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Portland, Oregon 97201
Tel 503.220.8201
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www.arcadis-us.com

ENVIRONMENTAL

Ms. Libby Goldstein
Washington State Department of Ecology
3190 160th Ave. SE
Bellevue, Washington 98008-5452

RE: Fourth Quarter 2012 Annual Groundwater Monitoring Report, ARCO Facility No. 00217 (5377) (VCP No. NW2434), 13131 Bothell Everett Hwy, Everett, Washington

Date:
March 28, 2013

Contact:
Alexander Lopez III

Phone:
503.220.8201 x1122

Email:
alex.lopez.iii
@arcadis-us.com

Our ref:
GP09BPNA.WA01.N0000

Dear Ms. Goldstein,

On behalf of BP West Coast Products, LLC (BP), ARCADIS U.S., Inc. (ARCADIS) is pleased to submit this *Fourth Quarter 2012 Annual Groundwater Monitoring Report* for the ARCO Facility No. 00217 (5377) located at 13131 Bothell Everett Hwy in Everett, Washington (the "site"). This letter report summarizes the groundwater monitoring activities conducted at the site during fourth quarter of 2012. The site currently operates as an active retail gasoline station. A site location map is presented on Figure 1 and a site aerial photo is presented on Figure 2.

On November 26, 2012 ARCADIS conducted fourth quarter groundwater monitoring activities at the site. During the groundwater monitoring event, monitoring wells MW-1, MW-2, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9 and MW-10 were gauged and low-flow purged and sampled using a peristaltic pump with new disposable tubing. Field parameters including temperature, pH, electrical conductivity, dissolved oxygen (DO) and oxidation-reduction potential were collected during the purging process using a Yellow Spring Instruments (YSI) 556 water-quality meter. Field parameters were allowed to stabilize prior to sample collection. Groundwater samples collected during the groundwater monitoring event were analyzed for total petroleum hydrocarbons-gasoline range organics (GRO) according to Northwest Method NWTPH-Gx, benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl tertiary-butyl ether (MTBE) by U.S. Environmental Protection Agency (EPA) Method 8260 and total and dissolved lead by EPA method 6010. Samples were collected in laboratory-provided bottles, placed in a cooler with ice, and submitted to Pace Analytical Services in Seattle, Washington, under standard chain-of-custody procedures. Laboratory analytical reports and chain-of-custody documentation are included in Attachment B. Investigation-derived waste generated during groundwater monitoring activities was containerized on site pending characterization and transportation to an appropriate off-site disposal facility. Field data sheets are included in Attachment A.

During the fourth quarter 2012 groundwater monitoring event, conditions at the site remained generally consistent with previous events. Depth to groundwater during the event ranged from 4.89 to 7.52 feet below top of casing (btoc). Groundwater

elevations ranged from 452.55 to 459.22 feet above mean sea level (amsl). The inferred direction of groundwater flow was to the west at a calculated hydraulic gradient of approximately 0.032 vertical feet per lateral foot (ft/ft). Groundwater elevation contours and a summary of analytical results are presented on Figure 3. Analytical results for groundwater samples collected from monitoring wells at the site identified concentrations of constituents of concern (COCs) above the Washington State Department of Ecology Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs). GRO was detected above the Method A CUL in samples collected from monitoring well MW-5 (4,720 micrograms per liter [μg/L]) and MW-6 (814 μg/L). Ethylbenzene was detected above the Method A CUL in the sample collected from MW-5 (1,040 μg/L). Remaining COCs were either not detected above laboratory reporting limits (RLs) or detected above RLs but below their respective Method A CULs. Groundwater gauging data and select analytical results are summarized in Table 1.

The next groundwater monitoring event at the site is scheduled for second quarter 2013. Should you have any questions or if ARCADIS can be of further assistance, please contact Alexander Lopez at 503.220.8201 ext. 1122 or by email at alex.lopez.iii@arcadis-us.com.

Sincerely,

ARCADIS U.S., Inc.

3/28/2013

State of Washington
Hydrogeologist
211
Licensed Geologist
Thomas F. Mullen

Alexander Lopez, LG
Project Geologist

Thomas F. Mullen, LHG
Senior Hydrogeologist

Attachments

Figure 1	Site Location Map
Figure 2	Site Aerial Photo
Figure 3	Groundwater Elevation Contour and Analytical Summary Map, November 26, 2012
Table 1	Groundwater Gauging Data and Select Analytical Results
Attachment A	Groundwater Monitoring Field Data Sheets
Attachment B	Laboratory Reports and Chain-of-Custody Documentation

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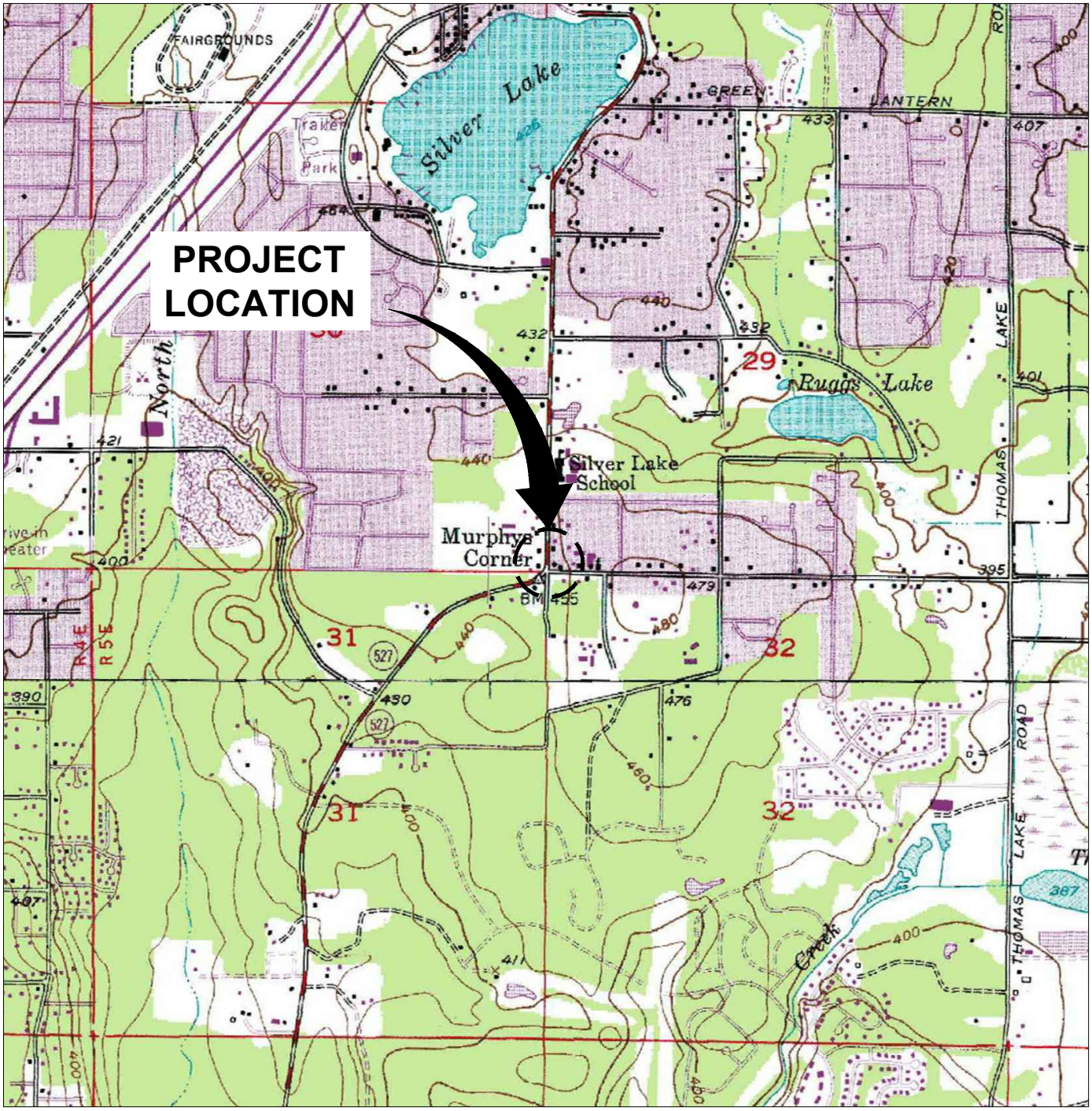
Figures



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD.,EVERETT AND BOTHELL, WA, 1991.

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.

WASHINGTON

ATLANTIC RICHFIELD COMPANY
ARCO FACILITY NO. 00217 (5377)
13131 BOTHELL EVERETT HIGHWAY, EVERETT, WASHINGTON
FOURTH QUARTER 2012 ANNUAL GROUNDWATER MONITORING REPORT

SITE LOCATION MAP

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FIGURE
1

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS LD:--- PIC:--- PM: S. DAVIS TM: T. POTTER LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\Emeryville\ACT\GP09BPNA\WA01\N0000\4Q-2012-GWMR\DWG\GP09BPNAWA01 N01.dwg LAYOUT: 1 SAVED: 1/7/2013 3:47 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 1/7/2013 3:48 PM BY: REYES, ALEC

IMAGE: GOOGLE EARTH PRO

0 200' 400'

Scale: 1 in. = 200 ft.

ATLANTIC RICHFIELD COMPANY
ARCO FACILITY NO. 00217 (5377)
13131 BOTHELL EVERETT HIGHWAY, EVERETT, WASHINGTON
FOURTH QUARTER 2012 ANNUAL GROUNDWATER MONITORING REPORT

SITE AERIAL PHOTO

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FIGURE
2

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS LD:--- PIC:--- PM: S. DAVIS TM: T. POTTER LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\Emeryville\ACT\GP09BPNA\WA01\N0000\4Q-2012-GWMR\DWG\GP09BPNAWA01 B02.dwg LAYOUT: 2 SAVED: 1/7/2013 3:49 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 1/7/2013 3:51 PM BY: REYES, ALEC

MW-1						
DATE	GRO	B	T	E	X	MTBE
5/10/2011	< 100	< 0.200	< 1.00	< 1.00	< 3.00	< 1.00
12/5/2011	< 50.0	< 0.20	< 1.0	< 1.0	< 3.0	< 1.0
3/9/2012	< 50.0	< 0.20	< 1.0	< 1.0	< 3.0	< 1.00
11/26/2012	< 100	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0

MW-5						
DATE	GRO	B	T	E	X	MTBE
5/10/2011	8,170	< 2.00	< 10.0	281	1,194	< 10.0
12/2/2011	11,000	0.87	1.3	448	845	< 1.0
3/9/2012	14,000	0.62	2.9	514	1,610	< 1.0
11/26/2012	4,720	< 10.0	< 10.0	1,040	940	< 10.0

MW-2						
DATE	GRO	B	T	E	X	MTBE
5/10/2011	938	1.66	< 1.00	74.6	97.9	< 1.00
12/2/2011	4,120	0.82	< 1.9	348	412	< 1.0
3/9/2012	195	< 0.20	< 1.0	23.8	10.7	< 1.0
11/26/2012	330	< 1.0	< 1.0	33.4	9.6	< 1.0

MW-6						
DATE	GRO	B	T	E	X	MTBE
5/10/2011	< 100	< 0.200	< 1.00	< 1.00	< 3.00	< 1.00
12/5/2011	< 50.0	< 0.20	< 1.0	< 1.0	< 3.0	< 1.0
3/9/2012	< 50.0	< 0.20	< 1.0	< 1.0	< 3.0	< 1.0
11/26/2012	814	< 1.0	< 1.0	79.3	66.4	< 1.0

