



Remediation Management Services Company

4 Centerpointe Drive, Suite 200
La Palma, CA 90623
Room LPR 4-222
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wade.melton@bp.com

August 21, 2019

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 2019, 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', written over a light blue rectangular 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 2019
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

August 21, 2019
Antea Group Project No. 05300SA191

us.anteagroup.com

ARCO Facility No.:	5300
Address:	710 15th Avenue, Longview, Washington
Atlantic Richfield Project Manager:	Wade Melton, (360) 594-7978
Consulting Co. /Contact Person:	Antea Group / Megan Richard, (425) 498-7711
Consultant Project Number:	05300SA191
Primary Agency/Regulatory FS ID No.:	Washington State Department of Ecology / 41995646

WORK PERFORMED DURING FIRST HALF OF 2019:

- Antea®Group (Antea Group) conducted groundwater monitoring and sampling on February 26, 2019 and May 16, 2019.
- Antea Group prepared this Semi-Annual Groundwater Monitoring Report.

WORK SCHEDULED FOR SECOND HALF OF 2019:

- Antea Group will conduct quarterly groundwater monitoring and sampling.
- Antea Group will conduct PetroFIX™ injections.
- 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:	Natural Attenuation
Approximate Depth to Groundwater:	2/26/2019: 10.45 to 11.55 ft. 5/16/2019: 10.78 to 11.86 ft.
Groundwater Gradient:	2/26/2019: West-Southwest 5/16/2019: West-Southwest
	2/26/2019: 0.010 ft./linear ft. 5/16/2019: 0.009 ft./linear ft.

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

Prepared by:


Jonah Leurquin
Staff Professional

Date: August 21, 2019

Reviewed by:


Megan Richard, LG
Senior Project Manager

Date: August 21, 2019

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

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Redmond, WA 98052 USA

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Enclosures

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Table 1	Groundwater Gauging Data
Table 2	Groundwater Analytical Data

TABLE 1
Groundwater Gauging Data
Former BP 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-2	9/6/2012	99.72	11.43	NP	--	88.29	--
MW-2	12/14/2012	99.72	10.45	NP	--	89.27	--
MW-2	1/9/2013	99.72	10.38	NP	--	89.34	--
MW-2	5/29/2013	99.72	10.66	NP	--	89.06	--
MW-2	8/20/2013	99.72	11.35	NP	--	88.37	--
MW-2	11/13/2013	99.72	11.02	NP	--	88.70	--
MW-2	2/19/2014	99.72	10.49	NP	--	89.23	--
MW-2	4/23/2014	99.72	10.38	NP	--	89.34	--
MW-2	8/7/2014	99.72	11.22	NP	--	88.50	--
MW-2	11/19/2014	99.72	11.03	NP	--	88.69	--
MW-2	2/25/2015	99.72	10.72	NP	--	89.00	--

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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-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-3	9/6/2012	99.68	11.63	NP	--	88.05	--
MW-3	12/14/2012	99.68	10.51	NP	--	89.17	--
MW-3	1/9/2013	99.68	10.45	NP	--	89.23	--
MW-3	5/29/2013	99.68	10.81	NP	--	88.87	--
MW-3	8/20/2013	99.68	11.55	NP	--	88.13	--
MW-3	11/13/2013	99.68	11.10	NP	--	88.58	--
MW-3	2/19/2014	99.68	10.01	NP	--	89.67	--
MW-3	4/23/2014	99.68	10.47	NP	--	89.21	--
MW-3	8/7/2014	99.68	11.36	NP	--	88.32	--
MW-3	11/19/2014	99.68	11.10	NP	--	88.58	--
MW-3	2/25/2015	99.68	10.92	NP	--	88.76	--
MW-3	8/11/2015	99.68	11.94	NP	--	87.74	--
MW-3	2/3/2016	99.68	10.25	NP	--	89.43	--
MW-3	4/8/2016	99.68	10.44	NP	--	89.24	--
MW-3	9/20/2016	99.68	11.82	NP	--	87.86	--
MW-3	12/28/2016	99.68	10.20	NP	--	89.48	--
MW-3	3/24/2017	99.68	9.63	NP	--	90.05	--
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	--

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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	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-4	9/6/2012	100.00	12.02	NP	--	87.98	--
MW-4	12/14/2012	100.00	11.03	NP	--	88.97	--
MW-4	1/9/2013	100.00	10.90	NP	--	89.10	--
MW-4	5/29/2013	100.00	11.28	NP	--	88.72	--
MW-4	8/20/2013	100.00	11.95	NP	--	88.05	--
MW-4	11/13/2013	100.00	11.69	NP	--	88.31	--
MW-4	2/19/2014	100.00	10.73	NP	--	89.27	--
MW-4	4/23/2014	100.00	11.14	NP	--	88.86	--
MW-4	8/7/2014	100.00	11.88	NP	--	88.12	--
MW-4	11/19/2014	100.00	11.71	NP	--	88.29	--
MW-4	2/25/2015	100.00	11.43	NP	--	88.57	--
MW-4	8/11/2015	100.00	12.25	NP	--	87.75	--
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-5	4/8/2016	99.63	11.13	NP	--	88.50	--
MW-5	9/20/2016	99.63	12.40	NP	--	87.23	--
MW-5	12/28/2016	99.63	11.24	NP	--	88.39	--
MW-5	3/24/2017	99.63	10.70	NP	--	88.93	--
MW-5	6/22/2017	99.63	11.41	NP	--	88.22	--

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Well I.D.	Date	GROUNDWATER ELEVATION DATA					
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-5	9/29/2017	99.63	12.07	NP	--	87.56	--
MW-5	11/14/2017	99.63	11.69	NP	--	87.94	--
MW-5	2/26/2018	99.63	11.03	NP	--	88.60	--
MW-5	6/12/2018	99.63	11.50	NP	--	88.13	--
MW-5	8/14/2018	99.63	11.96	NP	--	87.67	--
MW-5	9/11/2018	99.63	12.10	NP	--	87.53	--
MW-5	11/29/2018	99.63	11.86	NP	--	87.77	--
MW-5	2/26/2019	99.63	11.43	NP	--	88.20	--
MW-5	5/16/2019	99.63	11.70	NP	--	87.93	--
MW-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	--
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-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	--

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

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

Notes:

TOC - Top of Casing

ft - feet

NP - No Product

LNAPL - Light Non-Aqueous Phase Liquid

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

-- No Information Available

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

CONSTITUENT		B	T	E	X	MTBE	EDB	EDC	TPH-G	Lead (Total)	Lead (Dissolved)
UNIT		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MTCA METHOD A CLEANUP LEVELS		5	1000	700	1000	20	0.01	5	1000/800 ¹	15	NE
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-2	9/6/2012	< 1.0	< 1.0	< 1.0	< 3.0	2.6	< 0.010	< 1.0	< 50.0	15.8	--
MW-2	12/14/2012	< 1.0	< 1.0	< 1.0	< 3.0	--	< 0.01	< 1.0	< 100	< 3.0	--
MW-2	1/9/2013	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 1.0	< 1.0	< 80	< 1.0	--
MW-2	5/29/2013	< 0.50	< 0.50	< 0.50	< 1.00	0.66	< 0.0098	< 0.50	< 50	13.0	--
MW-2	8/20/2013	< 0.50	< 0.50	< 0.50	< 1.0	0.70	< 0.0097	< 0.50	< 50	< 10	< 10
MW-2	11/13/2013	< 1.0	2.8	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	7.8	< 2.0
MW-2	2/19/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-2	4/23/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-2	8/7/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-2	11/19/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	< 2.0	< 2.0

Table 2
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Former BP Facility 5300
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CONSTITUENT		B	T	E	X	MTBE	EDB	EDC	TPH-G	Lead (Total)	Lead (Dissolved)
UNIT		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MTCA METHOD A CLEANUP LEVELS		5	1000	700	1000	20	0.01	5	1000/800 ¹	15	NE
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-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	8.0	--	--	< 100	< 10.0	< 10.0

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CONSTITUENT		B	T	E	X	MTBE	EDB	EDC	TPH-G	Lead (Total)	Lead (Dissolved)
UNIT		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MTCA METHOD A CLEANUP LEVELS		5	1000	700	1000	20	0.01	5	1000/800¹	15	NE
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-4	9/6/2012	6.1	< 1.0	290	116	3.6	< 0.010	< 1.0	10200	< 10.0	--
MW-4	12/14/2012	4.8	< 1.0	208	50.7	--	< 0.01	< 1.0	3230	15.8	--
MW-4	1/9/2013	< 5.0	< 5.0	250	56	< 5.0	< 5.0	< 5.0	4500	6.1	--
MW-4	5/29/2013	2.1	< 0.50	220	48.8	2.6	< 0.0095	< 0.50	4500	14.7	--
MW-4	8/20/2013	1.6	< 0.50	240	47	< 2.4	< 0.0098	< 0.50	4500	< 10	< 10
MW-4	11/13/2013	1.7	1.9	270	43	1.1	< 0.010	< 1.0	7100	8.9	8.2
MW-4	2/19/2014	1.1	< 1.0	180	26	2.0	< 0.010	< 1.0	5400	5.6	5.7
MW-4	4/23/2014	< 1.0	< 1.0	130	17	< 1.0	< 0.010	< 1.0	5800	8.6	6.1
MW-4	8/7/2014	< 1.0	< 1.0	170	15	< 1.0	< 0.010	< 1.0	5700	6.6	6.0
MW-4	11/19/2014	< 1.0	< 1.0	< 1.0	7.6	< 1.0	< 0.010	< 1.0	4900	9.0	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	--	--	3700	5.7	5.6
MW-4	2/3/2016	< 2.0	< 2.0	53	< 3.0	< 1.0*	--	--	3300 *	5.8	5.5
MW-4	4/8/2016	< 2.0	< 2.0	54	< 3.0	< 1.0	--	--	1900	5.8	5.3
MW-4	9/20/2016	< 2.0	< 2.0	15	< 3.0	< 1.0	--	--	2200	5.4	4.3
MW-4	12/28/2016	< 2.0	< 2.0	39	< 3.0	< 1.0	--	--	2300	5.9	5.1
MW-4	3/24/2017	< 2.0	< 2.0	24	< 3.0	< 1.0	--	--	1800	4.8	4.8
MW-4	6/22/2017	< 2.0	< 2.0	22	< 3.0	< 2.0	--	--	1700	5.3	4.9
MW-4	9/29/2017	< 1.0	< 1.0	23.5	< 3.0	< 1.0	--	--	2260	< 10.0	< 10.0
MW-4	11/14/2017	< 1.0 H1	< 1.0 H1	24.3 H1	< 3.0	< 1.0 H1 L1	--	--	2300	< 10.0	< 10.0
MW-4	2/26/2018	< 1.0	< 1.0	12.4	< 3.0	< 1.0	--	--	2240	< 10.0	< 10.0
MW-4	6/12/2018	< 1.0	< 1.0	7.3	< 3.0	< 1.0	--	--	2140	< 10.0	< 10.0
MW-4	8/14/2018	< 3.0	< 2.0*	11	< 3.0	< 2.0*	--	--	2200	5.1	5.0
MW-4	9/11/2018	< 3.0	< 2.0	60	< 3.0	< 2.0	--	--	3600	30	28
MW-4	11/29/2018	< 3.0	< 2.0	43	< 3.0	< 2.0	--	--	2800	10	10
MW-4	2/26/2019	< 3.0	< 2.0	23	< 3.0	< 2.0	--	--	1400	6.4	5.5
MW-4	5/16/2019	< 3.0	< 2.0	30	< 3.0	< 2.0	--	--	2000	6.5	6.1
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

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CONSTITUENT		B	T	E	X	MTBE	EDB	EDC	TPH-G	Lead (Total)	Lead (Dissolved)
UNIT		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MTCA METHOD A CLEANUP LEVELS		5	1000	700	1000	20	0.01	5	1000/800 ¹	15	NE
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-6	8/20/2013	< 0.50	< 0.50	1.9	< 1.0	4.9	< 0.0097	< 0.50	650	< 10	< 10
MW-6	11/13/2013	< 1.0	1.4	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	400	2.1	< 2.0
MW-6	2/19/2014	< 1.0	< 1.0	1.4	< 3.0	1.6	< 0.010	< 1.0	300	< 2.0	< 2.0
MW-6	4/23/2014	< 1.0	< 1.0	1.0	< 3.0	< 1.0	< 0.010	< 1.0	830	3.4	< 2.0
MW-6	8/7/2014	< 1.0	< 1.0	3.0	< 3.0	< 1.0	< 0.010	< 1.0	570	< 2.0	< 2.0
MW-6	11/19/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	220	< 2.0	< 2.0
MW-6	2/25/2015	< 2.0*	< 2.0*	< 3.0*	< 3.0	< 1.0	--	--	370	< 2.0	< 2.0
MW-6	8/11/2015	< 2.0	< 2.0	< 3.0	< 3.0	2.2	--	--	88	< 2.0	< 2.0
MW-6	2/3/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0H	--	--	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
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-7	8/20/2013	< 0.50	< 0.50	< 0.50	< 1.0	2.0	< 0.0096	< 0.50	< 50	< 10	< 10
MW-7	11/13/2013	< 1.0	1.2	< 1.0	< 3.0	2.2	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-7	2/19/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-7	4/23/2014	< 1.0	< 1.0	< 1.0	< 3.0	2.2	< 0.010	< 1.0	< 50	< 2.0	< 2.0

