable	Water	3005A	
LCS 580-345353/24-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 580-345353/25-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	

Prep Batch: 345400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-99461-1	MW-1_10.79_20201202	Dissolved	Water	3005A	
580-99461-2	MW-2_10.49_20201202	Dissolved	Water	3005A	
580-99461-3	MW-3_10.70_20201202	Total Recoverable	Water	3005A	
580-99461-4	MW-4_11.57_20201202	Dissolved	Water	3005A	
580-99461-5	MW-6_10.72_20201202	Total Recoverable	Water	3005A	
580-99461-6	MW-7_11.68_20201202	Dissolved	Water	3005A	
580-99461-8	MW-8_11.28_20201202	Total Recoverable	Water	3005A	
MB 580-345400/23-A	Method Blank	Total Recoverable	Water	3005A	
LCS 580-345400/24-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 580-345400/25-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	
580-99461-1 MS	MW-1_10.79_20201202	Dissolved	Water	3005A	
580-99461-1 MSD	MW-1_10.79_20201202	Dissolved	Water	3005A	
580-99461-1 DU	MW-1_10.79_20201202	Dissolved	Water	3005A	

Analysis Batch: 345455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-99461-1	MW-1_10.79_20201202	Total Recoverable	Water	6020B	345353
580-99461-2	MW-2_10.49_20201202	Total Recoverable	Water	6020B	345353
580-99461-3	MW-3_10.70_20201202	Dissolved	Water	6020B	345353
580-99461-4	MW-4_11.57_20201202	Total Recoverable	Water	6020B	345353
580-99461-5	MW-6_10.72_20201202	Dissolved	Water	6020B	345353
580-99461-6	MW-7_11.68_20201202	Total Recoverable	Water	6020B	345353
580-99461-8	MW-8_11.28_20201202	Dissolved	Water	6020B	345353
MB 580-345353/23-A	Method Blank	Total Recoverable	Water	6020B	345353
LCS 580-345353/24-A	Lab Control Sample	Total Recoverable	Water	6020B	345353
LCSD 580-345353/25-A	Lab Control Sample Dup	Total Recoverable	Water	6020B	345353

Analysis Batch: 345568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-99461-1	MW-1_10.79_20201202	Dissolved	Water	6020B	345400
580-99461-2	MW-2_10.49_20201202	Dissolved	Water	6020B	345400
580-99461-3	MW-3_10.70_20201202	Total Recoverable	Water	6020B	345400

Eurofins TestAmerica, Seattle

QC Association Summary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

Metals (Continued)

Analysis Batch: 345568 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-99461-4	MW-4_11.57_20201202	Dissolved	Water	6020B	345400
580-99461-5	MW-6_10.72_20201202	Total Recoverable	Water	6020B	345400
580-99461-6	MW-7_11.68_20201202	Dissolved	Water	6020B	345400
580-99461-8	MW-8_11.28_20201202	Total Recoverable	Water	6020B	345400
MB 580-345400/23-A	Method Blank	Total Recoverable	Water	6020B	345400
LCS 580-345400/24-A	Lab Control Sample	Total Recoverable	Water	6020B	345400
LCSD 580-345400/25-A	Lab Control Sample Dup	Total Recoverable	Water	6020B	345400
580-99461-1 MS	MW-1_10.79_20201202	Dissolved	Water	6020B	345400
580-99461-1 MSD	MW-1_10.79_20201202	Dissolved	Water	6020B	345400
580-99461-1 DU	MW-1_10.79_20201202	Dissolved	Water	6020B	345400

Lab Chronicle

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

Client Sample ID: MW-1_10.79_20201202

Lab Sample ID: 580-99461-1

Date Collected: 12/02/20 10:20

Matrix: Water

Date Received: 12/03/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	345499	12/15/20 00:41	JSM	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	344952	12/07/20 21:20	JSM	TAL SEA
Dissolved	Prep	3005A			345400	12/11/20 17:09	TMH	TAL SEA
Dissolved	Analysis	6020B		5	345568	12/14/20 11:11	FCW	TAL SEA
Total Recoverable	Prep	3005A			345353	12/11/20 11:00	NRS	TAL SEA
Total Recoverable	Analysis	6020B		5	345455	12/11/20 17:45	FCW	TAL SEA

