



**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

Jury 30, 2020

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 – First 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-colored 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

First 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

July 30, 2020
FSID No. 41995646
Project No. 05300SA201

us.anteagroup.com

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 / Megan Richard, +1 425 498 7711
Consultant Project Number	05300SA201
Primary Agency/Regulatory FS ID No.	Washington State Department of Ecology / 41995646

Work Performed during First Half of 2020

- Antea®Group (Antea Group) conducted quarterly groundwater monitoring and sampling.
- Antea Group prepared a Semi-Annual Groundwater Monitoring Report.

Work Scheduled for Second Half of 2020

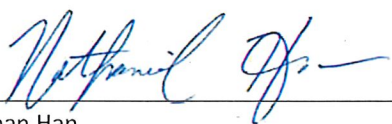
- Antea Group will conduct quarterly groundwater monitoring and sampling.
- Antea Group will prepare a Semi-Annual Groundwater Monitoring Report.

Current Phase of Project	Monitoring	
Frequency of Groundwater Sampling and Monitoring	Quarterly	
Are LPH Present On-Site/Off-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	Post PetroFix™ Injection Monitoring	
Approximate Depth to Groundwater	January 6, 2020	10.17-11.61 ft bgs.
	March 18, 2020	10.28-11.47 ft bgs.
	June 18, 2020	10.42-11.66 ft bgs.
Groundwater Gradient	January 6, 2020	Northwest, 0.05 ft./linear ft.
	March 18, 2020	Southwest, 0.009 ft./linear ft.
	June 18, 2020	Southwest, 0.009 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:



Nathan Han
Staff Professional

Date: July 30, 2020

Reviewed by:



Megan Richard, LG
Senior Project Manager


The seal is circular with 'State of Washington' at the top, 'Licensed Geologist' at the bottom, and '3157' in the center. Below the seal is a rectangular box containing the name 'MEGAN RICHARD'.

Date: July 30, 2020

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

Contact Information

4006 148th Avenue NE
Redmond, WA 98052 USA

Toll Free +1 800 477 7411
International +1 651 639 9449

Enclosures

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Table 2	Groundwater Analytical Data

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Table 1	Groundwater Gauging Data
Table 2	Groundwater Analytical Data

Table 1
Groundwater Gauging Data
ARCO Facility 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	--
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-2	9/6/2012	99.72	11.43	NP	--	88.29	--
MW-2	12/14/2012	99.72	10.45	NP	--	89.27	--

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		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
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	--
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-3	9/6/2012	99.68	11.63	NP	--	88.05	--
MW-3	12/14/2012	99.68	10.51	NP	--	89.17	--

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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-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	--
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-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	--

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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-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	--
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-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	--

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		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-5	6/22/2017	99.63	11.41	NP	--	88.22	--
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	--
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	--

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		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
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-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	--
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	--

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		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
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-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	--
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	--

Table 1
Groundwater Gauging Data
ARCO Facility 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

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
ARCO 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	800	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
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

Table 2
Groundwater Analytical Data
ARCO 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	800	15	
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	--
MW-2	8/20/2013	< 0.50	< 0.50	< 0.50	< 1.0	0.7	< 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
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

Table 2
Groundwater Analytical Data
ARCO 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	800	15	
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
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	--	--	< 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

Table 2
Groundwater Analytical Data
ARCO 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	800	15	
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	< 0.010	< 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
MW-4	11/19/2014	< 1.0	< 1.0	< 1.0	7.6	< 1.0	< 0.010	< 1.0	4,900	9	6.9
MW-4	2/25/2015	< 2.0 *	< 2.0 *	130	5.5	< 1.0	--	--	< 100	6.1	5.3
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
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	--	--	< 5,000	5.9	< 4.0
MW-4	1/6/2020	< 3.0 ¹	< 2.0 ¹	< 3.0 ¹	< 3.0 ¹	< 2.0 ¹	--	--	< 250 ¹	--	--
MW-4	1/6/2020	< 15	< 10	< 15	< 15	< 10	--	--	< 2,500	< 4.0	< 4.0
MW-4	3/18/2020	< 3.0 ¹	< 2.0 ¹	< 3.0 ¹	< 3.0 ¹	< 2.0 ¹	--	--	< 250 ¹	--	--

Table 2
Groundwater Analytical Data
ARCO 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	800	15	
MW-4	3/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-4	6/18/2020	< 3.0 ¹	< 2.0 ¹	< 3.0 ¹	< 3.0 ¹	< 2.0 ¹	--	--	< 250 ¹	--	--
MW-4	6/18/2020	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
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	< 3.0	< 1.0	< 0.010	< 1.0	830	3.4	< 2.0
MW-6	8/7/2014	< 1.0	< 1.0	3	< 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

Table 2
Groundwater Analytical Data
ARCO 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	800	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-7	8/20/2013	< 0.50	< 0.50	< 0.50	< 1.0	2	< 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
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	--	--	< 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

Table 2
Groundwater Analytical Data
ARCO 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	800	15	
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	--	--	< 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-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	< 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
MW-8	2/25/2015	< 2.0 *	< 2.0 *	< 3.0 *	< 3.0	3	--	--	< 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

Table 2
Groundwater Analytical Data
ARCO 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	800	15	
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

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

* = 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.

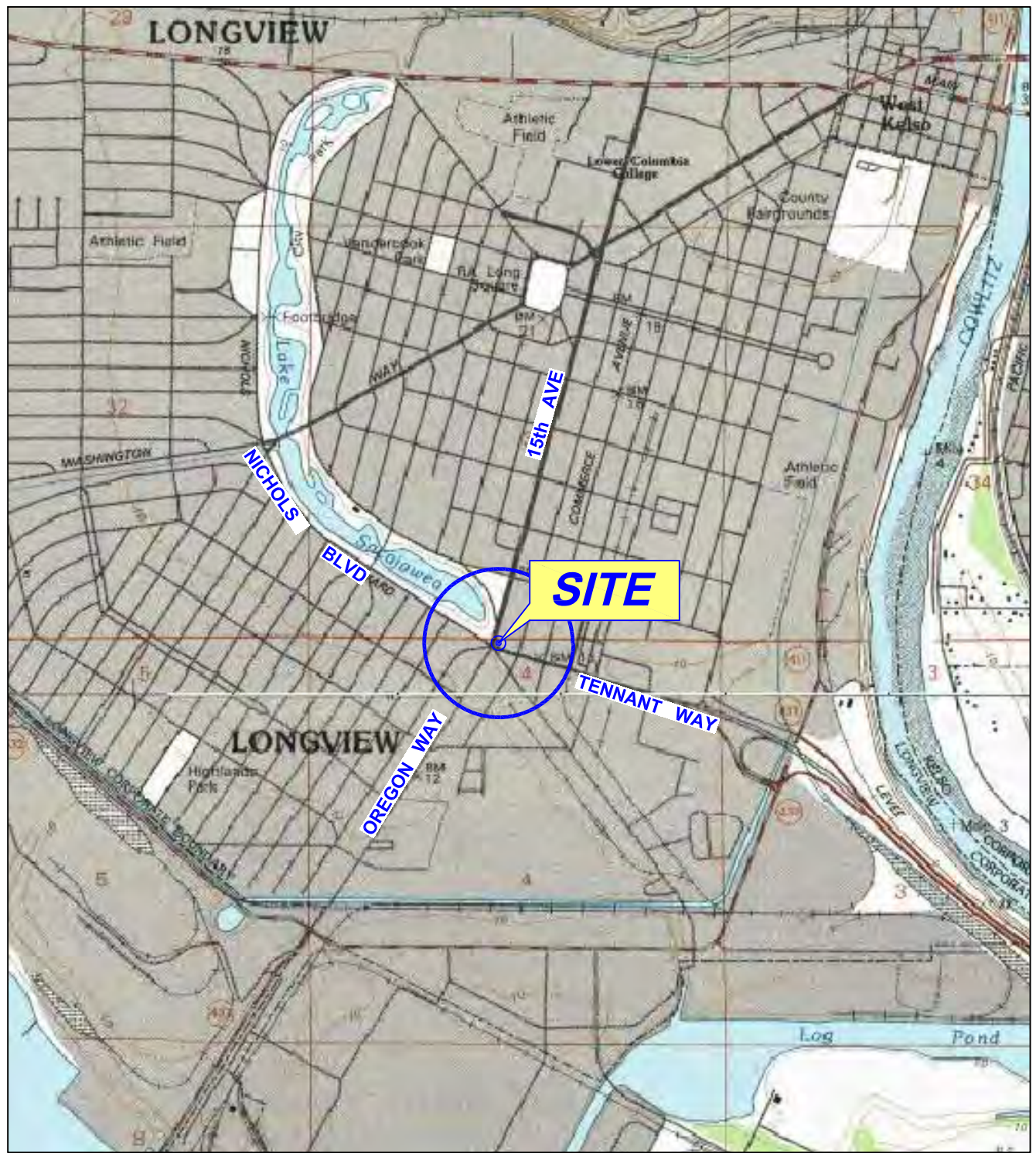
H = Sample was prepped or analyzed beyond the specified holding time

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

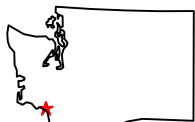
¹ = Sample collected from a passive diffuser bag.

Figures

Figure 1	Site Location Map
Figure 2	Site Aerial Map
Figure 3	Groundwater Analytical and Elevation Contour Map – 1/6/2020
Figure 4	Groundwater Analytical and Elevation Contour Map – 3/18/2020
Figure 5	Groundwater Analytical and Elevation Contour Map – 6/18/2020



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



QUADRANGLE LOCATION

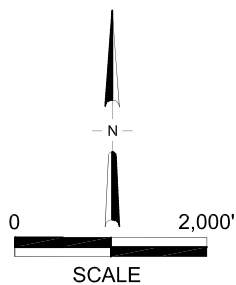
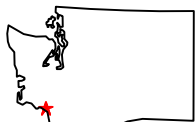


FIGURE 1
 SITE LOCATION MAP

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

PROJECT NO. 05300SA191	DRAWN BY KM/JH
FILE NO. 5300-SLM	PREPARED BY FS
REVISION NO. 1	REVIEWED BY MR





QUADRANGLE LOCATION

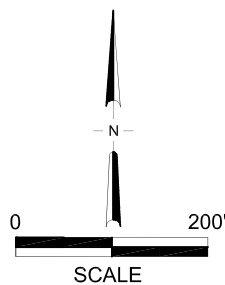
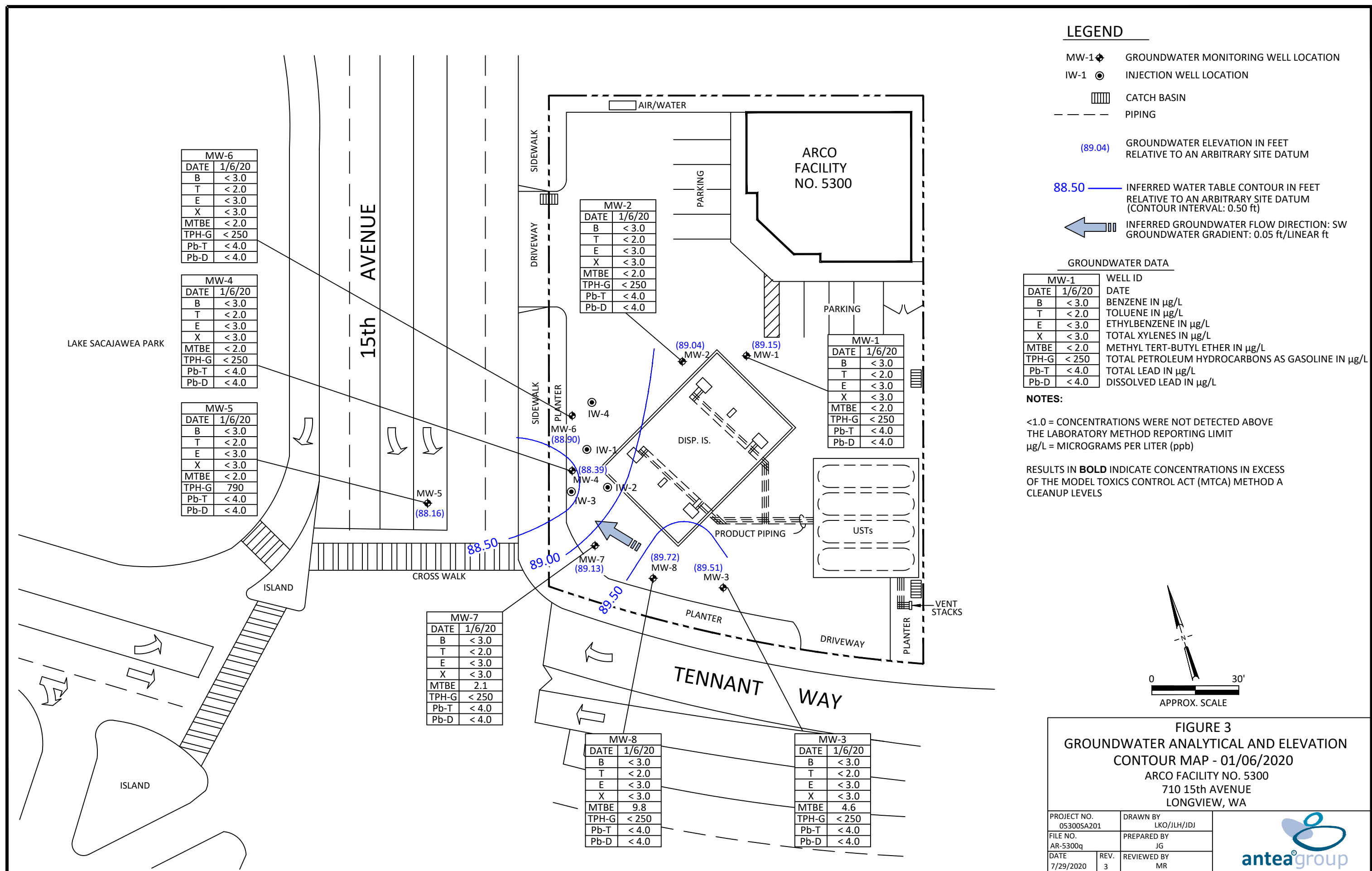


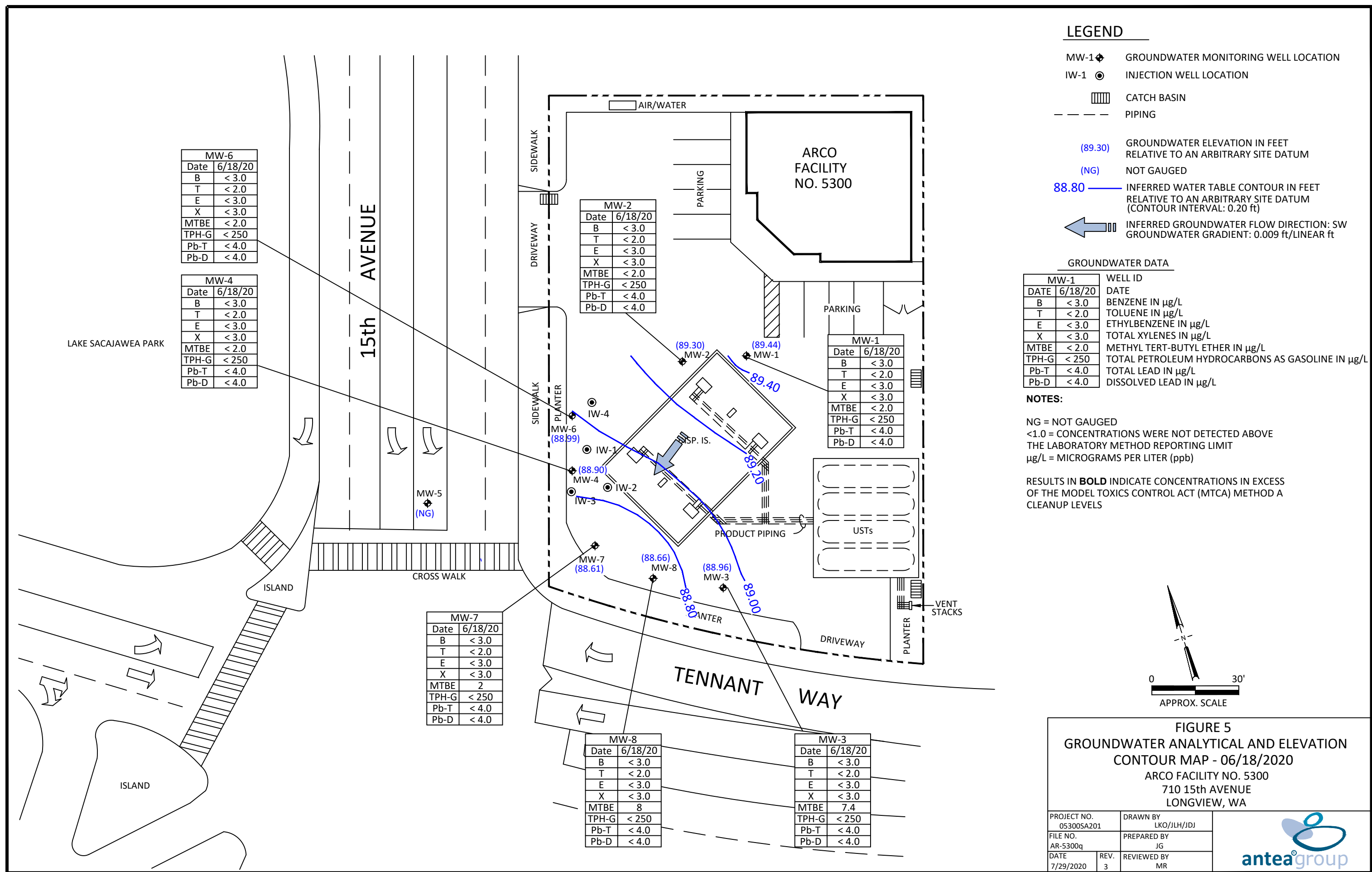
FIGURE 2
SITE AERIAL MAP

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

PROJECT NO. 05300SA191	DRAWN BY KM/JH
FILE NO. 5300-Sam	PREPARED BY FS
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: 580-91898-1
Client Project/Site: BP - ARCO 5300
Sampling Event: ARCO 5300

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

Attn: Megan Richard

M. Elaine Walker

Authorized for release by:
1/16/2020 2:40:48 PM

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

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 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: 580-91898-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Case Narrative

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

Job ID: 580-91898-1

Job ID: 580-91898-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-91898-1

Receipt

Eleven samples were received on 1/7/2020 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.0° C.

GC/MS VOA

Method 8260C: The following sample was diluted due to the nature of the sample matrix: MW-4_20200106_11.61 (580-91898-4). Elevated reporting limits (RLs) are provided. Due to the sample matrix, this sample cannot be run at a lesser dilution.

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

GC VOA

Method NWTPH-Gx: The following sample was diluted due to the nature of the sample matrix: MW-4_20200106_11.61 (580-91898-4). Elevated reporting limits (RLs) are provided.

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

Metals

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

General Chemistry

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 580-320526 were outside control limits for Sulfate. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

Detection Summary

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

Job ID: 580-91898-1

Client Sample ID: MW-1_20200106_10.75

Lab Sample ID: 580-91898-1

No Detections.

Client Sample ID: MW-2_20200106_10.68

Lab Sample ID: 580-91898-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.56		0.20		mg/L	1		300.0	Total/NA
Sulfate	56		1.2		mg/L	1		300.0	Total/NA
Total Dissolved Solids	460		10		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-3_20200106_10.17

Lab Sample ID: 580-91898-3

No Detections.

Client Sample ID: MW-4_20200106_11.61

Lab Sample ID: 580-91898-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.21		0.20		mg/L	1		300.0	Total/NA
Sulfate	28		1.2		mg/L	1		300.0	Total/NA
Total Dissolved Solids	420		10		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-5_20200106_11.47

Lab Sample ID: 580-91898-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline	790		250		ug/L	1		NWTPH-Gx	Total/NA
Total Dissolved Solids	420		10		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-6_20200106_10.83

Lab Sample ID: 580-91898-6

No Detections.

Client Sample ID: MW-7_20200106_11.14

Lab Sample ID: 580-91898-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.21		0.20		mg/L	1		300.0	Total/NA
Sulfate	10		1.2		mg/L	1		300.0	Total/NA
Total Dissolved Solids	380		10		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-8_20200106_10.28

Lab Sample ID: 580-91898-8

No Detections.

Client Sample ID: Trip Blank_1_20200106

Lab Sample ID: 580-91898-9

No Detections.

Client Sample ID: MW-4_20200106_PDB

Lab Sample ID: 580-91898-10

No Detections.