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CONSTITUENT		B	T	E	X	MTBE	EDB	EDC	TPH-G	Lead (Total)	Lead (Dissolved)
UNIT		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MTCA METHOD A CLEANUP LEVELS		5	1000	700	1000	20	0.01	5	1000/800 ¹	15	NE
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	3.0	--	--	< 50	< 2.0	< 2.0
MW-7	12/28/2016	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	< 50	< 2.0	< 2.0
MW-7	3/24/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 1.0	--	--	< 50	< 4.0	< 4.0
MW-7	6/22/2017	< 2.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 500	< 4.0	< 4.0
MW-7	9/29/2017	< 1.0	< 1.0	< 1.0	< 3.0	3.9	--	--	< 100	< 10.0	< 10.0
MW-7	11/14/2017	< 1.0 H1	< 1.0 H1	< 1.0 H1	< 3.0	2.6 H1 L1 SS	--	--	< 100	< 10.0	< 10.0
MW-7	2/26/2018	< 1.0	< 1.0	< 1.0	< 3.0	1.3	--	--	< 100	< 10.0	< 10.0
MW-7	6/12/2018	< 1.0	< 1.0	< 1.0	< 3.0 RS	2.0	--	--	< 100	< 10.0	< 10.0
MW-7	8/14/2018	< 3.0	< 2.0*	< 3.0	< 3.0	3.6 *	--	--	< 250	< 4.0	< 4.0
MW-7	9/11/2018	< 3.0	< 2.0	< 3.0	< 3.0	2.6	--	--	< 250	< 4.0	< 4.0
MW-7	11/29/2018	< 3.0	< 2.0	< 3.0	< 3.0	2.7	--	--	< 250	< 4.0	< 4.0
MW-7	2/26/2019	< 3.0	< 2.0	< 3.0	< 3.0	< 2.0	--	--	< 250	< 4.0	< 4.0
MW-7	5/16/2019	< 3.0	< 2.0	< 3.0	< 3.0	2.1	--	--	< 250	< 4.0	< 4.0
MW-8	8/20/2013	< 0.50	< 0.50	< 0.50	< 1.0	2.2	< 0.0097	< 0.50	< 50	< 10	< 10
MW-8	11/13/2013	< 1.0	1.0	< 1.0	< 3.0	2.3	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-8	2/19/2014	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-8	4/23/2014	< 1.0	< 1.0	< 1.0	< 3.0	1.9	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-8	8/7/2014	< 1.0	< 1.0	< 1.0	< 3.0	1.8	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-8	11/19/2014	< 1.0	< 1.0	< 1.0	< 3.0	2.7	< 0.010	< 1.0	< 50	< 2.0	< 2.0
MW-8	2/25/2015	< 2.0*	< 2.0*	< 3.0*	< 3.0	3.0	--	--	< 100	< 2.0	< 2.0
MW-8	8/11/2015	< 2.0	< 2.0	< 3.0	< 3.0	4.6	--	--	200	< 2.0	< 2.0
MW-8	2/3/2016	< 2.0	< 2.0	< 3.0	< 3.0	9.5 *	--	--	< 50*	< 2.0	< 2.0
MW-8	4/8/2016	< 2.0	< 2.0	< 3.0	< 3.0	4.5	--	--	< 50	< 2.0	< 2.0
MW-8	9/20/2016	< 2.0	< 2.0	< 3.0	< 3.0	8.6	--	--	< 50	< 2.0	< 2.0
MW-8	12/28/2016	< 2.0	< 2.0	< 3.0	< 3.0	1.2	--	--	< 50	< 2.0	< 2.0
MW-8	3/24/2017	< 2.0	< 2.0	< 3.0	< 3.0	4.2	--	--	< 50	< 4.0	< 4.0
MW-8	6/22/2017	< 2.0	< 2.0	< 3.0	< 3.0	6.3	--	--	< 500	< 4.0	< 4.0
MW-8	9/29/2017	< 1.0	< 1.0	< 1.0	< 3.0	8.2	--	--	< 100	< 10.0	< 10.0
MW-8	11/14/2017	< 1.0 H1	< 1.0 H1	< 1.0 H1	< 3.0	6.6 H1 L1 SS	--	--	< 100	< 10.0	< 10.0
MW-8	2/26/2018	< 1.0	< 1.0	< 1.0	< 3.0	3.5	--	--	< 100	< 10.0	< 10.0
MW-8	6/12/2018	< 1.0	< 1.0 M1	< 1.0 M1	< 3.0	4.6	--	--	< 100	< 10.0	< 10.0
MW-8	8/14/2018	< 3.0	< 2.0*	< 3.0	< 3.0	8.1 *	--	--	< 250	< 4.0	< 4.0

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

CONSTITUENT UNIT		B ug/L	T ug/L	E ug/L	X ug/L	MTBE ug/L	EDB ug/L	EDC ug/L	TPH-G ug/L	Lead (Total) ug/L	Lead (Dissolved) ug/L
MTCA METHOD A CLEANUP LEVELS		5	1000	700	1000	20	0.01	5	1000/800¹	15	NE
MW-8	9/11/2018	< 3.0	< 2.0	< 3.0	< 3.0	6.3	--	--	< 250	< 4.0	< 4.0
MW-8	11/29/2018	< 3.0	< 2.0	< 3.0	< 3.0	9.9	--	--	< 250	< 4.0	< 4.0
MW-8	2/26/2019	< 3.0	< 2.0	< 3.0	< 3.0	12	--	--	< 250	< 4.0	< 4.0
MW-8	5/16/2019	< 3.0	< 2.0	< 3.0	< 3.0	7.5	--	--	< 250	< 4.0	< 4.0

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.

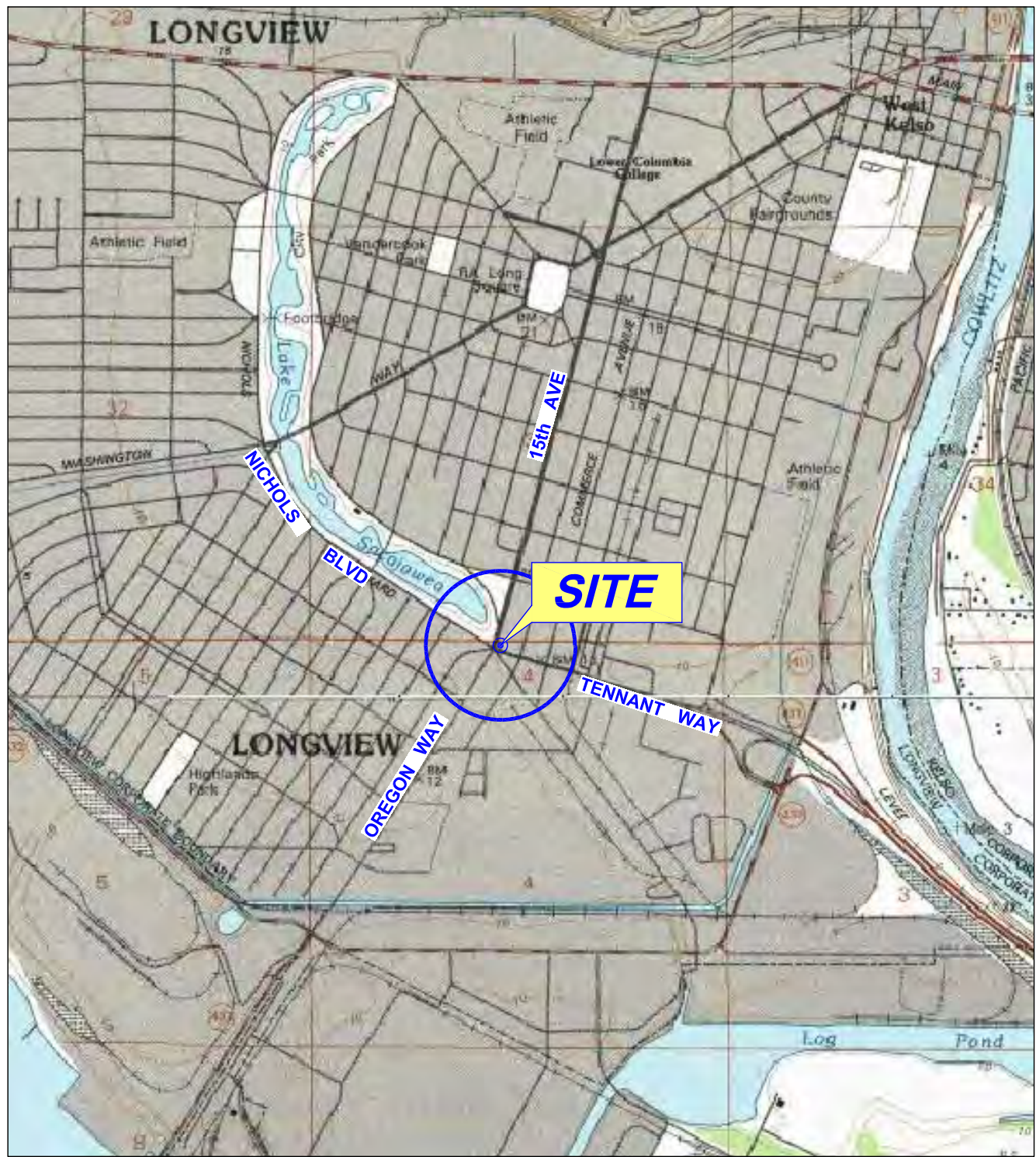
H1 = Analysis conducted outside the recognized method holding time.

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

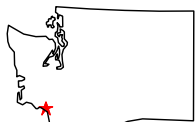
M1 = Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

Figures

- | | |
|----------|--|
| Figure 1 | Site Location Map |
| Figure 2 | Site Aerial Map |
| Figure 3 | Groundwater Analytical and Elevation Contour Map - 2/26/2019 |
| Figure 4 | Groundwater Analytical and Elevation Contour Map - 5/16/2019 |



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



QUADRANGLE LOCATION

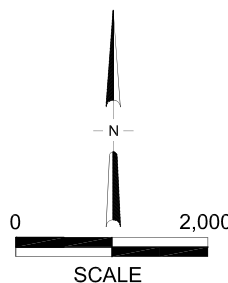
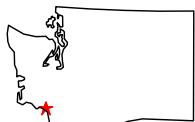


FIGURE 1
 SITE LOCATION MAP

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

PROJECT NO. 05300SA181	DRAWN BY KM
FILE NO. 5300-SLM	PREPARED BY FS
REVISION NO. 1	REVIEWED BY MR





QUADRANGLE LOCATION

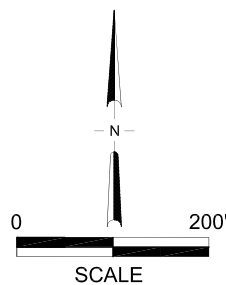
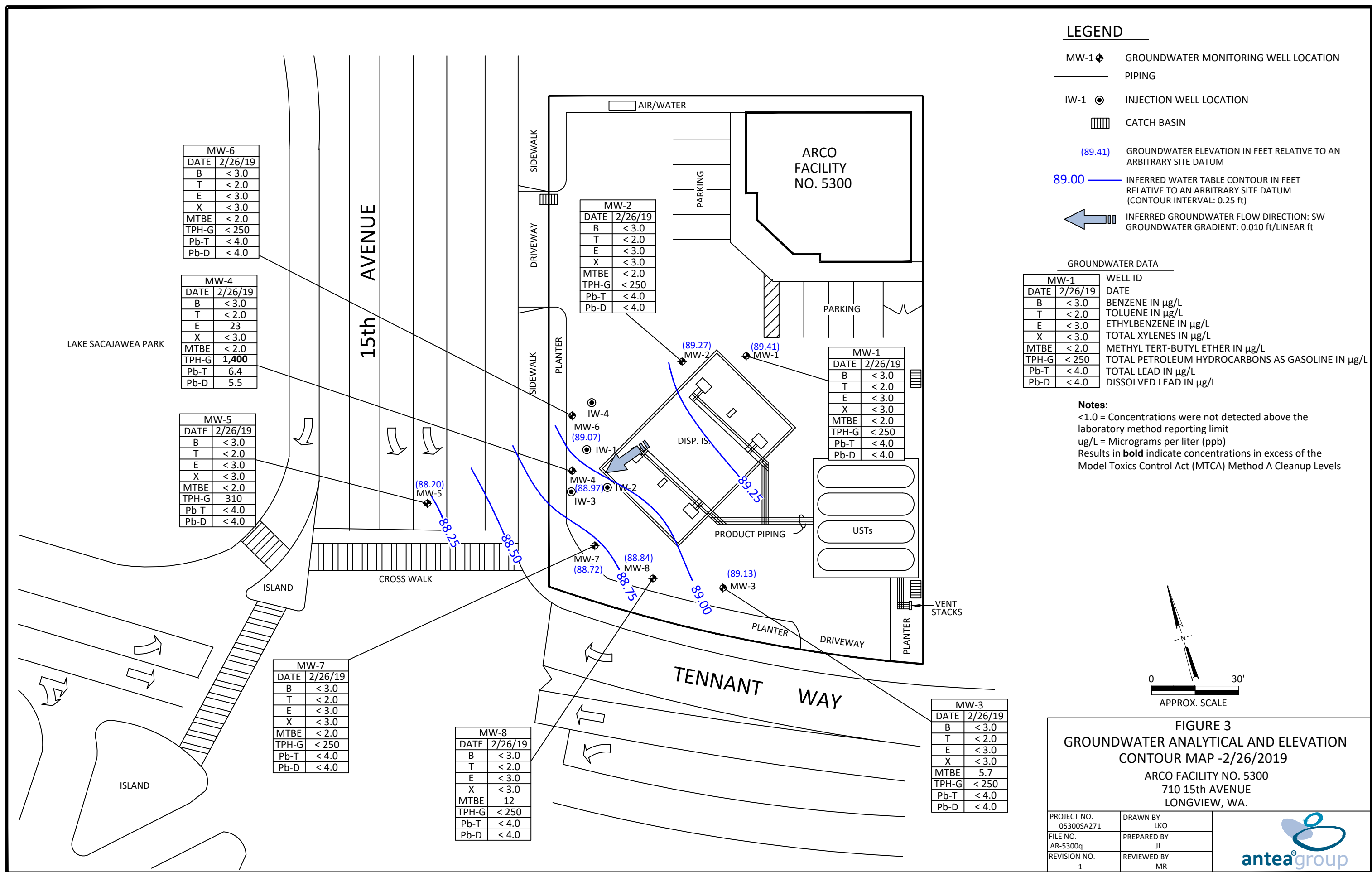