Client Sample ID: MW-2_10.49_20201202

Lab Sample ID: 580-99461-2

Date Collected: 12/02/20 11:00

Matrix: Water

Date Received: 12/03/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	344922	12/07/20 15:08	JSM	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	344952	12/07/20 21:44	JSM	TAL SEA
Dissolved	Prep	3005A			345400	12/11/20 17:09	TMH	TAL SEA
Dissolved	Analysis	6020B		5	345568	12/14/20 14:08	FCW	TAL SEA
Total Recoverable	Prep	3005A			345353	12/11/20 11:00	NRS	TAL SEA
Total Recoverable	Analysis	6020B		5	345455	12/11/20 17:49	FCW	TAL SEA

Client Sample ID: MW-3_10.70_20201202

Lab Sample ID: 580-99461-3

Date Collected: 12/02/20 14:10

Matrix: Water

Date Received: 12/03/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	344922	12/07/20 15:34	JSM	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	344952	12/07/20 22:08	JSM	TAL SEA
Dissolved	Prep	3005A			345353	12/11/20 11:00	NRS	TAL SEA
Dissolved	Analysis	6020B		5	345455	12/11/20 17:53	FCW	TAL SEA
Total Recoverable	Prep	3005A			345400	12/11/20 17:09	TMH	TAL SEA
Total Recoverable	Analysis	6020B		5	345568	12/14/20 14:11	FCW	TAL SEA

Client Sample ID: MW-4_11.57_20201202

Lab Sample ID: 580-99461-4

Date Collected: 12/02/20 12:25

Matrix: Water

Date Received: 12/03/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	344922	12/07/20 15:59	JSM	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	344952	12/07/20 22:33	JSM	TAL SEA
Dissolved	Prep	3005A			345400	12/11/20 17:09	TMH	TAL SEA
Dissolved	Analysis	6020B		5	345568	12/14/20 14:15	FCW	TAL SEA
Total Recoverable	Prep	3005A			345353	12/11/20 11:00	NRS	TAL SEA
Total Recoverable	Analysis	6020B		5	345455	12/11/20 17:56	FCW	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

Client Sample ID: MW-6_10.72_20201202

Lab Sample ID: 580-99461-5

Date Collected: 12/02/20 11:35

Matrix: Water

Date Received: 12/03/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	344922	12/07/20 16:23	JSM	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	344952	12/07/20 22:57	JSM	TAL SEA
Dissolved	Prep	3005A			345353	12/11/20 11:00	NRS	TAL SEA
Dissolved	Analysis	6020B		5	345455	12/11/20 18:00	FCW	TAL SEA
Total Recoverable	Prep	3005A			345400	12/11/20 17:09	TMH	TAL SEA
Total Recoverable	Analysis	6020B		5	345568	12/14/20 14:19	FCW	TAL SEA

Client Sample ID: MW-7_11.68_20201202

Lab Sample ID: 580-99461-6

Date Collected: 12/02/20 13:00

Matrix: Water

Date Received: 12/03/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	344922	12/07/20 16:49	JSM	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	345067	12/08/20 16:46	JSM	TAL SEA
Dissolved	Prep	3005A			345400	12/11/20 17:10	TMH	TAL SEA
Dissolved	Analysis	6020B		5	345568	12/14/20 14:22	FCW	TAL SEA
Total Recoverable	Prep	3005A			345353	12/11/20 11:00	NRS	TAL SEA
Total Recoverable	Analysis	6020B		5	345455	12/11/20 18:04	FCW	TAL SEA

Client Sample ID: MW-4_PDB_20201202

Lab Sample ID: 580-99461-7

Date Collected: 12/02/20 12:00

Matrix: Water

Date Received: 12/03/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	344922	12/07/20 17:14	JSM	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	345067	12/08/20 17:11	JSM	TAL SEA

Client Sample ID: MW-8_11.28_20201202

Lab Sample ID: 580-99461-8

Date Collected: 12/02/20 13:35

Matrix: Water

Date Received: 12/03/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	344922	12/07/20 17:39	JSM	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	345067	12/08/20 17:59	JSM	TAL SEA
Dissolved	Prep	3005A			345353	12/11/20 11:00	NRS	TAL SEA
Dissolved	Analysis	6020B		5	345455	12/11/20 18:07	FCW	TAL SEA
Total Recoverable	Prep	3005A			345400	12/11/20 17:10	TMH	TAL SEA
Total Recoverable	Analysis	6020B		5	345568	12/14/20 14:26	FCW	TAL SEA