Client Sample ID: PDB Blank_20200106

Lab Sample ID: 580-91898-11

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: 580-91898-1

Client Sample ID: MW-1_20200106_10.75

Lab Sample ID: 580-91898-1

Date Collected: 01/06/20 08:55

Matrix: Water

Date Received: 01/07/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			01/08/20 19:36	1
Ethylbenzene	ND		3.0		ug/L			01/08/20 19:36	1
Methyl tert-butyl ether	ND		2.0		ug/L			01/08/20 19:36	1
Toluene	ND		2.0		ug/L			01/08/20 19:36	1
Xylenes, Total	ND		3.0		ug/L			01/08/20 19:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 126		01/08/20 19:36	1
4-Bromofluorobenzene (Surr)	100		80 - 120		01/08/20 19:36	1
Dibromofluoromethane (Surr)	98		80 - 120		01/08/20 19:36	1
Toluene-d8 (Surr)	104		80 - 120		01/08/20 19:36	1
Trifluorotoluene (Surr)	104		80 - 120		01/08/20 19:36	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	-		01/08/20 17:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		50 - 150					01/08/20 17:20	1
Trifluorotoluene (Surr)	106		50 - 150					01/08/20 17:20	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		01/09/20 22:36	01/10/20 11:42	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		01/10/20 09:44	01/13/20 13:50	5

Client Sample ID: MW-2_20200106_10.68

Lab Sample ID: 580-91898-2

Date Collected: 01/06/20 09:25

Matrix: Water

Date Received: 01/07/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			01/08/20 20:01	1
Ethylbenzene	ND		3.0		ug/L			01/08/20 20:01	1
Methyl tert-butyl ether	ND		2.0		ug/L			01/08/20 20:01	1
Toluene	ND		2.0		ug/L			01/08/20 20:01	1
Xylenes, Total	ND		3.0		ug/L			01/08/20 20:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 126		01/08/20 20:01	1
4-Bromofluorobenzene (Surr)	99		80 - 120		01/08/20 20:01	1
Dibromofluoromethane (Surr)	98		80 - 120		01/08/20 20:01	1
Toluene-d8 (Surr)	107		80 - 120		01/08/20 20:01	1
Trifluorotoluene (Surr)	102		80 - 120		01/08/20 20:01	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			01/08/20 17:45	1

Eurofins TestAmerica, Seattle

Client Sample Results

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

Job ID: 580-91898-1

Client Sample ID: MW-2_20200106_10.68

Lab Sample ID: 580-91898-2

Date Collected: 01/06/20 09:25

Matrix: Water

Date Received: 01/07/20 10:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		50 - 150		01/08/20 17:45	1
Trifluorotoluene (Surr)	96		50 - 150		01/08/20 17:45	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		01/09/20 22:36	01/10/20 12:13	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		01/10/20 09:44	01/13/20 13:53	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.56		0.20		mg/L			01/07/20 20:28	1
Sulfate	56		1.2		mg/L			01/11/20 05:16	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	460		10		mg/L			01/11/20 12:59	1

Client Sample ID: MW-3_20200106_10.17

Lab Sample ID: 580-91898-3

Date Collected: 01/06/20 13:25

Matrix: Water

Date Received: 01/07/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			01/08/20 22:29	1
Ethylbenzene	ND		3.0		ug/L			01/08/20 22:29	1
Methyl tert-butyl ether	ND		2.0		ug/L			01/08/20 22:29	1
Toluene	ND		2.0		ug/L			01/08/20 22:29	1
Xylenes, Total	ND		3.0		ug/L			01/08/20 22:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		80 - 126		01/08/20 22:29	1
4-Bromofluorobenzene (Surr)	100		80 - 120		01/08/20 22:29	1
Dibromofluoromethane (Surr)	97		80 - 120		01/08/20 22:29	1
Toluene-d8 (Surr)	105		80 - 120		01/08/20 22:29	1
Trifluorotoluene (Surr)	104		80 - 120		01/08/20 22:29	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			01/08/20 19:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		50 - 150		01/08/20 19:45	1
Trifluorotoluene (Surr)	98		50 - 150		01/08/20 19:45	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		01/09/20 22:36	01/10/20 12:16	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		01/10/20 09:44	01/13/20 13:55	5

Eurofins TestAmerica, Seattle

Client Sample Results

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

Job ID: 580-91898-1

Client Sample ID: MW-4_20200106_11.61

Lab Sample ID: 580-91898-4

Date Collected: 01/06/20 11:40

Matrix: Water

Date Received: 01/07/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		15		ug/L			01/10/20 20:49	5
Ethylbenzene	ND		15		ug/L			01/10/20 20:49	5
Methyl tert-butyl ether	ND		10		ug/L			01/10/20 20:49	5
Toluene	ND		10		ug/L			01/10/20 20:49	5
Xylenes, Total	ND		15		ug/L			01/10/20 20:49	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		80 - 126		01/10/20 20:49	5
4-Bromofluorobenzene (Surr)	82		80 - 120		01/10/20 20:49	5
Dibromofluoromethane (Surr)	99		80 - 120		01/10/20 20:49	5
Toluene-d8 (Surr)	112		80 - 120		01/10/20 20:49	5
Trifluorotoluene (Surr)	103		80 - 120		01/10/20 20:49	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		2500		ug/L	-		01/09/20 23:58	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		50 - 150					01/09/20 23:58	10
Trifluorotoluene (Surr)	61		50 - 150					01/09/20 23:58	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		01/09/20 22:36	01/10/20 12:51	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		01/10/20 09:44	01/13/20 13:58	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.21		0.20		mg/L			01/07/20 21:15	1
Sulfate	28		1.2		mg/L			01/11/20 05:27	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	420		10		mg/L			01/11/20 12:59	1

Client Sample ID: MW-5_20200106_11.47

Lab Sample ID: 580-91898-5

Date Collected: 01/06/20 10:40

Matrix: Water

Date Received: 01/07/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			01/08/20 20:26	1
Ethylbenzene	ND		3.0		ug/L			01/08/20 20:26	1
Methyl tert-butyl ether	ND		2.0		ug/L			01/08/20 20:26	1
Toluene	ND		2.0		ug/L			01/08/20 20:26	1
Xylenes, Total	ND		3.0		ug/L			01/08/20 20:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 126		01/08/20 20:26	1
4-Bromofluorobenzene (Surr)	101		80 - 120		01/08/20 20:26	1

Eurofins TestAmerica, Seattle

Client Sample Results

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

Job ID: 580-91898-1

Client Sample ID: MW-5_20200106_11.47

Lab Sample ID: 580-91898-5

Date Collected: 01/06/20 10:40

Matrix: Water

Date Received: 01/07/20 10:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	98		80 - 120		01/08/20 20:26	1
Toluene-d8 (Surr)	104		80 - 120		01/08/20 20:26	1
Trifluorotoluene (Surr)	104		80 - 120		01/08/20 20:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	790		250		ug/L			01/08/20 19:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		50 - 150		01/08/20 19:21	1
Trifluorotoluene (Surr)	93		50 - 150		01/08/20 19:21	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		01/09/20 22:36	01/10/20 12:49	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		01/10/20 09:44	01/13/20 14:01	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20		mg/L			01/07/20 21:27	1
Sulfate	ND	F1	1.2		mg/L			01/11/20 04:41	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	420		10		mg/L			01/11/20 12:59	1

Client Sample ID: MW-6_20200106_10.83

Lab Sample ID: 580-91898-6

Date Collected: 01/06/20 10:00

Matrix: Water

Date Received: 01/07/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			01/08/20 20:50	1
Ethylbenzene	ND		3.0		ug/L			01/08/20 20:50	1
Methyl tert-butyl ether	ND		2.0		ug/L			01/08/20 20:50	1
Toluene	ND		2.0		ug/L			01/08/20 20:50	1
Xylenes, Total	ND		3.0		ug/L			01/08/20 20:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 126		01/08/20 20:50	1
4-Bromofluorobenzene (Surr)	99		80 - 120		01/08/20 20:50	1
Dibromofluoromethane (Surr)	96		80 - 120		01/08/20 20:50	1
Toluene-d8 (Surr)	106		80 - 120		01/08/20 20:50	1
Trifluorotoluene (Surr)	104		80 - 120		01/08/20 20:50	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			01/08/20 18:09	1

Eurofins TestAmerica, Seattle

Client Sample Results

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

Job ID: 580-91898-1

Client Sample ID: MW-6_20200106_10.83

Lab Sample ID: 580-91898-6

Date Collected: 01/06/20 10:00

Matrix: Water

Date Received: 01/07/20 10:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		50 - 150		01/08/20 18:09	1
Trifluorotoluene (Surr)	98		50 - 150		01/08/20 18:09	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		01/09/20 22:36	01/10/20 12:21	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		01/10/20 09:44	01/13/20 14:03	5

Client Sample ID: MW-7_20200106_11.14

Lab Sample ID: 580-91898-7

Date Collected: 01/06/20 12:35

Matrix: Water

Date Received: 01/07/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			01/08/20 21:15	1
Ethylbenzene	ND		3.0		ug/L			01/08/20 21:15	1
Methyl tert-butyl ether	ND		2.0		ug/L			01/08/20 21:15	1
Toluene	ND		2.0		ug/L			01/08/20 21:15	1
Xylenes, Total	ND		3.0		ug/L			01/08/20 21:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		80 - 126		01/08/20 21:15	1
4-Bromofluorobenzene (Surr)	102		80 - 120		01/08/20 21:15	1
Dibromofluoromethane (Surr)	98		80 - 120		01/08/20 21:15	1
Toluene-d8 (Surr)	103		80 - 120		01/08/20 21:15	1
Trifluorotoluene (Surr)	102		80 - 120		01/08/20 21:15	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			01/08/20 18:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		50 - 150		01/08/20 18:33	1
Trifluorotoluene (Surr)	94		50 - 150		01/08/20 18:33	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		01/09/20 22:36	01/10/20 12:23	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		01/10/20 09:44	01/13/20 14:06	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.21		0.20		mg/L			01/07/20 21:50	1
Sulfate	10		1.2		mg/L			01/11/20 05:39	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	380		10		mg/L			01/11/20 12:59	1

Eurofins TestAmerica, Seattle

Client Sample Results

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

Job ID: 580-91898-1

Client Sample ID: MW-8_20200106_10.28

Lab Sample ID: 580-91898-8

Date Collected: 01/06/20 13:00

Matrix: Water

Date Received: 01/07/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			01/08/20 21:40	1
Ethylbenzene	ND		3.0		ug/L			01/08/20 21:40	1
Methyl tert-butyl ether	ND		2.0		ug/L			01/08/20 21:40	1
Toluene	ND		2.0		ug/L			01/08/20 21:40	1
Xylenes, Total	ND		3.0		ug/L			01/08/20 21:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 126		01/08/20 21:40	1
4-Bromofluorobenzene (Surr)	100		80 - 120		01/08/20 21:40	1
Dibromofluoromethane (Surr)	99		80 - 120		01/08/20 21:40	1
Toluene-d8 (Surr)	104		80 - 120		01/08/20 21:40	1
Trifluorotoluene (Surr)	104		80 - 120		01/08/20 21:40	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	-		01/08/20 18:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		50 - 150					01/08/20 18:57	1
Trifluorotoluene (Surr)	97		50 - 150					01/08/20 18:57	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		01/09/20 22:36	01/10/20 12:18	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		01/10/20 09:44	01/13/20 14:08	5

Client Sample ID: Trip Blank_1_20200106

Lab Sample ID: 580-91898-9

Date Collected: 01/06/20 00:01

Matrix: Water

Date Received: 01/07/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			01/08/20 17:57	1
Ethylbenzene	ND		3.0		ug/L			01/08/20 17:57	1
Toluene	ND		2.0		ug/L			01/08/20 17:57	1
Xylenes, Total	ND		3.0		ug/L			01/08/20 17:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		80 - 126		01/08/20 17:57	1
4-Bromofluorobenzene (Surr)	101		80 - 120		01/08/20 17:57	1
Dibromofluoromethane (Surr)	98		80 - 120		01/08/20 17:57	1
Toluene-d8 (Surr)	105		80 - 120		01/08/20 17:57	1
Trifluorotoluene (Surr)	102		80 - 120		01/08/20 17:57	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			01/08/20 15:20	1

Eurofins TestAmerica, Seattle

Client Sample Results

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

Job ID: 580-91898-1

Client Sample ID: Trip Blank_1_20200106

Lab Sample ID: 580-91898-9

Date Collected: 01/06/20 00:01

Matrix: Water

Date Received: 01/07/20 10:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		50 - 150		01/08/20 15:20	1
Trifluorotoluene (Surr)	93		50 - 150		01/08/20 15:20	1

Client Sample ID: MW-4_20200106_PDB

Lab Sample ID: 580-91898-10

Date Collected: 01/06/20 11:10

Matrix: Water

Date Received: 01/07/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			01/08/20 22:04	1
Ethylbenzene	ND		3.0		ug/L			01/08/20 22:04	1
Methyl tert-butyl ether	ND		2.0		ug/L			01/08/20 22:04	1
Toluene	ND		2.0		ug/L			01/08/20 22:04	1
Xylenes, Total	ND		3.0		ug/L			01/08/20 22:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 126		01/08/20 22:04	1
4-Bromofluorobenzene (Surr)	99		80 - 120		01/08/20 22:04	1
Dibromofluoromethane (Surr)	102		80 - 120		01/08/20 22:04	1
Toluene-d8 (Surr)	104		80 - 120		01/08/20 22:04	1
Trifluorotoluene (Surr)	103		80 - 120		01/08/20 22:04	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			01/08/20 16:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		50 - 150		01/08/20 16:08	1
Trifluorotoluene (Surr)	97		50 - 150		01/08/20 16:08	1

Client Sample ID: PDB Blank_20200106

Lab Sample ID: 580-91898-11

Date Collected: 01/06/20 11:50

Matrix: Water

Date Received: 01/07/20 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			01/08/20 18:22	1
Ethylbenzene	ND		3.0		ug/L			01/08/20 18:22	1
Methyl tert-butyl ether	ND		2.0		ug/L			01/08/20 18:22	1
Toluene	ND		2.0		ug/L			01/08/20 18:22	1
Xylenes, Total	ND		3.0		ug/L			01/08/20 18:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		80 - 126		01/08/20 18:22	1
4-Bromofluorobenzene (Surr)	102		80 - 120		01/08/20 18:22	1
Dibromofluoromethane (Surr)	99		80 - 120		01/08/20 18:22	1
Toluene-d8 (Surr)	103		80 - 120		01/08/20 18:22	1
Trifluorotoluene (Surr)	104		80 - 120		01/08/20 18:22	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			01/08/20 15:44	1

Eurofins TestAmerica, Seattle

Client Sample Results

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

Job ID: 580-91898-1

Client Sample ID: PDB Blank_20200106

Lab Sample ID: 580-91898-11

Date Collected: 01/06/20 11:50

Matrix: Water

Date Received: 01/07/20 10:00

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
4-Bromofluorobenzene (Surr)	107		50 - 150		01/08/20 15:44	1
Trifluorotoluene (Surr)	106		50 - 150		01/08/20 15:44	1

Surrogate Summary

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

Job ID: 580-91898-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)				
		DCA (80-126)	BFB (80-120)	DBFM (80-120)	TOL (80-120)	TFT (80-120)
580-91898-1	MW-1_20200106_10.75	95	100	98	104	104
580-91898-2	MW-2_20200106_10.68	98	99	98	107	102
580-91898-3	MW-3_20200106_10.17	97	100	97	105	104
580-91898-4	MW-4_20200106_11.61	96	82	99	112	103
580-91898-5	MW-5_20200106_11.47	95	101	98	104	104
580-91898-6	MW-6_20200106_10.83	95	99	96	106	104
580-91898-7	MW-7_20200106_11.14	94	102	98	103	102
580-91898-8	MW-8_20200106_10.28	98	100	99	104	104
580-91898-9	Trip Blank_1_20200106	94	101	98	105	102
580-91898-10	MW-4_20200106_PDB	98	99	102	104	103
580-91898-11	PDB Blank_20200106	93	102	99	103	104
LCS 580-320203/3	Lab Control Sample	95	102	100	104	106
LCS 580-320385/3	Lab Control Sample	93	100	97	105	105
LCSD 580-320203/4	Lab Control Sample Dup	94	99	98	105	106
LCSD 580-320385/4	Lab Control Sample Dup	91	99	96	104	101
MB 580-320203/6	Method Blank	92	101	99	103	104
MB 580-320385/6	Method Blank	94	98	94	106	105

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)
TFT = Trifluorotoluene (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)	
		BFB1 (50-150)	TFT1 (50-150)
580-91898-1	MW-1_20200106_10.75	106	106
580-91898-2	MW-2_20200106_10.68	102	96
580-91898-3	MW-3_20200106_10.17	99	98
580-91898-4	MW-4_20200106_11.61	80	61
580-91898-5	MW-5_20200106_11.47	109	93
580-91898-6	MW-6_20200106_10.83	105	98
580-91898-7	MW-7_20200106_11.14	100	94
580-91898-8	MW-8_20200106_10.28	103	97
580-91898-9	Trip Blank_1_20200106	98	93
580-91898-10	MW-4_20200106_PDB	100	97
580-91898-11	PDB Blank_20200106	107	106
LCS 580-320211/8	Lab Control Sample	112	106
LCS 580-320305/8	Lab Control Sample	107	99
LCSD 580-320211/9	Lab Control Sample Dup	102	97
LCSD 580-320305/9	Lab Control Sample Dup	102	101
MB 580-320211/7	Method Blank	106	99
MB 580-320305/7	Method Blank	96	91

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

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Surrogate Summary

Client: Antea USA Inc.
Project/Site: BP - ARCO 5300
TFT = Trifluorotoluene (Surr)

Job ID: 580-91898-1

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QC Sample Results

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

Job ID: 580-91898-1

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

Lab Sample ID: MB 580-320203/6

Matrix: Water

Analysis Batch: 320203

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			01/08/20 17:07	1
Ethylbenzene	ND		3.0		ug/L			01/08/20 17:07	1
Methyl tert-butyl ether	ND		2.0		ug/L			01/08/20 17:07	1
Toluene	ND		2.0		ug/L			01/08/20 17:07	1
Xylenes, Total	ND		3.0		ug/L			01/08/20 17:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		80 - 126		01/08/20 17:07	1
4-Bromofluorobenzene (Surr)	101		80 - 120		01/08/20 17:07	1
Dibromofluoromethane (Surr)	99		80 - 120		01/08/20 17:07	1
Toluene-d8 (Surr)	103		80 - 120		01/08/20 17:07	1
Trifluorotoluene (Surr)	104		80 - 120		01/08/20 17:07	1

Lab Sample ID: LCS 580-320203/3

Matrix: Water

Analysis Batch: 320203

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	10.0		ug/L		100	75 - 121
Ethylbenzene	10.0	10.3		ug/L		103	80 - 120
Methyl tert-butyl ether	10.0	9.35		ug/L		93	72 - 130
m-Xylene & p-Xylene	10.0	10.2		ug/L		102	80 - 120
o-Xylene	10.0	10.0		ug/L		100	80 - 120
Toluene	10.0	10.1		ug/L		101	80 - 120
Xylenes, Total	20.0	20.2		ug/L		101	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		80 - 126
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	104		80 - 120
Trifluorotoluene (Surr)	106		80 - 120

Lab Sample ID: LCSD 580-320203/4

Matrix: Water

Analysis Batch: 320203

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	9.86		ug/L		99	75 - 121	2	14
Ethylbenzene	10.0	10.6		ug/L		106	80 - 120	3	14
Methyl tert-butyl ether	10.0	10.2		ug/L		102	72 - 130	8	18
m-Xylene & p-Xylene	10.0	10.3		ug/L		103	80 - 120	1	14
o-Xylene	10.0	10.0		ug/L		100	80 - 120	0	16
Toluene	10.0	10.3		ug/L		103	80 - 120	2	19
Xylenes, Total	20.0	20.3		ug/L		102	80 - 120	0	16

Eurofins TestAmerica, Seattle

QC Sample Results

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

Job ID: 580-91898-1

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

Lab Sample ID: LCSD 580-320203/4

Matrix: Water

Analysis Batch: 320203

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		80 - 126
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120
Toluene-d8 (Surr)	105		80 - 120
Trifluorotoluene (Surr)	106		80 - 120

Lab Sample ID: MB 580-320385/6

Matrix: Water

Analysis Batch: 320385

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			01/10/20 12:50	1
Ethylbenzene	ND		3.0		ug/L			01/10/20 12:50	1
Methyl tert-butyl ether	ND		2.0		ug/L			01/10/20 12:50	1
Toluene	ND		2.0		ug/L			01/10/20 12:50	1
Xylenes, Total	ND		3.0		ug/L			01/10/20 12:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		80 - 126		01/10/20 12:50	1
4-Bromofluorobenzene (Surr)	98		80 - 120		01/10/20 12:50	1
Dibromofluoromethane (Surr)	94		80 - 120		01/10/20 12:50	1
Toluene-d8 (Surr)	106		80 - 120		01/10/20 12:50	1
Trifluorotoluene (Surr)	105		80 - 120		01/10/20 12:50	1

Lab Sample ID: LCS 580-320385/3

Matrix: Water

Analysis Batch: 320385

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	10.3		ug/L		103	75 - 121
Ethylbenzene	10.0	10.5		ug/L		105	80 - 120
Methyl tert-butyl ether	10.0	10.1		ug/L		101	72 - 130
m-Xylene & p-Xylene	10.0	10.3		ug/L		103	80 - 120
o-Xylene	10.0	10.2		ug/L		102	80 - 120
Toluene	10.0	10.3		ug/L		103	80 - 120
Xylenes, Total	20.0	20.5		ug/L		103	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		80 - 126
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120
Toluene-d8 (Surr)	105		80 - 120
Trifluorotoluene (Surr)	105		80 - 120

Eurofins TestAmerica, Seattle

QC Sample Results

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

Job ID: 580-91898-1

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

Lab Sample ID: LCSD 580-320385/4

Matrix: Water

Analysis Batch: 320385

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	10.5		ug/L		105	75 - 121	2	14
Ethylbenzene	10.0	10.5		ug/L		105	80 - 120	1	14
Methyl tert-butyl ether	10.0	10.1		ug/L		101	72 - 130	0	18
m-Xylene & p-Xylene	10.0	10.3		ug/L		103	80 - 120	0	14
o-Xylene	10.0	10.3		ug/L		103	80 - 120	1	16
Toluene	10.0	10.2		ug/L		102	80 - 120	1	19
Xylenes, Total	20.0	20.6		ug/L		103	80 - 120	0	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		80 - 126
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	96		80 - 120
Toluene-d8 (Surr)	104		80 - 120
Trifluorotoluene (Surr)	101		80 - 120

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

Lab Sample ID: MB 580-320211/7

Matrix: Water

Analysis Batch: 320211

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			01/08/20 12:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		50 - 150		01/08/20 12:31	1
Trifluorotoluene (Surr)	99		50 - 150		01/08/20 12:31	1

Lab Sample ID: LCS 580-320211/8

Matrix: Water

Analysis Batch: 320211

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	1000	965		ug/L		97	79 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		50 - 150
Trifluorotoluene (Surr)	106		50 - 150

Lab Sample ID: LCSD 580-320211/9

Matrix: Water

Analysis Batch: 320211

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	913		ug/L		91	79 - 120	6	10

Eurofins TestAmerica, Seattle

QC Sample Results

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

Job ID: 580-91898-1

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

Lab Sample ID: LCSD 580-320211/9

Matrix: Water

Analysis Batch: 320211

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		50 - 150
Trifluorotoluene (Surr)	97		50 - 150

Lab Sample ID: MB 580-320305/7

Matrix: Water

Analysis Batch: 320305

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	Result	Qualifier			ug/L			01/09/20 15:57	1
	ND		250						
Surrogate	MB	MB					Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	96		50 - 150					01/09/20 15:57	1
Trifluorotoluene (Surr)	91		50 - 150					01/09/20 15:57	1

Lab Sample ID: LCS 580-320305/8

Matrix: Water

Analysis Batch: 320305

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte		Spike	LCS	LCS	Unit	D	%Rec	%Rec.
Gasoline		Added	Result	Qualifier	ug/L		94	Limits
		1000	940					79 - 120
Surrogate	LCS	LCS						
	%Recovery	Qualifier	Limits					
4-Bromofluorobenzene (Surr)	107		50 - 150					
Trifluorotoluene (Surr)	99		50 - 150					

Lab Sample ID: LCSD 580-320305/9

Matrix: Water

Analysis Batch: 320305

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte		Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD
Gasoline		Added	Result	Qualifier	ug/L		93	Limits	Limit
		1000	925					79 - 120	2 10
Surrogate	LCSD	LCSD							
	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	102		50 - 150						
Trifluorotoluene (Surr)	101		50 - 150						

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 580-320296/18-A

Matrix: Water

Analysis Batch: 320470

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 320296

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	Result	Qualifier			ug/L		01/09/20 13:37	01/10/20 11:40	5
	ND		4.0						

Eurofins TestAmerica, Seattle

QC Sample Results

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

Job ID: 580-91898-1

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

Lab Sample ID: LCS 580-320296/19-A
Matrix: Water
Analysis Batch: 320470

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 320296

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1000	1080		ug/L		108	80 - 120

Lab Sample ID: LCSD 580-320296/20-A
Matrix: Water
Analysis Batch: 320470

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 320296

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	1000	979		ug/L		98	80 - 120	9	20

Lab Sample ID: 580-91898-1 MS
Matrix: Water
Analysis Batch: 320470

Client Sample ID: MW-1_20200106_10.75
Prep Type: Total Recoverable
Prep Batch: 320296

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	ND		1000	857		ug/L		86	80 - 120

Lab Sample ID: 580-91898-1 MSD
Matrix: Water
Analysis Batch: 320470

Client Sample ID: MW-1_20200106_10.75
Prep Type: Total Recoverable
Prep Batch: 320296

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	ND		1000	870		ug/L		87	80 - 120	2	20

Lab Sample ID: 580-91898-1 DU
Matrix: Water
Analysis Batch: 320470

Client Sample ID: MW-1_20200106_10.75
Prep Type: Total Recoverable
Prep Batch: 320296

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

Lab Sample ID: MB 580-320356/18-A
Matrix: Water
Analysis Batch: 320564

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 320356

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		01/10/20 09:44	01/13/20 13:15	5

Lab Sample ID: LCS 580-320356/19-A
Matrix: Water
Analysis Batch: 320564

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 320356

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1000	1030		ug/L		103	80 - 120

Lab Sample ID: LCSD 580-320356/20-A
Matrix: Water
Analysis Batch: 320564

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 320356

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	1000	1020		ug/L		102	80 - 120	1	20

Eurofins TestAmerica, Seattle

QC Sample Results

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

Job ID: 580-91898-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-320243/4
Matrix: Water
Analysis Batch: 320243

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20		mg/L			01/07/20 18:43	1

Lab Sample ID: LCS 580-320243/5
Matrix: Water
Analysis Batch: 320243

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	4.63		mg/L		93	90 - 110

Lab Sample ID: LCSD 580-320243/6
Matrix: Water
Analysis Batch: 320243

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
Nitrate as N	5.00	4.63		mg/L		93	90 - 110	0	15

Lab Sample ID: MB 580-320526/4
Matrix: Water
Analysis Batch: 320526

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		1.2		mg/L			01/11/20 00:35	1

Lab Sample ID: LCS 580-320526/5
Matrix: Water
Analysis Batch: 320526

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	50.0	51.2		mg/L		102	90 - 110

Lab Sample ID: LCSD 580-320526/6
Matrix: Water
Analysis Batch: 320526

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
Sulfate	50.0	51.3		mg/L		103	90 - 110	0	15