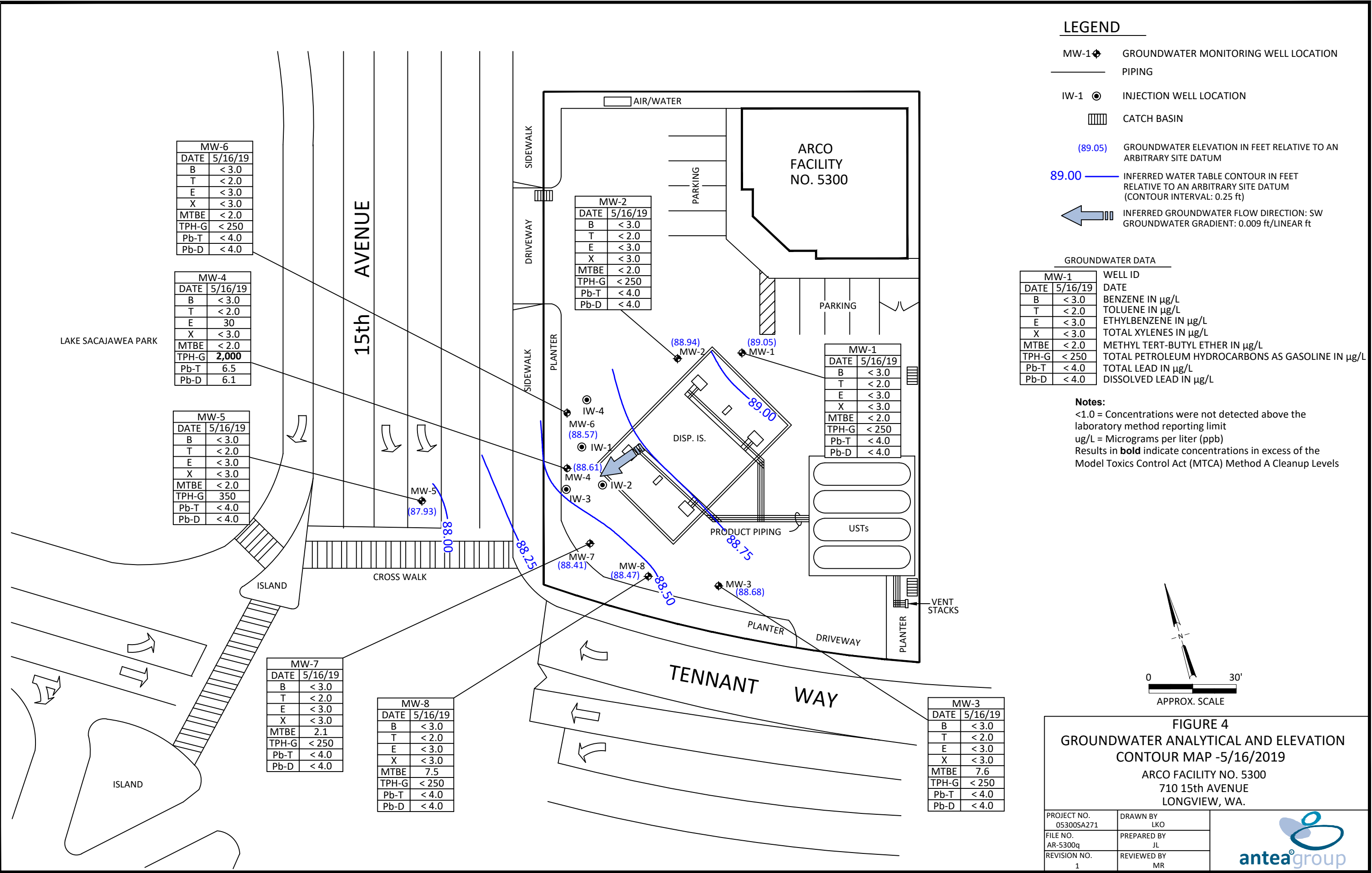
FIGURE 2
SITE AERIAL MAP

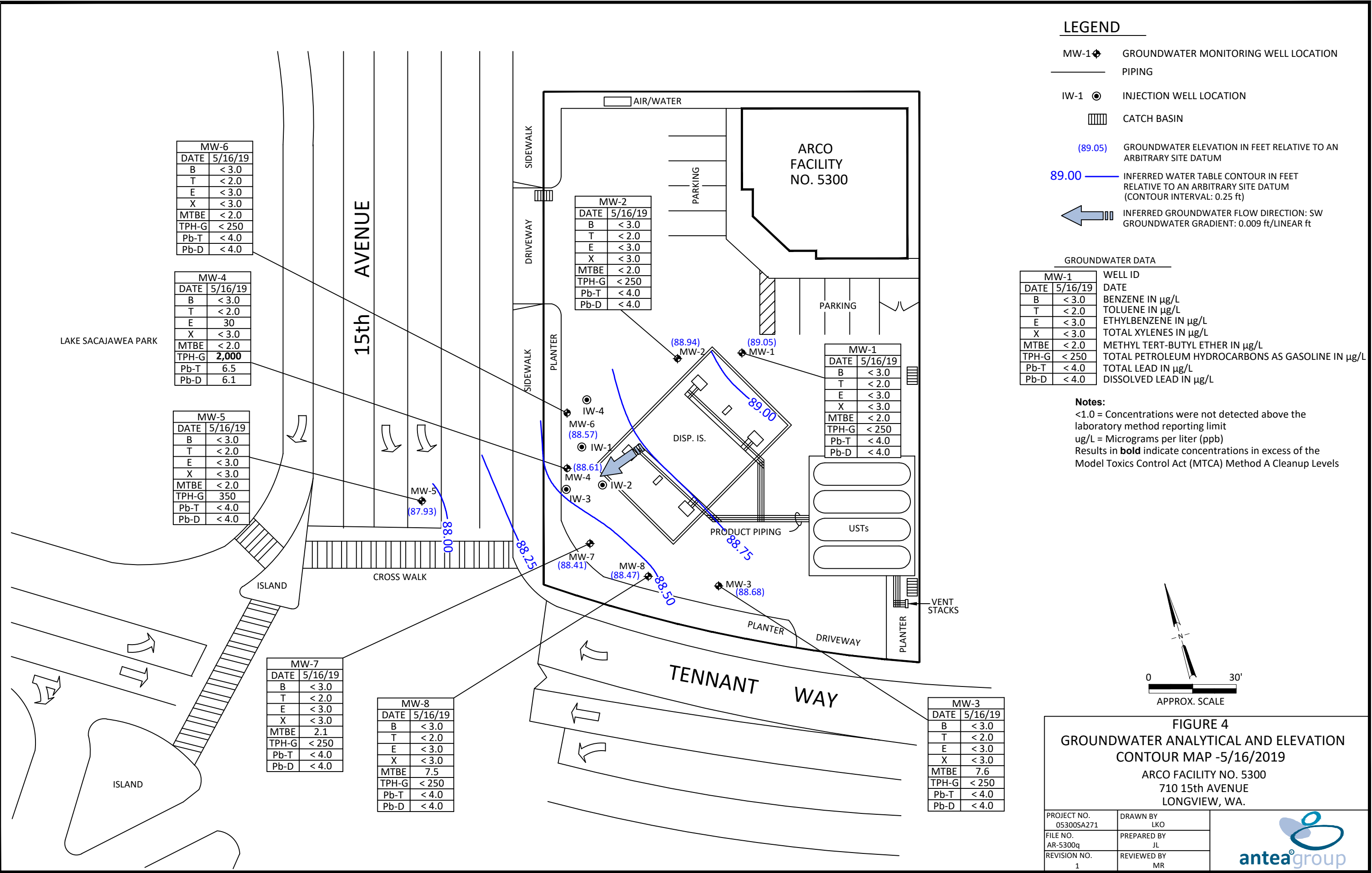
ARCO FACILITY NO. 5300
710 15th AVENUE
LONGVIEW, WA.

PROJECT NO. 05300SA181	DRAWN BY KM
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

TestAmerica Laboratories, Inc.

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

TestAmerica Job ID: 580-84125-1

TestAmerica SDG: Stage 2_Select (20); Activity_Additional
Data Collection (100)

Client Project/Site: BP - ARCO 5300

For:

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

Attn: Megan Richard

Kristine D. Allen

Authorized for release by:

3/13/2019 3:41:11 PM

Kristine Allen, Manager of Project Management
(253)248-4970

kristine.allen@testamericainc.com

Designee for

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

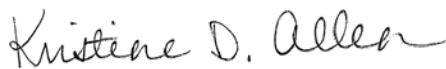
The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail 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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The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the BPLAMP Technical Specifications, applicable federal, state, local regulations and certification requirements as well as the methodologies as described in laboratory SOPs reviewed by the BPLAMP. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The signature on the cover page extends to the case narrative and all the data and forms in the package. The Chain of Custody is included and is an integral part of this report.



Kristine Allen
Manager of Project Management
3/13/2019 3:41:12 PM

Table of Contents

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Case Narrative

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

TestAmerica Job ID: 580-84125-1
Page 2_Select (20); Activity_Additional Data Collection (100)

Job ID: 580-84125-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative 580-84125-1

Comments

No additional comments.

Receipt

The samples were received on 2/26/2019 3:12 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.6° C.

Receipt Exceptions

Insufficient sample volume was provided for the following sample: sample #6, MW-6_. Only two VOA vials out of 6 necessary were provided for this sample, along with one 250mL nitric preserved poly and one field filtered 250mL nitric preserved poly.

GC/MS VOA

Method(s) NWTPH-Gx: CCC %C criteria were exceeded for 4-bromofluorobenzene (surr) and/or Trifluorotoluene (surr). Target analyte recoveries and surrogates were within acceptance limits, therefore the data have been reported. (CCV 580-295844/23) and (CCV 580-295844/5)

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.