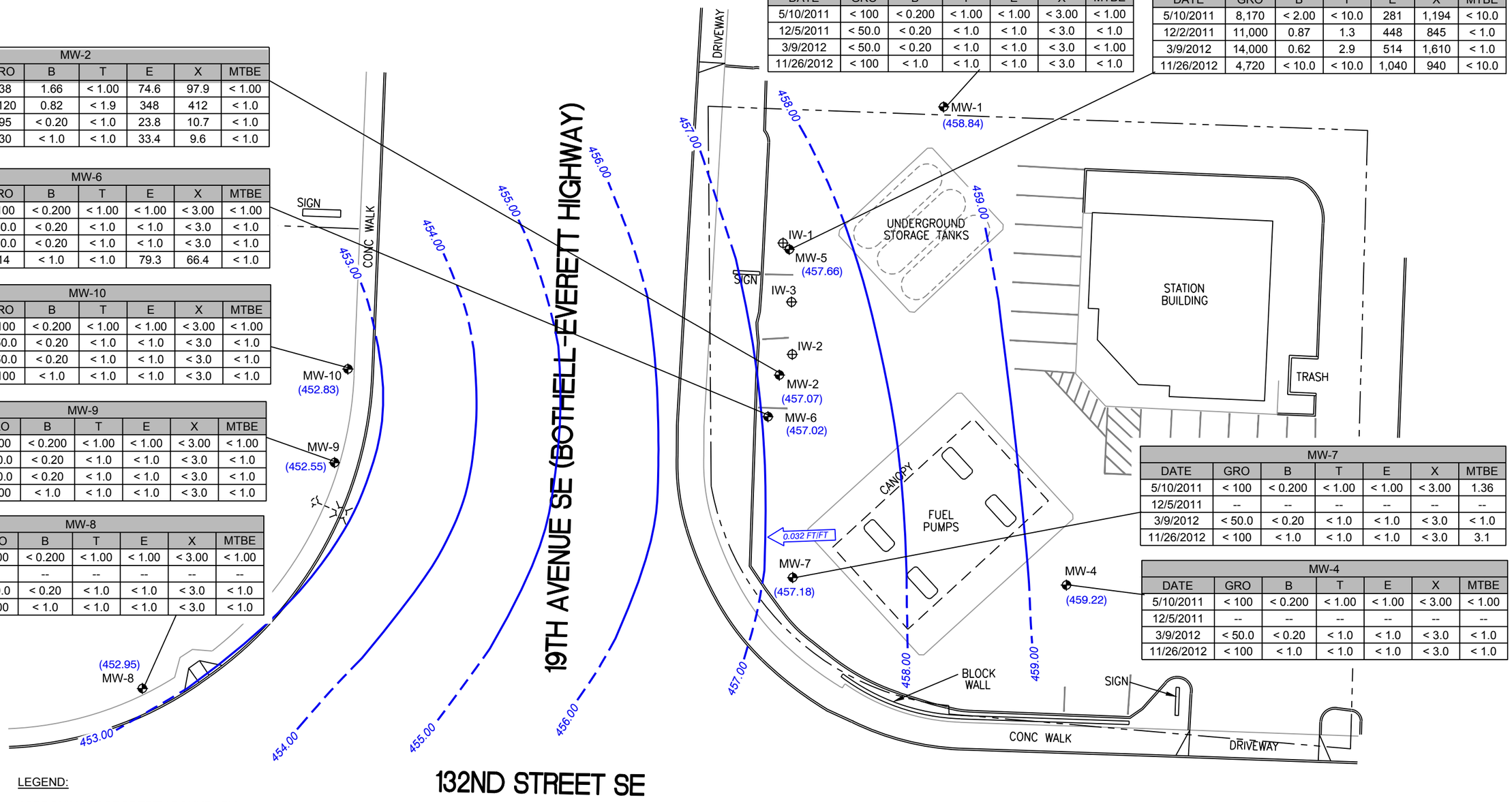
MW-10						
DATE	GRO	B	T	E	X	MTBE
5/10/2011	< 100	< 0.200	< 1.00	< 1.00	< 3.00	< 1.00
12/5/2011	< 50.0	< 0.20	< 1.0	< 1.0	< 3.0	< 1.0
3/9/2012	< 50.0	< 0.20	< 1.0	< 1.0	< 3.0	< 1.0
11/26/2012	< 100	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0

MW-9						
DATE	GRO	B	T	E	X	MTBE
5/10/2011	< 100	< 0.200	< 1.00	< 1.00	< 3.00	< 1.00
12/5/2011	< 50.0	< 0.20	< 1.0	< 1.0	< 3.0	< 1.0
3/9/2012	< 50.0	< 0.20	< 1.0	< 1.0	< 3.0	< 1.0
11/26/2012	< 100	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0

MW-8						
DATE	GRO	B	T	E	X	MTBE
5/10/2011	< 100	< 0.200	< 1.00	< 1.00	< 3.00	< 1.00
12/5/2011	--	--	--	--	--	--
3/9/2012	< 50.0	< 0.20	< 1.0	< 1.0	< 3.0	< 1.0
11/26/2012	< 100	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0

MW-7						
DATE	GRO	B	T	E	X	MTBE
5/10/2011	< 100	< 0.200	< 1.00	< 1.00	< 3.00	1.36
12/5/2011	--	--	--	--	--	--
3/9/2012	< 50.0	< 0.20	< 1.0	< 1.0	< 3.0	< 1.0
11/26/2012	< 100	< 1.0	< 1.0	< 1.0	< 3.0	3.1

MW-4						
DATE	GRO	B	T	E	X	MTBE
5/10/2011	< 100	< 0.200	< 1.00	< 1.00	< 3.00	< 1.00
12/5/2011	--	--	--	--	--	--
3/9/2012	< 50.0	< 0.20	< 1.0	< 1.0	< 3.0	< 1.0
11/26/2012	< 100	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0



LEGEND:

——— - - - ———	APPROXIMATE PROPERTY BOUNDARY
MW-3 ⊕	GROUNDWATER MONITORING WELL LOCATION
IW-1 ⊕	INJECTION WELL LOCATION
0.032 FT/FT	APPROXIMATE GROUNDWATER FLOW DIRECTION AND HYDRAULIC GRADIENT IN FEET PER FOOT(FT/FT)
456.00	GROUNDWATER ELEVATION CONTOUR (FEET ABOVE MEAN SEA LEVEL) (DASHED WHERE INFERRED)
(457.02)	GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

GRO	TOTAL PETROLEUM HYDROCARBONS, GASOLINE RANGE ORGANICS
B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	TOTAL XYLENES

NOTE: ALL CONCENTRATIONS IN MICROGRAMS PER LITER (µg/L)

0 30' 60'
GRAPHIC SCALE

ATLANTIC RICHFIELD COMPANY
ARCO FACILITY NO. 00217 (5377)
13131 BOTHELL EVERETT HIGHWAY, EVERETT, WASHINGTON
FOURTH QUARTER 2012 ANNUAL GROUNDWATER MONITORING REPORT

GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL SUMMARY MAP NOVEMBER 26, 2012

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FIGURE
3

CITY:(Reqd) DIV/GROUP:(Reqd) DB:(Reqd) LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF* PAGESETUP: ---- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 3/26/2013 1:16 PM BY: REYES, ALEC
G:\ENVCAD\Emeryville\ACT\GP09BPNA\WA01\N0000\4Q-2012-GWMR\DWG\GP09BPNAWA01 W03.dwg LAYOUT: 3 SAVED: 3/12/2013 11:52 AM ACADVER: 18.1S (LMS TECH)

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Tables

Table 1
Groundwater Gauging Data and Select Analytical Results
WA-00217 (05377)

13131 Bothell Everett Hwy, Everett, WA 98208

All analytical results are presented in micrograms per liter (µg/L)

Well	Date	Notes	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	EDC	Total Lead	Dissolved Lead
Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs) in µg/L							**800/1,000**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**20**	**0.01**	**5**	**15**	**15**
IW-1	12/12/2012		--	--	--	--	**885**	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	<3.0	<3.0
IW-3	12/12/2012		--	--	--	--	<100	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	<3.0	<3.0
MW-1	7/2/2004	(P)	101.93	6.50	--	95.43	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<2.00	<0.010	<1.00	**22.3**	<1.00
MW-1	9/27/2004	(P)	101.93	6.60	--	95.33	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<1.00	--	--	<1.00	<1.00
MW-1	11/10/2004	(P)	101.93	6.11	--	95.82	<80.0	--	--	<0.200	<0.500	<0.500	<1.00	<2.00	--	--	11.9	<1.00
MW-1	2/22/2005	(P)	101.93	5.15	--	96.78	<80.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
MW-1	5/18/2005	(P)	101.93	4.76	--	97.17	<80.0	--	--	<0.200	<0.500	<0.500	<1.00	<2.00	--	--	<1.00	<1.00
MW-1	8/16/2005	(P)	101.93	6.36	--	95.57	<80.0	--	--	<0.200	<0.500	<0.500	<1.00	<2.00	--	--	<1.00	--
MW-1	11/10/2005	(P)	101.93	5.98	--	95.95	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<1.00	--	--	<1.00	<1.00
MW-1	1/12/2006	(NP)	101.93	4.06	--	97.87	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<1.00	<0.010	<1.00	<1.00	--
MW-1	4/13/2006	(NS)	101.93	5.32	--	96.61	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	7/7/2006	(NS)	101.93	6.79	--	95.14	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	7/2/2007	(NS)	101.93	6.52	--	95.41	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	7/9/2008	(NP)	101.93	5.49	--	96.44	<50.0	--	--	<0.500	<0.500	<0.500	<3.00	--	--	--	--	--
MW-1	8/13/2009	(NP)	101.93	9.15	--	92.78	<50.0	--	--	<1.00	<1.00	<1.00	<2.00	--	--	--	2.1	<2.00
MW-1	6/23/2010	(P)	464.68	4.35	--	460.33	<50	--	--	<1.0	<1.0	<1.0	<3	--	--	--	--	--
MW-1	6/23/2010	(Dup)(P)	464.68	4.35	--	460.33	<50	--	--	<1.0	<1.0	<1.0	<3	--	--	--	--	--
MW-1	8/24/2010		--	--	--	--	<50.0	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	<10.0
MW-1	12/7/2010	(LF)	464.68	5.31	--	459.37	<50	--	--	<1.0	<1.0	<1.0	<2.0	<1.0	--	--	3.9	--
MW-1	12/7/2010	(Dup)(LF)	464.68	5.31	--	459.37	<50	--	--	<1.0	<1.0	<1.0	<2.0	<1.0	--	--	<2.0	--
MW-1	3/29/2011	(LF)	464.68	4.25	0.0	460.43	<50	--	--	<1.0	<1.0	<1.0	<2.0	<1.0	--	--	<2.0	--
MW-1	5/10/2011	(LF)	464.68	3.90	0.0	460.78	<100	--	--	<0.200	<1.00	<1.00	<3	<1.00	--	--	1.70	--
MW-1	12/2/2011	(LF)	464.68	7.23	0.0	457.45	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	12/5/2011		--	--	--	--	<50.0	--	--	<0.20	<1.0	<1.0	<3.0	<1.0	--	--	--	--
MW-1	3/9/2012	(LF)	464.68	4.31	0.0	460.37	<50.0	--	--	<0.20	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	--
MW-1	11/26/2012	(LF)	464.68	5.84	0.0	458.84	<100	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	<3.0	<3.0
MW-2	7/2/2004	(P)	99.57	7.57	--	92.00	**20,300**	--	--	**70.2**	15.9	**1,900**	**4,060**	<2.00	<0.010	<1.00	2.18	<1.00
MW-2	9/27/2004	(P)	99.57	7.35	--	92.22	**3,310**	--	--	**32.3**	2.79	412	309	<5.00	--	--	<1.00	<1.00
MW-2	11/10/2004	(P)	99.57	6.68	--	92.89	**10,700**	--	--	**96.5**	11.9	**1,430**	**3,370**	<20.0	--	--	<1.00	<1.00
MW-2	2/22/2005	(P)	99.57	5.60	--	93.97	**16,400**	--	--	**55.4**	42.8	**1,630**	**3,580**	--	--	--	--	--
MW-2	5/18/2005	(NS)	99.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	8/16/2005	(P)	99.57	7.08	--	92.49	**9,100**	--	--	**16.4**	13.3	**1,200**	**2,490**	<20.0	--	--	<1.00	--
MW-2	11/10/2005	(P)	99.57	5.45	--	94.12	**14,400**	--	--	**15.7**	466	**1,020**	**3,370**	<10.0	--	--	<1.00	<1.00
MW-2	1/12/2006	(NP)	99.57	4.10	--	95.47	**10,200**	--	--	**17.9**	134	**1,140**	**2,530**	2.35	<0.010	<1.00	<1.00	--
MW-2	4/13/2006	(P)	99.57	5.01	--	94.56	**1,330**	--	--	0.6	0.93	128	124	<1.00	<0.010	<1.00	<1.00	<1.00
MW-2	7/7/2006	(P)	99.57	6.85	--	92.72	**8,330**	--	--	<5.00	9.1	**946**	**1,080**	<10.0	<0.010	<10.0	<1.00	--