Lab Sample ID: 580-91898-5 MS
Matrix: Water
Analysis Batch: 320526

Client Sample ID: MW-5_20200106_11.47
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	ND	F1	50.0	56.4	F1	mg/L		112	90 - 110

Lab Sample ID: 580-91898-5 MSD
Matrix: Water
Analysis Batch: 320526

Client Sample ID: MW-5_20200106_11.47
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	ND	F1	50.0	56.3	F1	mg/L		112	90 - 110	0	15

Eurofins TestAmerica, Seattle

QC Sample Results

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

Job ID: 580-91898-1

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 580-320456/1
Matrix: Water
Analysis Batch: 320456

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10		mg/L			01/11/20 12:59	1

Lab Sample ID: LCS 580-320456/2
Matrix: Water
Analysis Batch: 320456

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1000	956		mg/L		96	80 - 120

QC Association Summary

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

Job ID: 580-91898-1

GC/MS VOA

Analysis Batch: 320203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91898-1	MW-1_20200106_10.75	Total/NA	Water	8260C	
580-91898-2	MW-2_20200106_10.68	Total/NA	Water	8260C	
580-91898-3	MW-3_20200106_10.17	Total/NA	Water	8260C	
580-91898-5	MW-5_20200106_11.47	Total/NA	Water	8260C	
580-91898-6	MW-6_20200106_10.83	Total/NA	Water	8260C	
580-91898-7	MW-7_20200106_11.14	Total/NA	Water	8260C	
580-91898-8	MW-8_20200106_10.28	Total/NA	Water	8260C	
580-91898-9	Trip Blank_1_20200106	Total/NA	Water	8260C	
580-91898-10	MW-4_20200106_PDB	Total/NA	Water	8260C	
580-91898-11	PDB Blank_20200106	Total/NA	Water	8260C	
MB 580-320203/6	Method Blank	Total/NA	Water	8260C	
LCS 580-320203/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 580-320203/4	Lab Control Sample Dup	Total/NA	Water	8260C	

Analysis Batch: 320385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91898-4	MW-4_20200106_11.61	Total/NA	Water	8260C	
MB 580-320385/6	Method Blank	Total/NA	Water	8260C	
LCS 580-320385/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 580-320385/4	Lab Control Sample Dup	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 320211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91898-1	MW-1_20200106_10.75	Total/NA	Water	NWTPH-Gx	
580-91898-2	MW-2_20200106_10.68	Total/NA	Water	NWTPH-Gx	
580-91898-3	MW-3_20200106_10.17	Total/NA	Water	NWTPH-Gx	
580-91898-5	MW-5_20200106_11.47	Total/NA	Water	NWTPH-Gx	
580-91898-6	MW-6_20200106_10.83	Total/NA	Water	NWTPH-Gx	
580-91898-7	MW-7_20200106_11.14	Total/NA	Water	NWTPH-Gx	
580-91898-8	MW-8_20200106_10.28	Total/NA	Water	NWTPH-Gx	
580-91898-9	Trip Blank_1_20200106	Total/NA	Water	NWTPH-Gx	
580-91898-10	MW-4_20200106_PDB	Total/NA	Water	NWTPH-Gx	
580-91898-11	PDB Blank_20200106	Total/NA	Water	NWTPH-Gx	
MB 580-320211/7	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 580-320211/8	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 580-320211/9	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

Analysis Batch: 320305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91898-4	MW-4_20200106_11.61	Total/NA	Water	NWTPH-Gx	
MB 580-320305/7	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 580-320305/8	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 580-320305/9	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

Metals

Prep Batch: 320296

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91898-1	MW-1_20200106_10.75	Total Recoverable	Water	3005A	
580-91898-2	MW-2_20200106_10.68	Total Recoverable	Water	3005A	

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QC Association Summary

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

Job ID: 580-91898-1

Metals (Continued)

Prep Batch: 320296 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91898-3	MW-3_20200106_10.17	Total Recoverable	Water	3005A	
580-91898-4	MW-4_20200106_11.61	Total Recoverable	Water	3005A	
580-91898-5	MW-5_20200106_11.47	Total Recoverable	Water	3005A	
580-91898-6	MW-6_20200106_10.83	Total Recoverable	Water	3005A	
580-91898-7	MW-7_20200106_11.14	Total Recoverable	Water	3005A	
580-91898-8	MW-8_20200106_10.28	Total Recoverable	Water	3005A	
MB 580-320296/18-A	Method Blank	Total Recoverable	Water	3005A	
LCS 580-320296/19-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 580-320296/20-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	
580-91898-1 MS	MW-1_20200106_10.75	Total Recoverable	Water	3005A	
580-91898-1 MSD	MW-1_20200106_10.75	Total Recoverable	Water	3005A	
580-91898-1 DU	MW-1_20200106_10.75	Total Recoverable	Water	3005A	

Prep Batch: 320356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91898-1	MW-1_20200106_10.75	Dissolved	Water	3005A	
580-91898-2	MW-2_20200106_10.68	Dissolved	Water	3005A	
580-91898-3	MW-3_20200106_10.17	Dissolved	Water	3005A	
580-91898-4	MW-4_20200106_11.61	Dissolved	Water	3005A	
580-91898-5	MW-5_20200106_11.47	Dissolved	Water	3005A	
580-91898-6	MW-6_20200106_10.83	Dissolved	Water	3005A	
580-91898-7	MW-7_20200106_11.14	Dissolved	Water	3005A	
580-91898-8	MW-8_20200106_10.28	Dissolved	Water	3005A	
MB 580-320356/18-A	Method Blank	Total Recoverable	Water	3005A	
LCS 580-320356/19-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 580-320356/20-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	

Analysis Batch: 320470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91898-1	MW-1_20200106_10.75	Total Recoverable	Water	6020B	320296
580-91898-2	MW-2_20200106_10.68	Total Recoverable	Water	6020B	320296
580-91898-3	MW-3_20200106_10.17	Total Recoverable	Water	6020B	320296
580-91898-4	MW-4_20200106_11.61	Total Recoverable	Water	6020B	320296
580-91898-5	MW-5_20200106_11.47	Total Recoverable	Water	6020B	320296
580-91898-6	MW-6_20200106_10.83	Total Recoverable	Water	6020B	320296
580-91898-7	MW-7_20200106_11.14	Total Recoverable	Water	6020B	320296
580-91898-8	MW-8_20200106_10.28	Total Recoverable	Water	6020B	320296
MB 580-320296/18-A	Method Blank	Total Recoverable	Water	6020B	320296
LCS 580-320296/19-A	Lab Control Sample	Total Recoverable	Water	6020B	320296
LCSD 580-320296/20-A	Lab Control Sample Dup	Total Recoverable	Water	6020B	320296
580-91898-1 MS	MW-1_20200106_10.75	Total Recoverable	Water	6020B	320296
580-91898-1 MSD	MW-1_20200106_10.75	Total Recoverable	Water	6020B	320296
580-91898-1 DU	MW-1_20200106_10.75	Total Recoverable	Water	6020B	320296

Analysis Batch: 320564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91898-1	MW-1_20200106_10.75	Dissolved	Water	6020B	320356
580-91898-2	MW-2_20200106_10.68	Dissolved	Water	6020B	320356
580-91898-3	MW-3_20200106_10.17	Dissolved	Water	6020B	320356
580-91898-4	MW-4_20200106_11.61	Dissolved	Water	6020B	320356
580-91898-5	MW-5_20200106_11.47	Dissolved	Water	6020B	320356

Eurofins TestAmerica, Seattle

QC Association Summary

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

Job ID: 580-91898-1

Metals (Continued)

Analysis Batch: 320564 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91898-6	MW-6_20200106_10.83	Dissolved	Water	6020B	320356
580-91898-7	MW-7_20200106_11.14	Dissolved	Water	6020B	320356
580-91898-8	MW-8_20200106_10.28	Dissolved	Water	6020B	320356
MB 580-320356/18-A	Method Blank	Total Recoverable	Water	6020B	320356
LCS 580-320356/19-A	Lab Control Sample	Total Recoverable	Water	6020B	320356
LCSD 580-320356/20-A	Lab Control Sample Dup	Total Recoverable	Water	6020B	320356

General Chemistry

Analysis Batch: 320243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91898-2	MW-2_20200106_10.68	Total/NA	Water	300.0	
580-91898-4	MW-4_20200106_11.61	Total/NA	Water	300.0	
580-91898-5	MW-5_20200106_11.47	Total/NA	Water	300.0	
580-91898-7	MW-7_20200106_11.14	Total/NA	Water	300.0	
MB 580-320243/4	Method Blank	Total/NA	Water	300.0	
LCS 580-320243/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 580-320243/6	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 320456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91898-2	MW-2_20200106_10.68	Total/NA	Water	SM 2540C	
580-91898-4	MW-4_20200106_11.61	Total/NA	Water	SM 2540C	
580-91898-5	MW-5_20200106_11.47	Total/NA	Water	SM 2540C	
580-91898-7	MW-7_20200106_11.14	Total/NA	Water	SM 2540C	
MB 580-320456/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 580-320456/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 320526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91898-2	MW-2_20200106_10.68	Total/NA	Water	300.0	
580-91898-4	MW-4_20200106_11.61	Total/NA	Water	300.0	
580-91898-5	MW-5_20200106_11.47	Total/NA	Water	300.0	
580-91898-7	MW-7_20200106_11.14	Total/NA	Water	300.0	
MB 580-320526/4	Method Blank	Total/NA	Water	300.0	
LCS 580-320526/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 580-320526/6	Lab Control Sample Dup	Total/NA	Water	300.0	
580-91898-5 MS	MW-5_20200106_11.47	Total/NA	Water	300.0	
580-91898-5 MSD	MW-5_20200106_11.47	Total/NA	Water	300.0	

Lab Chronicle

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

Job ID: 580-91898-1

Client Sample ID: MW-1_20200106_10.75

Lab Sample ID: 580-91898-1

Date Collected: 01/06/20 08:55

Matrix: Water

Date Received: 01/07/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	320203	01/08/20 19:36	APR	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	320211	01/08/20 17:20	DCV	TAL SEA
Dissolved	Prep	3005A			320356	01/10/20 09:44	ART	TAL SEA
Dissolved	Analysis	6020B		5	320564	01/13/20 13:50	FCW	TAL SEA
Total Recoverable	Prep	3005A			320296	01/09/20 22:36	A1B	TAL SEA
Total Recoverable	Analysis	6020B		5	320470	01/10/20 11:42	FCW	TAL SEA

Client Sample ID: MW-2_20200106_10.68

Lab Sample ID: 580-91898-2

Date Collected: 01/06/20 09:25

Matrix: Water

Date Received: 01/07/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	320203	01/08/20 20:01	APR	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	320211	01/08/20 17:45	DCV	TAL SEA
Dissolved	Prep	3005A			320356	01/10/20 09:44	ART	TAL SEA
Dissolved	Analysis	6020B		5	320564	01/13/20 13:53	FCW	TAL SEA
Total Recoverable	Prep	3005A			320296	01/09/20 22:36	A1B	TAL SEA
Total Recoverable	Analysis	6020B		5	320470	01/10/20 12:13	FCW	TAL SEA
Total/NA	Analysis	300.0		1	320243	01/07/20 20:28	JKM	TAL SEA
Total/NA	Analysis	300.0		1	320526	01/11/20 05:16	AAC	TAL SEA
Total/NA	Analysis	SM 2540C		1	320456	01/11/20 12:59	R1K	TAL SEA

Client Sample ID: MW-3_20200106_10.17

Lab Sample ID: 580-91898-3

Date Collected: 01/06/20 13:25

Matrix: Water

Date Received: 01/07/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	320203	01/08/20 22:29	APR	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	320211	01/08/20 19:45	DCV	TAL SEA
Dissolved	Prep	3005A			320356	01/10/20 09:44	ART	TAL SEA
Dissolved	Analysis	6020B		5	320564	01/13/20 13:55	FCW	TAL SEA
Total Recoverable	Prep	3005A			320296	01/09/20 22:36	A1B	TAL SEA
Total Recoverable	Analysis	6020B		5	320470	01/10/20 12:16	FCW	TAL SEA

Client Sample ID: MW-4_20200106_11.61

Lab Sample ID: 580-91898-4

Date Collected: 01/06/20 11:40

Matrix: Water

Date Received: 01/07/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	320385	01/10/20 20:49	W1T	TAL SEA
Total/NA	Analysis	NWTPH-Gx		10	320305	01/09/20 23:58	W1T	TAL SEA
Dissolved	Prep	3005A			320356	01/10/20 09:44	ART	TAL SEA
Dissolved	Analysis	6020B		5	320564	01/13/20 13:58	FCW	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

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

Job ID: 580-91898-1

Client Sample ID: MW-4_20200106_11.61

Lab Sample ID: 580-91898-4

Date Collected: 01/06/20 11:40

Matrix: Water

Date Received: 01/07/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			320296	01/09/20 22:36	A1B	TAL SEA
Total Recoverable	Analysis	6020B		5	320470	01/10/20 12:51	FCW	TAL SEA
Total/NA	Analysis	300.0		1	320243	01/07/20 21:15	JKM	TAL SEA
Total/NA	Analysis	300.0		1	320526	01/11/20 05:27	AAC	TAL SEA
Total/NA	Analysis	SM 2540C		1	320456	01/11/20 12:59	R1K	TAL SEA

Client Sample ID: MW-5_20200106_11.47

Lab Sample ID: 580-91898-5

Date Collected: 01/06/20 10:40

Matrix: Water

Date Received: 01/07/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	320203	01/08/20 20:26	APR	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	320211	01/08/20 19:21	DCV	TAL SEA
Dissolved	Prep	3005A			320356	01/10/20 09:44	ART	TAL SEA
Dissolved	Analysis	6020B		5	320564	01/13/20 14:01	FCW	TAL SEA
Total Recoverable	Prep	3005A			320296	01/09/20 22:36	A1B	TAL SEA
Total Recoverable	Analysis	6020B		5	320470	01/10/20 12:49	FCW	TAL SEA
Total/NA	Analysis	300.0		1	320243	01/07/20 21:27	JKM	TAL SEA
Total/NA	Analysis	300.0		1	320526	01/11/20 04:41	AAC	TAL SEA
Total/NA	Analysis	SM 2540C		1	320456	01/11/20 12:59	R1K	TAL SEA

Client Sample ID: MW-6_20200106_10.83

Lab Sample ID: 580-91898-6

Date Collected: 01/06/20 10:00

Matrix: Water

Date Received: 01/07/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	320203	01/08/20 20:50	APR	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	320211	01/08/20 18:09	DCV	TAL SEA
Dissolved	Prep	3005A			320356	01/10/20 09:44	ART	TAL SEA
Dissolved	Analysis	6020B		5	320564	01/13/20 14:03	FCW	TAL SEA
Total Recoverable	Prep	3005A			320296	01/09/20 22:36	A1B	TAL SEA
Total Recoverable	Analysis	6020B		5	320470	01/10/20 12:21	FCW	TAL SEA

Client Sample ID: MW-7_20200106_11.14

Lab Sample ID: 580-91898-7

Date Collected: 01/06/20 12:35

Matrix: Water

Date Received: 01/07/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	320203	01/08/20 21:15	APR	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	320211	01/08/20 18:33	DCV	TAL SEA
Dissolved	Prep	3005A			320356	01/10/20 09:44	ART	TAL SEA
Dissolved	Analysis	6020B		5	320564	01/13/20 14:06	FCW	TAL SEA
Total Recoverable	Prep	3005A			320296	01/09/20 22:36	A1B	TAL SEA
Total Recoverable	Analysis	6020B		5	320470	01/10/20 12:23	FCW	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

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

Job ID: 580-91898-1

Client Sample ID: MW-7_20200106_11.14

Lab Sample ID: 580-91898-7

Date Collected: 01/06/20 12:35

Matrix: Water

Date Received: 01/07/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	320243	01/07/20 21:50	JKM	TAL SEA
Total/NA	Analysis	300.0		1	320526	01/11/20 05:39	AAC	TAL SEA
Total/NA	Analysis	SM 2540C		1	320456	01/11/20 12:59	R1K	TAL SEA

Client Sample ID: MW-8_20200106_10.28

Lab Sample ID: 580-91898-8

Date Collected: 01/06/20 13:00

Matrix: Water

Date Received: 01/07/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	320203	01/08/20 21:40	APR	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	320211	01/08/20 18:57	DCV	TAL SEA
Dissolved	Prep	3005A			320356	01/10/20 09:44	ART	TAL SEA
Dissolved	Analysis	6020B		5	320564	01/13/20 14:08	FCW	TAL SEA
Total Recoverable	Prep	3005A			320296	01/09/20 22:36	A1B	TAL SEA
Total Recoverable	Analysis	6020B		5	320470	01/10/20 12:18	FCW	TAL SEA

Client Sample ID: Trip Blank_1_20200106

Lab Sample ID: 580-91898-9

Date Collected: 01/06/20 00:01

Matrix: Water

Date Received: 01/07/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	320203	01/08/20 17:57	APR	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	320211	01/08/20 15:20	DCV	TAL SEA

Client Sample ID: MW-4_20200106_PDB

Lab Sample ID: 580-91898-10

Date Collected: 01/06/20 11:10

Matrix: Water

Date Received: 01/07/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	320203	01/08/20 22:04	APR	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	320211	01/08/20 16:08	DCV	TAL SEA

Client Sample ID: PDB Blank_20200106

Lab Sample ID: 580-91898-11

Date Collected: 01/06/20 11:50

Matrix: Water

Date Received: 01/07/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	320203	01/08/20 18:22	APR	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	320211	01/08/20 15:44	DCV	TAL SEA

Laboratory References:

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

Eurofins TestAmerica, Seattle

Accreditation/Certification Summary

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

Job ID: 580-91898-1

Laboratory: Eurofins TestAmerica, Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State Program	C553	02-17-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
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Method Summary

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

Job ID: 580-91898-1

Method	Method Description	Protocol	Laboratory
8260C	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
300.0	Anions, Ion Chromatography	MCAWW	TAL SEA
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL SEA
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SEA
5030B	Purge and Trap	SW846	TAL SEA

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

NWTPH = Northwest Total Petroleum Hydrocarbon

SM = "Standard Methods For The Examination Of Water And Wastewater"

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: 580-91898-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-91898-1	MW-1_20200106_10.75	Water	01/06/20 08:55	01/07/20 10:00	
580-91898-2	MW-2_20200106_10.68	Water	01/06/20 09:25	01/07/20 10:00	
580-91898-3	MW-3_20200106_10.17	Water	01/06/20 13:25	01/07/20 10:00	
580-91898-4	MW-4_20200106_11.61	Water	01/06/20 11:40	01/07/20 10:00	
580-91898-5	MW-5_20200106_11.47	Water	01/06/20 10:40	01/07/20 10:00	
580-91898-6	MW-6_20200106_10.83	Water	01/06/20 10:00	01/07/20 10:00	
580-91898-7	MW-7_20200106_11.14	Water	01/06/20 12:35	01/07/20 10:00	
580-91898-8	MW-8_20200106_10.28	Water	01/06/20 13:00	01/07/20 10:00	
580-91898-9	Trip Blank_1_20200106	Water	01/06/20 00:01	01/07/20 10:00	
580-91898-10	MW-4_20200106_PDB	Water	01/06/20 11:10	01/07/20 10:00	
580-91898-11	PDB Blank_20200106	Water	01/06/20 11:50	01/07/20 10:00	



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

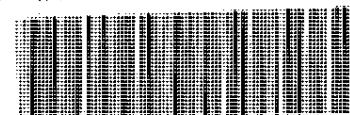
Page 1 of 1

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
91898

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: 05300SA191.20100																					
Lab PM: 05300SA191.20100	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 Acont: NA	Enfos Proposal No: WR329531/009V4-0008 Pending	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	STEX by EPA Method 8260B	MTBE by EPA Method 8260B	NWTPH-Gx	NWTPH-D w/ silica gel	Pb-D New Field Filtered	Pb-T by EPA 6010B	EDB by EPA 8011	EDC by EPA 8260	Nitrate	Sulfate	TDS		
-1	MW-1_20200106-10.75	1/6/20	0855	W				G	8	X	X	X		X	X								
	MW-2_20200106-10.68	1/6/20	0925	W				G	10	X	X	X		X	X		X	X	X				
-3	MW-3_20200106-10.17	1/6/20	1325	W				G	8	X	X	X		X	X								
	MW-4_20200106-11.61	1/6/20	1140	W				G	10	X	X	X		X	X		X	X	X				
-5	MW-5_20200106-11.47	1/6/20	1040	W				G	10	X	X	X		X	X		X	X	X				
	MW-6_20200106-10.83	1/6/20	1000	W				G	8	X	X	X		X	X								
-7	MW-7_20200106-11.14	1/6/20	1235	W				G	10	X	X	X		X	X		X	X	X				
Sampler's Name: Jeff Karambula				Relinquished By / Affiliation				Date	Time	Accepted By / Affiliation				Date	Time								
Sampler's Company: Antea Group								1/6/20	1600					2-07-20	1000								
Ship Method: FedEx Ship Date: 1/6/20																							
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 S																							



530-91898 Chain of Custody

Therm. ID: 1R6 Cor: 3.0 ° Unc: 2.6 °
Cooler Desc: LB
Packing: Sub FedEx: P.O.
Cust. Seal: Yes No Lab Cour:
Blue Ice, Wet Dry, None Other:

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

Page 1 of 2

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

Req Due Date (mm/dd/yy): Standard TAT Rush TAT Yes No X
Lab Work Order Number: 91898

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: 05300SA191.20100	
Lab PM: 05300SA191.20100		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: <u>WR329531/009V4-0008 Pending</u>		Phone: 425-498-7711 Email: <u>Megan.Richard@anteagroup.com</u>	
Lab Bottle Order No: NA		Accounting Mode: Provision <u>X</u> OOC-BU <u> </u> OOC-RM <u> </u>		Send/Submit EDD to: <u>Megan.Richard@anteagroup.com</u>	
Other Info: <u>elaine.walker@testamericainc.com</u>		Stage <u>2</u> Select (20) Activity Additional Data Collection (100)		Invoice To: <u> </u> BP-RM <u> </u> BP/ARC <u>X</u>	
BP/RM PM: Wade Melton		Report Type & QC Level			
PM Phone: 360-594-7978		Limited (Standard) Package <u> </u>			
PM Email: <u>wade.melton@bp.com</u>		Limited Plus Package <u> </u>			
		Full Package <u> </u>			
Lab No.	Sample Description	Date	Time	Comments	
	MW-8_20200106_10.28	4/6/20	1300	Contact Megan Richard for Billing	
~9	Trip Blank_1	—	—		
	MW-4_20200106_PDS	4/6/20	1112		
Sampler's Name: <u>Jeff Karambel</u>		Relinquished By / Affiliation <u>[Signature]</u>		Date <u>4/6/20</u>	Time <u>1600</u>
Sampler's Company: Antea Group				Accepted By / Affiliation <u>[Signature]</u>	Date <u>4-7-20</u>
Ship Method: <u>FedEx</u>		Ship Date: <u>4/6/20</u>		Time <u>1000</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					

Therm. ID: 1R6 Cor: 3.0° Unc: 2.6°
Cooler Desc: IB FedEx: P.O.
Packing: Bub UPS:
Cust. Seal: Yes No Lab Cour:
Blue Ice: Wet Dry, None Other:

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

Page 1 of 1

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: 91898

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: 05300SA191.20100											
Lab PM: 05300SA191.20100				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: WR329531/009V4-0008 Pending				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		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				Report Type & QC Level							
												Limited (Standard) Package <u> </u>							
PM Phone: 380-594-7978												Limited Plus Package <u> </u>							
PM Email: wade.melton@bp.com												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	BTEX by EPA Method 8260B	MTBE by EPA Method 8260B	NWTPH-GX	NWTPH-D w/ elcils gel	Pb-D Non Field Filtered	Pb-T by EPA 8010B	EDB by EPA 8011	EDC by EPA 8260	Comments
	MW 8			W				G	4		X	X	X	X	X				
	Trip Blank 1			W				G	4		X		X						Contact Megan Richard for billing
-11	PP3 Blank 26200106	1/6/20	1150	W				G	4		X	X	X						
Sampler's Name: Jeff Karambelu				Relinquished By / Affiliation				Date		Time		Accepted By / Affiliation				Date		Time	
Sampler's Company: Antea Group				[Signature]				1/6/20		1600		[Signature]				1-7-20		1000	
Ship Method: FedEx				Ship Date: 1/6/20															
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				Therm. ID: 126 Cor: 3.0 ° Unc: 2.6 °				Cooler Dsc: <u> </u> FedEx: <u> </u>			
												B/LB				UPS: <u> </u>			

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Login Sample Receipt Checklist

Client: Antea USA Inc.