Definitions/Glossary

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection
(100)

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)

Client Sample Results

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection (100)

Client Sample ID: MW-1_

Date Collected: 02/26/19 10:00

Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			02/27/19 20:28	1
Toluene	ND		2.0		ug/L			02/27/19 20:28	1
Ethylbenzene	ND		3.0		ug/L			02/27/19 20:28	1
Methyl tert-butyl ether	ND		2.0		ug/L			02/27/19 20:28	1
Naphthalene	ND		4.0		ug/L			02/27/19 20:28	1
Xylenes, Total	ND		3.0		ug/L			02/27/19 20:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		80 - 126		02/27/19 20:28	1
4-Bromofluorobenzene (Surr)	98		80 - 125		02/27/19 20:28	1
Toluene-d8 (Surr)	101		80 - 122		02/27/19 20:28	1
Trifluorotoluene (Surr)	100		80 - 120		02/27/19 20:28	1
Dibromofluoromethane (Surr)	101		77 - 120		02/27/19 20:28	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	-		03/08/19 15:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		50 - 150					03/08/19 15:30	1
Trifluorotoluene (Surr)	105		50 - 150					03/08/19 15:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		03/07/19 12:59	03/08/19 15:56	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		03/11/19 17:50	03/12/19 15:12	5

Client Sample Results

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection (100)

Client Sample ID: MW-2_

Date Collected: 02/26/19 11:00

Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			02/27/19 20:53	1
Toluene	ND		2.0		ug/L			02/27/19 20:53	1
Ethylbenzene	ND		3.0		ug/L			02/27/19 20:53	1
Methyl tert-butyl ether	ND		2.0		ug/L			02/27/19 20:53	1
Naphthalene	ND		4.0		ug/L			02/27/19 20:53	1
Xylenes, Total	ND		3.0		ug/L			02/27/19 20:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		80 - 126		02/27/19 20:53	1
4-Bromofluorobenzene (Surr)	99		80 - 125		02/27/19 20:53	1
Toluene-d8 (Surr)	100		80 - 122		02/27/19 20:53	1
Trifluorotoluene (Surr)	100		80 - 120		02/27/19 20:53	1
Dibromofluoromethane (Surr)	105		77 - 120		02/27/19 20:53	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			03/08/19 15:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		50 - 150		03/08/19 15:57	1
Trifluorotoluene (Surr)	101		50 - 150		03/08/19 15:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		03/07/19 12:59	03/08/19 16:28	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		03/11/19 17:50	03/12/19 15:53	5

Client Sample Results

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection (100)

Client Sample ID: MW-3_

Date Collected: 02/26/19 13:40

Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-3

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			02/27/19 21:18	1
Toluene	ND		2.0		ug/L			02/27/19 21:18	1
Ethylbenzene	ND		3.0		ug/L			02/27/19 21:18	1
Methyl tert-butyl ether	5.7		2.0		ug/L			02/27/19 21:18	1
Naphthalene	ND		4.0		ug/L			02/27/19 21:18	1
Xylenes, Total	ND		3.0		ug/L			02/27/19 21:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		80 - 126		02/27/19 21:18	1
4-Bromofluorobenzene (Surr)	99		80 - 125		02/27/19 21:18	1
Toluene-d8 (Surr)	101		80 - 122		02/27/19 21:18	1
Trifluorotoluene (Surr)	100		80 - 120		02/27/19 21:18	1
Dibromofluoromethane (Surr)	103		77 - 120		02/27/19 21:18	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	-		03/08/19 16:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	77		50 - 150					03/08/19 16:25	1
Trifluorotoluene (Surr)	107		50 - 150					03/08/19 16:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		03/07/19 12:59	03/08/19 16:32	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		03/11/19 17:50	03/12/19 15:58	5

Client Sample Results

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection (100)

Client Sample ID: MW-4_
Date Collected: 02/26/19 12:00
Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			02/27/19 21:43	1
Toluene	ND		2.0		ug/L			02/27/19 21:43	1
Ethylbenzene	23		3.0		ug/L			02/27/19 21:43	1
Methyl tert-butyl ether	ND		2.0		ug/L			02/27/19 21:43	1
Naphthalene	6.2		4.0		ug/L			02/27/19 21:43	1
Xylenes, Total	ND		3.0		ug/L			02/27/19 21:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		80 - 126		02/27/19 21:43	1
4-Bromofluorobenzene (Surr)	101		80 - 125		02/27/19 21:43	1
Toluene-d8 (Surr)	100		80 - 122		02/27/19 21:43	1
Trifluorotoluene (Surr)	101		80 - 120		02/27/19 21:43	1
Dibromofluoromethane (Surr)	102		77 - 120		02/27/19 21:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	1400		250		ug/L			03/08/19 20:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		50 - 150		03/08/19 20:03	1
Trifluorotoluene (Surr)	101		50 - 150		03/08/19 20:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0064		0.0040		mg/L		03/07/19 12:59	03/08/19 16:35	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0055		0.0040		mg/L		03/11/19 17:50	03/12/19 16:03	5

Client Sample Results

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection (100)

Client Sample ID: MW-5_
Date Collected: 02/26/19 10:30
Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			02/27/19 22:08	1
Toluene	ND		2.0		ug/L			02/27/19 22:08	1
Ethylbenzene	ND		3.0		ug/L			02/27/19 22:08	1
Methyl tert-butyl ether	ND		2.0		ug/L			02/27/19 22:08	1
Naphthalene	ND		4.0		ug/L			02/27/19 22:08	1
Xylenes, Total	ND		3.0		ug/L			02/27/19 22:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		80 - 126		02/27/19 22:08	1
4-Bromofluorobenzene (Surr)	100		80 - 125		02/27/19 22:08	1
Toluene-d8 (Surr)	100		80 - 122		02/27/19 22:08	1
Trifluorotoluene (Surr)	100		80 - 120		02/27/19 22:08	1
Dibromofluoromethane (Surr)	102		77 - 120		02/27/19 22:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	310		250		ug/L			03/08/19 16:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		50 - 150		03/08/19 16:52	1
Trifluorotoluene (Surr)	107		50 - 150		03/08/19 16:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		03/07/19 12:59	03/08/19 16:38	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		03/11/19 17:50	03/12/19 16:07	5

Client Sample Results

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection (100)

Client Sample ID: MW-6_

Date Collected: 02/26/19 11:30

Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-6

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			02/27/19 22:32	1
Toluene	ND		2.0		ug/L			02/27/19 22:32	1
Ethylbenzene	ND		3.0		ug/L			02/27/19 22:32	1
Methyl tert-butyl ether	ND		2.0		ug/L			02/27/19 22:32	1
Naphthalene	ND		4.0		ug/L			02/27/19 22:32	1
Xylenes, Total	ND		3.0		ug/L			02/27/19 22:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		80 - 126		02/27/19 22:32	1
4-Bromofluorobenzene (Surr)	98		80 - 125		02/27/19 22:32	1
Toluene-d8 (Surr)	101		80 - 122		02/27/19 22:32	1
Trifluorotoluene (Surr)	101		80 - 120		02/27/19 22:32	1
Dibromofluoromethane (Surr)	102		77 - 120		02/27/19 22:32	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			03/08/19 17:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	69		50 - 150		03/08/19 17:46	1
Trifluorotoluene (Surr)	101		50 - 150		03/08/19 17:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		03/07/19 12:59	03/08/19 16:42	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		03/11/19 17:50	03/12/19 16:12	5

Client Sample Results

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection (100)

Client Sample ID: MW-7_
Date Collected: 02/26/19 12:30
Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			02/27/19 22:57	1
Toluene	ND		2.0		ug/L			02/27/19 22:57	1
Ethylbenzene	ND		3.0		ug/L			02/27/19 22:57	1
Methyl tert-butyl ether	ND		2.0		ug/L			02/27/19 22:57	1
Naphthalene	ND		4.0		ug/L			02/27/19 22:57	1
Xylenes, Total	ND		3.0		ug/L			02/27/19 22:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		80 - 126		02/27/19 22:57	1
4-Bromofluorobenzene (Surr)	98		80 - 125		02/27/19 22:57	1
Toluene-d8 (Surr)	100		80 - 122		02/27/19 22:57	1
Trifluorotoluene (Surr)	101		80 - 120		02/27/19 22:57	1
Dibromofluoromethane (Surr)	106		77 - 120		02/27/19 22:57	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			03/08/19 18:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	73		50 - 150		03/08/19 18:14	1
Trifluorotoluene (Surr)	103		50 - 150		03/08/19 18:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		03/07/19 12:59	03/08/19 16:46	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		03/11/19 17:50	03/12/19 16:16	5

Client Sample Results

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection (100)

Client Sample ID: MW-8_
Date Collected: 02/26/19 13:00
Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			02/27/19 23:22	1
Toluene	ND		2.0		ug/L			02/27/19 23:22	1
Ethylbenzene	ND		3.0		ug/L			02/27/19 23:22	1
Methyl tert-butyl ether	12		2.0		ug/L			02/27/19 23:22	1
Naphthalene	ND		4.0		ug/L			02/27/19 23:22	1
Xylenes, Total	ND		3.0		ug/L			02/27/19 23:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		80 - 126		02/27/19 23:22	1
4-Bromofluorobenzene (Surr)	98		80 - 125		02/27/19 23:22	1
Toluene-d8 (Surr)	100		80 - 122		02/27/19 23:22	1
Trifluorotoluene (Surr)	102		80 - 120		02/27/19 23:22	1
Dibromofluoromethane (Surr)	105		77 - 120		02/27/19 23:22	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			03/08/19 18:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		50 - 150		03/08/19 18:41	1
Trifluorotoluene (Surr)	107		50 - 150		03/08/19 18:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		03/07/19 12:59	03/08/19 16:49	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		03/11/19 17:50	03/12/19 16:21	5

Client Sample Results

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection (100)

Client Sample ID: Trip Blank_1

Lab Sample ID: 580-84125-9

Date Collected: 02/26/19 00:00

Matrix: Water

Date Received: 02/26/19 15:12

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			02/27/19 23:47	1
Toluene	ND		2.0		ug/L			02/27/19 23:47	1
Ethylbenzene	ND		3.0		ug/L			02/27/19 23:47	1
Xylenes, Total	ND		3.0		ug/L			02/27/19 23:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 122		02/27/19 23:47	1
Trifluorotoluene (Surr)	100		80 - 120		02/27/19 23:47	1
4-Bromofluorobenzene (Surr)	99		80 - 125		02/27/19 23:47	1
Dibromofluoromethane (Surr)	106		77 - 120		02/27/19 23:47	1
1,2-Dichloroethane-d4 (Surr)	110		80 - 126		02/27/19 23:47	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			03/08/19 14:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	75		50 - 150		03/08/19 14:36	1
Trifluorotoluene (Surr)	103		50 - 150		03/08/19 14:36	1

QC Sample Results

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection (100)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-295320/4

Matrix: Water

Analysis Batch: 295320

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			02/27/19 19:13	1
Toluene	ND		2.0		ug/L			02/27/19 19:13	1
Ethylbenzene	ND		3.0		ug/L			02/27/19 19:13	1
Methyl tert-butyl ether	ND		2.0		ug/L			02/27/19 19:13	1
Naphthalene	ND		4.0		ug/L			02/27/19 19:13	1
Xylenes, Total	ND		3.0		ug/L			02/27/19 19:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		80 - 125		02/27/19 19:13	1
Toluene-d8 (Surr)	101		80 - 122		02/27/19 19:13	1
1,2-Dichloroethane-d4 (Surr)	106		80 - 126		02/27/19 19:13	1
Trifluorotoluene (Surr)	102		80 - 120		02/27/19 19:13	1
Dibromofluoromethane (Surr)	102		77 - 120		02/27/19 19:13	1

Lab Sample ID: LCS 580-295320/5

Matrix: Water

Analysis Batch: 295320

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	9.12		ug/L		91	75 - 128
Toluene	10.0	8.95		ug/L		90	75 - 120
Ethylbenzene	10.0	8.77		ug/L		88	75 - 120
m-Xylene & p-Xylene	10.0	8.88		ug/L		89	75 - 120
Methyl tert-butyl ether	10.0	11.6		ug/L		116	72 - 130
o-Xylene	10.0	9.09		ug/L		91	74 - 120
Naphthalene	10.0	8.73		ug/L		87	50 - 144
Xylenes, Total	20.0	18.0		ug/L		90	74 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		80 - 125
Toluene-d8 (Surr)	100		80 - 122
1,2-Dichloroethane-d4 (Surr)	106		80 - 126
Trifluorotoluene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	100		77 - 120

Lab Sample ID: LCSD 580-295320/6

Matrix: Water

Analysis Batch: 295320

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	9.51		ug/L		95	75 - 128	4	14
Toluene	10.0	9.14		ug/L		91	75 - 120	2	13
Ethylbenzene	10.0	9.14		ug/L		91	75 - 120	4	14
m-Xylene & p-Xylene	10.0	9.05		ug/L		91	75 - 120	2	14
Methyl tert-butyl ether	10.0	12.0		ug/L		120	72 - 130	4	18
o-Xylene	10.0	9.45		ug/L		94	74 - 120	4	16

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection (100)

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

Lab Sample ID: LCSD 580-295320/6

Matrix: Water

Analysis Batch: 295320

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
Naphthalene	10.0	9.53		ug/L		95	50 - 144	9	16
Xylenes, Total	20.0	18.5		ug/L		93	74 - 120	3	15

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		80 - 125
Toluene-d8 (Surr)	101		80 - 122
1,2-Dichloroethane-d4 (Surr)	106		80 - 126
Trifluorotoluene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	102		77 - 120

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

Lab Sample ID: MB 580-295844/6

Matrix: Water

Analysis Batch: 295844

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			03/08/19 12:48	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		50 - 150		03/08/19 12:48	1
Trifluorotoluene (Surr)	106		50 - 150		03/08/19 12:48	1

Lab Sample ID: LCS 580-295844/7

Matrix: Water

Analysis Batch: 295844

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	1000	911		ug/L		91	79 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	79		50 - 150
Trifluorotoluene (Surr)	119		50 - 150

Lab Sample ID: LCSD 580-295844/8

Matrix: Water

Analysis Batch: 295844

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	922		ug/L		92	79 - 120	1	10

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	77		50 - 150
Trifluorotoluene (Surr)	119		50 - 150

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection (100)

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 580-295780/22-A
Matrix: Water
Analysis Batch: 295933

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 295780

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		03/07/19 12:59	03/08/19 15:45	5

Lab Sample ID: LCS 580-295780/23-A
Matrix: Water
Analysis Batch: 295933

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 295780

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1.00	0.949		mg/L		95	80 - 120

Lab Sample ID: LCSD 580-295780/24-A
Matrix: Water
Analysis Batch: 295933

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 295780

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	1.00	0.931		mg/L		93	80 - 120	2	20

Lab Sample ID: 580-84125-1 MS
Matrix: Water
Analysis Batch: 295933

Client Sample ID: MW-1_
Prep Type: Total Recoverable
Prep Batch: 295780

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	ND		1.00	1.00		mg/L		100	80 - 120