Table 1
Groundwater Gauging Data and Select Analytical Results
WA-00217 (05377)

13131 Bothell Everett Hwy, Everett, WA 98208

All analytical results are presented in micrograms per liter (µg/L)

Well	Date	Notes	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	EDC	Total Lead	Dissolved Lead
Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs) in µg/L							**800/1,000**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**20**	**0.01**	**5**	**15**	**15**
MW-2	7/2/2007	(P)	99.57	7.35	--	92.22	**3,430**	--	--	2.77	7.41	**952**	638	--	--	--	--	--
MW-2	7/9/2008	(NP)	99.57	6.60	--	92.97	**2,730**	--	--	**5.8**	1.44	612	572	--	--	--	--	--
MW-2	8/13/2009	(NP)	99.57	9.54	--	90.03	**6,000**	--	--	2.1	3.4	**1,600**	320	--	--	--	<2.00	<2.00
MW-2	6/23/2010	(P)	462.74	5.01	--	457.73	**4,100**	--	--	2.4	1.3	560	98.5	--	--	--	--	--
MW-2	8/24/2010		--	--	--	--	**2,720**	--	--	2.7	1.5	567	67.5	<1.0	--	--	<10.0	<10.0
MW-2	12/7/2010	(LF)	462.74	5.96	--	456.78	**1,500**	--	--	1.7	<1.0	95	2.9	<1.0	--	--	<2.0	--
MW-2	3/29/2011	(LF)	462.35	4.54	0.0	457.81	**1,400**	--	--	2.3	<1.0	140	21	<1.0	--	--	<2.0	--
MW-2	5/10/2011	(LF)	462.35	4.41	0.0	457.94	**938**	--	--	1.66	<1.00	74.6	97.9	<1.00	--	--	<0.40	--
MW-2	5/10/2011	(Dup)(LF)	462.35	4.41	0.0	457.94	**835**	--	--	2.02	<1.00	89.3	116.5	<1.00	--	--	--	--
MW-2	12/2/2011	(LF)	462.35	6.38	0.0	455.97	**4,120**	--	--	0.82	1.9	348	412	<1.0	--	--	--	--
MW-2	3/9/2012	(LF)	462.35	4.94	0.0	457.41	195	--	--	<0.20	<1.0	23.8	10.7	<1.0	--	--	<10.0	--
MW-2	11/26/2012	(LF)	462.35	5.28	0.0	457.07	330	--	--	<1.0	<1.0	33.4	9.6	<1.0	--	--	<3.0	<3.0
MW-3	7/2/2004	(P)	101.18	8.88	--	92.30	**2,100**	--	--	<0.500	<0.500	<0.500	7.71	**24.2**	<0.010	<1.00	<1.00	<1.00
MW-3	9/27/2004	(P)	101.18	8.08	--	93.10	593	--	--	<0.500	<0.500	0.892	1.92	<1.00	--	--	<1.00	<1.00
MW-3	11/10/2004	(P)	101.18	11.11	--	90.07	<80.0	--	--	<0.200	<0.500	<0.500	<1.00	<2.00	--	--	<1.00	<1.00
MW-3	1/7/2005	(ABANDONED)	101.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	7/2/2004	(P)	103.99	8.41	--	95.58	<50.0	--	--	<0.500	<0.500	1.17	2.36	<2.00	<0.010	<1.00	1.93	<1.00
MW-4	9/27/2004	(P)	103.99	8.60	--	95.39	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<1.00	--	--	<1.00	--
MW-4	11/10/2004	(P)	103.99	7.62	--	96.37	<80.0	--	--	<0.200	<0.500	<0.500	<1.00	<2.00	--	--	<1.00	<1.00
MW-4	2/22/2005	(P)	103.99	7.02	--	96.97	<80.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
MW-4	5/18/2005	(P)	103.99	6.04	--	97.95	<80.0	--	--	<0.200	<0.500	<0.500	<1.00	<2.00	--	--	<1.00	<1.00
MW-4	8/16/2005	(P)	103.99	7.66	--	96.33	<80.0	--	--	<0.200	<0.500	<0.500	<1.00	<2.00	--	--	<1.00	--
MW-4	11/10/2005	(P)	103.99	7.42	--	96.57	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<1.00	--	--	<1.00	<1.00
MW-4	1/12/2006	(NP)	103.99	5.28	--	98.71	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<1.00	<0.010	<1.00	1.29	--
MW-4	4/13/2006	(NS)	103.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	7/7/2006	(NS)	103.99	7.59	--	96.40	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	7/2/2007	(NS)	103.99	8.50	--	95.49	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	7/9/2008	(NP)	103.99	7.59	--	96.40	<50.0	--	--	<0.500	<0.500	<0.500	<3.00	--	--	--	--	--
MW-4	8/13/2009	(NP)	103.99	10.15	--	93.84	<50.0	--	--	<1.00	<1.00	<1.00	<2.00	--	--	--	4.4	<2.00
MW-4	6/23/2010	(P)	466.74	6.86	--	459.88	<50	--	--	<1.0	<1.0	<1.0	<3	--	--	--	--	--
MW-4	12/7/2010	(LF)	466.74	7.53	--	459.21	<50	--	--	<1.0	<1.0	<1.0	<2.0	<1.0	--	--	<2.0	--
MW-4	3/29/2011	(LF)	466.74	5.71	0.0	461.03	<50	--	--	<1.0	<1.0	<1.0	<2.0	<1.0	--	--	<2.0	--
MW-4	5/10/2011	(LF)	466.74	5.23	0.0	461.51	<100	--	--	<0.200	<1.00	<1.00	<3	<1.00	--	--	<0.40	--
MW-4	12/2/2011	(NS)	466.74	8.79	0.0	457.95	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	3/9/2012	(LF)	466.74	6.53	0.0	460.21	<50.0	--	--	<0.20	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	--
MW-4	11/26/2012	(LF)	466.74	7.52	0.0	459.22	<100	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	<3.0	<3.0

Table 1
Groundwater Gauging Data and Select Analytical Results
WA-00217 (05377)

13131 Bothell Everett Hwy, Everett, WA 98208

All analytical results are presented in micrograms per liter (µg/L)

Well	Date	Notes	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	EDC	Total Lead	Dissolved Lead
Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs) in µg/L							**800/1,000**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**20**	**0.01**	**5**	**15**	**15**
MW-5	12/7/2010	(LF)	--	4.88	--	--	**25,000**	--	--	1.9	3.7	**900**	**3,200**	<1.0	--	--	<2.0	--
MW-5	3/29/2011	(LF)	462.55	3.17	0.0	459.38	**1,900**	--	--	<1.0	<1.0	62	140	<1.0	--	--	<2.0	--
MW-5	5/10/2011	(LF)	462.55	3.23	0.0	459.32	**8,170**	--	--	<2.00	<10.0	281	**1,194**	<10.0	--	--	2.40	--
MW-5	12/2/2011	(LF)	462.55	6.47	0.0	456.08	**11,000**	--	--	0.87	1.3	448	845	<1.0	--	--	--	--
MW-5	3/9/2012	(LF)	462.55	3.79	0.0	458.76	**14,000**	--	--	0.62	2.9	514	**1,610**	<1.0	--	--	<10.0	--
MW-5	11/26/2012	(LF, a)	462.55	4.89	0.0	457.66	**4,720**	--	--	<10.0	<10.0	**1,040**	940	<10.0	--	--	<3.0	<3.0
MW-6	12/7/2010	(LF)	--	6.01	--	--	<50	--	--	<1.0	<1.0	<1.0	<2.0	<1.0	--	--	<2.0	--
MW-6	3/29/2011	(LF)	462.29	4.70	0.0	457.59	<50	--	--	<1.0	<1.0	<1.0	<2.0	<1.0	--	--	<2.0	--
MW-6	3/29/2011	(Dup)(LF)	462.29	4.70	0.0	457.59	<50	--	--	<1.0	<1.0	<1.0	<2.0	<1.0	--	--	<2.0	--
MW-6	5/10/2011	(LF)	462.29	4.51	0.0	457.78	<100	--	--	<0.200	<1.00	<1.00	<3	<1.00	--	--	5.60	--
MW-6	12/2/2011	(LF)	462.29	6.53	0.0	455.76	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	12/5/2011		--	--	--	--	<50.0	--	--	<0.20	<1.0	<1.0	<3.0	<1.0	--	--	--	--
MW-6	3/9/2012	(LF)	462.29	4.98	0.0	457.31	<50.0	--	--	<0.20	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	--
MW-6	11/26/2012	(LF)	462.29	5.27	0.0	457.02	**814**	--	--	<1.0	<1.0	79.3	66.4	<1.0	--	--	<3.0	<3.0
MW-7	12/7/2010	(LF)	--	7.01	--	--	67	--	--	<1.0	<1.0	<1.0	<2.0	5.1	--	--	<2.0	--
MW-7	3/29/2011	(LF)	463.37	4.62	0.0	458.75	<50	--	--	<1.0	<1.0	<1.0	<2.0	1.1	--	--	<2.0	--
MW-7	5/10/2011	(LF)	463.37	5.10	0.0	458.27	<100	--	--	<0.200	<1.00	<1.00	<3	1.36	--	--	5.20	--
MW-7	12/2/2011	(NS)	463.37	7.37	0.0	456.00	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	3/9/2012	(LF)	463.37	5.88	0.0	457.49	<50.0	--	--	<0.20	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	--
MW-7	11/26/2012	(LF)	463.37	6.19	0.0	457.18	<100	--	--	<1.0	<1.0	<1.0	<3.0	3.1	--	--	7.4	<3.0
MW-8	12/7/2010	(LF)	--	6.79	--	--	<50	--	--	<1.0	<1.0	<1.0	<2.0	<1.0	--	--	13	--
MW-8	3/29/2011	(LF)	457.91	5.38	0.0	452.53	<50	--	--	<1.0	<1.0	<1.0	<2.0	<1.0	--	--	9.5	--
MW-8	5/10/2011	(LF)	457.91	5.12	0.0	452.79	<100	--	--	<0.200	<1.00	<1.00	<3	<1.00	--	--	14	--
MW-8	12/2/2011	(NS)	457.91	6.49	0.0	451.42	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	3/9/2012	(LF)	457.91	5.15	0.0	452.76	<50.0	--	--	<0.20	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	--
MW-8	11/26/2012	(LF)	457.91	4.96	0.0	452.95	<100	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	<3.0	<3.0
MW-9	12/7/2010	(LF)	--	7.67	--	--	<50	--	--	<1.0	<1.0	<1.0	<2.0	<1.0	--	--	8.3	--
MW-9	3/29/2011	(LF)	459.40	6.60	0.0	452.80	<50	--	--	<1.0	<1.0	<1.0	<2.0	<1.0	--	--	2.6	--
MW-9	5/10/2011	(LF)	459.40	6.67	0.0	452.73	<100	--	--	<0.200	<1.00	<1.00	<3	<1.00	--	--	1.30	--
MW-9	12/2/2011	(LF)	459.40	7.38	0.0	452.02	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	12/5/2011		--	--	--	--	<50.0	--	--	<0.20	<1.0	<1.0	<3.0	<1.0	--	--	--	--
MW-9	3/9/2012	(LF)	459.40	6.84	0.0	452.56	<50.0	--	--	<0.20	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	--
MW-9	11/26/2012	(LF)	459.40	6.85	0.0	452.55	<100	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	3.4	<3.0
MW-10	12/7/2010	(LF)	--	7.42	--	--	<50	--	--	<1.0	<1.0	<1.0	<2.0	<1.0	--	--	8.6	--
MW-10	3/29/2011	(LF)	459.28	6.28	0.0	453.00	<50	--	--	<1.0	<1.0	<1.0	<2.0	<1.0	--	--	3.1	--
MW-10	5/10/2011	(LF)	459.28	6.44	0.0	452.84	<100	--	--	<0.200	<1.00	<1.00	<3	<1.00	--	--	14	--