Job Number: 580-91898-1

Login Number: 91898

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

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91898-1

SDG No.: _____

Batch Number: 320203 Batch Start Date: 01/08/20 15:28 Batch Analyst: Ruslander, Amanda PBatch Method: 8260C Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS/TFT 00011	VOAMasterMix 00046	
LCS 580-320203/3		8260C		5 mL	5 mL		2 uL	10 uL	
LCSD 580-320203/4		8260C		5 mL	5 mL		2 uL	10 uL	
MB 580-320203/6		8260C		5 mL	5 mL		2 uL		
580-91898-B-9	Trip Blank 1 20200106	8260C	T	5 mL	5 mL	<2 SU	2 uL		
580-91898-B-11	PDB Blank 20200106	8260C	T	5 mL	5 mL	<2 SU	2 uL		
580-91898-B-1	MW-1_20200106_10 .75	8260C	T	5 mL	5 mL	<2 SU	2 uL		
580-91898-B-2	MW-2_20200106_10 .68	8260C	T	5 mL	5 mL	<2 SU	2 uL		
580-91898-B-5	MW-5_20200106_11 .47	8260C	T	5 mL	5 mL	<2 SU	2 uL		
580-91898-B-6	MW-6_20200106_10 .83	8260C	T	5 mL	5 mL	<2 SU	2 uL		
580-91898-B-7	MW-7_20200106_11 .14	8260C	T	5 mL	5 mL	<2 SU	2 uL		
580-91898-B-8	MW-8_20200106_10 .28	8260C	T	5 mL	5 mL	<2 SU	2 uL		
580-91898-B-10	MW-4_20200106_PD B	8260C	T	5 mL	5 mL	<2 SU	2 uL		
580-91898-B-3	MW-3_20200106_10 .17	8260C	T	5 mL	5 mL	<2 SU	2 uL		

Batch Notes

pH Indicator ID	6908005
Vial Lot Number	0217701E

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.

8260C

Page 1 of 1

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91898-1

SDG No.: _____

Batch Number: 320385 Batch Start Date: 01/10/20 10:44 Batch Analyst: Thaneerat, Wijittra 1Batch Method: 8260C Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS/TFT 00011	VOAMasterMix 00046	
LCS 580-320385/3		8260C		5 mL	5 mL		2 uL	10 uL	
LCSD 580-320385/4		8260C		5 mL	5 mL		2 uL	10 uL	
MB 580-320385/6		8260C		5 mL	5 mL		2 uL		
580-91898-D-4	MW-4_20200106_11 .61	8260C	T	5 mL	5 mL	<2 SU	2 uL		

Batch Notes

pH Indicator ID	6908005
Vial Lot Number	0217701E

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.

8260C

Page 1 of 1

GC VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91898-1

SDG No.: _____

Batch Number: 320211 Batch Start Date: 01/08/20 11:43 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 00040	GRO_LCS 00059	TFT Spike 00038
MB 580-320211/7		NWTPH-Gx		5 mL	5 mL		2 uL		10.75 uL
LCS 580-320211/8		NWTPH-Gx		5 mL	5 mL		2 uL	50 uL	
LCSD 580-320211/9		NWTPH-Gx		5 mL	5 mL		2 uL	50 uL	
580-91898-A-9	Trip Blank 1 20200106	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	2 uL		10.75 uL
580-91898-A-11	PDB Blank 20200106	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	2 uL		10.75 uL
580-91898-A-10	MW-4_20200106_PD B	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	2 uL		10.75 uL
580-91898-A-1	MW-1_20200106_10 .75	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	2 uL		10.75 uL
580-91898-A-2	MW-2_20200106_10 .68	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	2 uL		10.75 uL
580-91898-A-6	MW-6_20200106_10 .83	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	2 uL		10.75 uL
580-91898-A-7	MW-7_20200106_11 .14	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	2 uL		10.75 uL
580-91898-A-8	MW-8_20200106_10 .28	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	2 uL		10.75 uL
580-91898-A-5	MW-5_20200106_11 .47	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	2 uL		10.75 uL
580-91898-A-3	MW-3_20200106_10 .17	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	2 uL		10.75 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	V2.4TFT-EX 00044					
MB 580-320211/7		NWTPH-Gx							
LCS 580-320211/8		NWTPH-Gx		2500 uL					
LCSD 580-320211/9		NWTPH-Gx		2500 uL					
580-91898-A-9	Trip Blank 1 20200106	NWTPH-Gx	T						
580-91898-A-11	PDB Blank 20200106	NWTPH-Gx	T						
580-91898-A-10	MW-4_20200106_PD B	NWTPH-Gx	T						
580-91898-A-1	MW-1_20200106_10 .75	NWTPH-Gx	T						

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 2

GC VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91898-1

SDG No.: _____

Batch Number: 320211 Batch Start Date: 01/08/20 11:43 Batch Analyst: Vaughan, Dmitra CBatch Method: NWTPH-Gx Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	V2.4TFT-EX 00044					
580-91898-A-2	MW-2_20200106_10 .68	NWTPH-Gx	T						
580-91898-A-6	MW-6_20200106_10 .83	NWTPH-Gx	T						
580-91898-A-7	MW-7_20200106_11 .14	NWTPH-Gx	T						
580-91898-A-8	MW-8_20200106_10 .28	NWTPH-Gx	T						
580-91898-A-5	MW-5_20200106_11 .47	NWTPH-Gx	T						
580-91898-A-3	MW-3_20200106_10 .17	NWTPH-Gx	T						

Batch Notes	
pH Indicator ID	pH 0.0-6.0 lot#6901002
Pipette/Syringe/Dispenser ID	C25V, C2500Q, B50Q, B100Z
Vial Lot Number	0217701E

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 2 of 2

GC VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91898-1

SDG No.: _____

Batch Number: 320305 Batch Start Date: 01/09/20 15:08 Batch Analyst: Thaneerat, Wijittra 1Batch Method: NWTPH-Gx Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	BFBGRO ARCHON 00040	GRO_LCS 00059	TFT Spike 00038
MB 580-320305/7		NWTPH-Gx		5 mL	5 mL		2 uL		10.75 uL
LCS 580-320305/8		NWTPH-Gx		5 mL	5 mL		2 uL	50 uL	
LCSD 580-320305/9		NWTPH-Gx		5 mL	5 mL		2 uL	50 uL	
580-91898-C-4	MW-4_20200106_11 .61	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		10.75 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	V2.4TFT-EX 00044					
MB 580-320305/7		NWTPH-Gx							
LCS 580-320305/8		NWTPH-Gx		2500 uL					
LCSD 580-320305/9		NWTPH-Gx		2500 uL					
580-91898-C-4	MW-4_20200106_11 .61	NWTPH-Gx	T						

Batch Notes	
Vial Lot Number	217701E

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.: 580-91898-1

SDG No.: _____

Batch Number: 320296 Batch Start Date: 01/09/20 13:36 Batch Analyst: Boyer, Alec 1Batch Method: 3005A Batch End Date: 01/09/20 18:18

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ICP CAL 1 00005	ICP CAL 2 00005	MET Spike 3C 00016	
580-91898-G-1	MW-1_20200106_10 .75	3005A, 6020B	R	50 mL	50 mL				
580-91898-G-1 DU	MW-1_20200106_10 .75	3005A, 6020B	R	50 mL	50 mL				
580-91898-G-1 MS	MW-1_20200106_10 .75	3005A, 6020B	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
580-91898-G-1 MSD	MW-1_20200106_10 .75	3005A, 6020B	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
580-91898-G-2	MW-2_20200106_10 .68	3005A, 6020B	R	50 mL	50 mL				
580-91898-G-3	MW-3_20200106_10 .17	3005A, 6020B	R	50 mL	50 mL				
580-91898-G-4	MW-4_20200106_11 .61	3005A, 6020B	R	50 mL	50 mL				
580-91898-G-5	MW-5_20200106_11 .47	3005A, 6020B	R	50 mL	50 mL				
580-91898-G-6	MW-6_20200106_10 .83	3005A, 6020B	R	50 mL	50 mL				
580-91898-G-7	MW-7_20200106_11 .14	3005A, 6020B	R	50 mL	50 mL				
580-91898-G-8	MW-8_20200106_10 .28	3005A, 6020B	R	50 mL	50 mL				
MB 580-320296/18		3005A, 6020B		50 mL	50 mL				
LCS 580-320296/19		3005A, 6020B		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
LCSD 580-320296/20		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.: 580-91898-1

SDG No.: _____

Batch Number: 320296 Batch Start Date: 01/09/20 13:36 Batch Analyst: Boyer, Alec 1Batch Method: 3005A Batch End Date: 01/09/20 18:18

Batch Notes	
Temperature - Corrected - End	95.3 Degrees C
Temperature - Corrected - Start	95.3 Degrees C
Digestion End Time	01/09/2020 18:18
Digestion Start Time	01/09/2020 14:18
Digestion Unit ID	38008
Hydrochloric Acid ID	2545476
Nitric Acid ID	2461130
Pipette/Syringe/Dispenser ID	METALS-PREP-2
Analyst ID - Spike Analyst	see above
Sufficient Volume for Batch QC	yes
Thermometer ID	661358
Digestion Tube/Cup ID	2535260
Temperature - Uncorrected - End	95 Degrees C
Temperature - Uncorrected - Start	95 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.: 580-91898-1

SDG No.: _____

Batch Number: 320356 Batch Start Date: 01/10/20 09:44 Batch Analyst: Tubens, Andrea RBatch Method: 3005A Batch End Date: 01/10/20 14:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ICP CAL 1 00005	ICP CAL 2 00005	MET Spike 3C 00016	
580-91898-H-1	MW-1_20200106_10 .75	3005A, 6020B	D	50 mL	50 mL				
580-91898-H-2	MW-2_20200106_10 .68	3005A, 6020B	D	50 mL	50 mL				
580-91898-H-3	MW-3_20200106_10 .17	3005A, 6020B	D	50 mL	50 mL				
580-91898-H-4	MW-4_20200106_11 .61	3005A, 6020B	D	50 mL	50 mL				
580-91898-H-5	MW-5_20200106_11 .47	3005A, 6020B	D	50 mL	50 mL				
580-91898-H-6	MW-6_20200106_10 .83	3005A, 6020B	D	50 mL	50 mL				
580-91898-H-7	MW-7_20200106_11 .14	3005A, 6020B	D	50 mL	50 mL				
580-91898-H-8	MW-8_20200106_10 .28	3005A, 6020B	D	50 mL	50 mL				
MB 580-320356/18		3005A, 6020B		50 mL	50 mL				
LCS 580-320356/19		3005A, 6020B		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
LCSD 580-320356/20		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.: 580-91898-1

SDG No.: _____

Batch Number: 320356 Batch Start Date: 01/10/20 09:44 Batch Analyst: Tubens, Andrea RBatch Method: 3005A Batch End Date: 01/10/20 14:15

Batch Notes	
Temperature - Corrected - End	96.7 Degrees C
Temperature - Corrected - Start	92.7 Degrees C
Digestion End Time	01/10/2020 14:07
Digestion Start Time	01/10/2020 10:07
Digestion Unit ID	3810
Hydrochloric Acid ID	2545472
Nitric Acid ID	2461130
Pipette/Syringe/Dispenser ID	METALS-PREP-2
Analyst ID - Spike Analyst	see above
Sufficient Volume for Batch QC	yes
Thermometer ID	110438
Digestion Tube/Cup ID	2535260
Temperature - Uncorrected - End	97 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

Page 2 of 2

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91898-1

SDG No.: _____

Batch Number: 320243 Batch Start Date: 01/07/20 18:08 Batch Analyst: Mundey, Jaspreet KBatch Method: 300.0 Batch End Date: 01/07/20 22:37

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC-Custom-EE 00020			
MB 580-320243/4		300.0		5 mL	5 mL				
LCS 580-320243/5		300.0		5 mL	5 mL	0.25 mL			
LCSD 580-320243/6		300.0		5 mL	5 mL	0.25 mL			
580-91898-I-2	MW-2_20200106_10 .68	300.0	T	5 mL	5 mL				
580-91898-I-4	MW-4_20200106_11 .61	300.0	T	5 mL	5 mL				
580-91898-I-5	MW-5_20200106_11 .47	300.0	T	5 mL	5 mL				
580-91898-I-7	MW-7_20200106_11 .14	300.0	T	5 mL	5 mL				

Batch Notes	
Eluent 1 ID	181107
Filter ID	16950886

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.

300.0

Page 1 of 1

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91898-1

SDG No.: _____

Batch Number: 320526 Batch Start Date: 01/11/20 00:00 Batch Analyst: Carter, Alexandra ABatch Method: 300.0 Batch End Date: 01/13/20 13:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC-Custom-EE 00020			
MB 580-320526/4		300.0		5 mL	5 mL				
LCS 580-320526/5		300.0		5 mL	5 mL	0.25 mL			
LCSD 580-320526/6		300.0		5 mL	5 mL	0.25 mL			
580-91898-I-5	MW-5_20200106_11 .47	300.0	T	5 mL	5 mL				
580-91898-I-5	MW-5_20200106_11 .47	300.0	T	5 mL	5 mL	0.25 mL			
580-91898-I-5 MSD	MW-5_20200106_11 .47	300.0	T	5 mL	5 mL	0.25 mL			
580-91898-I-2	MW-2_20200106_10 .68	300.0	T	5 mL	5 mL				
580-91898-I-4	MW-4_20200106_11 .61	300.0	T	5 mL	5 mL				
580-91898-I-7	MW-7_20200106_11 .14	300.0	T	5 mL	5 mL				

Batch Notes

Eluent 1 ID	181107
Filter ID	16950886

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.

300.0

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GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91898-1

SDG No.: _____

Batch Number: 320456 Batch Start Date: 01/11/20 12:59 Batch Analyst: Kidder, Robert 1Batch Method: SM 2540C Batch End Date: 01/16/20 11:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	CrucibleID	InitialAmount	TareWeight	Weight1	Weight2
MB 580-320456/1		SM 2540C			A0572314	100 mL	3.7853 g	3.7852 g	3.7848 g
LCS 580-320456/2		SM 2540C			A0572315	50 mL	3.6951 g	3.7431 g	3.7429 g
580-91898-I-2	MW-2_20200106_10 .68	SM 2540C	T	533 umhos/cm	A0572326	100 mL	3.6670 g	3.7130 g	3.7125 g
580-91898-I-4	MW-4_20200106_11 .61	SM 2540C	T	522 umhos/cm	A0572327	100 mL	3.6846 g	3.7260 g	3.7263 g
580-91898-I-5	MW-5_20200106_11 .47	SM 2540C	T	562 umhos/cm	A0572328	100 mL	3.6389 g	3.6810 g	3.6806 g
580-91898-I-7	MW-7_20200106_11 .14	SM 2540C	T	372 umhos/cm	A0572329	100 mL	3.6530 g	3.6910 g	3.6909 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	WeightTwo%Diff	Weight40K	Residue	Residue2	Residue3
MB 580-320456/1		SM 2540C		Pass	N/A	N/A	-0.0001 g	-0.0005 g	N/A g
LCS 580-320456/2		SM 2540C		Pass	N/A	N/A	0.048 g	0.0478 g	N/A g
580-91898-I-2	MW-2_20200106_10 .68	SM 2540C	T	Pass	N/A	N/A	0.046 g	0.0455 g	N/A g
580-91898-I-4	MW-4_20200106_11 .61	SM 2540C	T	Pass	N/A	N/A	0.0414 g	0.0417 g	N/A g
580-91898-I-5	MW-5_20200106_11 .47	SM 2540C	T	Pass	N/A	N/A	0.0421 g	0.0417 g	N/A g
580-91898-I-7	MW-7_20200106_11 .14	SM 2540C	T	Pass	N/A	N/A	0.038 g	0.0379 g	N/A g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue4	FinalAmount	CalcMsg	TDS Std. 00059		
MB 580-320456/1		SM 2540C		N/A g	100 mL	OK			
LCS 580-320456/2		SM 2540C		N/A g	100 mL	OK	50 mL		
580-91898-I-2	MW-2_20200106_10 .68	SM 2540C	T	N/A g	100 mL	OK			
580-91898-I-4	MW-4_20200106_11 .61	SM 2540C	T	N/A g	100 mL	OK			
580-91898-I-5	MW-5_20200106_11 .47	SM 2540C	T	N/A g	100 mL	OK			
580-91898-I-7	MW-7_20200106_11 .14	SM 2540C	T	N/A g	100 mL	OK			

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.

SM 2540C

Page 1 of 2

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91898-1

SDG No.: _____

Batch Number: 320456 Batch Start Date: 01/11/20 12:59 Batch Analyst: Kidder, Robert 1Batch Method: SM 2540C Batch End Date: 01/16/20 11:30

Batch Notes	
Balance ID	SEA227
Conductivity Meter ID	HQ40d
Date/Time - In - CW (WT2)	01/15/2020 15:15
Date/Time - Out - CW (WT2)	01/16/2020 09:30
Temperature - Start - CW (WT2) - Correct	180.2 Celsius
Temperature - End - CW (WT2) - Correct	180.2 Celsius
Temperature - Start-CW(WT2) -Uncorrected	179 Celsius
Temperature - End-CW(WT2) -Uncorrected	179 Celsius
Temperature - Start - Corrected	170 Celsius
Temperature - End - Corrected	169.8 Celsius
Date/Time - In	01/11/2020 15:50
Date/Time - Out	01/13/2020 13:15
Filter ID	RW0004801-9350-ES
Nominal Amount Used	100 mL
Oven ID	TDS1
Oven ID - Low Temperature	TDS3
Thermometer ID - Low Temperature	170
Thermometer ID	TDS1
Temperature - Start - Uncorrected	173.8 Celsius
Temperature - End - Uncorrected	173.4 Celsius
Weight(WT1) Start Date/Time	01/13/2020 13:15
Weight(WT1) Date/Time Out	01/15/2020 12:30
Weight(WT1) Start Temp	180.2 Celsius
Weight(WT1) Temp Out	180.2 Celsius
Uncorrected Weight(WT1) Start Temp	179 Celsius
Uncorrected Weight(WT1) Temp Out	179 Celsius

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.

SM 2540C

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ANALYTICAL REPORT

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

Laboratory Job ID: 580-93592-1
Client Project/Site: BP - ARCO 5300

For:

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

Attn: Megan Richard

M. Elaine Walker

Authorized for release by:
4/2/2020 4:58:58 PM

Elaine Walker, Project Manager II
(253)248-4972
elaine.walker@testamericainc.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: 580-93592-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
X	Surrogate recovery exceeds control limits

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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Case Narrative

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

Job ID: 580-93592-1

Job ID: 580-93592-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-93592-1

Receipt

Ten samples were received on 3/19/2020 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.0° C.

GC/MS VOA

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

GC VOA

Method NWTPH-Gx: Surrogate recovery for the following sample was outside control limits: MW-4_11.12_20200318 (580-93592-4). Re-extraction and/or re-analysis was performed with concurring results. The original analysis has been reported.

No additional analytical or quality issues were noted, other than those described above or 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: 580-93592-1

Client Sample ID: MW-1_10.38_20200318

Lab Sample ID: 580-93592-1

No Detections.

Client Sample ID: MW-2_10.28_20200318

Lab Sample ID: 580-93592-2

No Detections.

Client Sample ID: MW-3_10.53_20200318

Lab Sample ID: 580-93592-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	4.6		2.0		ug/L	1		8260D	Total/NA

Client Sample ID: MW-4_11.12_20200318

Lab Sample ID: 580-93592-4

No Detections.

Client Sample ID: MW-6_10.50_20200318

Lab Sample ID: 580-93592-5

No Detections.

Client Sample ID: MW-7_11.47_20200318

Lab Sample ID: 580-93592-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	2.1		2.0		ug/L	1		8260D	Total/NA

Client Sample ID: MW-4_PDB_20200318

Lab Sample ID: 580-93592-7

No Detections.

Client Sample ID: MW-8_11.14_20200318

Lab Sample ID: 580-93592-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	9.8		2.0		ug/L	1		8260D	Total/NA

Client Sample ID: Trip Blank_1_20200318

Lab Sample ID: 580-93592-9

No Detections.

Client Sample ID: PDBBlank_20200318

Lab Sample ID: 580-93592-10

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: 580-93592-1

Client Sample ID: MW-1_10.38_20200318

Lab Sample ID: 580-93592-1

Date Collected: 03/18/20 11:15

Matrix: Water

Date Received: 03/19/20 09:30

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			04/01/20 13:16	1
Benzene	ND		3.0		ug/L			04/01/20 13:16	1
Toluene	ND		2.0		ug/L			04/01/20 13:16	1
Ethylbenzene	ND		3.0		ug/L			04/01/20 13:16	1
Xylenes, Total	ND		3.0		ug/L			04/01/20 13:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	103		80 - 120		04/01/20 13:16	1
Toluene-d8 (Surr)	100		80 - 120		04/01/20 13:16	1
1,2-Dichloroethane-d4 (Surr)	106		80 - 126		04/01/20 13:16	1
4-Bromofluorobenzene (Surr)	99		80 - 120		04/01/20 13:16	1
Dibromofluoromethane (Surr)	103		80 - 120		04/01/20 13:16	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			03/27/20 21:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		50 - 150		03/27/20 21:42	1
Trifluorotoluene (Surr)	116		50 - 150		03/27/20 21:42	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		03/24/20 07:56	03/24/20 13:56	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		03/24/20 07:53	03/24/20 13:23	5

Client Sample ID: MW-2_10.28_20200318

Lab Sample ID: 580-93592-2

Date Collected: 03/18/20 11:45

Matrix: Water

Date Received: 03/19/20 09:30

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			04/01/20 13:43	1
Benzene	ND		3.0		ug/L			04/01/20 13:43	1
Toluene	ND		2.0		ug/L			04/01/20 13:43	1
Ethylbenzene	ND		3.0		ug/L			04/01/20 13:43	1
Xylenes, Total	ND		3.0		ug/L			04/01/20 13:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	103		80 - 120		04/01/20 13:43	1
Toluene-d8 (Surr)	99		80 - 120		04/01/20 13:43	1
1,2-Dichloroethane-d4 (Surr)	108		80 - 126		04/01/20 13:43	1
4-Bromofluorobenzene (Surr)	102		80 - 120		04/01/20 13:43	1
Dibromofluoromethane (Surr)	99		80 - 120		04/01/20 13:43	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			03/27/20 22:09	1

Eurofins TestAmerica, Seattle

Client Sample Results

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

Job ID: 580-93592-1

Client Sample ID: MW-2_10.28_20200318

Lab Sample ID: 580-93592-2

Date Collected: 03/18/20 11:45

Matrix: Water

Date Received: 03/19/20 09:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		50 - 150		03/27/20 22:09	1
Trifluorotoluene (Surr)	98		50 - 150		03/27/20 22:09	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		03/24/20 07:56	03/24/20 14:29	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		03/24/20 07:53	03/24/20 13:29	5

Client Sample ID: MW-3_10.53_20200318

Lab Sample ID: 580-93592-3

Date Collected: 03/18/20 14:10

Matrix: Water

Date Received: 03/19/20 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	4.6		2.0		ug/L			04/01/20 14:10	1
Benzene	ND		3.0		ug/L			04/01/20 14:10	1
Toluene	ND		2.0		ug/L			04/01/20 14:10	1
Ethylbenzene	ND		3.0		ug/L			04/01/20 14:10	1
Xylenes, Total	ND		3.0		ug/L			04/01/20 14:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	104		80 - 120		04/01/20 14:10	1
Toluene-d8 (Surr)	101		80 - 120		04/01/20 14:10	1
1,2-Dichloroethane-d4 (Surr)	111		80 - 126		04/01/20 14:10	1
4-Bromofluorobenzene (Surr)	101		80 - 120		04/01/20 14:10	1
Dibromofluoromethane (Surr)	98		80 - 120		04/01/20 14:10	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			03/27/20 22:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		50 - 150		03/27/20 22:36	1
Trifluorotoluene (Surr)	104		50 - 150		03/27/20 22:36	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		03/24/20 07:56	03/24/20 14:32	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		03/24/20 07:53	03/24/20 13:35	5