Client Sample ID: Trip Blank_1_20201202

Lab Sample ID: 580-99461-9

Date Collected: 12/02/20 00:01

Matrix: Water

Date Received: 12/03/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	344922	12/07/20 13:03	JSM	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

Client Sample ID: Trip Blank_1_20201202

Lab Sample ID: 580-99461-9

Date Collected: 12/02/20 00:01

Matrix: Water

Date Received: 12/03/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	345067	12/08/20 16:22	JSM	TAL SEA

Client Sample ID: PDB Blank_20201202

Lab Sample ID: 580-99461-10

Date Collected: 12/02/20 11:50

Matrix: Water

Date Received: 12/03/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	345120	12/08/20 13:30	JSM	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	345067	12/08/20 15:58	JSM	TAL SEA

Laboratory References:

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

Accreditation/Certification Summary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

Laboratory: Eurofins TestAmerica, Seattle

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

Authority	Program	Identification Number	Expiration Date
Washington	State	C553	02-18-21

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Method Summary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	TAL SEA
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC)	NWTPH	TAL SEA
6020B	Metals (ICP/MS)	SW846	TAL SEA
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SEA
5030B	Purge and Trap	SW846	TAL SEA

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

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

Laboratory References:

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

Sample Summary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300

Job ID: 580-99461-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-99461-1	MW-1_10.79_20201202	Water	12/02/20 10:20	12/03/20 09:45	
580-99461-2	MW-2_10.49_20201202	Water	12/02/20 11:00	12/03/20 09:45	
580-99461-3	MW-3_10.70_20201202	Water	12/02/20 14:10	12/03/20 09:45	
580-99461-4	MW-4_11.57_20201202	Water	12/02/20 12:25	12/03/20 09:45	
580-99461-5	MW-6_10.72_20201202	Water	12/02/20 11:35	12/03/20 09:45	
580-99461-6	MW-7_11.68_20201202	Water	12/02/20 13:00	12/03/20 09:45	
580-99461-7	MW-4_PDB_20201202	Water	12/02/20 12:00	12/03/20 09:45	
580-99461-8	MW-8_11.28_20201202	Water	12/02/20 13:35	12/03/20 09:45	
580-99461-9	Trip Blank_1_20201202	Water	12/02/20 00:01	12/03/20 09:45	
580-99461-10	PDB Blank_20201202	Water	12/02/20 11:50	12/03/20 09:45	

BP Site Node Path: BP 5300

Req Due Date (mm/dd/yy):	Standard TAT	Rush TAT	Yes	No	X
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BP/RM Facility No: BP Facility No. 5300

Lab Work Order Number: ~~99459~~ 99461

Lab Name:	Test America, Inc.	BP/ARC Facility Address:	710 15th Street	Consultant/Contractor:	Antea Group
Lab Address:	Tacoma, WA	City, State, ZIP Code:	Longview, Washington	Consultant/Contractor Project No:	05300SA201.20100
Lab PM:	Elaine Walker	WR329531/009V4-0008	Washington State Department of Ecology	Address:	4006 148th Ave NE, Redmond, WA 98052
Lab Phone:	253.248.4972	California Global ID No.:	NA	Consultant/Contractor PM:	Megan Richard
Lab Shipping Acct:	NA	Enfos Proposal No:	WR826968/009V4-0010	Phone:	425-498-7711
Lab Bottle Order No:	NA	Accounting Mode:	Provision <u>X</u> OOC-BU <u> </u> OOC-RM <u> </u>	Email:	Megan.Richard@anteagroup.com
Other Info:	elaine.walker@testamericainc.com	Stage	2_Select (20)	Activity	Additional Data Collection (100)
		Invoice To:	BP-RM <u> </u> BP/ARC <u>X</u>		

BP/RM PM: Wade Melton	Sample Details					Requested Analyses																Report Type & QC Level				
																						Limited (Standard) Package _____				
PM Phone: 360-594-7978						Filt																			Limited Plus Package _____	
PM Email: wade.melton@bp.com						Pres																			Full Package _____	