Lab Sample ID: 580-84125-1 MSD
Matrix: Water
Analysis Batch: 295933

Client Sample ID: MW-1_
Prep Type: Total Recoverable
Prep Batch: 295780

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	ND		1.00	0.993		mg/L		99	80 - 120	1	20

Lab Sample ID: 580-84125-1 DU
Matrix: Water
Analysis Batch: 295933

Client Sample ID: MW-1_
Prep Type: Total Recoverable
Prep Batch: 295780

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

Lab Sample ID: MB 580-296032/22-A
Matrix: Water
Analysis Batch: 296140

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 296032

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		03/11/19 17:50	03/12/19 14:58	5

QC Sample Results

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection (100)

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

Lab Sample ID: LCS 580-296032/23-A
Matrix: Water
Analysis Batch: 296140

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 296032

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1.00	0.913		mg/L		91	80 - 120

Lab Sample ID: LCSD 580-296032/24-A
Matrix: Water
Analysis Batch: 296140

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 296032

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	1.00	0.914		mg/L		91	80 - 120	0	20

Lab Sample ID: 580-84125-1 MS
Matrix: Water
Analysis Batch: 296140

Client Sample ID: MW-1_
Prep Type: Dissolved
Prep Batch: 296032

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	ND		1.00	0.904		mg/L		90	80 - 120

Lab Sample ID: 580-84125-1 MSD
Matrix: Water
Analysis Batch: 296140

Client Sample ID: MW-1_
Prep Type: Dissolved
Prep Batch: 296032

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	ND		1.00	0.897		mg/L		90	80 - 120	1	20

Lab Sample ID: 580-84125-1 DU
Matrix: Water
Analysis Batch: 296140

Client Sample ID: MW-1_
Prep Type: Dissolved
Prep Batch: 296032

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

Lab Chronicle

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection (100)

Client Sample ID: MW-1_

Date Collected: 02/26/19 10:00

Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	295320	02/27/19 20:28	W1T	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	295844	03/08/19 15:30	Z1R	TAL SEA
Dissolved	Prep	3005A			296032	03/11/19 17:50	T1H	TAL SEA
Dissolved	Analysis	6020A		5	296140	03/12/19 15:12	FCW	TAL SEA
Total Recoverable	Prep	3005A			295780	03/07/19 12:59	JKM	TAL SEA
Total Recoverable	Analysis	6020A		5	295933	03/08/19 15:56	FCW	TAL SEA

Client Sample ID: MW-2_

Date Collected: 02/26/19 11:00

Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	295320	02/27/19 20:53	W1T	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	295844	03/08/19 15:57	Z1R	TAL SEA
Dissolved	Prep	3005A			296032	03/11/19 17:50	T1H	TAL SEA
Dissolved	Analysis	6020A		5	296140	03/12/19 15:53	FCW	TAL SEA
Total Recoverable	Prep	3005A			295780	03/07/19 12:59	JKM	TAL SEA
Total Recoverable	Analysis	6020A		5	295933	03/08/19 16:28	FCW	TAL SEA

Client Sample ID: MW-3_

Date Collected: 02/26/19 13:40

Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	295320	02/27/19 21:18	W1T	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	295844	03/08/19 16:25	Z1R	TAL SEA
Dissolved	Prep	3005A			296032	03/11/19 17:50	T1H	TAL SEA
Dissolved	Analysis	6020A		5	296140	03/12/19 15:58	FCW	TAL SEA
Total Recoverable	Prep	3005A			295780	03/07/19 12:59	JKM	TAL SEA
Total Recoverable	Analysis	6020A		5	295933	03/08/19 16:32	FCW	TAL SEA

Client Sample ID: MW-4_

Date Collected: 02/26/19 12:00

Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	295320	02/27/19 21:43	W1T	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	295844	03/08/19 20:03	Z1R	TAL SEA
Dissolved	Prep	3005A			296032	03/11/19 17:50	T1H	TAL SEA
Dissolved	Analysis	6020A		5	296140	03/12/19 16:03	FCW	TAL SEA
Total Recoverable	Prep	3005A			295780	03/07/19 12:59	JKM	TAL SEA

TestAmerica Seattle

Lab Chronicle

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection (100)

Client Sample ID: MW-4_

Date Collected: 02/26/19 12:00

Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020A		5	295933	03/08/19 16:35	FCW	TAL SEA

Client Sample ID: MW-5_

Date Collected: 02/26/19 10:30

Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	295320	02/27/19 22:08	W1T	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	295844	03/08/19 16:52	Z1R	TAL SEA
Dissolved	Prep	3005A			296032	03/11/19 17:50	T1H	TAL SEA
Dissolved	Analysis	6020A		5	296140	03/12/19 16:07	FCW	TAL SEA
Total Recoverable	Prep	3005A			295780	03/07/19 12:59	JKM	TAL SEA
Total Recoverable	Analysis	6020A		5	295933	03/08/19 16:38	FCW	TAL SEA

Client Sample ID: MW-6_

Date Collected: 02/26/19 11:30

Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	295320	02/27/19 22:32	W1T	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	295844	03/08/19 17:46	Z1R	TAL SEA
Dissolved	Prep	3005A			296032	03/11/19 17:50	T1H	TAL SEA
Dissolved	Analysis	6020A		5	296140	03/12/19 16:12	FCW	TAL SEA
Total Recoverable	Prep	3005A			295780	03/07/19 12:59	JKM	TAL SEA
Total Recoverable	Analysis	6020A		5	295933	03/08/19 16:42	FCW	TAL SEA

Client Sample ID: MW-7_

Date Collected: 02/26/19 12:30

Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	295320	02/27/19 22:57	W1T	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	295844	03/08/19 18:14	Z1R	TAL SEA
Dissolved	Prep	3005A			296032	03/11/19 17:50	T1H	TAL SEA
Dissolved	Analysis	6020A		5	296140	03/12/19 16:16	FCW	TAL SEA
Total Recoverable	Prep	3005A			295780	03/07/19 12:59	JKM	TAL SEA
Total Recoverable	Analysis	6020A		5	295933	03/08/19 16:46	FCW	TAL SEA

Lab Chronicle

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection
(100)

Client Sample ID: MW-8_

Date Collected: 02/26/19 13:00

Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	295320	02/27/19 23:22	W1T	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	295844	03/08/19 18:41	Z1R	TAL SEA
Dissolved	Prep	3005A			296032	03/11/19 17:50	T1H	TAL SEA
Dissolved	Analysis	6020A		5	296140	03/12/19 16:21	FCW	TAL SEA
Total Recoverable	Prep	3005A			295780	03/07/19 12:59	JKM	TAL SEA
Total Recoverable	Analysis	6020A		5	295933	03/08/19 16:49	FCW	TAL SEA

Client Sample ID: Trip Blank_1

Date Collected: 02/26/19 00:00

Date Received: 02/26/19 15:12

Lab Sample ID: 580-84125-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	295320	02/27/19 23:47	W1T	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	295844	03/08/19 14:36	Z1R	TAL SEA

Laboratory References:

TAL SEA = 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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection
(100)

Laboratory: TestAmerica Seattle

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	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
6020A	3005A	Water	Lead
8260B		Water	Benzene
8260B		Water	Ethylbenzene
8260B		Water	Methyl tert-butyl ether
8260B		Water	Naphthalene
8260B		Water	Toluene
8260B		Water	Xylenes, Total

Sample Summary

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

TestAmerica Job ID: 580-84125-1
SDG: Stage 2_Select (20); Activity_Additional Data Collection
(100)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-84125-1	MW-1_	Water	02/26/19 10:00	02/26/19 15:12
580-84125-2	MW-2_	Water	02/26/19 11:00	02/26/19 15:12
580-84125-3	MW-3_	Water	02/26/19 13:40	02/26/19 15:12
580-84125-4	MW-4_	Water	02/26/19 12:00	02/26/19 15:12
580-84125-5	MW-5_	Water	02/26/19 10:30	02/26/19 15:12
580-84125-6	MW-6_	Water	02/26/19 11:30	02/26/19 15:12
580-84125-7	MW-7_	Water	02/26/19 12:30	02/26/19 15:12
580-84125-8	MW-8_	Water	02/26/19 13:00	02/26/19 15:12
580-84125-9	Trip Blank_1	Water	02/26/19 00:00	02/26/19 15:12



580-84125 Chain of Custody

Laboratory Management Program (LaMP) Chain of Custody Record



Soil, Sediment and Groundwater Samples

Page 1 of 2

BP Site Node Path:

BP 5300

Req Due Date (mm/dd/yyyy):

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: 05300SA181.20100
Lab PM: Elaine Walker	Lead Regulatory Agency: Washington State Department of Ecology	Address: 4005 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	Enforce Proposal No: pending	Phone: 425-498-7711 Email: Megan.Richard@anteargroup.com
Lab Bottle Order No: NA	Accounting Mode: Provision X OOC-BU OOC-RM	Send/Submit EDD to: Megan.Richard@anteargroup.com
Other Info: elaine.walker@testamericainc.com	Stage 2_Select (20) Activity Additional Data Collection (100)	Invoice To: BP-RM BP/ARC X

Sample Details		Requested Analyses		Report Type & QC Level	
Lab No.	Sample Description	Date	Time	Analysis	Comments

Lab No.	Sample Description	Date	Time	Analysis	Comments
MW-1		2/26/19	1000	Field Matrix	
MW-2			1100	Field Matrix	
MW-3			1340	Field Matrix	
MW-4			1200	Field Matrix	
MW-5			1030	Field Matrix	
MW-6			1130	Field Matrix	
MW-7		2/26/19	1230	Field Matrix	

Sampler's Name: Brad Jackson	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Antea Group		2/26/19	1512		2/26/19	1512
Ship Method: Delivered to Lab						
Shipment Tracking No:						

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals in Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: 5.0 °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP LaMP Soil/H2O COC July 2018

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Soil, Sediment and Groundwater Samples

BP Facility No. 5

1

Rush TAT Yes _____

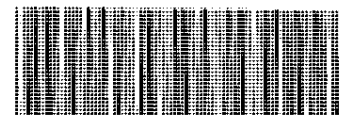
No X

Page 2 of 2

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



580-84125 Chain of Custody

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

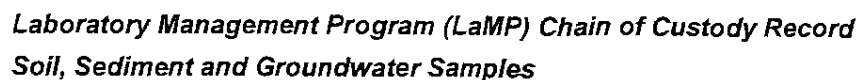
Lab Work Order Number:

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: 05300SA161.20100																	
Lab PM: Elaine Walker		Lead Regulatory Agency: 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: 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: BP-RM <u> </u> BP/ARC <u>X</u>																	
BP/RM PM: Wade Melton		Sample Details		Requested Analyses																	
PM Phone: 360-594-7978				Report Type & QC Level																	
PM Email: wade.melton@bp.com				Limited (Standard) Package <u> </u>																	
				Limited Plus Package <u> </u>																	
				Full Package <u> </u>																	
Lab No.	Sample Description	Date	Time	Field Matrix	Start Depth	End Depth	Depth Unit	Grab (G) or Composite (C)	Total Number of Containers	Analysis	RTX by EPA Method 8260B	MTBE by EPA Method 8260B	NWTPH-Gx	NWTPH-D w/ silica gel	Pb-D Non Field Filtered	Pb-T by EPA 6010B	EDC by EPA 8011	EDC by EPA 8260	Comments		
	MW-1_	2/26/19	1000	W				G			X	X	X		X	X					
	MW-2_		1100	W				G			X	X	X		X	X					
	MW-3_		1340	W				G			X	X	X		X	X					
	MW-4_		1200	W				G			X	X	X		X	X					
	MW-5_		1030	W				G			X	X	X		X	X					
	MW-6_		1130	W				G			X	X	X		X	X					
	MW-7_	2/26/19	1230	W				G			X	X	X		X	X					
Sampler's Name: Brad Jackson		Relinquished By / Affiliation		Date	Time	Accepted By / Affiliation		Date	Time												
Sampler's Company: Antea Group		Molue / Antea Group		2/26/19	1512	Molue / Antea Group		2/26/19	1512												
Ship Method: Delivered to Lab		Ship Date: 2/26/19		Molue / Antea Group		Molue / Antea Group		2/26/19	1700	Molue / Antea Group		Molue / Antea Group		Molue / Antea Group		Molue / Antea Group		Molue / Antea Group			
Shipment Tracking No:		Molue / Antea Group		Molue / Antea Group		Molue / Antea Group		Molue / Antea Group		Molue / Antea Group		Molue / Antea Group		Molue / Antea Group		Molue / Antea Group		Molue / Antea Group			
Special Instructions:																					
THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No Temp Blank: Yes / No Cooler Temp on Receipt: <u>5.6</u> °F/C Trip Blank: Yes / No MS/MSD Sample Submitted: Yes / No																					

BP LaMP Soil/H2O COC July 2018

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5-1-1



Rush TAT Yes No X

Lab Work Order Number:

THIS LINE - LAB USE ONLY: Custody Seals in Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: 5.0 °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP LaMP SoilH2O COC July 2018

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3/13/2019

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 580-84125-1

SDG Number: Stage 2_Select (20); Activity_Additional Data Collection (100)

Login Number: 84125

List Source: TestAmerica Seattle

List Number: 1

Creator: Antonson, Angeline D

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	False	Insufficient volume received for requested analysis.
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	

Walker, M Elaine

From: Brad Jackson <Brad.Jackson@anteagroup.com>
Sent: Wednesday, February 27, 2019 10:14 AM
To: Walker, M Elaine
Cc: Nolan Lewis
Subject: RE: BP LaMP Samples

-External Email-

Thanks Elaine, sorry about the labeling error and following confusion.