Client Sample ID: MW-4_11.12_20200318

Lab Sample ID: 580-93592-4

Date Collected: 03/18/20 12:40

Matrix: Water

Date Received: 03/19/20 09:30

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			04/01/20 14:37	1

Eurofins TestAmerica, Seattle

Client Sample Results

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

Job ID: 580-93592-1

Client Sample ID: MW-4_11.12_20200318

Lab Sample ID: 580-93592-4

Date Collected: 03/18/20 12:40

Matrix: Water

Date Received: 03/19/20 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			04/01/20 14:37	1
Toluene	ND		2.0		ug/L			04/01/20 14:37	1
Ethylbenzene	ND		3.0		ug/L			04/01/20 14:37	1
Xylenes, Total	ND		3.0		ug/L			04/01/20 14:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	104		80 - 120		04/01/20 14:37	1
Toluene-d8 (Surr)	101		80 - 120		04/01/20 14:37	1
1,2-Dichloroethane-d4 (Surr)	107		80 - 126		04/01/20 14:37	1
4-Bromofluorobenzene (Surr)	102		80 - 120		04/01/20 14:37	1
Dibromofluoromethane (Surr)	100		80 - 120		04/01/20 14:37	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	-		03/27/20 23:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		50 - 150					03/27/20 23:03	1
Trifluorotoluene (Surr)	9	X	50 - 150					03/27/20 23:03	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		03/24/20 07:56	03/24/20 14:44	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		03/24/20 07:53	03/24/20 13:20	5

Client Sample ID: MW-6_10.50_20200318

Lab Sample ID: 580-93592-5

Date Collected: 03/18/20 12:10

Matrix: Water

Date Received: 03/19/20 09:30

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			04/01/20 15:04	1
Benzene	ND		3.0		ug/L			04/01/20 15:04	1
Toluene	ND		2.0		ug/L			04/01/20 15:04	1
Ethylbenzene	ND		3.0		ug/L			04/01/20 15:04	1
Xylenes, Total	ND		3.0		ug/L			04/01/20 15:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	101		80 - 120		04/01/20 15:04	1
Toluene-d8 (Surr)	98		80 - 120		04/01/20 15:04	1
1,2-Dichloroethane-d4 (Surr)	112		80 - 126		04/01/20 15:04	1
4-Bromofluorobenzene (Surr)	101		80 - 120		04/01/20 15:04	1
Dibromofluoromethane (Surr)	102		80 - 120		04/01/20 15:04	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			03/27/20 23:58	1

Eurofins TestAmerica, Seattle

Client Sample Results

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

Job ID: 580-93592-1

Client Sample ID: MW-6_10.50_20200318

Lab Sample ID: 580-93592-5

Date Collected: 03/18/20 12:10

Matrix: Water

Date Received: 03/19/20 09:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		50 - 150		03/27/20 23:58	1
Trifluorotoluene (Surr)	110		50 - 150		03/27/20 23:58	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		03/24/20 07:56	03/24/20 14:38	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		03/24/20 07:53	03/24/20 13:32	5

Client Sample ID: MW-7_11.47_20200318

Lab Sample ID: 580-93592-6

Date Collected: 03/18/20 13:10

Matrix: Water

Date Received: 03/19/20 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	2.1		2.0		ug/L			04/01/20 15:31	1
Benzene	ND		3.0		ug/L			04/01/20 15:31	1
Toluene	ND		2.0		ug/L			04/01/20 15:31	1
Ethylbenzene	ND		3.0		ug/L			04/01/20 15:31	1
Xylenes, Total	ND		3.0		ug/L			04/01/20 15:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	105		80 - 120		04/01/20 15:31	1
Toluene-d8 (Surr)	99		80 - 120		04/01/20 15:31	1
1,2-Dichloroethane-d4 (Surr)	108		80 - 126		04/01/20 15:31	1
4-Bromofluorobenzene (Surr)	102		80 - 120		04/01/20 15:31	1
Dibromofluoromethane (Surr)	100		80 - 120		04/01/20 15:31	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			03/28/20 00:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		50 - 150		03/28/20 00:25	1
Trifluorotoluene (Surr)	97		50 - 150		03/28/20 00:25	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		03/24/20 07:56	03/24/20 14:41	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		03/24/20 07:53	03/24/20 13:26	5

Client Sample ID: MW-4_PDB_20200318

Lab Sample ID: 580-93592-7

Date Collected: 03/18/20 12:20

Matrix: Water

Date Received: 03/19/20 09:30

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			04/01/20 15:58	1

Eurofins TestAmerica, Seattle

Client Sample Results

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

Job ID: 580-93592-1

Client Sample ID: MW-4_PDB_20200318

Lab Sample ID: 580-93592-7

Date Collected: 03/18/20 12:20

Matrix: Water

Date Received: 03/19/20 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			04/01/20 15:58	1
Toluene	ND		2.0		ug/L			04/01/20 15:58	1
Ethylbenzene	ND		3.0		ug/L			04/01/20 15:58	1
Xylenes, Total	ND		3.0		ug/L			04/01/20 15:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	104		80 - 120		04/01/20 15:58	1
Toluene-d8 (Surr)	100		80 - 120		04/01/20 15:58	1
1,2-Dichloroethane-d4 (Surr)	107		80 - 126		04/01/20 15:58	1
4-Bromofluorobenzene (Surr)	101		80 - 120		04/01/20 15:58	1
Dibromofluoromethane (Surr)	100		80 - 120		04/01/20 15:58	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			03/28/20 00:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		50 - 150		03/28/20 00:52	1
Trifluorotoluene (Surr)	101		50 - 150		03/28/20 00:52	1

Client Sample ID: MW-8_11.14_20200318

Lab Sample ID: 580-93592-8

Date Collected: 03/18/20 13:40

Matrix: Water

Date Received: 03/19/20 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	9.8		2.0		ug/L			04/01/20 16:24	1
Benzene	ND		3.0		ug/L			04/01/20 16:24	1
Toluene	ND		2.0		ug/L			04/01/20 16:24	1
Ethylbenzene	ND		3.0		ug/L			04/01/20 16:24	1
Xylenes, Total	ND		3.0		ug/L			04/01/20 16:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	107		80 - 120		04/01/20 16:24	1
Toluene-d8 (Surr)	97		80 - 120		04/01/20 16:24	1
1,2-Dichloroethane-d4 (Surr)	121		80 - 126		04/01/20 16:24	1
4-Bromofluorobenzene (Surr)	101		80 - 120		04/01/20 16:24	1
Dibromofluoromethane (Surr)	104		80 - 120		04/01/20 16:24	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			03/28/20 01:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		50 - 150		03/28/20 01:19	1
Trifluorotoluene (Surr)	109		50 - 150		03/28/20 01:19	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		03/24/20 07:56	03/24/20 14:35	5

Eurofins TestAmerica, Seattle

Client Sample Results

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

Job ID: 580-93592-1

Client Sample ID: MW-8_11.14_20200318

Lab Sample ID: 580-93592-8

Date Collected: 03/18/20 13:40

Matrix: Water

Date Received: 03/19/20 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		03/24/20 07:53	03/24/20 12:48	5

Client Sample ID: Trip Blank_1_20200318

Lab Sample ID: 580-93592-9

Date Collected: 03/18/20 00:01

Matrix: Water

Date Received: 03/19/20 09:30

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			04/01/20 16:51	1
Toluene	ND		2.0		ug/L			04/01/20 16:51	1
Ethylbenzene	ND		3.0		ug/L			04/01/20 16:51	1
Xylenes, Total	ND		3.0		ug/L			04/01/20 16:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	101		80 - 120		04/01/20 16:51	1
Toluene-d8 (Surr)	101		80 - 120		04/01/20 16:51	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 126		04/01/20 16:51	1
4-Bromofluorobenzene (Surr)	100		80 - 120		04/01/20 16:51	1
Dibromofluoromethane (Surr)	102		80 - 120		04/01/20 16:51	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			03/27/20 20:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		50 - 150		03/27/20 20:20	1
Trifluorotoluene (Surr)	106		50 - 150		03/27/20 20:20	1

Client Sample ID: PDBBlank_20200318

Lab Sample ID: 580-93592-10

Date Collected: 03/18/20 12:15

Matrix: Water

Date Received: 03/19/20 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			03/27/20 20:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		50 - 150		03/27/20 20:48	1
Trifluorotoluene (Surr)	98		50 - 150		03/27/20 20:48	1

Surrogate Summary

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

Job ID: 580-93592-1

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)				
		TFT (80-120)	TOL (80-120)	DCA (80-126)	BFB (80-120)	DBFM (80-120)
580-93592-1	MW-1_10.38_20200318	103	100	106	99	103
580-93592-2	MW-2_10.28_20200318	103	99	108	102	99
580-93592-3	MW-3_10.53_20200318	104	101	111	101	98
580-93592-4	MW-4_11.12_20200318	104	101	107	102	100
580-93592-5	MW-6_10.50_20200318	101	98	112	101	102
580-93592-6	MW-7_11.47_20200318	105	99	108	102	100
580-93592-7	MW-4_PDB_20200318	104	100	107	101	100
580-93592-8	MW-8_11.14_20200318	107	97	121	101	104
580-93592-9	Trip Blank_1_20200318	101	101	105	100	102
LCS 580-325889/4	Lab Control Sample	102	99	102	100	101
LCSD 580-325889/5	Lab Control Sample Dup	102	99	101	101	101
MB 580-325889/7	Method Blank	101	99	102	100	102

Surrogate Legend

TFT = Trifluorotoluene (Surr)
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)	
		BFB1 (50-150)	TFT1 (50-150)
580-93592-1	MW-1_10.38_20200318	90	116
580-93592-2	MW-2_10.28_20200318	80	98
580-93592-3	MW-3_10.53_20200318	89	104
580-93592-4	MW-4_11.12_20200318	72	9 X
580-93592-5	MW-6_10.50_20200318	93	110
580-93592-6	MW-7_11.47_20200318	79	97
580-93592-7	MW-4_PDB_20200318	87	101
580-93592-8	MW-8_11.14_20200318	89	109
580-93592-9	Trip Blank_1_20200318	86	106
580-93592-10	PDBBlank_20200318	80	98
LCS 580-325694/14	Lab Control Sample	79	104
LCSD 580-325694/15	Lab Control Sample Dup	88	103
MB 580-325694/13	Method Blank	82	105

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
TFT = Trifluorotoluene (Surr)

QC Sample Results

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

Job ID: 580-93592-1

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

Lab Sample ID: MB 580-325889/7

Matrix: Water

Analysis Batch: 325889

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			04/01/20 08:48	1
Benzene	ND		3.0		ug/L			04/01/20 08:48	1
Toluene	ND		2.0		ug/L			04/01/20 08:48	1
Ethylbenzene	ND		3.0		ug/L			04/01/20 08:48	1
Xylenes, Total	ND		3.0		ug/L			04/01/20 08:48	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	101		80 - 120		04/01/20 08:48	1
Toluene-d8 (Surr)	99		80 - 120		04/01/20 08:48	1
1,2-Dichloroethane-d4 (Surr)	102		80 - 126		04/01/20 08:48	1
4-Bromofluorobenzene (Surr)	100		80 - 120		04/01/20 08:48	1
Dibromofluoromethane (Surr)	102		80 - 120		04/01/20 08:48	1

Lab Sample ID: LCS 580-325889/4

Matrix: Water

Analysis Batch: 325889

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	10.4		ug/L		104	72 - 130
Benzene	10.0	10.1		ug/L		101	75 - 121
Toluene	10.0	10.1		ug/L		101	80 - 120
Ethylbenzene	10.0	10.1		ug/L		101	80 - 120
m-Xylene & p-Xylene	10.0	10.3		ug/L		103	80 - 120
o-Xylene	10.0	10.4		ug/L		104	80 - 120
Xylenes, Total	20.0	20.7		ug/L		104	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Trifluorotoluene (Surr)	102		80 - 120
Toluene-d8 (Surr)	99		80 - 120
1,2-Dichloroethane-d4 (Surr)	102		80 - 126
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120

Lab Sample ID: LCSD 580-325889/5

Matrix: Water

Analysis Batch: 325889

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	10.8		ug/L		108	72 - 130	4	18
Benzene	10.0	10.7		ug/L		107	75 - 121	6	14
Toluene	10.0	10.7		ug/L		107	80 - 120	5	19
Ethylbenzene	10.0	10.5		ug/L		105	80 - 120	3	14
m-Xylene & p-Xylene	10.0	10.7		ug/L		107	80 - 120	4	14
o-Xylene	10.0	10.9		ug/L		109	80 - 120	4	16
Xylenes, Total	20.0	21.6		ug/L		108	80 - 120	4	16

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QC Sample Results

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

Job ID: 580-93592-1

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

Lab Sample ID: LCSD 580-325889/5

Matrix: Water

Analysis Batch: 325889

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

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

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

Lab Sample ID: MB 580-325694/13

Matrix: Water

Analysis Batch: 325694

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			03/27/20 18:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		50 - 150					03/27/20 18:59	1
Trifluorotoluene (Surr)	105		50 - 150					03/27/20 18:59	1

Lab Sample ID: LCS 580-325694/14

Matrix: Water

Analysis Batch: 325694

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	1000	851		ug/L		85	79 - 120
Surrogate	%Recovery	Qualifier	Limits				
4-Bromofluorobenzene (Surr)	79		50 - 150				
Trifluorotoluene (Surr)	104		50 - 150				

Lab Sample ID: LCSD 580-325694/15

Matrix: Water

Analysis Batch: 325694

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	886		ug/L		89	79 - 120	4	10
Surrogate	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	88		50 - 150						
Trifluorotoluene (Surr)	103		50 - 150						

QC Sample Results

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

Job ID: 580-93592-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 580-325442/21-A
Matrix: Water
Analysis Batch: 325568

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 325442

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		03/24/20 07:57	03/24/20 13:50	5

Lab Sample ID: LCS 580-325442/22-A
Matrix: Water
Analysis Batch: 325568

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 325442

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1000	956		ug/L		96	80 - 120

Lab Sample ID: LCSD 580-325442/23-A
Matrix: Water
Analysis Batch: 325568

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 325442

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	1000	960		ug/L		96	80 - 120	0	20

Lab Sample ID: 580-93592-1 MS
Matrix: Water
Analysis Batch: 325568

Client Sample ID: MW-1_10.38_20200318
Prep Type: Total Recoverable
Prep Batch: 325442

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	ND		1000	927		ug/L		93	80 - 120

Lab Sample ID: 580-93592-1 MSD
Matrix: Water
Analysis Batch: 325568

Client Sample ID: MW-1_10.38_20200318
Prep Type: Total Recoverable
Prep Batch: 325442

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	ND		1000	933		ug/L		93	80 - 120	1	20

Lab Sample ID: 580-93592-1 DU
Matrix: Water
Analysis Batch: 325568

Client Sample ID: MW-1_10.38_20200318
Prep Type: Total Recoverable
Prep Batch: 325442

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

Lab Sample ID: MB 580-325389/8-B
Matrix: Water
Analysis Batch: 325490

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 325441

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		03/24/20 07:53	03/24/20 12:45	5

Lab Sample ID: LCS 580-325389/9-B
Matrix: Water
Analysis Batch: 325490

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 325441

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1000	977		ug/L		98	80 - 120

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QC Sample Results

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

Job ID: 580-93592-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: LCSD 580-325389/10-B

Matrix: Water

Analysis Batch: 325490

Client Sample ID: Lab Control Sample Dup

Prep Type: Dissolved

Prep Batch: 325441

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead			1000	984		ug/L		98	80 - 120	1	20

Lab Sample ID: 580-93592-8 MS

Matrix: Water

Analysis Batch: 325490

Client Sample ID: MW-8_11.14_20200318

Prep Type: Dissolved

Prep Batch: 325441

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	ND		1000	1010		ug/L		101	80 - 120		

Lab Sample ID: 580-93592-8 MSD

Matrix: Water

Analysis Batch: 325490

Client Sample ID: MW-8_11.14_20200318

Prep Type: Dissolved

Prep Batch: 325441

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	ND		1000	998		ug/L		100	80 - 120	2	20

Lab Sample ID: 580-93592-8 DU

Matrix: Water

Analysis Batch: 325490

Client Sample ID: MW-8_11.14_20200318

Prep Type: Dissolved

Prep Batch: 325441

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

QC Association Summary

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

Job ID: 580-93592-1

GC/MS VOA

Analysis Batch: 325889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-93592-1	MW-1_10.38_20200318	Total/NA	Water	8260D	
580-93592-2	MW-2_10.28_20200318	Total/NA	Water	8260D	
580-93592-3	MW-3_10.53_20200318	Total/NA	Water	8260D	
580-93592-4	MW-4_11.12_20200318	Total/NA	Water	8260D	
580-93592-5	MW-6_10.50_20200318	Total/NA	Water	8260D	
580-93592-6	MW-7_11.47_20200318	Total/NA	Water	8260D	
580-93592-7	MW-4_PDB_20200318	Total/NA	Water	8260D	
580-93592-8	MW-8_11.14_20200318	Total/NA	Water	8260D	
580-93592-9	Trip Blank_1_20200318	Total/NA	Water	8260D	
MB 580-325889/7	Method Blank	Total/NA	Water	8260D	
LCS 580-325889/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 580-325889/5	Lab Control Sample Dup	Total/NA	Water	8260D	

GC VOA

Analysis Batch: 325694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-93592-1	MW-1_10.38_20200318	Total/NA	Water	NWTPH-Gx	
580-93592-2	MW-2_10.28_20200318	Total/NA	Water	NWTPH-Gx	
580-93592-3	MW-3_10.53_20200318	Total/NA	Water	NWTPH-Gx	
580-93592-4	MW-4_11.12_20200318	Total/NA	Water	NWTPH-Gx	
580-93592-5	MW-6_10.50_20200318	Total/NA	Water	NWTPH-Gx	
580-93592-6	MW-7_11.47_20200318	Total/NA	Water	NWTPH-Gx	
580-93592-7	MW-4_PDB_20200318	Total/NA	Water	NWTPH-Gx	
580-93592-8	MW-8_11.14_20200318	Total/NA	Water	NWTPH-Gx	
580-93592-9	Trip Blank_1_20200318	Total/NA	Water	NWTPH-Gx	
580-93592-10	PDBBlank_20200318	Total/NA	Water	NWTPH-Gx	
MB 580-325694/13	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 580-325694/14	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 580-325694/15	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

Metals

Filtration Batch: 325389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-93592-1	MW-1_10.38_20200318	Dissolved	Water	FILTRATION	
580-93592-2	MW-2_10.28_20200318	Dissolved	Water	FILTRATION	
580-93592-3	MW-3_10.53_20200318	Dissolved	Water	FILTRATION	
580-93592-4	MW-4_11.12_20200318	Dissolved	Water	FILTRATION	
580-93592-5	MW-6_10.50_20200318	Dissolved	Water	FILTRATION	
580-93592-6	MW-7_11.47_20200318	Dissolved	Water	FILTRATION	
580-93592-8	MW-8_11.14_20200318	Dissolved	Water	FILTRATION	
MB 580-325389/8-B	Method Blank	Dissolved	Water	FILTRATION	
LCS 580-325389/9-B	Lab Control Sample	Dissolved	Water	FILTRATION	
LCSD 580-325389/10-B	Lab Control Sample Dup	Dissolved	Water	FILTRATION	
580-93592-8 MS	MW-8_11.14_20200318	Dissolved	Water	FILTRATION	
580-93592-8 MSD	MW-8_11.14_20200318	Dissolved	Water	FILTRATION	
580-93592-8 DU	MW-8_11.14_20200318	Dissolved	Water	FILTRATION	

Prep Batch: 325441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-93592-1	MW-1_10.38_20200318	Dissolved	Water	3005A	325389

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QC Association Summary

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

Job ID: 580-93592-1

Metals (Continued)

Prep Batch: 325441 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-93592-2	MW-2_10.28_20200318	Dissolved	Water	3005A	325389
580-93592-3	MW-3_10.53_20200318	Dissolved	Water	3005A	325389
580-93592-4	MW-4_11.12_20200318	Dissolved	Water	3005A	325389
580-93592-5	MW-6_10.50_20200318	Dissolved	Water	3005A	325389
580-93592-6	MW-7_11.47_20200318	Dissolved	Water	3005A	325389
580-93592-8	MW-8_11.14_20200318	Dissolved	Water	3005A	325389
MB 580-325389/8-B	Method Blank	Dissolved	Water	3005A	325389
LCS 580-325389/9-B	Lab Control Sample	Dissolved	Water	3005A	325389
LCSD 580-325389/10-B	Lab Control Sample Dup	Dissolved	Water	3005A	325389
580-93592-8 MS	MW-8_11.14_20200318	Dissolved	Water	3005A	325389
580-93592-8 MSD	MW-8_11.14_20200318	Dissolved	Water	3005A	325389
580-93592-8 DU	MW-8_11.14_20200318	Dissolved	Water	3005A	325389

Prep Batch: 325442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-93592-1	MW-1_10.38_20200318	Total Recoverable	Water	3005A	
580-93592-2	MW-2_10.28_20200318	Total Recoverable	Water	3005A	
580-93592-3	MW-3_10.53_20200318	Total Recoverable	Water	3005A	
580-93592-4	MW-4_11.12_20200318	Total Recoverable	Water	3005A	
580-93592-5	MW-6_10.50_20200318	Total Recoverable	Water	3005A	
580-93592-6	MW-7_11.47_20200318	Total Recoverable	Water	3005A	
580-93592-8	MW-8_11.14_20200318	Total Recoverable	Water	3005A	
MB 580-325442/21-A	Method Blank	Total Recoverable	Water	3005A	
LCS 580-325442/22-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 580-325442/23-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	
580-93592-1 MS	MW-1_10.38_20200318	Total Recoverable	Water	3005A	
580-93592-1 MSD	MW-1_10.38_20200318	Total Recoverable	Water	3005A	
580-93592-1 DU	MW-1_10.38_20200318	Total Recoverable	Water	3005A	

Analysis Batch: 325490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-93592-1	MW-1_10.38_20200318	Dissolved	Water	6020B	325441
580-93592-2	MW-2_10.28_20200318	Dissolved	Water	6020B	325441
580-93592-3	MW-3_10.53_20200318	Dissolved	Water	6020B	325441
580-93592-4	MW-4_11.12_20200318	Dissolved	Water	6020B	325441
580-93592-5	MW-6_10.50_20200318	Dissolved	Water	6020B	325441
580-93592-6	MW-7_11.47_20200318	Dissolved	Water	6020B	325441
580-93592-8	MW-8_11.14_20200318	Dissolved	Water	6020B	325441
MB 580-325389/8-B	Method Blank	Dissolved	Water	6020B	325441
LCS 580-325389/9-B	Lab Control Sample	Dissolved	Water	6020B	325441
LCSD 580-325389/10-B	Lab Control Sample Dup	Dissolved	Water	6020B	325441
580-93592-8 MS	MW-8_11.14_20200318	Dissolved	Water	6020B	325441
580-93592-8 MSD	MW-8_11.14_20200318	Dissolved	Water	6020B	325441
580-93592-8 DU	MW-8_11.14_20200318	Dissolved	Water	6020B	325441

Analysis Batch: 325568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-93592-1	MW-1_10.38_20200318	Total Recoverable	Water	6020B	325442
580-93592-2	MW-2_10.28_20200318	Total Recoverable	Water	6020B	325442
580-93592-3	MW-3_10.53_20200318	Total Recoverable	Water	6020B	325442
580-93592-4	MW-4_11.12_20200318	Total Recoverable	Water	6020B	325442

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QC Association Summary

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

Job ID: 580-93592-1

Metals (Continued)