Lab No.	Sample Description	Date	Time
Field Matrix			
Start Depth			
End Depth			
Depth Unit			
Grab (G) or Composite (C)			
Total Number of Containers			
Analysis	MTX by EPA Method 8260B MTBE by EPA Method 8260B NWTPH-Gx NWTPH-D w/ silica gel Pb-D Non Field Filtered Pb-T by EPA 6010B CuB by EPA 8011 CDC by EPA 8260		



580-99461 Chain of Custody

-1	MW-1_10.79_20201202	12/2/2020	1020	W			G	8	X	X	X	X	X				All Dissolved metals,
	MW-2_10.49_20201202	12/2/2020	1100	W			G	8	X	X	X	X	X				Field Filtered.
-3	MW-3_10.70_20201202	12/2/2020	1410	W			G	8	X	X	X	X	X				
	MW-4_11.57_20201202	12/2/2020	1225	W			G	8	X	X	X	X	X				
-5	MW-6_10.72_20201202	12/2/2020	1135	W			G	8	X	X	X	X	X				
	MW-7_11.68_20201202	12/2/2020	1300	W			G	8	X	X	X	X	X				
-7	MW-4_PDB_20201202	12/2/2020	1200	W			G	6	X	X	X	X X					

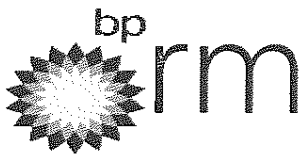
Sampler's Name: <i>Jeffrey Karambelas</i>	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: <i>Antea Group</i>	<i>Jeff Karambelas</i>	<i>12/1/20</i>	<i>17⁰⁰</i>	<i>Jeffrey Karambelas</i> <i>TASc2</i>	<i>12-3-20</i>	<i>945</i>
Ship Method: <i>FedEx</i> Ship Date: <i>12/1/2020</i>						
Shipment Tracking No: <i>7322 4614 8518</i>						

Special Instructions:

Therm. ID: 7 Cor: 1.6 ° Unc: 1.8 ° Body Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: _____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No
Cooler Desc: LB
Packing: B.B FedEx: PO
Cust. Seal: Yes ☒ No _____ UPS: _____
Blue Ice, ☒ Wet, Dry, None Lab Cour: _____
Other: _____

BP LaMP Sol/H₂O COC July 2018

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

Page 2 of 2

BP Site Node Path: BP 5300
BP/RM Facility No: BP Facility No. 5300

Req Due Date (mm/dd/yy): Standard TAT
Lab Work Order Number:

Rush TAT Yes No X
~~99459~~ 99461

Lab Name: Test America, Inc.		BP/ARC Facility Address: 710 15th Street		Consultant/Contractor: Antea Group																
Lab Address: Tacoma, WA		City, State, ZIP Code: Longview, Washington		Consultant/Contractor Project No: 05300SA201.20100																
Lab PM: Elaine Walker		WR329531/009V4-0008 Washington State Department of Ecology		Address: 4006 148th Ave NE, Redmond, WA 98052																
Lab Phone: 253.248.4972		California Global ID No.: NA		Consultant/Contractor PM: Megan Richard																
Lab Shipping Acct: NA		Enfos Proposal No: WR826968/009V4-0010		Phone: 425-498-7711 Email: Megan.Richard@anteagroup.com																
Lab Bottle Order No: NA		Accounting Mode: Provision X OOC-BU OOC-RM		Send/Submit EDD to: Megan.Richard@anteagroup.com																
Other Info: elaine.walker@testamericainc.com		Stage 2_Select (20) Activity Additional Data Collection (100)		Invoice To: BP-RM BP/ARC X																
BP/RM PM: Wade Melton		Sample Details		Requested Analyses																
PM Phone: 360-594-7978				Report Type & QC Level																
PM Email: wade.melton@bp.com				Limited (Standard) Package																
				Limited Plus Package																
				Full Package																
Lab No.	Sample Description	Date	Time	Field Matrix	Start Depth	End Depth	Depth Unit	Grab (G) or Composite (C)	Total Number of Containers	Analysis	BTEX by EPA Method 8260B	MTBE by EPA Method 8260B	NWTPH-Cx	NWTPH-D w/ silica gel	Pb-D Non Field Filtered	Pb-T by EPA 6010B	EDB by EPA 8011	EDC by EPA 8260	Comments	
	MW-8_11.28.2020	12/2/2020	1335	W				G	8		X	X	X		X	X				
- 9	Trip Blank_1			W				G	6		X		X							
	PDB Blank_20201202	12/2/2020	1150	W				G	3		X		X							3 empty Vials
																				All dissolved metals, field filtered
Sampler's Name: Jeffrey Karambelas		Relinquished By / Affiliation		Date	Time	Accepted By / Affiliation		Date	Time											
Sampler's Company: Antea Group		Jeff Karambelas		12/1/20	17:00	Karambelas Toca		12-3-20	945											
Ship Method:		Ship Date:																		
Shipment Tracking No:																				
Special Instructions:																				
THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No Temp Blank: Yes / No Cooler Temp on Receipt: °F/C Trip Blank: Yes / No MS/MSD Sample Submitted: Yes / No																				