Table 1
Groundwater Gauging Data and Select Analytical Results
WA-00217 (05377)

13131 Bothell Everett Hwy, Everett, WA 98208

All analytical results are presented in micrograms per liter (µg/L)

Well	Date	Notes	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	EDC	Total Lead	Dissolved Lead
Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs) in µg/L							**800/1,000**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**20**	**0.01**	**5**	**15**	**15**
MW-10	12/2/2011	(LF)	459.28	7.00	0.0	452.28	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	12/5/2011		--	--	--	--	<50.0	--	--	<0.20	<1.0	<1.0	<3.0	<1.0	--	--	--	--
MW-10	3/9/2012	(LF)	459.28	6.54	0.0	452.74	<50.0	--	--	<0.20	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	--
MW-10	11/26/2012	(LF)	459.28	6.45	0.0	452.83	<100	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	<3.0	<3.0

- = Not analyzed/not applicable
(a) = Drawdown greater than 3 feet observed during sampling.
800/1,000 = GRO MTCA Method A Cleanup Level with benzene present is 800 µg/L and without is 1,000 µg/L
BTEX = Benzene, toluene, ethylbenzene, and total xylenes
DRO = Total petroleum hydrocarbons - diesel range organics, analysis by Northwest Method NWTPH-Dx
DTW = Depth to Water below TOC
DUP = Duplicate sample location
EDB = Ethylene dibromide
EDC = 1,2-Dichloroethane
GRO = Total petroleum hydrocarbons - gasoline range organics, analysis by Northwest Method NWTPH-Gx
GWE = Groundwater elevation in feet above msl
HO = Total petroleum hydrocarbons - heavy oil range organics analysis by Northwest Method NWTPH-Dx
LF = Low flow purge and sample
msl = Mean sea level
MTBE = Methyl tertiary butyl ether
NAPL = Non-aqueous phase liquid
NP = No purge sample
NS = Not sampled
P = Bailer purge and sample
TOC = Top of casing in feet above msl
All analytical results are in micrograms per liter (µg/L)
BTEX, MTBE, and EDC by 8260B or EPA 8021B, lead by EPA 200.8 or EPA 6000/7000 Series, EDB by EPA 8011
Data collected prior to 2010 have been provided by previous consultants and are included as historical reference only
Groundwater elevation -if NAPL is present, the elevation is corrected according to the following formula, (TOC elevation - depth to water) + (0.75 x LNAPL thickness).
Wells were surveyed by Otak inc. during the first quarter 2010 and are referenced to mean sea level NAVD 88

BOLD constituent detected above MTCA Cleanup Levels

ARCADIS

Attachment A

Groundwater Monitoring
Field Data Sheets

ARCADIS

Groundwater Monitoring Well Gauging Form

Site ID: WA-00217 Project #: GP09BPNA.WA01.K0000

Site Address: 13131 Bothell Everett Highway, Ever Date: 11/26/12

Well ID	Time	Sheen/ Odor	LNAPL Depth	LNAPL Thickness	DTW	TD	Notes
MW-1	8:16	No / No	[illegible]	--	5.87	17.85	W.S.V. 0.0 ppm
MW-2	7:43	No / No	--	--	5.28	19.61	W.S.V. 5.2 ppm
MW-4	8:36	No / No	--	--	7.52	23.69	W.S.V. 0.0 ppm
MW-5	8:05	No / Yes	--	--	4.87	14.50	W.S.V. 3.2 ppm
MW-6	7:58	No / No	--	--	5.27	11.21	W.S.V. 2.2 ppm
MW-7	8:26	No / No	--	--	6.19	13.78	W.S.V. 0.4 ppm
MW-8	9:02	No / No	--	--	4.96	13.65	W.S.V. 0.0 ppm
MW-9	9:13	No / No	--	--	6.85	14.20	W.S.V. 0.4 ppm
MW-10	9:18	No / No	--	--	6.45	14.11	0.0 ppm

ARCADIS Low Flow Groundwater Purging and Sampling Form

Page 1 of 1

Project No. GP09BPNA.WA01.K0000 Well ID MW-6 Date 11/22/12

Project Name/Location WA-00217/ 13131 Bothell Everett Highway, Everett, WA Weather Sunny, cold (40°F)

Measuring Pt. Description TOC Screen Setting (ft-bmp) 4-14 Casing Diameter (in.) 1 Well Material ✓ PVC ___ SS

Static Water Level (ft-btoc) 4.96 Total Depth (ft-btoc) 13.65 Water Column/ Gallons in Well 8.65' / 0.35 gal Wellhead PID Reading (ppm) 0.0

TOC Elevation NA Pump Intake (ft-btoc) 9 Purge Method: Low Flow Sample Method Low Flow

Pump On/Off 9:24 / 9:36 Volumes Purged <1 Peristaltic x Submersible ___ Bladder ___

Sample Time: Label 9:40 Start 9:40 End 9:36 Replicate/ Code No. NA Water Quality Meter Make/Model: YSI 556 MPS Horiba U-52 Sampled by RH

Stabilization parameters 3 readings *(not reqr'd by SOP)*: 0.1 3% 10% *(10%)* 3% *(10%)*

Time (approx. 3-5 minute interval)	Minutes Elapsed	Rate 0.05-0.13 (gpm) 200-500 (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox orp (mV)	Appearance Color	Appearance Odor
9:27	3	200	5.25	0.16	5.31	0.279	—	2.22	11.96	123.9	olive	NA
9:30	6	200	5.24	0.32	5.35	0.259	—	0.88	11.94	120.8	↓	↓
9:33	9	200	5.26	0.48	5.39	0.247	—	0.79	11.79	116.8	↓	↓
9:36	12	200	5.27	0.63	5.43	0.242	—	0.75	11.74	119.4	clear	↓
9:39	15	200	5.28	0.79	5.44	0.244	—	0.73	11.75	119.4	↓	↓
Approx. value difference b/t 3rd & 2nd to last reading:												
Approx. value difference b/t 2nd to last & final reading:												

Constituents Sampled	Container	Number	Preservative
GRO / MTBE / BTEX	VOA	6	HCl
Total Pb	Poly	1	HNO_3
Dissolved Pb	Poly	1	none

Well Casing Volumes

Gallons/Foot 1" = 0.04 1.5" = 0.09 2.5" = 0.26 3.5" = 0.50 6" = 1.47
1.25" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65

Well Information

Well Location: SW corner B-E Hwy & 19th Ave intersection Well Locked at Arrival: Yes / No

Condition of Well: good Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up Key Number To Well: NA

ARCADIS Low Flow Groundwater Purging and Sampling Form

Project No. GP09BPNA.WA01.K0000 Well ID MW-9 Date 11/26/12

Project Name/Location WA-00217/ 13131 Bothell Everett Highway, Everett, WA Weather Sunny, 45°F

Measuring Pt. Description TOC Screen Setting (ft-bmp) 4-14 Casing Diameter (in.) 1 Well Material ✓ PVC ___ SS

Static Water Level (ft-btoc) 6.85 Total Depth (ft-btoc) 14.28 Water Column/ Gallons in Well 7.43 / 0.30 Wellhead PID Reading (ppm) 0.4

TOC Elevation NA Pump Intake (ft-btoc) 10 Purge Method: Low Flow; Peristaltic x; Submersible ___; Bladder ___ Sample Method Low Flow

Pump On/Off 10:22/10:36 Volumes Purged <1

Sample Time: Label 10:40 Start 10:36 End 10:30 Replicate/ Code No. N/A Water Quality Meter Make/Model: YSI 556 MPS Horiba U-52 Sampled by RH

Stabilization parameters 3 readings *(not reqr'd by SOP)*: 0.1 pH, 3% Cond. (µMhos), 10% Turbidity, (10%) Dissolved Oxygen, 3% Temp. (°C), (10%) Redox

Time (approx. 3-5 minute interval)	Minutes Elapsed	Rate 0.05-0.13 (gpm) 200-500 (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance Color	Appearance Odor
10:25	3	200	7.00	0.16	5.05	0.173	—	4.15	10.70	137.6	grayish	NO
10:28	6	200	7.09	0.32	5.08	0.166	—	2.33	11.41	134.8	↓	↓
10:31	9	200	7.12	0.48	5.14	0.167	—	2.02	11.52	131.4		
10:34	12	200	7.11	0.63	5.15	0.169	—	1.53	11.58	129.0		
10:37	15	200	7.12	0.79	5.18	0.169	—	1.40	11.61	126.7		
Approx. value difference b/t 3rd & 2nd to last reading:					0.01	0.002	—	0.44	0.06	2.4		
Approx. value difference b/t 2nd to last & final reading:					0.03	0.000	—	0.13	0.03	2.3		

Constituents Sampled	Container	Number	Preservative
GRO / MTBE / BTEX	VOA	6	HCl
Total Pb	Poly	1	HNO3
Dissolved Pb	Poly	1	none