Analysis Batch: 325568 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-93592-5	MW-6_10.50_20200318	Total Recoverable	Water	6020B	325442
580-93592-6	MW-7_11.47_20200318	Total Recoverable	Water	6020B	325442
580-93592-8	MW-8_11.14_20200318	Total Recoverable	Water	6020B	325442
MB 580-325442/21-A	Method Blank	Total Recoverable	Water	6020B	325442
LCS 580-325442/22-A	Lab Control Sample	Total Recoverable	Water	6020B	325442
LCSD 580-325442/23-A	Lab Control Sample Dup	Total Recoverable	Water	6020B	325442
580-93592-1 MS	MW-1_10.38_20200318	Total Recoverable	Water	6020B	325442
580-93592-1 MSD	MW-1_10.38_20200318	Total Recoverable	Water	6020B	325442
580-93592-1 DU	MW-1_10.38_20200318	Total Recoverable	Water	6020B	325442

Lab Chronicle

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

Job ID: 580-93592-1

Client Sample ID: MW-1_10.38_20200318

Lab Sample ID: 580-93592-1

Date Collected: 03/18/20 11:15

Matrix: Water

Date Received: 03/19/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	325889	04/01/20 13:16	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	325694	03/27/20 21:42	DCV	TAL SEA
Dissolved	Filtration	FILTRATION			325389	03/23/20 07:22	A1B	TAL SEA
Dissolved	Prep	3005A			325441	03/24/20 07:53	ART	TAL SEA
Dissolved	Analysis	6020B		5	325490	03/24/20 13:23	FCW	TAL SEA
Total Recoverable	Prep	3005A			325442	03/24/20 07:56	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	325568	03/24/20 13:56	FCW	TAL SEA

Client Sample ID: MW-2_10.28_20200318

Lab Sample ID: 580-93592-2

Date Collected: 03/18/20 11:45

Matrix: Water

Date Received: 03/19/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	325889	04/01/20 13:43	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	325694	03/27/20 22:09	DCV	TAL SEA
Dissolved	Filtration	FILTRATION			325389	03/23/20 07:22	A1B	TAL SEA
Dissolved	Prep	3005A			325441	03/24/20 07:53	ART	TAL SEA
Dissolved	Analysis	6020B		5	325490	03/24/20 13:29	FCW	TAL SEA
Total Recoverable	Prep	3005A			325442	03/24/20 07:56	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	325568	03/24/20 14:29	FCW	TAL SEA

Client Sample ID: MW-3_10.53_20200318

Lab Sample ID: 580-93592-3

Date Collected: 03/18/20 14:10

Matrix: Water

Date Received: 03/19/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	325889	04/01/20 14:10	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	325694	03/27/20 22:36	DCV	TAL SEA
Dissolved	Filtration	FILTRATION			325389	03/23/20 07:22	A1B	TAL SEA
Dissolved	Prep	3005A			325441	03/24/20 07:53	ART	TAL SEA
Dissolved	Analysis	6020B		5	325490	03/24/20 13:35	FCW	TAL SEA
Total Recoverable	Prep	3005A			325442	03/24/20 07:56	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	325568	03/24/20 14:32	FCW	TAL SEA

Client Sample ID: MW-4_11.12_20200318

Lab Sample ID: 580-93592-4

Date Collected: 03/18/20 12:40

Matrix: Water

Date Received: 03/19/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	325889	04/01/20 14:37	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	325694	03/27/20 23:03	DCV	TAL SEA
Dissolved	Filtration	FILTRATION			325389	03/23/20 07:22	A1B	TAL SEA
Dissolved	Prep	3005A			325441	03/24/20 07:53	ART	TAL SEA
Dissolved	Analysis	6020B		5	325490	03/24/20 13:20	FCW	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

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

Job ID: 580-93592-1

Client Sample ID: MW-4_11.12_20200318

Lab Sample ID: 580-93592-4

Date Collected: 03/18/20 12:40

Matrix: Water

Date Received: 03/19/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			325442	03/24/20 07:56	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	325568	03/24/20 14:44	FCW	TAL SEA

Client Sample ID: MW-6_10.50_20200318

Lab Sample ID: 580-93592-5

Date Collected: 03/18/20 12:10

Matrix: Water

Date Received: 03/19/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	325889	04/01/20 15:04	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	325694	03/27/20 23:58	DCV	TAL SEA
Dissolved	Filtration	FILTRATION			325389	03/23/20 07:22	A1B	TAL SEA
Dissolved	Prep	3005A			325441	03/24/20 07:53	ART	TAL SEA
Dissolved	Analysis	6020B		5	325490	03/24/20 13:32	FCW	TAL SEA
Total Recoverable	Prep	3005A			325442	03/24/20 07:56	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	325568	03/24/20 14:38	FCW	TAL SEA

Client Sample ID: MW-7_11.47_20200318

Lab Sample ID: 580-93592-6

Date Collected: 03/18/20 13:10

Matrix: Water

Date Received: 03/19/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	325889	04/01/20 15:31	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	325694	03/28/20 00:25	DCV	TAL SEA
Dissolved	Filtration	FILTRATION			325389	03/23/20 07:22	A1B	TAL SEA
Dissolved	Prep	3005A			325441	03/24/20 07:53	ART	TAL SEA
Dissolved	Analysis	6020B		5	325490	03/24/20 13:26	FCW	TAL SEA
Total Recoverable	Prep	3005A			325442	03/24/20 07:56	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	325568	03/24/20 14:41	FCW	TAL SEA

Client Sample ID: MW-4_PDB_20200318

Lab Sample ID: 580-93592-7

Date Collected: 03/18/20 12:20

Matrix: Water

Date Received: 03/19/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	325889	04/01/20 15:58	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	325694	03/28/20 00:52	DCV	TAL SEA

Client Sample ID: MW-8_11.14_20200318

Lab Sample ID: 580-93592-8

Date Collected: 03/18/20 13:40

Matrix: Water

Date Received: 03/19/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	325889	04/01/20 16:24	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	325694	03/28/20 01:19	DCV	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

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

Job ID: 580-93592-1

Client Sample ID: MW-8_11.14_20200318

Date Collected: 03/18/20 13:40

Date Received: 03/19/20 09:30

Lab Sample ID: 580-93592-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			325389	03/23/20 07:22	A1B	TAL SEA
Dissolved	Prep	3005A			325441	03/24/20 07:53	ART	TAL SEA
Dissolved	Analysis	6020B		5	325490	03/24/20 12:48	FCW	TAL SEA
Total Recoverable	Prep	3005A			325442	03/24/20 07:56	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	325568	03/24/20 14:35	FCW	TAL SEA

Client Sample ID: Trip Blank_1_20200318

Date Collected: 03/18/20 00:01

Date Received: 03/19/20 09:30

Lab Sample ID: 580-93592-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	325889	04/01/20 16:51	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	325694	03/27/20 20:20	DCV	TAL SEA

Client Sample ID: PDBBlank_20200318

Date Collected: 03/18/20 12:15

Date Received: 03/19/20 09:30

Lab Sample ID: 580-93592-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	325694	03/27/20 20:48	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: 580-93592-1

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: 580-93592-1

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
FILTRATION	Sample Filtration	None	TAL SEA

Protocol References:

None = None

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: 580-93592-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-93592-1	MW-1_10.38_20200318	Water	03/18/20 11:15	03/19/20 09:30	
580-93592-2	MW-2_10.28_20200318	Water	03/18/20 11:45	03/19/20 09:30	
580-93592-3	MW-3_10.53_20200318	Water	03/18/20 14:10	03/19/20 09:30	
580-93592-4	MW-4_11.12_20200318	Water	03/18/20 12:40	03/19/20 09:30	
580-93592-5	MW-6_10.50_20200318	Water	03/18/20 12:10	03/19/20 09:30	
580-93592-6	MW-7_11.47_20200318	Water	03/18/20 13:10	03/19/20 09:30	
580-93592-7	MW-4_PDB_20200318	Water	03/18/20 12:20	03/19/20 09:30	
580-93592-8	MW-8_11.14_20200318	Water	03/18/20 13:40	03/19/20 09:30	
580-93592-9	Trip Blank_1_20200318	Water	03/18/20 00:01	03/19/20 09:30	
580-93592-10	PDBBlank_20200318	Water	03/18/20 12:15	03/19/20 09:30	

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

Loc: 580
93592

Page 1 of 2

BP Site Node Path: BP 5300

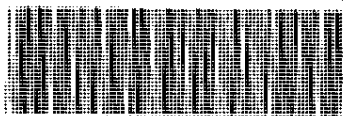
Req Due Date (mm/dd/yy): Standard TAT

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				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: WRB26968/009V4-0016				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 BPI/ARC X																					
BP/RM PM: Wade Melton				Sample Details				Requested Analyses				Report Type & QC Level																	
												Limited (Standard) Package																	
PM Phone: 360-594-7978												Limited Plus Package																	
PM Email: wade.melton@bp.com												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-Gx	NWTPH-D w/ silica gel	Pb-D Non Field Filtered	Pb-T by EPA 8010B	EDB by EPA 8011	EDC by EPA 8280	Therm. ID:	Cor:	Unc:	Cooler Dsc:	FedEx:	Packing:	UPS:	Cust. Seal: Yes / No	Lab Cour:	Blue Ice: Wet, Dry, None	Other:
MW-1_10.38-20200318		3/18/2020	1115	W			G	B		X	X	X		X	X					IR6	5.0 °	4.6	MR	P.0	Bub		No		
MW-2_10.28-20200318		3/18/2020	1145	W			G	B		X	X	X		X	X														
MW-3_10.53-20200318		3/18/2020	1410	W			G	B		X	X	X		X	X														
MW-4_11.12-20200318		3/18/2020	1240	W			G	B		X	X	X		X	X														
MW-6_10.50-20200318		3/18/2020	1210	W			G	B		X	X	X		X	X														
MW-7_11.47-20200318		3/18/2020	1310	W			G	B		X	X	X		X	X														
MW-4_PDB-20200318		3/18/2020	1220	W			G	G		X	X	X																	
Sampler's Name: Jeffrey Karamboles				Relinquished By / Affiliation				Date		Time		Accepted By / Affiliation				Date		Time											
Sampler's Company: Antea Group				Jeffrey Karamboles				3/18/20		1800		[Signature]				3-19-20		0930											
Ship Method: FedEx Ship Date: 3/18/2020																													
Shipment Tracking No:																													
Special Instructions:																													
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																													



580-93592 Chain of Custody

**Proprietary and Confidential
Property of BP and its Affiliates**



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				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: WR826958/009V4-0018				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@testamerica.com				Stage <u>2_Select (20)</u>		Activity <u>Additional Data Collection (100)</u>		Invoice To: BP-RM <u> </u> BP/ARC <u>X</u>						
BP/RM PM: Wade Melton				Sample Details				Requested Analyses				Report Type & QC Level		
PM Phone: 360-594-7978												Limited (Standard) Package <u> </u>		
PM Email: wade.melton@bp.com												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	FT	Pres	Comments	
	MW-8_11.14_20200318	3/18/2020	1340	W				G	8	BTX by EPA Method 8260B				Diss Pb Not Field Filtered
	Trip Blank_1	—	—	W				G	6	MTBE by EPA Method 8260B				
	PDB Blank_20200318	3/18/2020	1215	W				G	3	NMTPH-Gx				
										NMTPH-D w/ silica gel				
										Pb-D Non Field Filtered				
										Pb-T by EPA 8010B				
										EDB by EPA 8011				
										EDC by EPA 8260				
Sampler's Name: <u>Jeffrey Karambel</u>				Relinquished By / Affiliation				Date	Time	Accepted By / Affiliation		Date	Time	
Sampler's Company: <u>Antea Group</u>				<u>Jeffrey Karambel</u>				<u>3/18/20</u>	<u>1800</u>	<u>[Signature]</u>		<u>3-19-20</u>	<u>0930</u>	
Ship Method: <u>Fed Ex</u> Ship Date: <u>3/18/2020</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/MSO Sample Submitted: Yes / No														

BP LaMP Soil/H2O COC July 2018

Proprietary and Confidential
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Temperature readings:

Lined up in WASH-in

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u> pH	<u>Preservative</u> Temp	<u>Added (mls)</u>	<u>Lot #</u>
MW-1_10.38_20200318	580-93592-A-1	Plastic 250ml - with Nitric Acid	<2			0331901E-000
MW-2_10.28_20200318	580-93592-A-2	Plastic 250ml - with Nitric Acid				0331901E-000
MW-3_10.53_20200318	580-93592-A-3	Plastic 250ml - with Nitric Acid				0331901E-000
MW-4_11.12_20200318	580-93592-A-4	Plastic 250ml - with Nitric Acid				0331901E-000
MW-6_10.50_20200318	580-93592-A-5	Plastic 250ml - with Nitric Acid				0331901E-000
MW-7_11.47_20200318	580-93592-A-6	Plastic 250ml - with Nitric Acid				0331901E-000
MW-8_11.14_20200318	580-93592-A-8	Plastic 250ml - with Nitric Acid				0331901E-000

Login Sample Receipt Checklist

Client: Antea USA Inc.

Job Number: 580-93592-1

Login Number: 93592

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.: 580-93592-1

SDG No.: _____

Batch Number: 325889 Batch Start Date: 04/01/20 06:33 Batch Analyst: Jantanu, CharinpornBatch Method: 8260D Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS/TFT 00014	VOAMasterMix 00053	
LCS 580-325889/4		8260D		5 mL	5 mL		2 uL	10 uL	
LCSD 580-325889/5		8260D		5 mL	5 mL		2 uL	10 uL	
MB 580-325889/7		8260D		5 mL	5 mL		2 uL		
580-93592-E-1	MW-1_10.38_20200 318	8260D	T	5 mL	5 mL	<2 SU	2 uL		
580-93592-E-2	MW-2_10.28_20200 318	8260D	T	5 mL	5 mL	<2 SU	2 uL		
580-93592-E-3	MW-3_10.53_20200 318	8260D	T	5 mL	5 mL	<2 SU	2 uL		
580-93592-E-4	MW-4_11.12_20200 318	8260D	T	5 mL	5 mL	<2 SU	2 uL		
580-93592-E-5	MW-6_10.50_20200 318	8260D	T	5 mL	5 mL	<2 SU	2 uL		
580-93592-D-6	MW-7_11.47_20200 318	8260D	T	5 mL	5 mL	<2 SU	2 uL		
580-93592-B-7	MW-4_PDB_2020031 8	8260D	T	5 mL	5 mL	<2 SU	2 uL		
580-93592-D-8	MW-8_11.14_20200 318	8260D	T	5 mL	5 mL	<2 SU	2 uL		
580-93592-C-9	Trip Blank 1 20200318	8260D	T	5 mL	5 mL	<2 SU	2 uL		

Batch Notes

Vial Lot Number	0217701e
-----------------	----------

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.: 580-93592-1

SDG No.: _____

Batch Number: 325694 Batch Start Date: 03/27/20 15:21 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 00041	GRO_LCS 00060	TFT Spike 00040
MB 580-325694/13		NWTPH-Gx		5 mL	5 mL		1 uL		10.75 uL
LCS 580-325694/14		NWTPH-Gx		5 mL	5 mL		1 uL	50 uL	
LCSD 580-325694/15		NWTPH-Gx		5 mL	5 mL		1 uL	50 uL	
580-93592-B-9	Trip Blank 1 20200318	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	1 uL		10.75 uL
580-93592-C-10	PDBBlank_20200318	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	1 uL		10.75 uL
580-93592-D-1	MW-1_10.38_20200318	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	1 uL		10.75 uL
580-93592-D-2	MW-2_10.28_20200318	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	1 uL		10.75 uL
580-93592-D-3	MW-3_10.53_20200318	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	1 uL		10.75 uL
580-93592-D-4	MW-4_11.12_20200318	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	1 uL		10.75 uL
580-93592-D-5	MW-6_10.50_20200318	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	1 uL		10.75 uL
580-93592-E-6	MW-7_11.47_20200318	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	1 uL		10.75 uL
580-93592-C-7	MW-4_PDB_20200318	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	1 uL		10.75 uL
580-93592-E-8	MW-8_11.14_20200318	NWTPH-Gx	T	5 mL	5 mL	<2.0 SU	1 uL		10.75 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	V2.4TFT-EX 00050					
MB 580-325694/13		NWTPH-Gx							
LCS 580-325694/14		NWTPH-Gx		2.5 mL					
LCSD 580-325694/15		NWTPH-Gx		2.5 mL					
580-93592-B-9	Trip Blank 1 20200318	NWTPH-Gx	T						
580-93592-C-10	PDBBlank_20200318	NWTPH-Gx	T						
580-93592-D-1	MW-1_10.38_20200318	NWTPH-Gx	T						

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 2

GC VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-93592-1

SDG No.: _____

Batch Number: 325694 Batch Start Date: 03/27/20 15:21 Batch Analyst: Vaughan, Dmitra CBatch Method: NWTPH-Gx Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	V2.4TFT-EX 00050					
580-93592-D-2	MW-2_10.28_20200 318	NWTPH-Gx	T						
580-93592-D-3	MW-3_10.53_20200 318	NWTPH-Gx	T						
580-93592-D-4	MW-4_11.12_20200 318	NWTPH-Gx	T						
580-93592-D-5	MW-6_10.50_20200 318	NWTPH-Gx	T						
580-93592-E-6	MW-7_11.47_20200 318	NWTPH-Gx	T						
580-93592-C-7	MW-4_PDB_2020031 8	NWTPH-Gx	T						
580-93592-E-8	MW-8_11.14_20200 318	NWTPH-Gx	T						

Batch Notes	
Vial Lot Number	0217701E

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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METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-93592-1

SDG No.: _____

Batch Number: 325389 Batch Start Date: 03/23/20 07:22 Batch Analyst: Boyer, Alec 1Batch Method: FILTRATION Batch End Date: 03/24/20 07:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount				
580-93592-B-1	MW-1_10.38_20200 318	FILTRATION, 3005A, 6020B	D	250 mL	250 mL				
580-93592-B-2	MW-2_10.28_20200 318	FILTRATION, 3005A, 6020B	D	250 mL	250 mL				
580-93592-B-3	MW-3_10.53_20200 318	FILTRATION, 3005A, 6020B	D	250 mL	250 mL				
580-93592-B-4	MW-4_11.12_20200 318	FILTRATION, 3005A, 6020B	D	250 mL	250 mL				
580-93592-B-5	MW-6_10.50_20200 318	FILTRATION, 3005A, 6020B	D	250 mL	250 mL				
580-93592-B-6	MW-7_11.47_20200 318	FILTRATION, 3005A, 6020B	D	250 mL	250 mL				
580-93592-B-8	MW-8_11.14_20200 318	FILTRATION, 3005A, 6020B	D	250 mL	250 mL				
MB 580-325389/8		FILTRATION, 3005A, 6020B		250 mL	250 mL				
LCS 580-325389/9		FILTRATION, 3005A, 6020B		250 mL	250 mL				
LCSD 580-325389/10		FILTRATION, 3005A, 6020B		250 mL	250 mL				

Batch Notes	
Nitric Acid ID	2569937

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

Page 1 of 1

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-93592-1

SDG No.: _____

Batch Number: 325441 Batch Start Date: 03/24/20 07:53 Batch Analyst: Tubens, Andrea RBatch Method: 3005A Batch End Date: 03/24/20 12:24

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ICP CAL 1 00005	ICP CAL 2 00005	MET Spike 3C 00018	
580-93592-B-8-A	MW-8_11.14_20200 318	3005A, 6020B	D	50 mL	50 mL				
580-93592-B-8-A DU	MW-8_11.14_20200 318	3005A, 6020B	D	50 mL	50 mL				
580-93592-B-8-A MS	MW-8_11.14_20200 318	3005A, 6020B	D	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
580-93592-B-8-A MSD	MW-8_11.14_20200 318	3005A, 6020B	D	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
580-93592-B-4-A	MW-4_11.12_20200 318	3005A, 6020B	D	50 mL	50 mL				
580-93592-B-1-A	MW-1_10.38_20200 318	3005A, 6020B	D	50 mL	50 mL				
580-93592-B-6-A	MW-7_11.47_20200 318	3005A, 6020B	D	50 mL	50 mL				
580-93592-B-2-A	MW-2_10.28_20200 318	3005A, 6020B	D	50 mL	50 mL				
580-93592-B-5-A	MW-6_10.50_20200 318	3005A, 6020B	D	50 mL	50 mL				
580-93592-B-3-A	MW-3_10.53_20200 318	3005A, 6020B	D	50 mL	50 mL				
MB 580-325389/8-A		3005A, 6020B		50 mL	50 mL				
ICS 580-325389/9-A		3005A, 6020B		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
LCSD 580-325389/10-A		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.: 580-93592-1

SDG No.: _____

Batch Number: 325441 Batch Start Date: 03/24/20 07:53 Batch Analyst: Tubens, Andrea RBatch Method: 3005A Batch End Date: 03/24/20 12:24

Batch Notes	
Temperature - Corrected - End	90.3 Degrees C
Temperature - Corrected - Start	94.3 Degrees C
Digestion End Time	03/24/2020 12:24
Digestion Start Time	03/24/2020 08:24
Digestion Unit ID	38008
Hydrochloric Acid ID	2545480
Nitric Acid ID	2569937
Pipette/Syringe/Dispenser ID	METALS-PREP-2
Analyst ID - Spike Analyst	AT
Sufficient Volume for Batch QC	yes
Thermometer ID	661358
Digestion Tube/Cup ID	2535260
Temperature - Uncorrected - End	90 Degrees C
Temperature - Uncorrected - Start	94 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

Page 2 of 2

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-93592-1

SDG No.: _____

Batch Number: 325442 Batch Start Date: 03/24/20 07:56 Batch Analyst: Tubens, Andrea RBatch Method: 3005A Batch End Date: 03/24/20 12:24

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ICP CAL 1 00005	ICP CAL 2 00005	MET Spike 3C 00018	
580-93592-A-1	MW-1_10.38_20200 318	3005A, 6020B	R	50 mL	50 mL				
580-93592-A-1 DU	MW-1_10.38_20200 318	3005A, 6020B	R	50 mL	50 mL				
580-93592-A-1 MS	MW-1_10.38_20200 318	3005A, 6020B	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
580-93592-A-1 MSD	MW-1_10.38_20200 318	3005A, 6020B	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
580-93592-A-2	MW-2_10.28_20200 318	3005A, 6020B	R	50 mL	50 mL				
580-93592-A-3	MW-3_10.53_20200 318	3005A, 6020B	R	50 mL	50 mL				
580-93592-A-4	MW-4_11.12_20200 318	3005A, 6020B	R	50 mL	50 mL				
580-93592-A-5	MW-6_10.50_20200 318	3005A, 6020B	R	50 mL	50 mL				
580-93592-A-6	MW-7_11.47_20200 318	3005A, 6020B	R	50 mL	50 mL				
580-93592-A-8	MW-8_11.14_20200 318	3005A, 6020B	R	50 mL	50 mL				
MB 580-325442/21		3005A, 6020B		50 mL	50 mL				
ICS 580-325442/22		3005A, 6020B		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
LCSD 580-325442/23		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.

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Page 1 of 2

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-93592-1

SDG No.: _____

Batch Number: 325442 Batch Start Date: 03/24/20 07:56 Batch Analyst: Tubens, Andrea RBatch Method: 3005A Batch End Date: 03/24/20 12:24

Batch Notes	
Temperature - Corrected - End	90.3 Degrees C
Temperature - Corrected - Start	94.3 Degrees C
Digestion End Time	03/24/2020 12:24
Digestion Start Time	03/24/2020 08:24
Digestion Unit ID	38008
Hydrochloric Acid ID	2545480
Nitric Acid ID	2569937
Pipette/Syringe/Dispenser ID	METALS-PREP-2
Analyst ID - Spike Analyst	AT
Sufficient Volume for Batch QC	yes
Thermometer ID	661358
Digestion Tube/Cup ID	2535260
Temperature - Uncorrected - End	90 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

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ANALYTICAL REPORT

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

Laboratory Job ID: 580-95470-1
Client Project/Site: BP - ARCO 5300

For:

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

Attn: Megan Richard



Authorized for release by:
6/29/2020 3:14:15 PM

Elaine Walker, Project Manager II
(253)248-4972
elaine.walker@testamericainc.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: 580-95470-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
X	Surrogate recovery exceeds control limits

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: 580-95470-1

Job ID: 580-95470-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-95470-1

Receipt

Ten samples were received on 6/18/2020 4:10 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.5° C.