BP LaMP Soil/H2O COC July 2018

Login Sample Receipt Checklist

Client: Antea USA Inc.

Job Number: 580-99461-1

Login Number: 99461

List Source: Eurofins TestAmerica, Seattle

List Number: 1

Creator: Blankinship, Tom X

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

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-99461-1

SDG No.: _____

Batch Number: 344922 Batch Start Date: 12/07/20 09:45 Batch Analyst: McKell, Justin SBatch Method: 8260D Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS 00002	VOAMasterMix 00062	
MB 580-344922/5		8260D		5 mL	5 mL		1 uL		
LCS 580-344922/6		8260D		5 mL	5 mL		1 uL	10 uL	
LCSD 580-344922/7		8260D		5 mL	5 mL		1 uL	10 uL	
580-99461-C-9	Trip Blank 1 20201202	8260D	T	5 mL	5 mL	<2 SU	1 uL		
580-99461-F-2	MW-2_10.49_20201 202	8260D	T	5 mL	5 mL	<2 SU	1 uL		
580-99461-D-3	MW-3_10.70_20201 202	8260D	T	5 mL	5 mL	<2 SU	1 uL		
580-99461-A-4	MW-4_11.57_20201 202	8260D	T	5 mL	5 mL	<2 SU	1 uL		
580-99461-C-5	MW-6_10.72_20201 202	8260D	T	5 mL	5 mL	<2 SU	1 uL		
580-99461-B-6	MW-7_11.68_20201 202	8260D	T	5 mL	5 mL	<2 SU	1 uL		
580-99461-C-7	MW-4_PDB_2020120 2	8260D	T	5 mL	5 mL	<2 SU	1 uL		
580-99461-B-8	MW-8_11.28_20201 202	8260D	T	5 mL	5 mL	<2 SU	1 uL		

Batch Notes

Basis	Basis Description
T	Total/NA

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

8260D

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GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-99461-1

SDG No.: _____

Batch Number: 345120 Batch Start Date: 12/08/20 10:10 Batch Analyst: McKell, Justin SBatch Method: 8260D Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS 00002	VOAMasterMix 00062	
MB 580-345120/5		8260D		5 mL	5 mL		1 uL		
LCS 580-345120/6		8260D		5 mL	5 mL		1 uL	10 uL	
LCSD 580-345120/7		8260D		5 mL	5 mL		1 uL	10 uL	
580-99461-A-10	PDB Blank 20201202	8260D	T	5 mL	5 mL	<2 SU	1 uL		

Batch Notes	

Basis	Basis Description
T	Total/NA

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

8260D

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GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-99461-1

SDG No.: _____

Batch Number: 345499 Batch Start Date: 12/14/20 12:07 Batch Analyst: McKell, Justin SBatch Method: 8260D Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	5X SUR/IS 00002	VOAMasterMix 00063		
MB 580-345499/15		8260D		5 mL	5 mL	1 uL			
LCS 580-345499/16		8260D		5 mL	5 mL	1 uL	10 uL		
LCSD 580-345499/17		8260D		5 mL	5 mL	1 uL	10 uL		
580-99461-B-1	MW-1_10.79_20201 202	8260D	T	5 mL	5 mL	1 uL			