Well Casing Volumes

Gallons/Foot: 1" = 0.04; 1.25" = 0.06; 1.5" = 0.09; 2" = 0.16; 2.5" = 0.26; 3" = 0.37; 3.5" = 0.50; 4" = 0.65; 6" = 1.47

Well Information

Well Location: SW corner of intersection B-E Hwy + 164th Ave Well Locked at Arrival: Yes / No

Condition of Well: good Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up Key Number To Well: NA

ARCADIS Low Flow Groundwater Purging and Sampling Form

Page 1 of ____

Project No. GP09BPNA.WA01.K0000 Well ID MW-10 Date 11/26/12

Project Name/Location WA-00217/ 13131 Bothell Everett Highway, Everett, WA Weather Sunny, 40°F

Measuring Pt. Description TOC Screen Setting (ft-bmp) 4-14 Casing Diameter (in.) 1 Well Material ✓ PVC ___ SS

Static Water Level (ft-btoc) 6.45 Total Depth (ft-btoc) 14.11 Water Column/ Gallons in Well 7.66 / 0.31 Wellhead PID Reading (ppm) 0.0

TOC Elevation NA Pump Intake (ft-btoc) 10 Purge Method: Low Flow; Peristaltic x; Submersible ___; Bladder ___ Sample Method Low Flow

Pump On/Off 11:03 / 11:30 Volumes Purged ___

Sample Time: Label 11:20 Start 11:19 End 11:30 Replicate/ Code No. NA Water Quality Meter Make/Model: Horiba U-52 Sampled by RH

Stabilization parameters 3 readings *(not reqr'd by SOP)*: 0.1 | 3% | 10% | (10%) | 3% | (10%)

Time (approx. 3-5 minute interval)	Minutes Elapsed	Rate 0.05-0.13 (gpm) 200-500 (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C) (°F)	Redox (mV)	Appearance Color	Appearance Odor
11:06	3	~~200~~ 200	7.06	0.24	5.27	0.115	—	7.89	11.07	141.5	grayish	N
11:09	6	200	7.01	0.40	5.32	0.114	—	8.04	11.15	152.0	↓	↓
11:12	9	200	7.02	0.56	5.36	0.112	—	8.07	11.34	147.3		
11:15	12	200	7.04	0.72	5.38	0.112	—	7.73	11.38	144.8		
11:18	15	200	7.06	0.88	5.39	0.112	—	7.65	11.39	142.8		
Approx. value difference b/t 3rd & 2nd to last reading:					0.03	0	—	0.38	0.04	2.5		
Approx. value difference b/t 2nd to last & final reading:					0.02	0	—	0.12	0.01	2.0		

Constituents Sampled	Container	Number	Preservative
GRO / MTBE / BTEX	VOA	6	HCl
Total Pb	Poly	1	HNO3
Dissolved Pb	Poly	1	none

Well Casing Volumes

Gallons/Foot 1" = 0.04 | 1.25" = 0.06 | 1.5" = 0.09 | 2" = 0.16 | 2.5" = 0.26 | 3" = 0.37 | 3.5" = 0.50 | 4" = 0.65 | 6" = 1.47

Well Information

Well Location: SW corner of 19th Ave + Bothell Hwy intersection Well Locked at Arrival: Yes / No

Condition of Well: good Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up Key Number To Well: NA

ARCADIS Low Flow Groundwater Purging and Sampling Form

Page ____ of ____

Project No. GP09BPNA.WA01.K0000 Well ID MW-C Date 11/26/12

Project Name/Location WA-00217/ 13131 Bothell Everett Highway, Everett, WA Weather clear / 50°F

Measuring Pt. Description TOC Screen Setting (ft-bmp) 4-14 Casing Diameter (in.) 1" Well Material ✓ PVC ___ SS

Static Water Level (ft-btoc) 5.27 Total Depth (ft-btoc) 11.21* Water Column/ Gallons in Well 5.94* / 0.24* Wellhead PID Reading (ppm) 2.2

TOC Elevation NA Pump Intake (ft-btoc) 10 Purge Method: Low Flow Sample Method Low Flow

Pump On/Off 12:13 / 12:44 Volumes Purged NA Peristaltic x Submersible ___ Bladder ___

Sample Time: Label 12:30 Start 12:34 End 12:44 Replicate/ Code No. NA Water Quality Meter Make/Model: YSI 556 MPS Horiba U-52 Sampled by RH

Stabilization parameters 3 readings *(not reqr'd by SOP)*: 0.1 | 3% | 10% | (10%) | 3% | (10%)

Time (approx. 3-5 minute interval)	Minutes Elapsed	Rate 0.05-0.13 (gpm) 200-500 (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance Color	Appearance Odor
12:18	5	200	5.93	0.26	6.04	0.714	—	1.12	13.69	124.6	greyish	No
12:21	8	200	5.92	0.42	6.17	0.852	—	0.89	13.96	119.6	↓	↓
12:24	11	200	5.91	0.58	6.22	0.856	—	0.84	13.82	98.3	↓	↓
12:27	14	200	5.90	0.74	6.24	0.897	—	0.79	13.67	94.2	↓	↓
12:30	17	200	5.92	0.90	6.24	0.895	—	0.66	13.70	92.4	↓	↓
12:33	20	200	5.93	1.06	6.24	0.894	—	0.75	13.74	92.5	↓	↓
Approx. value difference b/t 3rd & 2nd to last reading:					0	0.002	—	0.13	0.03	1.8		
Approx. value difference b/t 2nd to last & final reading:					0	0.001	—	0.11	0.04	0.1		

Constituents Sampled	Container	Number	Preservative
GRO / MTBE / BTEX	VOA	6	HCl
Total Pb	Poly	1	HNO3
Dissolved Pb	Poly	1	none

Well Casing Volumes

Gallons/Foot 1" = 0.04 | 1.25" = 0.06 | 1.5" = 0.09 | 2" = 0.16 | 2.5" = 0.26 | 3" = 0.37 | 3.5" = 0.50 | 4" = 0.65 | 6" = 1.47

Well Information

Well Location: Southern parcel site, near DOT util. cabinet Well Locked at Arrival: Yes / No

Condition of Well: good Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up Key Number To Well: NA

ARCADIS Low Flow Groundwater Purging and Sampling Form

Page ____ of ____

Project No. GP09BPNA.WA01.K0000 Well ID MW-2 Date 11/26/12

Project Name/Location WA-00217/ 13131 Bothell Everett Highway, Everett, WA Weather sunny, clear 55°F

Measuring Pt. Description TOC Screen Setting (ft-bmp) 5-20 Casing Diameter (in.) 2 Well Material ✓ PVC ___ SS

Static Water Level (ft-btoc) 5.28 Total Depth (ft-btoc) 19.81 Water Column/ Gallons in Well 14.53 / 2.33 Wellhead PID Reading (ppm) 5.2

TOC Elevation NA Pump Intake (ft-btoc) 10 Purge Method: Low Flow Sample Method Low Flow

Pump On/Off 12:55/13:22 Volumes Purged <1 Peristaltic x Submersible ___ Bladder ___

Sample Time: Label 13:15 Start 13:16 End 13:22 Replicate/ Code No. NA Water Quality Meter Make/Model: YSI 556 MPS Horiba U-52 Sampled by RH

Stabilization parameters 3 readings *(not reqr'd by SOP)*: 0.1 pH, 3% Cond., 10% Turbidity, (10%) Dissolved Oxygen, 3% Temp. (°C), (10%) Redox

Time (approx. 3-5 minute interval)	Minutes Elapsed	Rate 0.05-0.13 (gpm) 200-500 (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance Color	Appearance Odor
12:57	2	200	5.42	0.11	6.78	1.195	—	1.03	13.96	-78.2	clear	No
13:00	5	200	5.43	0.26	6.79	1.195	—	0.87	13.96	-71.7	↓	↓
13:03	8	200	5.43	0.42	6.79	1.192	—	0.69	13.98	-68.9	↓	↓
13:06	11	200	5.43	0.58	6.79	1.178	—	0.57	13.96	-75.1	↓	↓
13:09	14	200	5.43	0.74	6.79	1.173	—	0.46	13.96	-78.1	↓	↓
13:12	17	200	5.43	0.90	6.79	1.170	—	0.43	13.97	-76.1	↓	↓
13:15	20	200	5.43	1.06	6.79	1.167	—	0.40	13.99	-75.4	↓	↓
Approx. value difference b/t 3rd & 2nd to last reading:												
Approx. value difference b/t 2nd to last & final reading:												

Constituents Sampled	Container	Number	Preservative
GRO / MTBE / BTEX	VOA	6	HCl
Total Pb	Poly	1	HNO3
Dissolved Pb	Poly	1	none

Well Casing Volumes

Gallons/Foot 1" = 0.04 1.25" = 0.06 1.5" = 0.09 2" = 0.16 2.5" = 0.26 3" = 0.37 3.5" = 0.50 4" = 0.65 6" = 1.47

Well Information

Well Location: SW corner of site, E of MW-5 and sign Well Locked at Arrival: Yes / No

Condition of Well: good Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up Key Number To Well: NA

ARCADIS Low Flow Groundwater Purging and Sampling Form

Page 1 of ____

Project No. GP09BPNA.WA01.K0000 Well ID MW-7 Date 11/26/12

Project Name/Location WA-00217/ 13131 Bothell Everett Highway, Everett, WA Weather ____

Measuring Pt. Description TOC Screen Setting (ft-bmp) 4-14 Casing Diameter (in.) 1 Well Material ✓ PVC ___ SS

Static Water Level (ft-btoc) 6.19 Total Depth (ft-btoc) 13.78 Water Column/ Gallons in Well 7.59 / 0.30 Wellhead PID Reading (ppm) 0.4

TOC Elevation NA Pump Intake (ft-btoc) 10 Purge Method: Low Flow Peristaltic x Submersible ___ Bladder ___ Sample Method Low Flow

Pump On/Off 13:37 / 14:01 Volumes Purged NA

Sample Time: Label 14:00 Start 13:53 End 14:01 Replicate/ Code No. NA Water Quality Meter Make/Model: Horiba U-52 Sampled by RH

Stabilization parameters 3 readings *(not reqr'd by SOP)*: 0.1 | 3% | 10% | (10%) | 3% | (10%)

Time (approx. 3-5 minute interval)	Minutes Elapsed	Rate 0.05-0.13 (gpm) 200-500 (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance Color	Appearance Odor
13:39	2	300	6.52	0.16	6.52	0.621	—	1.67	14.74	-84.4	greyish	No
13:42	5	200	6.57	0.26	~~6.60~~ 6.55	0.814	—	0.66	14.79	-84.1	↓	↓
13:45	8	200	6.74	0.42	~~6.74~~ 6.50	0.794	—	0.52	14.89	-88.7		
13:48	11	200	6.91	0.58	6.50	0.780	—	0.50	14.84	-89.1		
13:51	14	200	7.06	0.74	6.50	0.771	—	0.46	14.87	-81.1	✓	✓
Approx. value difference b/t 3rd & 2nd to last reading:												
Approx. value difference b/t 2nd to last & final reading:												

Constituents Sampled	Container	Number	Preservative
GRO / MTBE / BTEX	VOA	6	HCl
Total Pb	Poly	1	HNO3
Dissolved Pb	Poly	1	none

Well Casing Volumes

Gallons/Foot 1" = 0.04 1.5" = 0.09 2.5" = 0.26 3.5" = 0.50 6" = 1.47
1.25" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65