GC/MS VOA

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

GC VOA

Method NWTPH-Gx: The 4-Bromofluorobenzene surrogate was outside control limits low for sample MW-4_11.10-20200618 (580-95470-4). The sample was ND and has been reported.

Method NWTPH-Gx: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 580-331556 recovered outside control limits for the following analytes: Gasoline. The LCS and LCSD recoveries met acceptance limits.

No additional analytical or quality issues were noted, other than those described above or 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: 580-95470-1

Client Sample ID: MW-1_10.46-20200618

Lab Sample ID: 580-95470-1

No Detections.

Client Sample ID: MW-2_10.42-20200618

Lab Sample ID: 580-95470-2

No Detections.

Client Sample ID: MW-3_10.72-20200618

Lab Sample ID: 580-95470-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	7.4		2.0		ug/L	1		8260D	Total/NA

Client Sample ID: MW-4_11.10-20200618

Lab Sample ID: 580-95470-4

No Detections.

Client Sample ID: MW-6_10.74-20200618

Lab Sample ID: 580-95470-5

No Detections.

Client Sample ID: MW-7_11.66-20200618

Lab Sample ID: 580-95470-6

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

Client Sample ID: MW-4-PDB-20200618

Lab Sample ID: 580-95470-7

No Detections.

Client Sample ID: MW-8_11.34-20200618

Lab Sample ID: 580-95470-8

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_20200618

Lab Sample ID: 580-95470-9

No Detections.

Client Sample ID: PDBBlank_20200618

Lab Sample ID: 580-95470-10

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: 580-95470-1

Client Sample ID: MW-1_10.46-20200618

Lab Sample ID: 580-95470-1

Date Collected: 06/18/20 09:35

Matrix: Water

Date Received: 06/18/20 16:10

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	-		06/25/20 09:02	1
Toluene	ND		2.0		ug/L	-		06/25/20 09:02	1
Ethylbenzene	ND		3.0		ug/L	-		06/25/20 09:02	1
Xylenes, Total	ND		3.0		ug/L	-		06/25/20 09:02	1
Methyl tert-butyl ether	ND		2.0		ug/L	-		06/25/20 09:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	109		80 - 120		06/25/20 09:02	1
1,2-Dichloroethane-d4 (Surr)	124		80 - 126		06/25/20 09:02	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/25/20 09:02	1
Dibromofluoromethane (Surr)	95		80 - 120		06/25/20 09:02	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	-		06/22/20 21:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		50 - 150					06/22/20 21:50	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	-	06/19/20 15:23	06/22/20 11:02	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L	-	06/22/20 13:21	06/23/20 17:24	5

Client Sample ID: MW-2_10.42-20200618

Lab Sample ID: 580-95470-2

Date Collected: 06/18/20 10:20

Matrix: Water

Date Received: 06/18/20 16:10

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	-		06/25/20 09:26	1
Toluene	ND		2.0		ug/L	-		06/25/20 09:26	1
Ethylbenzene	ND		3.0		ug/L	-		06/25/20 09:26	1
Xylenes, Total	ND		3.0		ug/L	-		06/25/20 09:26	1
Methyl tert-butyl ether	ND		2.0		ug/L	-		06/25/20 09:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		80 - 120		06/25/20 09:26	1
1,2-Dichloroethane-d4 (Surr)	124		80 - 126		06/25/20 09:26	1
4-Bromofluorobenzene (Surr)	98		80 - 120		06/25/20 09:26	1
Dibromofluoromethane (Surr)	95		80 - 120		06/25/20 09:26	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	-		06/22/20 22:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		50 - 150					06/22/20 22:14	1

Eurofins TestAmerica, Seattle

Client Sample Results

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

Job ID: 580-95470-1

Client Sample ID: MW-2_10.42-20200618

Lab Sample ID: 580-95470-2

Date Collected: 06/18/20 10:20

Matrix: Water

Date Received: 06/18/20 16:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		06/19/20 15:23	06/22/20 11:44	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		06/22/20 13:21	06/23/20 17:27	5

Client Sample ID: MW-3_10.72-20200618

Lab Sample ID: 580-95470-3

Date Collected: 06/18/20 13:40

Matrix: Water

Date Received: 06/18/20 16:10

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			06/25/20 09:49	1
Toluene	ND		2.0		ug/L			06/25/20 09:49	1
Ethylbenzene	ND		3.0		ug/L			06/25/20 09:49	1
Xylenes, Total	ND		3.0		ug/L			06/25/20 09:49	1
Methyl tert-butyl ether	7.4		2.0		ug/L			06/25/20 09:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		80 - 120		06/25/20 09:49	1
1,2-Dichloroethane-d4 (Surr)	117		80 - 126		06/25/20 09:49	1
4-Bromofluorobenzene (Surr)	102		80 - 120		06/25/20 09:49	1
Dibromofluoromethane (Surr)	90		80 - 120		06/25/20 09:49	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			06/22/20 22:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		50 - 150		06/22/20 22:38	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		06/19/20 15:23	06/22/20 11:05	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		06/22/20 13:21	06/23/20 17:45	5

Client Sample ID: MW-4_11.10-20200618

Lab Sample ID: 580-95470-4

Date Collected: 06/18/20 12:00

Matrix: Water

Date Received: 06/18/20 16:10

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			06/25/20 10:12	1
Toluene	ND		2.0		ug/L			06/25/20 10:12	1
Ethylbenzene	ND		3.0		ug/L			06/25/20 10:12	1
Xylenes, Total	ND		3.0		ug/L			06/25/20 10:12	1
Methyl tert-butyl ether	ND		2.0		ug/L			06/25/20 10:12	1

Eurofins TestAmerica, Seattle

Client Sample Results

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

Job ID: 580-95470-1

Client Sample ID: MW-4_11.10-20200618

Lab Sample ID: 580-95470-4

Date Collected: 06/18/20 12:00

Matrix: Water

Date Received: 06/18/20 16:10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		80 - 120		06/25/20 10:12	1
1,2-Dichloroethane-d4 (Surr)	115		80 - 126		06/25/20 10:12	1
4-Bromofluorobenzene (Surr)	103		80 - 120		06/25/20 10:12	1
Dibromofluoromethane (Surr)	89		80 - 120		06/25/20 10:12	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			06/23/20 10:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	23	X	50 - 150		06/23/20 10:19	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		06/19/20 15:23	06/22/20 11:47	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		06/22/20 13:21	06/23/20 17:48	5

Client Sample ID: MW-6_10.74-20200618

Lab Sample ID: 580-95470-5

Date Collected: 06/18/20 11:00

Matrix: Water

Date Received: 06/18/20 16:10

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			06/25/20 10:35	1
Toluene	ND		2.0		ug/L			06/25/20 10:35	1
Ethylbenzene	ND		3.0		ug/L			06/25/20 10:35	1
Xylenes, Total	ND		3.0		ug/L			06/25/20 10:35	1
Methyl tert-butyl ether	ND		2.0		ug/L			06/25/20 10:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 120		06/25/20 10:35	1
1,2-Dichloroethane-d4 (Surr)	120		80 - 126		06/25/20 10:35	1
4-Bromofluorobenzene (Surr)	93		80 - 120		06/25/20 10:35	1
Dibromofluoromethane (Surr)	89		80 - 120		06/25/20 10:35	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			06/23/20 08:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		50 - 150		06/23/20 08:43	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		06/19/20 15:23	06/22/20 11:51	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		06/22/20 13:21	06/23/20 17:52	5

Eurofins TestAmerica, Seattle

Client Sample Results

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

Job ID: 580-95470-1

Client Sample ID: MW-7_11.66-20200618

Lab Sample ID: 580-95470-6

Date Collected: 06/18/20 12:40

Matrix: Water

Date Received: 06/18/20 16:10

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	-		06/25/20 10:59	1
Toluene	ND		2.0		ug/L	-		06/25/20 10:59	1
Ethylbenzene	ND		3.0		ug/L	-		06/25/20 10:59	1
Xylenes, Total	ND		3.0		ug/L	-		06/25/20 10:59	1
Methyl tert-butyl ether	2.0		2.0		ug/L	-		06/25/20 10:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		80 - 120		06/25/20 10:59	1
1,2-Dichloroethane-d4 (Surr)	114		80 - 126		06/25/20 10:59	1
4-Bromofluorobenzene (Surr)	98		80 - 120		06/25/20 10:59	1
Dibromofluoromethane (Surr)	87		80 - 120		06/25/20 10:59	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	-		06/23/20 09:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		50 - 150					06/23/20 09:07	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	-	06/19/20 15:23	06/22/20 11:54	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L	-	06/22/20 13:21	06/23/20 17:55	5

Client Sample ID: MW-4-PDB-20200618

Lab Sample ID: 580-95470-7

Date Collected: 06/18/20 11:20

Matrix: Water

Date Received: 06/18/20 16:10

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	-		06/25/20 11:22	1
Toluene	ND		2.0		ug/L	-		06/25/20 11:22	1
Ethylbenzene	ND		3.0		ug/L	-		06/25/20 11:22	1
Xylenes, Total	ND		3.0		ug/L	-		06/25/20 11:22	1
Methyl tert-butyl ether	ND		2.0		ug/L	-		06/25/20 11:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	107		80 - 120		06/25/20 11:22	1
1,2-Dichloroethane-d4 (Surr)	119		80 - 126		06/25/20 11:22	1
4-Bromofluorobenzene (Surr)	102		80 - 120		06/25/20 11:22	1
Dibromofluoromethane (Surr)	92		80 - 120		06/25/20 11:22	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	-		06/23/20 09:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		50 - 150					06/23/20 09:31	1

Eurofins TestAmerica, Seattle

Client Sample Results

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

Job ID: 580-95470-1

Client Sample ID: MW-8_11.34-20200618

Lab Sample ID: 580-95470-8

Date Collected: 06/18/20 13:10

Matrix: Water

Date Received: 06/18/20 16:10

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			06/25/20 11:46	1
Toluene	ND		2.0		ug/L			06/25/20 11:46	1
Ethylbenzene	ND		3.0		ug/L			06/25/20 11:46	1
Xylenes, Total	ND		3.0		ug/L			06/25/20 11:46	1
Methyl tert-butyl ether	8.0		2.0		ug/L			06/25/20 11:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		06/25/20 11:46	1
1,2-Dichloroethane-d4 (Surr)	117		80 - 126		06/25/20 11:46	1
4-Bromofluorobenzene (Surr)	103		80 - 120		06/25/20 11:46	1
Dibromofluoromethane (Surr)	85		80 - 120		06/25/20 11:46	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			06/23/20 09:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		50 - 150					06/23/20 09:55	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		06/19/20 15:23	06/22/20 11:58	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		06/22/20 13:21	06/23/20 17:59	5

Client Sample ID: Trip Blank_1_20200618

Lab Sample ID: 580-95470-9

Date Collected: 06/18/20 00:01

Matrix: Water

Date Received: 06/18/20 16:10

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			06/25/20 06:41	1
Toluene	ND		2.0		ug/L			06/25/20 06:41	1
Ethylbenzene	ND		3.0		ug/L			06/25/20 06:41	1
Xylenes, Total	ND		3.0		ug/L			06/25/20 06:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		06/25/20 06:41	1
1,2-Dichloroethane-d4 (Surr)	114		80 - 126		06/25/20 06:41	1
4-Bromofluorobenzene (Surr)	87		80 - 120		06/25/20 06:41	1
Dibromofluoromethane (Surr)	91		80 - 120		06/25/20 06:41	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			06/22/20 17:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		50 - 150					06/22/20 17:50	1

Eurofins TestAmerica, Seattle

Client Sample Results

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

Job ID: 580-95470-1

Client Sample ID: PDBBlank_20200618

Lab Sample ID: 580-95470-10

Date Collected: 06/18/20 11:30

Matrix: Water

Date Received: 06/18/20 16:10

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			06/25/20 07:04	1
Toluene	ND		2.0		ug/L			06/25/20 07:04	1
Ethylbenzene	ND		3.0		ug/L			06/25/20 07:04	1
Xylenes, Total	ND		3.0		ug/L			06/25/20 07:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	107		80 - 120		06/25/20 07:04	1
1,2-Dichloroethane-d4 (Surr)	123		80 - 126		06/25/20 07:04	1
4-Bromofluorobenzene (Surr)	110		80 - 120		06/25/20 07:04	1
Dibromofluoromethane (Surr)	95		80 - 120		06/25/20 07:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND	*1	250		ug/L			06/24/20 13:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		50 - 150		06/24/20 13:59	1

Surrogate Summary

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

Job ID: 580-95470-1

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)
580-95470-1	MW-1_10.46-20200618	109	124	101	95
580-95470-2	MW-2_10.42-20200618	108	124	98	95
580-95470-3	MW-3_10.72-20200618	106	117	102	90
580-95470-4	MW-4_11.10-20200618	106	115	103	89
580-95470-5	MW-6_10.74-20200618	103	120	93	89
580-95470-6	MW-7_11.66-20200618	108	114	98	87
580-95470-7	MW-4-PDB-20200618	107	119	102	92
580-95470-8	MW-8_11.34-20200618	99	117	103	85
580-95470-9	Trip Blank_1_20200618	96	114	87	91
580-95470-10	PDBBlank_20200618	107	123	110	95
LCS 580-331569/4	Lab Control Sample	106	120	95	89
LCSD 580-331569/5	Lab Control Sample Dup	102	120	98	93
MB 580-331569/7	Method Blank	105	121	103	93

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)			
580-95470-1	MW-1_10.46-20200618	95			
580-95470-2	MW-2_10.42-20200618	88			
580-95470-3	MW-3_10.72-20200618	104			
580-95470-4	MW-4_11.10-20200618	23 X			
580-95470-5	MW-6_10.74-20200618	94			
580-95470-6	MW-7_11.66-20200618	99			
580-95470-7	MW-4-PDB-20200618	88			
580-95470-8	MW-8_11.34-20200618	97			
580-95470-9	Trip Blank_1_20200618	92			
580-95470-10	PDBBlank_20200618	90			
LCS 580-331326/6	Lab Control Sample	97			
LCS 580-331556/6	Lab Control Sample	100			
LCSD 580-331326/7	Lab Control Sample Dup	94			
LCSD 580-331556/7	Lab Control Sample Dup	84			
MB 580-331326/5	Method Blank	96			
MB 580-331556/5	Method Blank	93			

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

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

Job ID: 580-95470-1

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

Lab Sample ID: MB 580-331569/7

Matrix: Water

Analysis Batch: 331569

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			06/25/20 05:54	1
Toluene	ND		2.0		ug/L			06/25/20 05:54	1
Ethylbenzene	ND		3.0		ug/L			06/25/20 05:54	1
Xylenes, Total	ND		3.0		ug/L			06/25/20 05:54	1
Methyl tert-butyl ether	ND		2.0		ug/L			06/25/20 05:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 120		06/25/20 05:54	1
1,2-Dichloroethane-d4 (Surr)	121		80 - 126		06/25/20 05:54	1
4-Bromofluorobenzene (Surr)	103		80 - 120		06/25/20 05:54	1
Dibromofluoromethane (Surr)	93		80 - 120		06/25/20 05:54	1

Lab Sample ID: LCS 580-331569/4

Matrix: Water

Analysis Batch: 331569

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	8.89		ug/L		89	82 - 122
Toluene	10.0	9.41		ug/L		94	80 - 120
Ethylbenzene	10.0	9.47		ug/L		95	80 - 120
m-Xylene & p-Xylene	10.0	9.52		ug/L		95	80 - 120
o-Xylene	10.0	9.67		ug/L		97	80 - 125
Xylenes, Total	20.0	19.2		ug/L		96	80 - 120
Methyl tert-butyl ether	10.0	9.54		ug/L		95	72 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	106		80 - 120
1,2-Dichloroethane-d4 (Surr)	120		80 - 126
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	89		80 - 120

Lab Sample ID: LCSD 580-331569/5

Matrix: Water

Analysis Batch: 331569

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	9.24		ug/L		92	82 - 122	4	14
Toluene	10.0	9.36		ug/L		94	80 - 120	1	13
Ethylbenzene	10.0	9.82		ug/L		98	80 - 120	4	14
m-Xylene & p-Xylene	10.0	10.0		ug/L		100	80 - 120	5	14
o-Xylene	10.0	9.84		ug/L		98	80 - 125	2	16
Xylenes, Total	20.0	19.8		ug/L		99	80 - 120	3	16
Methyl tert-butyl ether	10.0	10.2		ug/L		102	72 - 130	7	18

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	102		80 - 120
1,2-Dichloroethane-d4 (Surr)	120		80 - 126

Eurofins TestAmerica, Seattle

QC Sample Results

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

Job ID: 580-95470-1

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

Lab Sample ID: LCSD 580-331569/5

Matrix: Water

Analysis Batch: 331569

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	93		80 - 120

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

Lab Sample ID: MB 580-331326/5

Matrix: Water

Analysis Batch: 331326

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			06/22/20 16:38	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		50 - 150					06/22/20 16:38	1

Lab Sample ID: LCS 580-331326/6

Matrix: Water

Analysis Batch: 331326

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline	1000	987		ug/L		99	79 - 120		
Surrogate	%Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	97		50 - 150						

Lab Sample ID: LCSD 580-331326/7

Matrix: Water

Analysis Batch: 331326

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	912		ug/L		91	79 - 120	8	10
Surrogate	%Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	94		50 - 150						

Lab Sample ID: MB 580-331556/5

Matrix: Water

Analysis Batch: 331556

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			06/24/20 10:47	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		50 - 150					06/24/20 10:47	1

Eurofins TestAmerica, Seattle

QC Sample Results

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

Job ID: 580-95470-1

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

Lab Sample ID: LCS 580-331556/6

Matrix: Water

Analysis Batch: 331556

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

			Spike	LCS	LCS				%Rec.		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline			1000	1010		ug/L		101	79 - 120		
			LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	100		50 - 150								

Lab Sample ID: LCSD 580-331556/7

Matrix: Water

Analysis Batch: 331556

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analysis Date: 05/19/00											
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline			1000	904	*1	ug/L	-	90	79 - 120	11	10
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	84		50 - 150								

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 580-331166/13-A

Matrix: Water

Analysis Batch: 331297

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 331166

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.80		ug/L		06/19/20 15:23	06/22/20 10:58	1

Lab Sample ID: LCS 580-331166/14-A

Matrix: Water

Analysis Batch: 331297

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 331166

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

Lab Sample ID: LCSD 580-331166/15-A

Matrix: Water

Analysis Batch: 331297

Client Sample ID: Lab Control Sample Dup

Prep Type: Total Recoverable

Prep Batch: 331166

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	1000	1000		ug/L		100	80 - 120	1	20

Lab Sample ID: 580-95470-3 MS

Matrix: Water

Analysis Batch: 331297

Client Sample ID: MW-3_10.72-20200618

Prep Type: Total Recoverable

Prep Batch: 331166

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	ND		1000	984		ug/L		98	80 - 120

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QC Sample Results

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

Job ID: 580-95470-1

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

Lab Sample ID: 580-95470-3 MSD

Matrix: Water

Analysis Batch: 331297

Client Sample ID: MW-3_10.72-20200618

Prep Type: Total Recoverable

Prep Batch: 331166

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	ND		1000	959		ug/L		96	80 - 120	3	20

Lab Sample ID: 580-95470-3 DU

Matrix: Water

Analysis Batch: 331297

Client Sample ID: MW-3_10.72-20200618

Prep Type: Total Recoverable

Prep Batch: 331166

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

Lab Sample ID: MB 580-331304/19-A

Matrix: Water

Analysis Batch: 331463

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 331304

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		4.0		ug/L		06/22/20 13:21	06/23/20 16:17	5

Lab Sample ID: LCS 580-331304/20-A

Matrix: Water

Analysis Batch: 331463

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 331304

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1000	984		ug/L		98	80 - 120

Lab Sample ID: LCSD 580-331304/21-A

Matrix: Water

Analysis Batch: 331463

Client Sample ID: Lab Control Sample Dup

Prep Type: Total Recoverable

Prep Batch: 331304

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	1000	979		ug/L		98	80 - 120	0	20

QC Association Summary

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

Job ID: 580-95470-1

GC/MS VOA

Analysis Batch: 331569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-95470-1	MW-1_10.46-20200618	Total/NA	Water	8260D	
580-95470-2	MW-2_10.42-20200618	Total/NA	Water	8260D	
580-95470-3	MW-3_10.72-20200618	Total/NA	Water	8260D	
580-95470-4	MW-4_11.10-20200618	Total/NA	Water	8260D	
580-95470-5	MW-6_10.74-20200618	Total/NA	Water	8260D	
580-95470-6	MW-7_11.66-20200618	Total/NA	Water	8260D	
580-95470-7	MW-4-PDB-20200618	Total/NA	Water	8260D	
580-95470-8	MW-8_11.34-20200618	Total/NA	Water	8260D	
580-95470-9	Trip Blank_1_20200618	Total/NA	Water	8260D	
580-95470-10	PDBBlank_20200618	Total/NA	Water	8260D	
MB 580-331569/7	Method Blank	Total/NA	Water	8260D	
LCS 580-331569/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 580-331569/5	Lab Control Sample Dup	Total/NA	Water	8260D	

GC VOA

Analysis Batch: 331326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-95470-1	MW-1_10.46-20200618	Total/NA	Water	NWTPH-Gx	
580-95470-2	MW-2_10.42-20200618	Total/NA	Water	NWTPH-Gx	
580-95470-3	MW-3_10.72-20200618	Total/NA	Water	NWTPH-Gx	
580-95470-4	MW-4_11.10-20200618	Total/NA	Water	NWTPH-Gx	
580-95470-5	MW-6_10.74-20200618	Total/NA	Water	NWTPH-Gx	
580-95470-6	MW-7_11.66-20200618	Total/NA	Water	NWTPH-Gx	
580-95470-7	MW-4-PDB-20200618	Total/NA	Water	NWTPH-Gx	
580-95470-8	MW-8_11.34-20200618	Total/NA	Water	NWTPH-Gx	
580-95470-9	Trip Blank_1_20200618	Total/NA	Water	NWTPH-Gx	
MB 580-331326/5	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 580-331326/6	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 580-331326/7	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

Analysis Batch: 331556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-95470-10	PDBBlank_20200618	Total/NA	Water	NWTPH-Gx	
MB 580-331556/5	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 580-331556/6	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 580-331556/7	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

Metals

Prep Batch: 331166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-95470-1	MW-1_10.46-20200618	Total Recoverable	Water	3005A	
580-95470-2	MW-2_10.42-20200618	Total Recoverable	Water	3005A	
580-95470-3	MW-3_10.72-20200618	Total Recoverable	Water	3005A	
580-95470-4	MW-4_11.10-20200618	Total Recoverable	Water	3005A	
580-95470-5	MW-6_10.74-20200618	Total Recoverable	Water	3005A	
580-95470-6	MW-7_11.66-20200618	Total Recoverable	Water	3005A	
580-95470-8	MW-8_11.34-20200618	Total Recoverable	Water	3005A	
MB 580-331166/13-A	Method Blank	Total Recoverable	Water	3005A	
LCS 580-331166/14-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 580-331166/15-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	

Eurofins TestAmerica, Seattle

QC Association Summary

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

Job ID: 580-95470-1

Metals (Continued)

Prep Batch: 331166 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-95470-3 MS	MW-3_10.72-20200618	Total Recoverable	Water	3005A	
580-95470-3 MSD	MW-3_10.72-20200618	Total Recoverable	Water	3005A	
580-95470-3 DU	MW-3_10.72-20200618	Total Recoverable	Water	3005A	

Analysis Batch: 331297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-95470-1	MW-1_10.46-20200618	Total Recoverable	Water	6020B	331166
580-95470-2	MW-2_10.42-20200618	Total Recoverable	Water	6020B	331166
580-95470-3	MW-3_10.72-20200618	Total Recoverable	Water	6020B	331166
580-95470-4	MW-4_11.10-20200618	Total Recoverable	Water	6020B	331166
580-95470-5	MW-6_10.74-20200618	Total Recoverable	Water	6020B	331166
580-95470-6	MW-7_11.66-20200618	Total Recoverable	Water	6020B	331166
580-95470-8	MW-8_11.34-20200618	Total Recoverable	Water	6020B	331166
MB 580-331166/13-A	Method Blank	Total Recoverable	Water	6020B	331166
LCS 580-331166/14-A	Lab Control Sample	Total Recoverable	Water	6020B	331166
LCSD 580-331166/15-A	Lab Control Sample Dup	Total Recoverable	Water	6020B	331166
580-95470-3 MS	MW-3_10.72-20200618	Total Recoverable	Water	6020B	331166
580-95470-3 MSD	MW-3_10.72-20200618	Total Recoverable	Water	6020B	331166
580-95470-3 DU	MW-3_10.72-20200618	Total Recoverable	Water	6020B	331166