Brad Jackson | Project Manager

Antea®Group

Direct +1 503 863 2114 | Mobile +1 971 777 0241
121 SW Salmon Street, Suite 1100, Portland, Oregon 97204
Brad.jackson@anteagroup.com | us.anteagroup.com



Member of Inogen® | www.inogenet.com

From: Walker, M Elaine [mailto:M.Elaine.Walker@testamericainc.com]
Sent: Wednesday, February 27, 2019 10:13 AM
To: Brad Jackson <Brad.Jackson@anteagroup.us>
Cc: Nolan Lewis <Nolan.Lewis@anteagroup.us>
Subject: RE: BP LaMP Samples

Hi Brad,

I just got finished going through all the VOA vials. The 4 extra vials that say MW-2 actually have the time of 11:30, which matches the MW-6 sample time. We will make sure to log those extra VOAs as sample MW-6, not MW-2.

Thanks,

M. Elaine Walker

Phone: 253-248-4972

E-mail: M.Elaine.Walker@testamericainc.com

From: Brad Jackson [mailto:Brad.Jackson@anteagroup.com]
Sent: Tuesday, February 26, 2019 6:06 PM
To: Walker, M Elaine
Cc: Nolan Lewis
Subject: Re: BP LaMP Samples

-External Email-

If the samples for MW-2 & MW-6 cannot be identified by the sample times do not run either. We will need to resample those two wells to ensure we have the correct water for analysis.

Bradford Jackson
Antea Group
971-777-0241
us.anteagroup.com

On Feb 26, 2019, at 4:40 PM, Brad Jackson <Brad.Jackson@anteagroup.us> wrote:

There must have been some mislabeled sample containers. There were 6 VOAs and two poly bottles per well. Please ask Angeline to confirm which VOAs are for each sample location by using the sample times. Ill talk to Nolan who filled some sample containers if he can confirm which were mislabeled.

Please let me know ASAP if the sample times are also incorrect. Sorry for the confusion.

Bradford Jackson
Antea Group
971-777-0241
us.anteagroup.com

On Feb 26, 2019, at 4:11 PM, Walker, M Elaine <M.Elaine.Walker@testamericainc.com> wrote:

Hi Brad,

See below from the Portland Service Center. Can you answer the question on bottles please?

Thanks,
M. Elaine Walker

Phone: 253-248-4972

E-mail: M.Elaine.Walker@testamericainc.com

From: Antonson, Angeline D.
Sent: Tuesday, February 26, 2019 3:56 PM
To: Walker, M Elaine
Subject: BP LaMP Samples
Importance: High

Hi Elaine,

Sample #6 only had 2 VOAs provided by the client, but it is still marked for all the tests. Let me know if I need to cancel any of the analyses, since I don't think that's enough volume for everything. (sample #2 has four extra VOA vials, which

I suspect might be mislabeled from sample #6, but I cannot confirm since they're labeled as MW-2).

Thank you,

ANGELINE ANTONSON

Field Specialist

Eurofins TestAmerica
8920 SW Gemini Dr
Beaverton, OR 97008

www.EurofinsUS.com | www.TestAmericainc.com

Office: 503-906-9200

Cell: 971-275-5739

<bp LaMP coc.pdf>

This e-mail is personal. For our full disclaimer, please visit <http://www.anteagroup.com/confidentiality>.

This e-mail is personal. For our full disclaimer, please visit <http://www.anteagroup.com/confidentiality>.

ANALYTICAL REPORT

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

Laboratory Job ID: 580-86222-1
Client Project/Site: BP - ARCO 5300

For:

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

Attn: Megan Richard



Authorized for release by:
5/28/2019 4:52:13 PM

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

LINKS

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results through
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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.

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



Elaine Walker
Project Manager II
5/28/2019 4:52:13 PM

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Case Narrative

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

Job ID: 580-86222-1

Job ID: 580-86222-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-86222-1

Receipt

Nine samples were received on 5/16/2019 2:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.3° C.

GC/MS VOA

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

GC VOA

Method(s) NWTPH-Gx: Surrogate recovery for the following sample was outside control limits: MW-4 (580-86222-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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.

Definitions/Glossary

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

Job ID: 580-86222-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
X	Surrogate is outside 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)

Client Sample Results

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

Job ID: 580-86222-1

Client Sample ID: MW-1_20190516

Lab Sample ID: 580-86222-1

Date Collected: 05/16/19 07:30

Matrix: Water

Date Received: 05/16/19 14:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			05/17/19 19:23	1
Toluene	ND		2.0		ug/L			05/17/19 19:23	1
Ethylbenzene	ND		3.0		ug/L			05/17/19 19:23	1
Methyl tert-butyl ether	ND		2.0		ug/L			05/17/19 19:23	1
Xylenes, Total	ND		3.0		ug/L			05/17/19 19:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		80 - 126		05/17/19 19:23	1
4-Bromofluorobenzene (Surr)	96		80 - 120		05/17/19 19:23	1
Toluene-d8 (Surr)	103		80 - 120		05/17/19 19:23	1
Trifluorotoluene (Surr)	103		80 - 120		05/17/19 19:23	1
Dibromofluoromethane (Surr)	90		80 - 120		05/17/19 19:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			05/23/19 17:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		50 - 150		05/23/19 17:01	1
Trifluorotoluene (Surr)	127		50 - 150		05/23/19 17:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		05/20/19 19:01	05/21/19 19:14	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		05/20/19 10:23	05/21/19 11:12	5

Client Sample Results

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

Job ID: 580-86222-1

Client Sample ID: MW-2_20190516

Lab Sample ID: 580-86222-2

Date Collected: 05/16/19 08:10

Matrix: Water

Date Received: 05/16/19 14:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			05/17/19 19:47	1
Toluene	ND		2.0		ug/L			05/17/19 19:47	1
Ethylbenzene	ND		3.0		ug/L			05/17/19 19:47	1
Methyl tert-butyl ether	ND		2.0		ug/L			05/17/19 19:47	1
Xylenes, Total	ND		3.0		ug/L			05/17/19 19:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		80 - 126		05/17/19 19:47	1
4-Bromofluorobenzene (Surr)	98		80 - 120		05/17/19 19:47	1
Toluene-d8 (Surr)	103		80 - 120		05/17/19 19:47	1
Trifluorotoluene (Surr)	102		80 - 120		05/17/19 19:47	1
Dibromofluoromethane (Surr)	88		80 - 120		05/17/19 19:47	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	-		05/23/19 17:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	70		50 - 150					05/23/19 17:28	1
Trifluorotoluene (Surr)	123		50 - 150					05/23/19 17:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		05/20/19 19:01	05/21/19 19:54	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		05/20/19 10:23	05/21/19 11:51	5

Client Sample Results

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

Job ID: 580-86222-1

Client Sample ID: MW-3_20190516

Lab Sample ID: 580-86222-3

Date Collected: 05/16/19 12:10

Matrix: Water

Date Received: 05/16/19 14:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			05/17/19 20:12	1
Toluene	ND		2.0		ug/L			05/17/19 20:12	1
Ethylbenzene	ND		3.0		ug/L			05/17/19 20:12	1
Methyl tert-butyl ether	7.6		2.0		ug/L			05/17/19 20:12	1
Xylenes, Total	ND		3.0		ug/L			05/17/19 20:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		80 - 126		05/17/19 20:12	1
4-Bromofluorobenzene (Surr)	96		80 - 120		05/17/19 20:12	1
Toluene-d8 (Surr)	103		80 - 120		05/17/19 20:12	1
Trifluorotoluene (Surr)	98		80 - 120		05/17/19 20:12	1
Dibromofluoromethane (Surr)	86		80 - 120		05/17/19 20:12	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	-		05/23/19 17:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		50 - 150					05/23/19 17:55	1
Trifluorotoluene (Surr)	125		50 - 150					05/23/19 17:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		05/20/19 19:01	05/21/19 19:59	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		05/20/19 10:23	05/21/19 11:56	5

Client Sample Results

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

Job ID: 580-86222-1

Client Sample ID: MW-4_20190516

Lab Sample ID: 580-86222-4

Date Collected: 05/16/19 09:40

Matrix: Water

Date Received: 05/16/19 14:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			05/17/19 20:36	1
Toluene	ND		2.0		ug/L			05/17/19 20:36	1
Ethylbenzene	30		3.0		ug/L			05/17/19 20:36	1
Methyl tert-butyl ether	ND		2.0		ug/L			05/17/19 20:36	1
Xylenes, Total	ND		3.0		ug/L			05/17/19 20:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		80 - 126		05/17/19 20:36	1
4-Bromofluorobenzene (Surr)	98		80 - 120		05/17/19 20:36	1
Toluene-d8 (Surr)	100		80 - 120		05/17/19 20:36	1
Trifluorotoluene (Surr)	102		80 - 120		05/17/19 20:36	1
Dibromofluoromethane (Surr)	87		80 - 120		05/17/19 20:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	2000		250		ug/L			05/23/19 18:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	152	X	50 - 150		05/23/19 18:22	1
Trifluorotoluene (Surr)	125		50 - 150		05/23/19 18:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0065		0.0040		mg/L		05/20/19 19:01	05/21/19 20:03	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0061		0.0040		mg/L		05/20/19 10:23	05/21/19 12:00	5

Client Sample Results

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

Job ID: 580-86222-1

Client Sample ID: MW-5_20190516

Lab Sample ID: 580-86222-5

Date Collected: 05/16/19 10:50

Matrix: Water

Date Received: 05/16/19 14:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			05/17/19 21:00	1
Toluene	ND		2.0		ug/L			05/17/19 21:00	1
Ethylbenzene	ND		3.0		ug/L			05/17/19 21:00	1
Methyl tert-butyl ether	ND		2.0		ug/L			05/17/19 21:00	1
Xylenes, Total	ND		3.0		ug/L			05/17/19 21:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		80 - 126		05/17/19 21:00	1
4-Bromofluorobenzene (Surr)	95		80 - 120		05/17/19 21:00	1
Toluene-d8 (Surr)	100		80 - 120		05/17/19 21:00	1
Trifluorotoluene (Surr)	98		80 - 120		05/17/19 21:00	1
Dibromofluoromethane (Surr)	86		80 - 120		05/17/19 21:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	350		250		ug/L			05/23/19 18:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		50 - 150		05/23/19 18:49	1
Trifluorotoluene (Surr)	125		50 - 150		05/23/19 18:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		05/20/19 19:01	05/21/19 20:08	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		05/20/19 10:23	05/21/19 12:04	5

Client Sample Results

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

Job ID: 580-86222-1

Client Sample ID: MW-6_20190516

Lab Sample ID: 580-86222-6

Date Collected: 05/16/19 09:00

Matrix: Water

Date Received: 05/16/19 14:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			05/17/19 21:25	1
Toluene	ND		2.0		ug/L			05/17/19 21:25	1
Ethylbenzene	ND		3.0		ug/L			05/17/19 21:25	1
Methyl tert-butyl ether	ND		2.0		ug/L			05/17/19 21:25	1
Xylenes, Total	ND		3.0		ug/L			05/17/19 21:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		80 - 126		05/17/19 21:25	1
4-Bromofluorobenzene (Surr)	97		80 - 120		05/17/19 21:25	1
Toluene-d8 (Surr)	99		80 - 120		05/17/19 21:25	1
Trifluorotoluene (Surr)	96		80 - 120		05/17/19 21:25	1
Dibromofluoromethane (Surr)	88		80 - 120		05/17/19 21:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		250		ug/L			05/23/19 19:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		50 - 150		05/23/19 19:16	1
Trifluorotoluene (Surr)	124		50 - 150		05/23/19 19:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		05/20/19 19:01	05/21/19 20:12	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		05/20/19 10:23	05/21/19 12:08	5

Client Sample Results

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

Job ID: 580-86222-1

Client Sample ID: MW-7_20190516

Lab Sample ID: 580-86222-7

Date Collected: 05/16/19 10:20

Matrix: Water

Date Received: 05/16/19 14:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			05/21/19 20:05	1
Toluene	ND		2.0		ug/L			05/21/19 20:05	1
Ethylbenzene	ND		3.0		ug/L			05/21/19 20:05	1
Methyl tert-butyl ether	2.1		2.0		ug/L			05/21/19 20:05	1
Xylenes, Total	ND		3.0		ug/L			05/21/19 20:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		80 - 126		05/21/19 20:05	1
4-Bromofluorobenzene (Surr)	96		80 - 120		05/21/19 20:05	1
Toluene-d8 (Surr)	107		80 - 120		05/21/19 20:05	1
Trifluorotoluene (Surr)	94		80 - 120		05/21/19 20:05	1
Dibromofluoromethane (Surr)	84		80 - 120		05/21/19 20:05	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	-		05/23/19 19:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		50 - 150					05/23/19 19:43	1
Trifluorotoluene (Surr)	124		50 - 150					05/23/19 19:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		05/20/19 19:01	05/21/19 20:17	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		05/20/19 10:23	05/21/19 12:13	5