Well Information

Well Location: SE corner of site Well Locked at Arrival: Yes / No

Condition of Well: good Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up Key Number To Well: NA

ARCADIS Low Flow Groundwater Purging and Sampling Form

Page ___ of ___

Project No. GP09BPNA.WA01.K0000 Well ID MW-4 Date 11/20/12

Project Name/Location WA-00217/ 13131 Bothell Everett Highway, Everett, WA Weather Sunny, 55°F

Measuring Pt. Description TOC Screen Setting (ft-bmp) NA Casing Diameter (in.) 2 Well Material ✓ PVC ___ SS

Static Water Level (ft-btoc) 7.52 Total Depth (ft-btoc) 23.69 Water Column/ Gallons in Well 16.17 / 2.59 Wellhead PID Reading (ppm) 0.0

TOC Elevation NA Pump Intake (ft-btoc) 11 Purge Method: Low Flow; Peristaltic x; Submersible ___; Bladder ___ Sample Method Low Flow

Pump On/Off 14:20 / 14:50 Volumes Purged <1

Sample Time: Label 14:45 Start 14:39 End 14:50 Replicate/ Code No. NA Water Quality Meter Make/Model: ~~Horiba U-52~~ YSI 556 MPS Sampled by RH

Stabilization parameters 3 readings *(not reqr'd by SOP)*: 0.1 | 3% | 10% | (10%) | 3% | (10%)

Time (approx. 3-5 minute interval)	Minutes Elapsed	Rate 0.05-0.13 (gpm) 200-500 (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance Color	Appearance Odor
14:23	3	200	7.66	0.16	6.30	0.454	—	5.71	14.66	17.7	clear	No
14:27	7	200	7.70	0.37	6.25	0.459	—	0.74	14.33	32.7	↓	↓
14:30	10	200	7.76	0.53	6.25	0.455	—	0.61	14.50	39.5		
14:33	13	200	7.81	0.69	6.23	0.454	—	0.73	14.72	41.1		
14:36	16	200	7.86	0.85	6.22	0.456	—	0.44	14.76	50.9		
14:39	19	200	7.92	1.00	6.21	0.465	—	0.44	14.82	52.4		
Approx. value difference b/t 3rd & 2nd to last reading:					0.01	0.004	—	0.29	0.04	9.7		
Approx. value difference b/t 2nd to last & final reading:					0.01	0.007	—	0	0.06	1.5		

Constituents Sampled	Container	Number	Preservative
GRO / MTBE / BTEX	VOA	6	HCl
Total Pb	Poly	1	HNO3
Dissolved Pb	Poly	1	none

Well Casing Volumes

Gallons/Foot: 1" = 0.04; 1.25" = 0.06; 1.5" = 0.09; 2" = 0.16; 2.5" = 0.26; 3" = 0.37; 3.5" = 0.50; 4" = 0.65; 6" = 1.47

Well Information

Well Location: ~~NW~~ SE of disp. island

Condition of Well: good

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Key Number To Well: NA

ARCADIS Low Flow Groundwater Purging and Sampling Form

Page ___ of ___

Project No. GP09BPNA.WA01.K0000 Well ID MW-1 Date 11/26/12

Project Name/Location WA-00217/ 13131 Bothell Everett Highway, Everett, WA Weather Sunny, 55°F

Measuring Pt. Description TOC | Screen Setting (ft-bmp) ~~17.85~~ 20 | Casing Diameter (in.) 2 | Well Material ✓ PVC ___ SS

Static Water Level (ft-btoc) 5.84 | Total Depth (ft-btoc) 17.85 | Water Column/ Gallons in Well 12.01 / 1.92 | Wellhead PID Reading (ppm) 0.0

TOC Elevation NA | Pump Intake (ft-btoc) 11 | Purge Method: Peristaltic x, Submersible ___, Bladder ___ | Sample Method Low Flow

Pump On/Off 15:01 / | Volumes Purged

Sample Time: Label 15:20 | Start 15:17 | End 15:30 | Replicate/ Code No. NA | Water Quality Meter Make/Model: YSI 556 MPS Horiba U-52 | Sampled by RH

Stabilization parameters 3 readings *(not reqr'd by SOP)*: 0.1 pH, 3% Cond. (µMhos), 10% Turbidity, *(10%)* Dissolved Oxygen, 3% Temp. (°C), *(10%)* Redox

Time (approx. 3-5 minute interval)	Minutes Elapsed	Rate 0.05-0.13 (gpm) 200-500 (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance Color	Appearance Odor
15:04	3	200	5.95	0.16	6.38	0.244	—	10.05	15.23	52.9	clear	No
15:07	6	200	5.99	0.32	6.30	0.242	—	7.97	15.42	69.1	↓	↓
15:10	9	200	6.02	0.48	6.26	0.238	—	7.53	15.63	80.2		
15:13	12	200	6.05	0.63	6.24	0.237	—	7.66	15.69	88.8		
15:16	15	200	6.12	0.79	6.23	0.238	—	7.65	15.68	89.2		
Approx. value difference b/t 3rd & 2nd to last reading:												
Approx. value difference b/t 2nd to last & final reading:												

Constituents Sampled	Container	Number	Preservative
GRO / MTBE / BTEX	VOA	6 12	HCl
Total Pb	Poly	1	HNO3
Dissolved Pb	Poly	1	None

Well Casing Volumes

Gallons/Foot: 1" = 0.04, 1.25" = 0.06, 1.5" = 0.09, 2" = 0.16, 2.5" = 0.26, 3" = 0.37, 3.5" = 0.50, 4" = 0.65, 6" = 1.47

Well Information

Well Location: W side of site | Well Locked at Arrival: Yes / No

Condition of Well: good | Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up | Key Number To Well: NA

ARC... S Low Flow Groundwater Purging and Sampling Form

CUSTODY SEAL

Page ___ of ___

Project No: ... NA.WA01.K0000 | Well ID: MW-5 | Date: 11/26/12

Project Name/Location: WA-00217/ 13131 Bothell Everett Highway, Everett, WA | Weather: clear, 50°

Measuring Pt. Description: TOC | Screen Setting (ft-bmp): NA | Casing Diameter (in.): 1 | Well Material: ✓ PVC ___ SS

Static Water Level (ft-btoc): 4.89 | Total Depth (ft-btoc): 14.50 | Water Column/ Gallons in Well: 9.61 / 0.38 | Wellhead PID Reading (ppm): 3.2

TOC Elevation: NA | Pump Intake (ft-btoc): 11 | Purge Method: Low Flow; Peristaltic: x; Submersible: ___; Bladder: ___ | Sample Method: Low Flow

Pump On/Off: 15:50/16:35 | Volumes Purged: NA

Sample Time: Label 16:10; Start 16:14; End 16:38 | Replicate/ Code No.: NA | Water Quality Meter Make/Model: ~~Horiba U-52~~ YSI 556 MPS | Sampled by: RH

Stabilization parameters 3 readings *(not reqr'd by SOP)*:

Time (approx. 3-5 minute interval)	Minutes Elapsed	Rate 0.05-0.13 (gpm) 200-500 (mL/min)	Depth to Water (ft)	Gallons Purged	pH (0.1)	Cond. (µMhos) (3%) (mS/cm)	Turbidity (10%) (NTU)	Dissolved Oxygen (10%) (mg/L)	Temp. (3%) (°C) (°F)	Redox (10%) ORP (mV)	Appearance Color	Appearance Odor
15:52	2	300	7.54	0.16	6.66	3.272	–	6.53	13.59	-116.3	clear	yes
15:55	5	200	7.47*	0.32	6.66	3.297	–	0.93	13.60	-124.1		
15:58	8	200	7.88	0.48	6.67	3.309	–	1.02	13.46	-123.8		
16:01	11	200	8.00*	0.63	6.69	3.125	–	1.07	13.15	-124.0		
16:05	15	200	8.14	0.79	6.71	3.083	–	1.25	13.00	-116.0		
16:08	18	200	8.28*	0.89	6.78	2.864	–	1.44	12.94	-113.9		
16:11	21	200	8.02	1.00	6.79	2.848	–	1.38	12.94	-107.6		
Approx. value difference b/t 3rd & 2nd to last reading:					0.07	0.019	–	0.19	0.06	2.1		
Approx. value difference b/t 2nd to last & final reading:					0.01	0.016	–	0.06	0	3.7		

Constituents Sampled	Container	Number	Preservative
GRO / MTBE / BTEX	VOA	6	HCl
Total Pb	Poly	1	HNO3
Dissolved Pb	Poly	1	none

* Stopped and restarted pump to stop drawdown

Well Casing Volumes

Gallons/Foot: 1" = 0.04; 1.25" = 0.06; 1.5" = 0.09; 2" = 0.16; 2.5" = 0.26; 3" = 0.37; 3.5" = 0.50; 4" = 0.65; 6" = 1.47

Well Information

Well Location: SW corner of site | Well Locked at Arrival: Yes / No

Condition of Well: good | Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up | Key Number To Well: NA

ARCADIS

Attachment B

Laboratory Reports and
Chain-of-Custody Documentation

December 11, 2012

Harini Shanmugam
Arcadis U.S., Inc.
2300 Eastlake Ave. Ste. 200
Seattle, WA 98102

RE: Project: WA-00217
Pace Project No.: 10213568

Dear Harini Shanmugam:
Enclosed are the analytical results for sample(s) received by the laboratory on November 27, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Dan Gossett

dan.gossett@pacelabs.com
Project Manager

Enclosures

cc: Accounts Payable, Arcadis U.S., Inc.

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CERTIFICATIONS

Project: WA-00217
Pace Project No.: 10213568

Minnesota Certification IDs
1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: Pace
Florida/NELAP Certification #: E87605
Georgia Certification #: 959
Hawaii Certification #Pace
Idaho Certification #: MN00064
Illinois Certification #: 200011
Kansas Certification #: E-10167
Louisiana Certification #: 03086
Louisiana Certification #: LA080009
Maine Certification #: 2007029
Maryland Certification #: 322
Michigan DEQ Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT CERT0092
Nebraska Certification #: Pace
Nevada Certification #: MN_00064
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Dakota Certification #: R-036
North Dakota Certification #: R-036A
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Tennessee Certification #: 02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia/DCLS Certification #: 002521
Virginia/VELAP Certification #: 460163
Washington Certification #: C754
West Virginia Certification #: 382
Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: WA-00217
Pace Project No.: 10213568

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10213568001	**MW-1**	Water	11/26/12 15:20	11/27/12 15:00
10213568002	**MW-2**	Water	11/26/12 13:15	11/27/12 15:00
10213568003	**MW-4**	Water	11/26/12 14:45	11/27/12 15:00
10213568004	**MW-5**	Water	11/26/12 16:10	11/27/12 15:00
10213568005	**MW-6**	Water	11/26/12 12:30	11/27/12 15:00
10213568006	**MW-7**	Water	11/26/12 14:00	11/27/12 15:00
10213568007	**MW-8**	Water	11/26/12 09:40	11/27/12 15:00
10213568008	**MW-9**	Water	11/26/12 10:40	11/27/12 15:00
10213568009	**MW-10**	Water	11/26/12 11:20	11/27/12 15:00