Batch Notes	

Basis	Basis Description
T	Total/NA

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

8260D

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GC VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-99461-1

SDG No.: _____

Batch Number: 344952 Batch Start Date: 12/07/20 09:54 Batch Analyst: McKell, Justin SBatch Method: NWTPH-Gx Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	BFBGRO ARCHON 00045	GRO_LCS 00064	
MB 580-344952/4		NWTPH-Gx		5 mL	5 mL		1 uL		
LCS 580-344952/5		NWTPH-Gx		5 mL	5 mL		1 uL	25 uL	
LCSD 580-344952/6		NWTPH-Gx		5 mL	5 mL		1 uL	25 uL	
580-99461-A-1	MW-1_10.79_20201 202	NWTPH-Gx	T	5 mL	5 mL	<2 SU	1 uL		
580-99461-A-2	MW-2_10.49_20201 202	NWTPH-Gx	T	5 mL	5 mL	<2 SU	1 uL		
580-99461-A-3	MW-3_10.70_20201 202	NWTPH-Gx	T	5 mL	5 mL	<2 SU	1 uL		
580-99461-B-4	MW-4_11.57_20201 202	NWTPH-Gx	T	5 mL	5 mL	<2 SU	1 uL		
580-99461-D-5	MW-6_10.72_20201 202	NWTPH-Gx	T	5 mL	5 mL	<2 SU	1 uL		

Batch Notes	
Vial Lot Number	0103101f

Basis	Basis Description
T	Total/NA

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

NWTPH-Gx

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GC VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-99461-1

SDG No.: _____

Batch Number: 345067 Batch Start Date: 12/08/20 12:43 Batch Analyst: McKell, Justin SBatch Method: NWTPH-Gx Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	BFBGRO ARCHON 00045	GRO_LCS 00064	V2.4TFT-EX 00062
MB 580-345067/4		NWTPH-Gx		5 mL	5 mL		1 uL		
LCS 580-345067/5		NWTPH-Gx		5 mL	5 mL		1 uL	25 uL	
LCSD 580-345067/6		NWTPH-Gx		5 mL	5 mL		1 uL	25 uL	1250 uL
580-99461-B-10	PDB Blank 20201202	NWTPH-Gx	T	5 mL	5 mL	<2 SU	1 uL		
580-99461-D-9	Trip Blank 1 20201202	NWTPH-Gx	T	5 mL	5 mL	<2 SU	1 uL		
580-99461-A-6	MW-7_11.68_20201 202	NWTPH-Gx	T	5 mL	5 mL	<2 SU	1 uL		
580-99461-D-7	MW-4_PDB_2020120 2	NWTPH-Gx	T	5 mL	5 mL	<2 SU	1 uL		
580-99461-C-8	MW-8_11.28_20201 202	NWTPH-Gx	T	5 mL	5 mL	<2 SU	1 uL		
MB 580-345067/32		NWTPH-Gx		5 mL	5 mL		1 uL		
LCS 580-345067/33		NWTPH-Gx		5 mL	5 mL		1 uL	25 uL	
LCSD 580-345067/34		NWTPH-Gx		5 mL	5 mL		1 uL	25 uL	

Batch Notes

Basis	Basis Description
T	Total/NA

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

NWTPH-Gx

Page 1 of 1

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-99461-1

SDG No.: _____

Batch Number: 345353 Batch Start Date: 12/11/20 11:00 Batch Analyst: Shirk, Noah RBatch Method: 3005A Batch End Date: 12/11/20 15:56

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ICP CAL 1 00009	ICP CAL 2 00008	MET Spike 3C 00025	
580-99461-H-1	MW-1_10.79_20201 202	3005A, 6020B	R	50 mL	50 mL				
580-99461-H-2	MW-2_10.49_20201 202	3005A, 6020B	R	50 mL	50 mL				
580-99461-G-3	MW-3_10.70_20201 202	3005A, 6020B	D	50 mL	50 mL				
580-99461-H-4	MW-4_11.57_20201 202	3005A, 6020B	R	50 mL	50 mL				
580-99461-G-5	MW-6_10.72_20201 202	3005A, 6020B	D	50 mL	50 mL				
580-99461-H-6	MW-7_11.68_20201 202	3005A, 6020B	R	50 mL	50 mL				
580-99461-G-8	MW-8_11.28_20201 202	3005A, 6020B	D	50 mL	50 mL				
MB 580-345353/23		3005A, 6020B		50 mL	50 mL				
LCS 580-345353/24		3005A, 6020B		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
LCSD 580-345353/25		3005A, 6020B		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	