Client Sample Results

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

Job ID: 580-86222-1

Client Sample ID: MW-8_20190516

Lab Sample ID: 580-86222-8

Date Collected: 05/16/19 11:30

Matrix: Water

Date Received: 05/16/19 14:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			05/17/19 22:13	1
Toluene	ND		2.0		ug/L			05/17/19 22:13	1
Ethylbenzene	ND		3.0		ug/L			05/17/19 22:13	1
Methyl tert-butyl ether	7.5		2.0		ug/L			05/17/19 22:13	1
Xylenes, Total	ND		3.0		ug/L			05/17/19 22:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		80 - 126		05/17/19 22:13	1
4-Bromofluorobenzene (Surr)	89		80 - 120		05/17/19 22:13	1
Toluene-d8 (Surr)	101		80 - 120		05/17/19 22:13	1
Trifluorotoluene (Surr)	100		80 - 120		05/17/19 22:13	1
Dibromofluoromethane (Surr)	87		80 - 120		05/17/19 22:13	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	-		05/23/19 20:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		50 - 150					05/23/19 20:37	1
Trifluorotoluene (Surr)	122		50 - 150					05/23/19 20:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		05/20/19 19:01	05/21/19 20:21	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		05/20/19 10:23	05/21/19 12:17	5

Client Sample Results

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

Job ID: 580-86222-1

Client Sample ID: Trip Blank_20190516

Lab Sample ID: 580-86222-9

Date Collected: 05/16/19 00:00

Matrix: Water

Date Received: 05/16/19 14:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			05/17/19 18:35	1
Toluene	ND		2.0		ug/L			05/17/19 18:35	1
Ethylbenzene	ND		3.0		ug/L			05/17/19 18:35	1
Methyl tert-butyl ether	ND		2.0		ug/L			05/17/19 18:35	1
Xylenes, Total	ND		3.0		ug/L			05/17/19 18:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		80 - 126		05/17/19 18:35	1
4-Bromofluorobenzene (Surr)	101		80 - 120		05/17/19 18:35	1
Toluene-d8 (Surr)	105		80 - 120		05/17/19 18:35	1
Trifluorotoluene (Surr)	102		80 - 120		05/17/19 18:35	1
Dibromofluoromethane (Surr)	90		80 - 120		05/17/19 18:35	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			05/24/19 11:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		50 - 150		05/24/19 11:58	1
Trifluorotoluene (Surr)	106		50 - 150		05/24/19 11:58	1

QC Sample Results

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

Job ID: 580-86222-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-300975/7

Matrix: Water

Analysis Batch: 300975

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			05/17/19 18:10	1
Toluene	ND		2.0		ug/L			05/17/19 18:10	1
Ethylbenzene	ND		3.0		ug/L			05/17/19 18:10	1
Methyl tert-butyl ether	ND		2.0		ug/L			05/17/19 18:10	1
Xylenes, Total	ND		3.0		ug/L			05/17/19 18:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		80 - 126		05/17/19 18:10	1
4-Bromofluorobenzene (Surr)	97		80 - 120		05/17/19 18:10	1
Toluene-d8 (Surr)	102		80 - 120		05/17/19 18:10	1
Trifluorotoluene (Surr)	102		80 - 120		05/17/19 18:10	1
Dibromofluoromethane (Surr)	90		80 - 120		05/17/19 18:10	1

Lab Sample ID: LCS 580-300975/4

Matrix: Water

Analysis Batch: 300975

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	9.85		ug/L		98	75 - 121
Toluene	10.0	9.86		ug/L		99	80 - 120
Ethylbenzene	10.0	8.55		ug/L		85	80 - 120
m-Xylene & p-Xylene	10.0	8.94		ug/L		89	80 - 120
o-Xylene	10.0	8.85		ug/L		89	80 - 120
Methyl tert-butyl ether	10.0	9.20		ug/L		92	72 - 130
Xylenes, Total	20.0	17.8		ug/L		89	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	84		80 - 126
4-Bromofluorobenzene (Surr)	100		80 - 120
Toluene-d8 (Surr)	98		80 - 120
Trifluorotoluene (Surr)	106		80 - 120
Dibromofluoromethane (Surr)	90		80 - 120

Lab Sample ID: LCSD 580-300975/5

Matrix: Water

Analysis Batch: 300975

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	9.63		ug/L		96	75 - 121	2	14
Toluene	10.0	9.65		ug/L		96	80 - 120	2	19
Ethylbenzene	10.0	8.46		ug/L		85	80 - 120	1	14
m-Xylene & p-Xylene	10.0	8.94		ug/L		89	80 - 120	0	14
o-Xylene	10.0	8.69		ug/L		87	80 - 120	2	16
Methyl tert-butyl ether	10.0	8.84		ug/L		88	72 - 130	4	18
Xylenes, Total	20.0	17.6		ug/L		88	80 - 120	1	16

Eurofins TestAmerica, Seattle

QC Sample Results

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

Job ID: 580-86222-1

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

Lab Sample ID: LCSD 580-300975/5

Matrix: Water

Analysis Batch: 300975

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	88		80 - 126
4-Bromofluorobenzene (Surr)	95		80 - 120
Toluene-d8 (Surr)	99		80 - 120
Trifluorotoluene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	89		80 - 120

Lab Sample ID: MB 580-301234/7

Matrix: Water

Analysis Batch: 301234

Client Sample ID: Method Blank

Prep Type: Total/NA

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			05/21/19 18:53	1
Toluene	ND		2.0		ug/L			05/21/19 18:53	1
Ethylbenzene	ND		3.0		ug/L			05/21/19 18:53	1
Methyl tert-butyl ether	ND		2.0		ug/L			05/21/19 18:53	1
Xylenes, Total	ND		3.0		ug/L			05/21/19 18:53	1

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,2-Dichloroethane-d4 (Surr)	85		80 - 126		05/21/19 18:53	1			
4-Bromofluorobenzene (Surr)	89		80 - 120		05/21/19 18:53	1			
Toluene-d8 (Surr)	105		80 - 120		05/21/19 18:53	1			
Trifluorotoluene (Surr)	96		80 - 120		05/21/19 18:53	1			
Dibromofluoromethane (Surr)	87		80 - 120		05/21/19 18:53	1			

Lab Sample ID: LCS 580-301234/4

Matrix: Water

Analysis Batch: 301234

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	Spike	LCS	LCS						%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	10.0	9.89		ug/L		99	75 - 121		
Toluene	10.0	10.3		ug/L		103	80 - 120		
Ethylbenzene	10.0	9.08		ug/L		91	80 - 120		
m-Xylene & p-Xylene	10.0	9.59		ug/L		96	80 - 120		
o-Xylene	10.0	9.32		ug/L		93	80 - 120		
Methyl tert-butyl ether	10.0	9.46		ug/L		95	72 - 130		
Xylenes, Total	20.0	18.9		ug/L		95	80 - 120		

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	82		80 - 126
4-Bromofluorobenzene (Surr)	92		80 - 120
Toluene-d8 (Surr)	101		80 - 120
Trifluorotoluene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	90		80 - 120

Eurofins TestAmerica, Seattle

QC Sample Results

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

Job ID: 580-86222-1

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

Lab Sample ID: LCSD 580-301234/5

Matrix: Water

Analysis Batch: 301234

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	9.52		ug/L		95	75 - 121	4	14
Toluene	10.0	10.2		ug/L		102	80 - 120	1	19
Ethylbenzene	10.0	8.62		ug/L		86	80 - 120	5	14
m-Xylene & p-Xylene	10.0	9.54		ug/L		95	80 - 120	0	14
o-Xylene	10.0	8.87		ug/L		89	80 - 120	5	16
Methyl tert-butyl ether	10.0	9.70		ug/L		97	72 - 130	3	18
Xylenes, Total	20.0	18.4		ug/L		92	80 - 120	3	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	86		80 - 126
4-Bromofluorobenzene (Surr)	95		80 - 120
Toluene-d8 (Surr)	102		80 - 120
Trifluorotoluene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	88		80 - 120

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

Lab Sample ID: MB 580-301426/5

Matrix: Water

Analysis Batch: 301426

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			05/23/19 10:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		50 - 150		05/23/19 10:41	1
Trifluorotoluene (Surr)	124		50 - 150		05/23/19 10:41	1

Lab Sample ID: LCS 580-301426/6

Matrix: Water

Analysis Batch: 301426

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	1000	958		ug/L		96	79 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	79		50 - 150
Trifluorotoluene (Surr)	142		50 - 150

Lab Sample ID: LCSD 580-301426/7

Matrix: Water

Analysis Batch: 301426

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	967		ug/L		97	79 - 120	1	10

Eurofins TestAmerica, Seattle

QC Sample Results

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

Job ID: 580-86222-1

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

Lab Sample ID: LCSD 580-301426/7

Matrix: Water

Analysis Batch: 301426

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	79		50 - 150
Trifluorotoluene (Surr)	136		50 - 150

Lab Sample ID: MB 580-301602/5

Matrix: Water

Analysis Batch: 301602

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			05/24/19 10:36	1
	ND		250						
Surrogate	MB	MB					Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	74		50 - 150					05/24/19 10:36	1
Trifluorotoluene (Surr)	126		50 - 150					05/24/19 10:36	1

Lab Sample ID: LCS 580-301602/6

Matrix: Water

Analysis Batch: 301602

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte		Spike	LCS	LCS	Unit	D	%Rec	%Rec.
Gasoline		Added	Result	Qualifier	ug/L		101	Limits
		1000	1010					79 - 120
Surrogate	LCS	LCS						
	%Recovery	Qualifier	Limits					
4-Bromofluorobenzene (Surr)	77		50 - 150					
Trifluorotoluene (Surr)	141		50 - 150					

Lab Sample ID: LCSD 580-301602/7

Matrix: Water

Analysis Batch: 301602

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		99	Limits	Limit
		1000	994					79 - 120	1 10
Surrogate	LCSD	LCSD							
	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	78		50 - 150						
Trifluorotoluene (Surr)	139		50 - 150						

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 580-301064/22-A

Matrix: Water

Analysis Batch: 301190

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 301064

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	Result	Qualifier			mg/L		05/20/19 10:23	05/21/19 10:59	5
	ND		0.0040						

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QC Sample Results

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

Job ID: 580-86222-1

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

Lab Sample ID: LCS 580-301064/23-A
Matrix: Water
Analysis Batch: 301190

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 301064

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1.00	1.07		mg/L		107	80 - 120

Lab Sample ID: LCSD 580-301064/24-A
Matrix: Water
Analysis Batch: 301190

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 301064

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	1.00	1.04		mg/L		104	80 - 120	3	20

Lab Sample ID: MB 580-301136/23-A
Matrix: Water
Analysis Batch: 301263

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 301136

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0040		mg/L		05/20/19 19:01	05/21/19 19:01	5

Lab Sample ID: LCS 580-301136/24-A
Matrix: Water
Analysis Batch: 301263

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 301136

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1.00	1.03		mg/L		103	80 - 120

Lab Sample ID: LCSD 580-301136/25-A
Matrix: Water
Analysis Batch: 301263

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 301136

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	1.00	1.05		mg/L		105	80 - 120	2	20

Lab Sample ID: 580-86222-1 MS
Matrix: Water
Analysis Batch: 301263

Client Sample ID: MW-1_20190516
Prep Type: Total Recoverable
Prep Batch: 301136

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	ND		1.00	1.03		mg/L		103	80 - 120

Lab Sample ID: 580-86222-1 MSD
Matrix: Water
Analysis Batch: 301263

Client Sample ID: MW-1_20190516
Prep Type: Total Recoverable
Prep Batch: 301136

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	ND		1.00	0.979		mg/L		98	80 - 120	5	20

Lab Sample ID: 580-86222-1 DU
Matrix: Water
Analysis Batch: 301263

Client Sample ID: MW-1_20190516
Prep Type: Total Recoverable
Prep Batch: 301136

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

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QC Sample Results

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

Job ID: 580-86222-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: 580-86222-1 MS

Matrix: Water

Analysis Batch: 301190

Client Sample ID: MW-1_20190516

Prep Type: Dissolved

Prep Batch: 301064

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	ND		1.00	1.04		mg/L		104	80 - 120

Lab Sample ID: 580-86222-1 MSD

Matrix: Water

Analysis Batch: 301190

Client Sample ID: MW-1_20190516

Prep Type: Dissolved

Prep Batch: 301064

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	ND		1.00	1.11		mg/L		111	80 - 120	7	20

Lab Sample ID: 580-86222-1 DU

Matrix: Water

Analysis Batch: 301190

Client Sample ID: MW-1_20190516

Prep Type: Dissolved

Prep Batch: 301064

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

Lab Chronicle

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

Job ID: 580-86222-1

Client Sample ID: MW-1_20190516

Lab Sample ID: 580-86222-1

Date Collected: 05/16/19 07:30

Matrix: Water

Date Received: 05/16/19 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	300975	05/17/19 19:23	T1W	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	301426	05/23/19 17:01	CJ	TAL SEA
Dissolved	Prep	3005A			301064	05/20/19 10:23	T1H	TAL SEA
Dissolved	Analysis	6020A		5	301190	05/21/19 11:12	FCW	TAL SEA
Total Recoverable	Prep	3005A			301136	05/20/19 19:01	T1H	TAL SEA
Total Recoverable	Analysis	6020A		5	301263	05/21/19 19:14	FCW	TAL SEA