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SAMPLE ANALYTE COUNT

Project: WA-00217
Pace Project No.: 10213568

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10213568001	**MW-1**	NWTPH-Gx/8021	KT1	2
		EPA 6010	TEM	1
		EPA 6010	TEM	1
		EPA 8260	EB2	9
10213568002	**MW-2**	NWTPH-Gx/8021	KT1	2
		EPA 6010	TEM	1
		EPA 6010	TEM	1
		EPA 8260	EB2	9
10213568003	**MW-4**	NWTPH-Gx/8021	KT1	2
		EPA 6010	TEM	1
		EPA 6010	TEM	1
		EPA 8260	EB2	9
10213568004	**MW-5**	NWTPH-Gx/8021	MJH	2
		EPA 6010	TEM	1
		EPA 6010	TEM	1
		EPA 8260	EB2	9
10213568005	**MW-6**	NWTPH-Gx/8021	KT1	2
		EPA 6010	TEM	1
		EPA 6010	TEM	1
		EPA 8260	EB2	9
10213568006	**MW-7**	NWTPH-Gx/8021	KT1	2
		EPA 6010	TEM	1
		EPA 6010	TEM	1
		EPA 8260	EB2	9
10213568007	**MW-8**	NWTPH-Gx/8021	KT1	2
		EPA 6010	TEM	1
		EPA 6010	TEM	1
		EPA 8260	EB2	9
10213568008	**MW-9**	NWTPH-Gx/8021	KT1	2
		EPA 6010	TEM	1
		EPA 6010	TEM	1
		EPA 8260	EB2	9
10213568009	**MW-10**	NWTPH-Gx/8021	KT1	2
		EPA 6010	TEM	1
		EPA 6010	TEM	1
		EPA 8260	EB2	9

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ANALYTICAL RESULTS

Project: WA-00217
Pace Project No.: 10213568

Sample: MW-1 **Lab ID: 10213568001** Collected: 11/26/12 15:20 Received: 11/27/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx/8021BGx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND	ug/L	100	1		12/02/12 02:02		
Surrogates								
a,a,a-Trifluorotoluene (S)	98	%	75-131	1		12/02/12 02:02	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	3.0	1	11/30/12 18:13	12/04/12 18:41	7439-92-1	
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	3.0	1	11/30/12 18:11	12/04/12 16:44	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		11/30/12 02:29	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		11/30/12 02:29	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/30/12 02:29	1634-04-4	
Toluene	ND	ug/L	1.0	1		11/30/12 02:29	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		11/30/12 02:29	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%	75-125	1		11/30/12 02:29	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	75-125	1		11/30/12 02:29	17060-07-0	
Toluene-d8 (S)	98	%	75-125	1		11/30/12 02:29	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125	1		11/30/12 02:29	460-00-4	

Sample: MW-2 **Lab ID: 10213568002** Collected: 11/26/12 13:15 Received: 11/27/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx/8021BGx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	**330**	ug/L	100	1		12/02/12 03:40		
Surrogates								
a,a,a-Trifluorotoluene (S)	102	%	75-131	1		12/02/12 03:40	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	3.0	1	11/30/12 18:13	12/04/12 18:53	7439-92-1	
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	3.0	1	11/30/12 18:11	12/04/12 16:56	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		11/30/12 02:44	71-43-2	
Ethylbenzene	**33.4**	ug/L	1.0	1		11/30/12 02:44	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/30/12 02:44	1634-04-4	
Toluene	ND	ug/L	1.0	1		11/30/12 02:44	108-88-3	
Xylene (Total)	**9.6**	ug/L	3.0	1		11/30/12 02:44	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	96	%	75-125	1		11/30/12 02:44	1868-53-7	

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ANALYTICAL RESULTS

Project: WA-00217
Pace Project No.: 10213568

Sample: MW-2 **Lab ID: 10213568002** Collected: 11/26/12 13:15 Received: 11/27/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical Method: EPA 8260							
Surrogates								
1,2-Dichloroethane-d4 (S)	98	%	75-125	1		11/30/12 02:44	17060-07-0	
Toluene-d8 (S)	97	%	75-125	1		11/30/12 02:44	2037-26-5	
4-Bromofluorobenzene (S)	95	%	75-125	1		11/30/12 02:44	460-00-4	

Sample: MW-4 **Lab ID: 10213568003** Collected: 11/26/12 14:45 Received: 11/27/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx/8021BGx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND	ug/L	100	1		12/02/12 04:00		
Surrogates								
a,a,a-Trifluorotoluene (S)	101	%	75-131	1		12/02/12 04:00	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	3.0	1	11/30/12 18:13	12/04/12 19:13	7439-92-1	
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	3.0	1	11/30/12 18:11	12/04/12 17:16	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		11/30/12 02:59	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		11/30/12 02:59	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/30/12 02:59	1634-04-4	
Toluene	ND	ug/L	1.0	1		11/30/12 02:59	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		11/30/12 02:59	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	96	%	75-125	1		11/30/12 02:59	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	75-125	1		11/30/12 02:59	17060-07-0	
Toluene-d8 (S)	98	%	75-125	1		11/30/12 02:59	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125	1		11/30/12 02:59	460-00-4	

Sample: MW-5 **Lab ID: 10213568004** Collected: 11/26/12 16:10 Received: 11/27/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx/8021BGx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	**4720**	ug/L	200	2		12/02/12 17:47		
Surrogates								
a,a,a-Trifluorotoluene (S)	99	%	75-131	2		12/02/12 17:47	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	3.0	1	11/30/12 18:13	12/04/12 19:18	7439-92-1	

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ANALYTICAL RESULTS

Project: WA-00217
Pace Project No.: 10213568

Sample: MW-5 **Lab ID: 10213568004** Collected: 11/26/12 16:10 Received: 11/27/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	3.0	1	11/30/12 18:11	12/04/12 17:21	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	10.0	10		11/30/12 06:32	71-43-2	
Ethylbenzene	**1040**	ug/L	10.0	10		11/30/12 06:32	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	10.0	10		11/30/12 06:32	1634-04-4	
Toluene	ND	ug/L	10.0	10		11/30/12 06:32	108-88-3	
Xylene (Total)	**940**	ug/L	30.0	10		11/30/12 06:32	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	96	%	75-125	10		11/30/12 06:32	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	75-125	10		11/30/12 06:32	17060-07-0	
Toluene-d8 (S)	98	%	75-125	10		11/30/12 06:32	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125	10		11/30/12 06:32	460-00-4	

Sample: MW-6 **Lab ID: 10213568005** Collected: 11/26/12 12:30 Received: 11/27/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx/8021BGx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	**814**	ug/L	100	1		12/02/12 04:20		
Surrogates								
a,a,a-Trifluorotoluene (S)	102	%	75-131	1		12/02/12 04:20	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	3.0	1	11/30/12 18:13	12/04/12 19:25	7439-92-1	
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	3.0	1	11/30/12 18:11	12/04/12 17:28	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		11/30/12 03:14	71-43-2	
Ethylbenzene	**79.3**	ug/L	1.0	1		11/30/12 03:14	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/30/12 03:14	1634-04-4	
Toluene	ND	ug/L	1.0	1		11/30/12 03:14	108-88-3	
Xylene (Total)	**66.4**	ug/L	3.0	1		11/30/12 03:14	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	97	%	75-125	1		11/30/12 03:14	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	75-125	1		11/30/12 03:14	17060-07-0	
Toluene-d8 (S)	98	%	75-125	1		11/30/12 03:14	2037-26-5	
4-Bromofluorobenzene (S)	95	%	75-125	1		11/30/12 03:14	460-00-4	

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ANALYTICAL RESULTS

Project: WA-00217
Pace Project No.: 10213568

Sample: MW-7 **Lab ID: 10213568006** Collected: 11/26/12 14:00 Received: 11/27/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx/8021BGx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND	ug/L	100	1		12/02/12 04:39		
Surrogates								
a,a,a-Trifluorotoluene (S)	98	%	75-131	1		12/02/12 04:39	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	**7.4**	ug/L	3.0	1	11/30/12 18:13	12/04/12 19:30	7439-92-1	
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	3.0	1	11/30/12 18:11	12/04/12 17:33	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		11/30/12 03:30	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		11/30/12 03:30	100-41-4	
Methyl-tert-butyl ether	**3.1**	ug/L	1.0	1		11/30/12 03:30	1634-04-4	
Toluene	ND	ug/L	1.0	1		11/30/12 03:30	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		11/30/12 03:30	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	97	%	75-125	1		11/30/12 03:30	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	75-125	1		11/30/12 03:30	17060-07-0	
Toluene-d8 (S)	99	%	75-125	1		11/30/12 03:30	2037-26-5	
4-Bromofluorobenzene (S)	96	%	75-125	1		11/30/12 03:30	460-00-4	

Sample: MW-8 **Lab ID: 10213568007** Collected: 11/26/12 09:40 Received: 11/27/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx/8021BGx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND	ug/L	100	1		12/02/12 04:59		
Surrogates								
a,a,a-Trifluorotoluene (S)	97	%	75-131	1		12/02/12 04:59	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	3.0	1	11/30/12 18:13	12/04/12 19:35	7439-92-1	
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	3.0	1	11/30/12 18:11	12/04/12 17:38	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		11/30/12 03:45	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		11/30/12 03:45	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/30/12 03:45	1634-04-4	
Toluene	ND	ug/L	1.0	1		11/30/12 03:45	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		11/30/12 03:45	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%	75-125	1		11/30/12 03:45	1868-53-7	

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ANALYTICAL RESULTS

Project: WA-00217
Pace Project No.: 10213568

Sample: MW-8 **Lab ID: 10213568007** Collected: 11/26/12 09:40 Received: 11/27/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical Method: EPA 8260							
Surrogates								
1,2-Dichloroethane-d4 (S)	98	%	75-125	1		11/30/12 03:45	17060-07-0	
Toluene-d8 (S)	98	%	75-125	1		11/30/12 03:45	2037-26-5	
4-Bromofluorobenzene (S)	96	%	75-125	1		11/30/12 03:45	460-00-4	

Sample: MW-9 **Lab ID: 10213568008** Collected: 11/26/12 10:40 Received: 11/27/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx/8021BGx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND	ug/L	100	1		12/02/12 05:18		
Surrogates								
a,a,a-Trifluorotoluene (S)	97	%	75-131	1		12/02/12 05:18	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	**3.4**	ug/L	3.0	1	11/30/12 18:13	12/04/12 19:39	7439-92-1	
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	3.0	1	11/30/12 18:11	12/04/12 17:42	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		12/01/12 03:50	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/01/12 03:50	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		12/01/12 03:50	1634-04-4	
Toluene	ND	ug/L	1.0	1		12/01/12 03:50	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/01/12 03:50	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	94	%	75-125	1		12/01/12 03:50	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	75-125	1		12/01/12 03:50	17060-07-0	
Toluene-d8 (S)	99	%	75-125	1		12/01/12 03:50	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125	1		12/01/12 03:50	460-00-4	

Sample: MW-10 **Lab ID: 10213568009** Collected: 11/26/12 11:20 Received: 11/27/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx/8021BGx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND	ug/L	100	1		12/02/12 06:17		
Surrogates								
a,a,a-Trifluorotoluene (S)	97	%	75-131	1		12/02/12 06:17	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	3.0	1	11/30/12 18:13	12/04/12 19:53	7439-92-1	