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

6020B

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METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-99461-1

SDG No.: _____

Batch Number: 345353 Batch Start Date: 12/11/20 11:00 Batch Analyst: Shirk, Noah RBatch Method: 3005A Batch End Date: 12/11/20 15:56

Batch Notes	
Temperature - Corrected - End	91.5 Degrees C
Temperature - Corrected - Start	91.5 Degrees C
Digestion End Time	12/11/2020 15:56
Digestion Start Time	12/11/2020 11:55
Digestion Unit ID	BLOCK B
Hydrochloric Acid ID	2723685
Nitric Acid ID	2643720
Pipette/Syringe/Dispenser ID	METALS-PREP-2
Analyst ID - Spike Analyst	see above
Analyst ID - Spike Witness Analyst	TH
Sufficient Volume for Batch QC	yes
Thermometer Location ID	b12
Thermometer ID	700647
Digestion Tube/Cup ID	2535260
Temperature - Uncorrected - End	91.0 Degrees C
Temperature - Uncorrected - Start	91.0 Degrees C

Basis	Basis Description
R	Total Recoverable
D	Dissolved

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

6020B

Page 2 of 2

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-99461-1

SDG No.: _____

Batch Number: 345400 Batch Start Date: 12/11/20 17:09 Batch Analyst: Hua, Tammy MBatch Method: 3005A Batch End Date: 12/11/20 22:46

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ICP CAL 1 00009	ICP CAL 2 00008	MET Spike 3C 00025	
580-99461-G-1	MW-1_10.79_20201 202	3005A, 6020B	D	50 mL	50 mL				
580-99461-G-1 DU	MW-1_10.79_20201 202	3005A, 6020B	D	50 mL	50 mL				
580-99461-G-1 MS	MW-1_10.79_20201 202	3005A, 6020B	D	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
580-99461-G-1 MSD	MW-1_10.79_20201 202	3005A, 6020B	D	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
580-99461-G-2	MW-2_10.49_20201 202	3005A, 6020B	D	50 mL	50 mL				
580-99461-H-3	MW-3_10.70_20201 202	3005A, 6020B	R	50 mL	50 mL				
580-99461-G-4	MW-4_11.57_20201 202	3005A, 6020B	D	50 mL	50 mL				
580-99461-H-5	MW-6_10.72_20201 202	3005A, 6020B	R	50 mL	50 mL				
580-99461-G-6	MW-7_11.68_20201 202	3005A, 6020B	D	50 mL	50 mL				
580-99461-H-8	MW-8_11.28_20201 202	3005A, 6020B	R	50 mL	50 mL				
MB 580-345400/23		3005A, 6020B		50 mL	50 mL				
ICS 580-345400/24		3005A, 6020B		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
LCSD 580-345400/25		3005A, 6020B		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	

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

6020B

Page 1 of 2

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-99461-1

SDG No.: _____

Batch Number: 345400 Batch Start Date: 12/11/20 17:09 Batch Analyst: Hua, Tammy MBatch Method: 3005A Batch End Date: 12/11/20 22:46

Batch Notes	
Temperature - Corrected - End	91.5 Degrees C
Temperature - Corrected - Start	91.5 Degrees C
Digestion End Time	12/11/2020 22:46
Digestion Start Time	12/11/2020 18:46
Digestion Unit ID	BLOCK d
Hydrochloric Acid ID	2723685
Nitric Acid ID	2643720
Pipette/Syringe/Dispenser ID	METALS-PREP-2
Analyst ID - Spike Analyst	see above
Analyst ID - Spike Witness Analyst	TH
Sufficient Volume for Batch QC	yes
Thermometer Location ID	d14
Thermometer ID	700647
Digestion Tube/Cup ID	2535260
Temperature - Uncorrected - End	91.0 Degrees C
Temperature - Uncorrected - Start	91.0 Degrees C

Basis	Basis Description
R	Total Recoverable
D	Dissolved

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

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