Prep Batch: 331304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-95470-1	MW-1_10.46-20200618	Dissolved	Water	3005A	
580-95470-2	MW-2_10.42-20200618	Dissolved	Water	3005A	
580-95470-3	MW-3_10.72-20200618	Dissolved	Water	3005A	
580-95470-4	MW-4_11.10-20200618	Dissolved	Water	3005A	
580-95470-5	MW-6_10.74-20200618	Dissolved	Water	3005A	
580-95470-6	MW-7_11.66-20200618	Dissolved	Water	3005A	
580-95470-8	MW-8_11.34-20200618	Dissolved	Water	3005A	
MB 580-331304/19-A	Method Blank	Total Recoverable	Water	3005A	
LCS 580-331304/20-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 580-331304/21-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	

Analysis Batch: 331463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-95470-1	MW-1_10.46-20200618	Dissolved	Water	6020B	331304
580-95470-2	MW-2_10.42-20200618	Dissolved	Water	6020B	331304
580-95470-3	MW-3_10.72-20200618	Dissolved	Water	6020B	331304
580-95470-4	MW-4_11.10-20200618	Dissolved	Water	6020B	331304
580-95470-5	MW-6_10.74-20200618	Dissolved	Water	6020B	331304
580-95470-6	MW-7_11.66-20200618	Dissolved	Water	6020B	331304
580-95470-8	MW-8_11.34-20200618	Dissolved	Water	6020B	331304
MB 580-331304/19-A	Method Blank	Total Recoverable	Water	6020B	331304
LCS 580-331304/20-A	Lab Control Sample	Total Recoverable	Water	6020B	331304
LCSD 580-331304/21-A	Lab Control Sample Dup	Total Recoverable	Water	6020B	331304

Lab Chronicle

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

Job ID: 580-95470-1

Client Sample ID: MW-1_10.46-20200618

Lab Sample ID: 580-95470-1

Date Collected: 06/18/20 09:35

Matrix: Water

Date Received: 06/18/20 16:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	331569	06/25/20 09:02	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	331326	06/22/20 21:50	W1T	TAL SEA
Dissolved	Prep	3005A			331304	06/22/20 13:21	ART	TAL SEA
Dissolved	Analysis	6020B		5	331463	06/23/20 17:24	FCW	TAL SEA
Total Recoverable	Prep	3005A			331166	06/19/20 15:23	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	331297	06/22/20 11:02	FCW	TAL SEA

Client Sample ID: MW-2_10.42-20200618

Lab Sample ID: 580-95470-2

Date Collected: 06/18/20 10:20

Matrix: Water

Date Received: 06/18/20 16:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	331569	06/25/20 09:26	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	331326	06/22/20 22:14	W1T	TAL SEA
Dissolved	Prep	3005A			331304	06/22/20 13:21	ART	TAL SEA
Dissolved	Analysis	6020B		5	331463	06/23/20 17:27	FCW	TAL SEA
Total Recoverable	Prep	3005A			331166	06/19/20 15:23	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	331297	06/22/20 11:44	FCW	TAL SEA

Client Sample ID: MW-3_10.72-20200618

Lab Sample ID: 580-95470-3

Date Collected: 06/18/20 13:40

Matrix: Water

Date Received: 06/18/20 16:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	331569	06/25/20 09:49	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	331326	06/22/20 22:38	W1T	TAL SEA
Dissolved	Prep	3005A			331304	06/22/20 13:21	ART	TAL SEA
Dissolved	Analysis	6020B		5	331463	06/23/20 17:45	FCW	TAL SEA
Total Recoverable	Prep	3005A			331166	06/19/20 15:23	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	331297	06/22/20 11:05	FCW	TAL SEA

Client Sample ID: MW-4_11.10-20200618

Lab Sample ID: 580-95470-4

Date Collected: 06/18/20 12:00

Matrix: Water

Date Received: 06/18/20 16:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	331569	06/25/20 10:12	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	331326	06/23/20 10:19	W1T	TAL SEA
Dissolved	Prep	3005A			331304	06/22/20 13:21	ART	TAL SEA
Dissolved	Analysis	6020B		5	331463	06/23/20 17:48	FCW	TAL SEA
Total Recoverable	Prep	3005A			331166	06/19/20 15:23	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	331297	06/22/20 11:47	FCW	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

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

Job ID: 580-95470-1

Client Sample ID: MW-6_10.74-20200618

Lab Sample ID: 580-95470-5

Date Collected: 06/18/20 11:00

Matrix: Water

Date Received: 06/18/20 16:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	331569	06/25/20 10:35	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	331326	06/23/20 08:43	W1T	TAL SEA
Dissolved	Prep	3005A			331304	06/22/20 13:21	ART	TAL SEA
Dissolved	Analysis	6020B		5	331463	06/23/20 17:52	FCW	TAL SEA
Total Recoverable	Prep	3005A			331166	06/19/20 15:23	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	331297	06/22/20 11:51	FCW	TAL SEA

Client Sample ID: MW-7_11.66-20200618

Lab Sample ID: 580-95470-6

Date Collected: 06/18/20 12:40

Matrix: Water

Date Received: 06/18/20 16:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	331569	06/25/20 10:59	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	331326	06/23/20 09:07	W1T	TAL SEA
Dissolved	Prep	3005A			331304	06/22/20 13:21	ART	TAL SEA
Dissolved	Analysis	6020B		5	331463	06/23/20 17:55	FCW	TAL SEA
Total Recoverable	Prep	3005A			331166	06/19/20 15:23	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	331297	06/22/20 11:54	FCW	TAL SEA

Client Sample ID: MW-4-PDB-20200618

Lab Sample ID: 580-95470-7

Date Collected: 06/18/20 11:20

Matrix: Water

Date Received: 06/18/20 16:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	331569	06/25/20 11:22	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	331326	06/23/20 09:31	W1T	TAL SEA

Client Sample ID: MW-8_11.34-20200618

Lab Sample ID: 580-95470-8

Date Collected: 06/18/20 13:10

Matrix: Water

Date Received: 06/18/20 16:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	331569	06/25/20 11:46	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	331326	06/23/20 09:55	W1T	TAL SEA
Dissolved	Prep	3005A			331304	06/22/20 13:21	ART	TAL SEA
Dissolved	Analysis	6020B		5	331463	06/23/20 17:59	FCW	TAL SEA
Total Recoverable	Prep	3005A			331166	06/19/20 15:23	ART	TAL SEA
Total Recoverable	Analysis	6020B		5	331297	06/22/20 11:58	FCW	TAL SEA

Client Sample ID: Trip Blank_1_20200618

Lab Sample ID: 580-95470-9

Date Collected: 06/18/20 00:01

Matrix: Water

Date Received: 06/18/20 16:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	331569	06/25/20 06:41	CJ	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

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

Job ID: 580-95470-1

Client Sample ID: Trip Blank_1_20200618

Lab Sample ID: 580-95470-9

Date Collected: 06/18/20 00:01

Matrix: Water

Date Received: 06/18/20 16:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	331326	06/22/20 17:50	W1T	TAL SEA

Client Sample ID: PDBBlank_20200618

Lab Sample ID: 580-95470-10

Date Collected: 06/18/20 11:30

Matrix: Water

Date Received: 06/18/20 16:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	331569	06/25/20 07:04	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	331556	06/24/20 13:59	CJ	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: 580-95470-1

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: 580-95470-1

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: 580-95470-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-95470-1	MW-1_10.46-20200618	Water	06/18/20 09:35	06/18/20 16:10	
580-95470-2	MW-2_10.42-20200618	Water	06/18/20 10:20	06/18/20 16:10	
580-95470-3	MW-3_10.72-20200618	Water	06/18/20 13:40	06/18/20 16:10	
580-95470-4	MW-4_11.10-20200618	Water	06/18/20 12:00	06/18/20 16:10	
580-95470-5	MW-6_10.74-20200618	Water	06/18/20 11:00	06/18/20 16:10	
580-95470-6	MW-7_11.66-20200618	Water	06/18/20 12:40	06/18/20 16:10	
580-95470-7	MW-4-PDB-20200618	Water	06/18/20 11:20	06/18/20 16:10	
580-95470-8	MW-8_11.34-20200618	Water	06/18/20 13:10	06/18/20 16:10	
580-95470-9	Trip Blank_1_20200618	Water	06/18/20 00:01	06/18/20 16:10	
580-95470-10	PDBBlank_20200618	Water	06/18/20 11:30	06/18/20 16:10	



Laboratory Management Program (LaMP) Chain of Custody Record

Soil, Sediment and Groundwater Samples

BP Site Node Path:

BP/RM Facility No:

BP 5300

BP Facility No. 5300

Req Due Date (mm/dd/yy):

Lab Work Order Number:

Standard TAT

Rush TAT Yes

Page 1 of 2

No $\times$

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: 053005A201.20100	
Lab PM: Elaine Walker		WR329531/009V4-0008		Address: 4006 148th Ave NE, Redmond, WA 98052	
Lab Phone: 253.248.4872		California Global ID No.: NA		Consultant/Contractor PM: Megan Richard	
Lab Shipping Accont: NA		Enfos Proposal No: WR826968/009V4-0016		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 ___ BPI/ARC ___ X ___	
BP/RM PM: Wade Melton		Sample Details		Requested Analyses	
PM Phone: 360-594-7978		Total Number of Containers		Report Type & QC Level	
PM Email: wade.melton@bp.com		Grab (g) or Composite (C)		Limited (Standard) Package ___	
		Depth Unit		Limited Plus Package ___	
		End Depth		Full Package ___	
		Start Depth			
		Field Matrix			
Lab No.	Sample Description	Date	Time	Comments	
MW-1_1046-200006	6/18/20	0935		Dissolved Solubles Filtered in field	
MW-2_1048-200006	1020				
MW-3_1078-200006	1340				
MW-4_1110-200006	000				
MW-6_1074-200006	1100				
MW-7_1166-200006	1240				
MW-4_1078-200006	6/18/20	1120			
Sampler's Name: Nolan Lewis		Relinquished By / Affiliation		Accepted By / Affiliation	
Sampler's Company: Antea Group		Date		Date	
Ship Method: Vessel		Time		Time	
Shipment Tracking No: NA		Date		Date	
Special Instructions:		Temp Blank: Yes / No		Trip Blank: Yes / No	
THIS LINE - LAB USE ONLY: Custody Seals in Place: Yes / No		Cooler Temp on Receipt: 4.3 °F/C		MS/MSD Sample Submitted: Yes / No	

BP I a MP Soil/H2O COC July 2018

**Proprietary and Confidential
Property of BP and its Affiliates**



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

BP Site Node Path:

BP/RM Facility No:

BP 5300

BP Facility No. 5300

Req Due Date (mm/dd/yy):

Lab Work Order Number:

Standard TAT

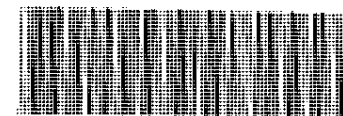
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Page 2 of 2[illegible]



Laboratory Management Program (LaMP) Chain of Custody Record

Soil, Sediment and Groundwater Samples



580-95470 Chain of Custody

Page 1 of 2

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

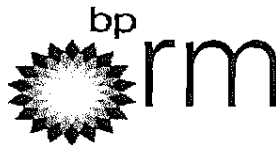
Req Due Date (mm/dd/yy): Standard TAT Rush TAT Yes No X
Lab Work Order Number:

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		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: WR826968/009V4-0016		Phone: 425-498-7711 Email: <u>Megan.Richard@anteagroup.com</u>															
Lab Bottle Order No: NA		Accounting Mode: Provision <u>X</u> OOC-BU <u> </u> OOC-RM <u> </u>		Send/Submit EDD to: <u>Megan.Richard@anteagroup.com</u>															
Other Info: <u>elaine.walker@testamericainc.com</u>		Stage <u>2</u> 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															
PM Phone: 360-594-7978				Report Type & QC Level															
PM Email: <u>wade.melton@bp.com</u>				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	BTEX by EPA Method 8260B	MTBE by EPA Method 8260B	NWTPH-Gx	NWTPH-D w/ silica gel	Pb-D7 Field Filled	Pb-T by EPA 8010B	EDB by EPA 8011	EDC by EPA 8260	Comments
	MW-1_1046-20200618	6/18/20	0935	W				G	6	X	X	X		X	X				Dissolved Samples Filled in field
	MW-2_1043-20200618	↑	1000	W				G	6	X	X	X		X	X				
	MW-3_1072-20200618		1340	W				G	6	X	X	X		X	X				
	MW-4_1110-20200618		1300	W				G	6	X	X	X		X	X				
	MW-6_1074-20200618		1100	W				G	6	X	X	X		X	X				
	MW-7_1166-20200618		1240	W				G	6	X	X	X		X	X				
	MW-4_1109-20200618	6/18/20	1120	W				G	6	X	X	X							
Sampler's Name: <u>Nolan Lewis</u>		Relinquished By / Affiliation		Date	Time	Accepted By / Affiliation		Date	Time										
Sampler's Company: Antea Group		<u>Nolan Lewis</u>		6/18/20	1610	<u>[Signature]</u>		6/18/20	1610										
Ship Method: <u>Drop</u>		Ship Date: <u>NA/Drop</u>		6/18/20	1600	<u>[Signature]</u>		6/19/20	1020										
Shipment Tracking No: <u>NA</u>																			
Special Instructions:																			
THIS LINE - LAB USE ONLY: Custody Seals in Place: Yes / No Temp Blank: Yes / No Cooler Temp on Receipt: <u>4.5</u> °F/C Trip Blank: Yes / No MS/MSD Sample Submitted: Yes / No																			

BP LaMP Soil/H2O COC July 2018

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IR6 = 1.5 / 1.1



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

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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

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: WR826968/009V4-0016		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	Analysis	Comments
	MW-8_1134-20200618	6/18/20	1310	W	X X X X X	Assigned Samples for field
	Trip Blank_1	6/18/20	1310	W	X X X	in field
	PDB Blank_20200618	6/18/20	1130		X X	
Sampler's Name: John Lewis		Relinquished By / Affiliation		Date	Time	Accepted By / Affiliation
Sampler's Company: Antea Group		John Lewis / A.G.		6/18/20	1610	6/18/20 1610
Ship Method: 100% off		Ship Date: NA		6/18/20	1700	6/19/20 1020
Shipment Tracking No: NA						
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: 580-95470-1

Login Number: 95470

List Source: Eurofins TestAmerica, Seattle

List Number: 1

Creator: O'Connell, Jason I

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	
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.: 580-95470-1

SDG No.: _____

Batch Number: 331569 Batch Start Date: 06/25/20 03:56 Batch Analyst: Jantanu, CharinpornBatch Method: 8260D Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS 00001	VOAMasterMix 00056	
LCS 580-331569/4		8260D		5 mL	5 mL		20 uL	10 uL	
LCSD 580-331569/5		8260D		5 mL	5 mL		20 uL	10 uL	
MB 580-331569/7		8260D		5 mL	5 mL		20 uL		
580-95470-B-9	Trip Blank 1 20200618	8260D	T	5 mL	5 mL	<2 SU	20 uL		
580-95470-D-10	PDBBlank_20200618	8260D	T	5 mL	5 mL	<2 SU	20 uL		
580-95470-E-1	MW-1_10.46-20200618	8260D	T	5 mL	5 mL	<2 SU	20 uL		
580-95470-E-2	MW-2_10.42-20200618	8260D	T	5 mL	5 mL	<2 SU	20 uL		
580-95470-C-3	MW-3_10.72-20200618	8260D	T	5 mL	5 mL	<2 SU	20 uL		
580-95470-F-4	MW-4_11.10-20200618	8260D	T	5 mL	5 mL	<2 SU	20 uL		
580-95470-E-5	MW-6_10.74-20200618	8260D	T	5 mL	5 mL	<2 SU	20 uL		
580-95470-H-6	MW-7_11.66-20200618	8260D	T	5 mL	5 mL	<2 SU	20 uL		
580-95470-C-7	MW-4-PDB-20200618	8260D	T	5 mL	5 mL	<2 SU	20 uL		
580-95470-H-8	MW-8_11.34-20200618	8260D	T	5 mL	5 mL	<2 SU	20 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.: 580-95470-1

SDG No.: _____

Batch Number: 331326 Batch Start Date: 06/22/20 15:51 Batch Analyst: Thaneerat, Wijittra 1Batch Method: NWTPH-Gx Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	BFBGRO ARCHON 00043	GRO_LCS 00061	TFT Spike 00040
MB 580-331326/5		NWTPH-Gx		5 mL	5 mL		2 uL		10.75 uL
LCS 580-331326/6		NWTPH-Gx		5 mL	5 mL		2 uL	50 uL	
LCSD 580-331326/7		NWTPH-Gx		5 mL	5 mL		2 uL	50 uL	
580-95470-A-9	Trip Blank 1 20200618	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		
580-95470-H-1	MW-1_10.46-20200 618	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		
580-95470-H-2	MW-2_10.42-20200 618	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		
580-95470-F-3	MW-3_10.72-20200 618	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		
580-95470-E-4	MW-4_11.10-20200 618	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		
580-95470-D-5	MW-6_10.74-20200 618	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		
580-95470-E-6	MW-7_11.66-20200 618	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		
580-95470-D-7	MW-4-PDB-2020061 8	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		
580-95470-E-8	MW-8_11.34-20200 618	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	V2.4TFT-EX 00052					
MB 580-331326/5		NWTPH-Gx							
LCS 580-331326/6		NWTPH-Gx		2.5 mL					
LCSD 580-331326/7		NWTPH-Gx		2.5 mL					
580-95470-A-9	Trip Blank 1 20200618	NWTPH-Gx	T						
580-95470-H-1	MW-1_10.46-20200 618	NWTPH-Gx	T						
580-95470-H-2	MW-2_10.42-20200 618	NWTPH-Gx	T						
580-95470-F-3	MW-3_10.72-20200 618	NWTPH-Gx	T						
580-95470-E-4	MW-4_11.10-20200 618	NWTPH-Gx	T						

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.: 580-95470-1

SDG No.: _____

Batch Number: 331326 Batch Start Date: 06/22/20 15:51 Batch Analyst: Thaneerat, Wijittra 1Batch Method: NWTPH-Gx Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	V2.4TFT-EX 00052					
580-95470-D-5	MW-6_10.74-20200 618	NWTPH-Gx	T						
580-95470-E-6	MW-7_11.66-20200 618	NWTPH-Gx	T						
580-95470-D-7	MW-4-PDB-2020061 8	NWTPH-Gx	T						
580-95470-E-8	MW-8_11.34-20200 618	NWTPH-Gx	T						

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

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GC VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-95470-1

SDG No.: _____

Batch Number: 331556 Batch Start Date: 06/24/20 09:59 Batch Analyst: Jantanu, CharinpornBatch Method: NWTPH-Gx Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	BFBGRO ARCHON 00043	GRO_LCS 00061	TFT Spike 00040
MB 580-331556/5		NWTPH-Gx		5 mL	5 mL		2 uL		10.75 uL
LCS 580-331556/6		NWTPH-Gx		5 mL	5 mL		2 uL	50 uL	
LCSD 580-331556/7		NWTPH-Gx		5 mL	5 mL		2 uL	50 uL	
580-95470-A-10	PDBBlank_20200618	NWTPH-Gx	T	5 mL	5 mL	<2 SU	2 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	V2.4TFT-EX 00052					
MB 580-331556/5		NWTPH-Gx							
LCS 580-331556/6		NWTPH-Gx		2.5 mL					
LCSD 580-331556/7		NWTPH-Gx		2.5 mL					
580-95470-A-10	PDBBlank_20200618	NWTPH-Gx	T						

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

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METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-95470-1

SDG No.: _____

Batch Number: 331166 Batch Start Date: 06/19/20 15:23 Batch Analyst: Tubens, Andrea RBatch Method: 3005A Batch End Date: 06/19/20 20:12

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ICP CAL 1 00008	ICP CAL 2 00006	MET Spike 3C 00020	
580-95470-A-3	MW-3_10.72-20200 618	3005A, 6020B	R	50 mL	50 mL				
580-95470-A-3 DU	MW-3_10.72-20200 618	3005A, 6020B		50 mL	50 mL				
580-95470-A-3 MS	MW-3_10.72-20200 618	3005A, 6020B		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
580-95470-A-3 MSD	MW-3_10.72-20200 618	3005A, 6020B		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
580-95470-A-1	MW-1_10.46-20200 618	3005A, 6020B	R	50 mL	50 mL				
580-95470-A-2	MW-2_10.42-20200 618	3005A, 6020B	R	50 mL	50 mL				
580-95470-A-4	MW-4_11.10-20200 618	3005A, 6020B	R	50 mL	50 mL				
580-95470-A-5	MW-6_10.74-20200 618	3005A, 6020B	R	50 mL	50 mL				
580-95470-A-6	MW-7_11.66-20200 618	3005A, 6020B	R	50 mL	50 mL				
580-95470-A-8	MW-8_11.34-20200 618	3005A, 6020B	R	50 mL	50 mL				
MB 580-331166/13		3005A, 6020B		50 mL	50 mL				
ICS 580-331166/14		3005A, 6020B		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
LCSD 580-331166/15		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.: 580-95470-1

SDG No.: _____

Batch Number: 331166 Batch Start Date: 06/19/20 15:23 Batch Analyst: Tubens, Andrea RBatch Method: 3005A Batch End Date: 06/19/20 20:12

Batch Notes	
Temperature - Corrected - End	93.3 Degrees C
Temperature - Corrected - Start	93.3 Degrees C
Digestion End Time	06/19/2020 20:12
Digestion Start Time	06/19/2020 16:12
Digestion Unit ID	38008
Hydrochloric Acid ID	2589185
Nitric Acid ID	2569936
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
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.: 580-95470-1

SDG No.: _____

Batch Number: 331304 Batch Start Date: 06/22/20 13:21 Batch Analyst: Tubens, Andrea RBatch Method: 3005A Batch End Date: 06/22/20 17:39

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ICP CAL 1 00008	ICP CAL 2 00006	MET Spike 3C 00020	
580-95470-B-1	MW-1_10.46-20200 618	3005A, 6020B	D	50 mL	50 mL				
580-95470-B-2	MW-2_10.42-20200 618	3005A, 6020B	D	50 mL	50 mL				
580-95470-B-3	MW-3_10.72-20200 618	3005A, 6020B	D	50 mL	50 mL				
580-95470-B-4	MW-4_11.10-20200 618	3005A, 6020B	D	50 mL	50 mL				
580-95470-B-5	MW-6_10.74-20200 618	3005A, 6020B	D	50 mL	50 mL				
580-95470-B-6	MW-7_11.66-20200 618	3005A, 6020B	D	50 mL	50 mL				
580-95470-B-8	MW-8_11.34-20200 618	3005A, 6020B	D	50 mL	50 mL				
MB 580-331304/19		3005A, 6020B		50 mL	50 mL				
LCS 580-331304/20		3005A, 6020B		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
LCSD 580-331304/21		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.: 580-95470-1

SDG No.: _____

Batch Number: 331304 Batch Start Date: 06/22/20 13:21 Batch Analyst: Tubens, Andrea RBatch Method: 3005A Batch End Date: 06/22/20 17:39

Batch Notes	
Temperature - Corrected - End	93.5 Degrees C
Temperature - Corrected - Start	93.5 Degrees C
Digestion End Time	06/22/2020 17:39
Digestion Start Time	06/22/2020 13:39
Digestion Unit ID	BlockE
Hydrochloric Acid ID	2589185
Nitric Acid ID	2569936
Pipette/Syringe/Dispenser ID	METALS-PREP-2
Analyst ID - Spike Analyst	AT
Sufficient Volume for Batch QC	yes
Thermometer ID	661672
Digestion Tube/Cup ID	2535260
Temperature - Uncorrected - End	94 Degrees C
Temperature - Uncorrected - Start	94 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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