Client Sample ID: MW-2_20190516

Lab Sample ID: 580-86222-2

Date Collected: 05/16/19 08:10

Matrix: Water

Date Received: 05/16/19 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	300975	05/17/19 19:47	T1W	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	301426	05/23/19 17:28	CJ	TAL SEA
Dissolved	Prep	3005A			301064	05/20/19 10:23	T1H	TAL SEA
Dissolved	Analysis	6020A		5	301190	05/21/19 11:51	FCW	TAL SEA
Total Recoverable	Prep	3005A			301136	05/20/19 19:01	T1H	TAL SEA
Total Recoverable	Analysis	6020A		5	301263	05/21/19 19:54	FCW	TAL SEA

Client Sample ID: MW-3_20190516

Lab Sample ID: 580-86222-3

Date Collected: 05/16/19 12:10

Matrix: Water

Date Received: 05/16/19 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	300975	05/17/19 20:12	T1W	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	301426	05/23/19 17:55	CJ	TAL SEA
Dissolved	Prep	3005A			301064	05/20/19 10:23	T1H	TAL SEA
Dissolved	Analysis	6020A		5	301190	05/21/19 11:56	FCW	TAL SEA
Total Recoverable	Prep	3005A			301136	05/20/19 19:01	T1H	TAL SEA
Total Recoverable	Analysis	6020A		5	301263	05/21/19 19:59	FCW	TAL SEA

Client Sample ID: MW-4_20190516

Lab Sample ID: 580-86222-4

Date Collected: 05/16/19 09:40

Matrix: Water

Date Received: 05/16/19 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	300975	05/17/19 20:36	T1W	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	301426	05/23/19 18:22	CJ	TAL SEA
Dissolved	Prep	3005A			301064	05/20/19 10:23	T1H	TAL SEA
Dissolved	Analysis	6020A		5	301190	05/21/19 12:00	FCW	TAL SEA
Total Recoverable	Prep	3005A			301136	05/20/19 19:01	T1H	TAL SEA
Total Recoverable	Analysis	6020A		5	301263	05/21/19 20:03	FCW	TAL SEA

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Lab Chronicle

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

Job ID: 580-86222-1

Client Sample ID: MW-5_20190516

Lab Sample ID: 580-86222-5

Date Collected: 05/16/19 10:50

Matrix: Water

Date Received: 05/16/19 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	300975	05/17/19 21:00	T1W	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	301426	05/23/19 18:49	CJ	TAL SEA
Dissolved	Prep	3005A			301064	05/20/19 10:23	T1H	TAL SEA
Dissolved	Analysis	6020A		5	301190	05/21/19 12:04	FCW	TAL SEA
Total Recoverable	Prep	3005A			301136	05/20/19 19:01	T1H	TAL SEA
Total Recoverable	Analysis	6020A		5	301263	05/21/19 20:08	FCW	TAL SEA

Client Sample ID: MW-6_20190516

Lab Sample ID: 580-86222-6

Date Collected: 05/16/19 09:00

Matrix: Water

Date Received: 05/16/19 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	300975	05/17/19 21:25	T1W	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	301426	05/23/19 19:16	CJ	TAL SEA
Dissolved	Prep	3005A			301064	05/20/19 10:23	T1H	TAL SEA
Dissolved	Analysis	6020A		5	301190	05/21/19 12:08	FCW	TAL SEA
Total Recoverable	Prep	3005A			301136	05/20/19 19:01	T1H	TAL SEA
Total Recoverable	Analysis	6020A		5	301263	05/21/19 20:12	FCW	TAL SEA

Client Sample ID: MW-7_20190516

Lab Sample ID: 580-86222-7

Date Collected: 05/16/19 10:20

Matrix: Water

Date Received: 05/16/19 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	301234	05/21/19 20:05	CJ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	301426	05/23/19 19:43	CJ	TAL SEA
Dissolved	Prep	3005A			301064	05/20/19 10:23	T1H	TAL SEA
Dissolved	Analysis	6020A		5	301190	05/21/19 12:13	FCW	TAL SEA
Total Recoverable	Prep	3005A			301136	05/20/19 19:01	T1H	TAL SEA
Total Recoverable	Analysis	6020A		5	301263	05/21/19 20:17	FCW	TAL SEA

Client Sample ID: MW-8_20190516

Lab Sample ID: 580-86222-8

Date Collected: 05/16/19 11:30

Matrix: Water

Date Received: 05/16/19 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	300975	05/17/19 22:13	T1W	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	301426	05/23/19 20:37	CJ	TAL SEA
Dissolved	Prep	3005A			301064	05/20/19 10:23	T1H	TAL SEA
Dissolved	Analysis	6020A		5	301190	05/21/19 12:17	FCW	TAL SEA
Total Recoverable	Prep	3005A			301136	05/20/19 19:01	T1H	TAL SEA
Total Recoverable	Analysis	6020A		5	301263	05/21/19 20:21	FCW	TAL SEA

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Lab Chronicle

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

Job ID: 580-86222-1

Client Sample ID: Trip Blank_20190516

Lab Sample ID: 580-86222-9

Date Collected: 05/16/19 00:00

Matrix: Water

Date Received: 05/16/19 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	300975	05/17/19 18:35	T1W	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	301602	05/24/19 11:58	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: 580-86222-1

Laboratory: Eurofins TestAmerica, Seattle

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	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
6020A	3005A	Water	Lead
8260B		Water	Benzene
8260B		Water	Ethylbenzene
8260B		Water	Methyl tert-butyl ether
8260B		Water	Toluene
8260B		Water	Xylenes, Total

Sample Summary

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

Job ID: 580-86222-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-86222-1	MW-1_20190516	Water	05/16/19 07:30	05/16/19 14:50	
580-86222-2	MW-2_20190516	Water	05/16/19 08:10	05/16/19 14:50	
580-86222-3	MW-3_20190516	Water	05/16/19 12:10	05/16/19 14:50	
580-86222-4	MW-4_20190516	Water	05/16/19 09:40	05/16/19 14:50	
580-86222-5	MW-5_20190516	Water	05/16/19 10:50	05/16/19 14:50	
580-86222-6	MW-6_20190516	Water	05/16/19 09:00	05/16/19 14:50	
580-86222-7	MW-7_20190516	Water	05/16/19 10:20	05/16/19 14:50	
580-86222-8	MW-8_20190516	Water	05/16/19 11:30	05/16/19 14:50	
580-86222-9	Trip Blank_20190516	Water	05/16/19 00:00	05/16/19 14:50	



Laboratory Management Program (LaMP) Chain of Custody Record

Soil, Sediment and Groundwater Samples

Page 1 of 2

BP Site Node Path: BP 5300 Req Due Date (mm/dd/yy): Standard TAT Rush TAT Yes No X

BP/RM Facility No: BP Facility No. 5300 Lab Work Order Number:

Lab Name: Test America, Inc.	BP/ARC Facility Address: 710 15th Street	Consultant/Contractor: Antea Group
Lab Address: Tacoma, WA	City, State, ZIP Code: Longview, Washington	Consultant/Contractor Project No: 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 Agent: NA	Erifos Proposal No: WR329531/009V4-0008	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	Report Type & QC Level
PM Phone: 360-594-7978	Field Matrix	Limited (Standard) Package
PM Email: wade.melton@bp.com	Start Depth	Limited Plus Package
	End Depth	Full Package
	Depth Unit	
	Grab (s) or Composite (C)	
	Total Number of Containers	
	Analysis	
	MTBE by EPA Method 8260B	
	ATX by EPA Method 8260B	
	NWTFH-GX	
	NWTFH-D w/ silica gel	
	Pb-T by EPA 6010B	
	EDB by EPA 8011	
	EDC by EPA 8260	
Lab No.	Sample Description	Date
MW-1		5/16/19 0730
MW-2		5/16/19 0810
MW-3		5/16/19 1210
MW-4		5/16/19 0940
MW-5		5/16/19 1050
MW-6		5/16/19 0900
MW-7		5/16/19 1020
Sampler's Name: Brad Jackson	Relinquished By/Affiliation	Time
Sampler's Company: Antea Group		1450
Ship Method: Petway		5/16/19
Shipment Tracking No:		
Special Instructions:		
THIS LINE - LAB USE ONLY: Custody Seals in Place: Yes / No Temp Blank: Yes / No Cooler Temp on Receipt: 13 °F/C Trip Blank: Yes / No MS/MSD Sample Submitted: Yes / No		



580-86222 Chain of Custody

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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
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: 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		Phone: 425-498-7711 Email: Megan.Richard@anteagroup.com																
Lab Bottle Order No: NA		Accounting Mode: Provision X OOC-BU OOC-RM		Send/Submit EDD to: Megan.Richard@anteagroup.com																
Other Info: elaine.walker@testamericainc.com		Stage 2_Select (20) Activity Additional Data Collection (100)		Invoice To: BP-RM BP/ARC X																
BP/RM PM: Wade Melton		Sample Details		Requested Analyses																
PM Phone: 360-594-7978				Report Type & QC Level																
PM Email: wade.melton@bp.com				Limited (Standard) Package Limited Plus Package Full Package																
Lab No.	Sample Description	Date	Time	Field Matrix	Start Depth	End Depth	Depth Unit	Grab (G) or Composite (C)	Total Number of Containers	Analysis	BTEX by EPA Method 8260B	MTBE by EPA Method 8260B	NWTFH-Gx	NWTFH-D w/ silica gel	Pb-D Non Field Filled	Pb-T by EPA 6010B	ED8 by EPA 8011	EDC by EPA 8260	Comments	
	MW-1_	5/16/19	0730	W				G	8		X	X	X		X	X				
	MW-2_	5/16/19	0810	W				G	8		X	X	X		X	X				
	MW-3_	5/16/19	1210	W				G	8		X	X	X		X	X				
	MW-4_	5/16/19	0940	W				G	8		X	X	X		X	X				
	MW-5_	5/16/19	1050	W				G	8		X	X	X		X	X				
	MW-6_	5/16/19	0900	W				G	8		X	X	X		X	X				
	MW-7_	5/16/19	1020	W				G	8		X	X	X		X	X				
Sampler's Name: Brad Jackson		Relinquished By / Affiliation		Date	Time	Accepted By / Affiliation		Date	Time											
Sampler's Company: Antea Group		5/16/19 IAG		5/16/19	1450	5/16/19 IAG		5/16/19	1450											
Ship Method: Delivery Ship Date:		5/16/19		5/16/19	1700	5/17/19		0910												
Shipment Tracking No:																				
Special Instructions:																				
THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No Temp Blank: Yes / No Cooler Temp on Receipt: 1.3 °F/C Trip Blank: Yes / No MS/MSD Sample Submitted: Yes / No																				



580-86222 Chain of Custody

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

Page 2 of 2

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

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

Rush TAT Yes No X

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		Phone: 425-498-7711 Email: Megan.Richard@anteagroup.com																
Lab Bottle Order No: NA		Accounting Mode: Provision X OOC-BU OOC-RM		Send/Submit EDD to: Megan.Richard@anteagroup.com																
Other Info: elaine.walker@testamericainc.com		Stage 2 Select (20) Activity Additional Data Collection (100)		Invoice To: BP-RM BP/ARC X																
BP/RM PM: Wade Melton		Sample Details		Requested Analyses																
PM Phone: 360-594-7978				Report Type & QC Level																
PM Email: wade.melton@bp.com				Limited (Standard) Package																
				Limited Plus Package																
				Full Package																
Lab No.	Sample Description	Date	Time	Field Matrix	Start Depth	End Depth	Depth Unit	Grab (G) or Composite (C)	Total Number of Containers	Analysis	BTEX by EPA Method 8260B	MTBE by EPA Method 8260B	NWTPH-Gx	NWTPH-D w silica gel	Pb-D Non Field Filtered	Pb-T by EPA 6010B	EDB by EPA 8011	EOC by EPA 8260	Comments	
	MW-8_	5/16/19	1130	W				G	8		X	X	X		X	X				
	Trip Blank_1			W				G			X		X							
Sampler's Name: Brad Jackson		Relinquished By / Affiliation		Date	Time	Accepted By / Affiliation		Date	Time											
Sampler's Company: Antea Group		A.C.		5/16/19	1450	TAPOR		5/16/19	1450											
Ship Method: Delivery		Ship Date:		5/16/19	1700	Kumpfholtz		5-17-19	0910											
Shipment Tracking No:																				
Special Instructions:																				
THIS LINE - LAB USE ONLY: Custody Seals in Place: Yes / No Temp Blank: Yes / No Cooler Temp on Receipt: 10.3 °F/C Trip Blank: Yes / No MS/MSD Sample Submitted: Yes / No																				

BP LaMP Soil/H2O COC July 2018

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Login Sample Receipt Checklist

Client: Antea USA Inc.

Job Number: 580-86222-1

Login Number: 86222

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	