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ANALYTICAL RESULTS

Project: WA-00217
Pace Project No.: 10213568

Sample: MW-10 **Lab ID: 10213568009** Collected: 11/26/12 11:20 Received: 11/27/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	3.0	1	11/30/12 18:11	12/04/12 17:56	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		12/01/12 04:05	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/01/12 04:05	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		12/01/12 04:05	1634-04-4	
Toluene	ND	ug/L	1.0	1		12/01/12 04:05	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/01/12 04:05	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	96	%	75-125	1		12/01/12 04:05	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	75-125	1		12/01/12 04:05	17060-07-0	
Toluene-d8 (S)	99	%	75-125	1		12/01/12 04:05	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125	1		12/01/12 04:05	460-00-4	

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QUALITY CONTROL DATA

Project: WA-00217
Pace Project No.: 10213568

QC Batch: GCV/10115 Analysis Method: NWTPH-Gx/8021
QC Batch Method: NWTPH-Gx/8021 Analysis Description: NWTPH-Gx/8021B Water
Associated Lab Samples: 10213568001, 10213568002, 10213568003, 10213568005, 10213568006, 10213568007, 10213568008, 10213568009

METHOD BLANK: 1343133 Matrix: Water
Associated Lab Samples: 10213568001, 10213568002, 10213568003, 10213568005, 10213568006, 10213568007, 10213568008, 10213568009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	12/01/12 23:46	
a,a,a-Trifluorotoluene (S)	%	98	75-131	12/01/12 23:46	

LABORATORY CONTROL SAMPLE & LCSD: 1343134 1343135

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	1080	1040	108	104	75-125	4	20	
a,a,a-Trifluorotoluene (S)	%				93	95	75-131			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1343136 1343137

Parameter	Units	10213568001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH as Gas	ug/L	ND	1000	1000	1100	1140	110	114	70-130	4	30	
a,a,a-Trifluorotoluene (S)	%						93	94	75-131			

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QUALITY CONTROL DATA

Project: WA-00217
Pace Project No.: 10213568

QC Batch: GCV/10120
QC Batch Method: NWTPH-Gx/8021
Analysis Method: NWTPH-Gx/8021
Analysis Description: NWTPH-Gx/8021B Water
Associated Lab Samples: 10213568004

METHOD BLANK: 1343285
Matrix: Water
Associated Lab Samples: 10213568004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	12/02/12 16:09	
a,a,a-Trifluorotoluene (S)	%	101	75-131	12/02/12 16:09	

LABORATORY CONTROL SAMPLE & LCSD: 1343286 1343287

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	1170	987	117	99	75-125	17	20	
a,a,a-Trifluorotoluene (S)	%				94	93	75-131			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1343288 1343289

Parameter	Units	10213705001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH as Gas	ug/L	4870	5000	5000	11300	10900	128	121	70-130	3	30	
a,a,a-Trifluorotoluene (S)	%						95	92	75-131			

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QUALITY CONTROL DATA

Project: WA-00217
Pace Project No.: 10213568

QC Batch: MPRP/36645 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 10213568001, 10213568002, 10213568003, 10213568004, 10213568005, 10213568006, 10213568007, 10213568008, 10213568009

METHOD BLANK: 1341264 Matrix: Water
Associated Lab Samples: 10213568001, 10213568002, 10213568003, 10213568004, 10213568005, 10213568006, 10213568007, 10213568008, 10213568009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	ND	3.0	12/04/12 18:32	

LABORATORY CONTROL SAMPLE: 1341265

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	1000	883	88	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1341266 1341267

Parameter	Units	10213568001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	ug/L	ND	1000	1000	910	889	91	89	75-125	2	20	

MATRIX SPIKE SAMPLE: 1341268

Parameter	Units	10213528004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	ND	1000	855	86	75-125	

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QUALITY CONTROL DATA

Project: WA-00217
Pace Project No.: 10213568

QC Batch: MPRP/36644 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 10213568001, 10213568002, 10213568003, 10213568004, 10213568005, 10213568006, 10213568007, 10213568008, 10213568009

METHOD BLANK: 1341259 Matrix: Water
Associated Lab Samples: 10213568001, 10213568002, 10213568003, 10213568004, 10213568005, 10213568006, 10213568007, 10213568008, 10213568009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead, Dissolved	ug/L	ND	3.0	12/04/12 16:35	

LABORATORY CONTROL SAMPLE: 1341260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead, Dissolved	ug/L	1000	890	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1341261 1341262

Parameter	Units	10213568001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead, Dissolved	ug/L	ND	1000	1000	872	880	87	88	75-125	.9	20	

MATRIX SPIKE SAMPLE: 1341263

Parameter	Units	10213528004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead, Dissolved	ug/L	ND	1000	880	88	75-125	

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QUALITY CONTROL DATA

Project: WA-00217
Pace Project No.: 10213568

QC Batch: MSV/22274 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10213568001, 10213568002, 10213568003, 10213568004, 10213568005, 10213568006, 10213568007

METHOD BLANK: 1341479 Matrix: Water
Associated Lab Samples: 10213568001, 10213568002, 10213568003, 10213568004, 10213568005, 10213568006, 10213568007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	11/30/12 01:28	
Ethylbenzene	ug/L	ND	1.0	11/30/12 01:28	
Methyl-tert-butyl ether	ug/L	ND	1.0	11/30/12 01:28	
Toluene	ug/L	ND	1.0	11/30/12 01:28	
Xylene (Total)	ug/L	ND	3.0	11/30/12 01:28	
1,2-Dichloroethane-d4 (S)	%	101	75-125	11/30/12 01:28	
4-Bromofluorobenzene (S)	%	97	75-125	11/30/12 01:28	
Dibromofluoromethane (S)	%	96	75-125	11/30/12 01:28	
Toluene-d8 (S)	%	98	75-125	11/30/12 01:28	

LABORATORY CONTROL SAMPLE: 1341480

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	44.0	88	75-132	
Ethylbenzene	ug/L	50	44.0	88	75-125	
Methyl-tert-butyl ether	ug/L	50	49.4	99	74-130	
Toluene	ug/L	50	44.2	88	75-125	
Xylene (Total)	ug/L	150	129	86	75-125	
1,2-Dichloroethane-d4 (S)	%			99	75-125	
4-Bromofluorobenzene (S)	%			96	75-125	
Dibromofluoromethane (S)	%			97	75-125	
Toluene-d8 (S)	%			101	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1341481 1341482

Parameter	Units	10213568001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	ND	50	50	46.8	47.5	94	95	75-146	2	30	
Ethylbenzene	ug/L	ND	50	50	47.6	48.2	95	96	75-132	1	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	49.9	51.0	100	102	71-137	2	30	
Toluene	ug/L	ND	50	50	47.7	48.9	95	98	75-131	2	30	
Xylene (Total)	ug/L	ND	150	150	139	142	93	95	75-129	2	30	
1,2-Dichloroethane-d4 (S)	%						100	101	75-125			
4-Bromofluorobenzene (S)	%						96	98	75-125			
Dibromofluoromethane (S)	%						97	96	75-125			
Toluene-d8 (S)	%						100	101	75-125			

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QUALITY CONTROL DATA

Project: WA-00217
Pace Project No.: 10213568

QC Batch: MSV/22288 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10213568008, 10213568009

METHOD BLANK: 1342223 | Matrix: Water
Associated Lab Samples: 10213568008, 10213568009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	12/01/12 00:48	
Ethylbenzene	ug/L	ND	1.0	12/01/12 00:48	
Methyl-tert-butyl ether	ug/L	ND	1.0	12/01/12 00:48	
Toluene	ug/L	ND	1.0	12/01/12 00:48	
Xylene (Total)	ug/L	ND	3.0	12/01/12 00:48	
1,2-Dichloroethane-d4 (S)	%	101	75-125	12/01/12 00:48	
4-Bromofluorobenzene (S)	%	98	75-125	12/01/12 00:48	
Dibromofluoromethane (S)	%	94	75-125	12/01/12 00:48	
Toluene-d8 (S)	%	100	75-125	12/01/12 00:48	

LABORATORY CONTROL SAMPLE: 1342224

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	44.9	90	75-132	
Ethylbenzene	ug/L	50	46.3	93	75-125	
Methyl-tert-butyl ether	ug/L	50	50.9	102	74-130	
Toluene	ug/L	50	47.3	95	75-125	
Xylene (Total)	ug/L	150	137	92	75-125	
1,2-Dichloroethane-d4 (S)	%			99	75-125	
4-Bromofluorobenzene (S)	%			98	75-125	
Dibromofluoromethane (S)	%			94	75-125	
Toluene-d8 (S)	%			101	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1342225 1342226

Parameter	Units	10213448006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	6290	2500	2500	8970	8850	107	103	75-146	1	30	
Ethylbenzene	ug/L	2220	2500	2500	4820	4820	104	104	75-132	.2	30	
Methyl-tert-butyl ether	ug/L	ND	2500	2500	2530	2590	101	104	71-137	3	30	
Toluene	ug/L	162	2500	2500	2680	2720	101	102	75-131	1	30	
Xylene (Total)	ug/L	6520	7500	7500	14500	14400	106	105	75-129	.7	30	
1,2-Dichloroethane-d4 (S)	%						100	101	75-125			
4-Bromofluorobenzene (S)	%						97	97	75-125			
Dibromofluoromethane (S)	%						93	95	75-125			
Toluene-d8 (S)	%						102	103	75-125			

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QUALIFIERS

Project: WA-00217
Pace Project No.: 10213568

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WA-00217
Pace Project No.: 10213568

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10213568001	**MW-1**	NWTPH-Gx/8021	GCV/10115		
10213568002	**MW-2**	NWTPH-Gx/8021	GCV/10115		
10213568003	**MW-4**	NWTPH-Gx/8021	GCV/10115		
10213568004	**MW-5**	NWTPH-Gx/8021	GCV/10120		
10213568005	**MW-6**	NWTPH-Gx/8021	GCV/10115		
10213568006	**MW-7**	NWTPH-Gx/8021	GCV/10115		
10213568007	**MW-8**	NWTPH-Gx/8021	GCV/10115		
10213568008	**MW-9**	NWTPH-Gx/8021	GCV/10115		
10213568009	**MW-10**	NWTPH-Gx/8021	GCV/10115		
10213568001	**MW-1**	EPA 3010	MPRP/36645	EPA 6010	ICP/15079
10213568002	**MW-2**	EPA 3010	MPRP/36645	EPA 6010	ICP/15079
10213568003	**MW-4**	EPA 3010	MPRP/36645	EPA 6010	ICP/15079
10213568004	**MW-5**	EPA 3010	MPRP/36645	EPA 6010	ICP/15079
10213568005	**MW-6**	EPA 3010	MPRP/36645	EPA 6010	ICP/15079
10213568006	**MW-7**	EPA 3010	MPRP/36645	EPA 6010	ICP/15079
10213568007	**MW-8**	EPA 3010	MPRP/36645	EPA 6010	ICP/15079
10213568008	**MW-9**	EPA 3010	MPRP/36645	EPA 6010	ICP/15079
10213568009	**MW-10**	EPA 3010	MPRP/36645	EPA 6010	ICP/15079
10213568001	**MW-1**	EPA 3010	MPRP/36644	EPA 6010	ICP/15089
10213568002	**MW-2**	EPA 3010	MPRP/36644	EPA 6010	ICP/15089
10213568003	**MW-4**	EPA 3010	MPRP/36644	EPA 6010	ICP/15089
10213568004	**MW-5**	EPA 3010	MPRP/36644	EPA 6010	ICP/15089
10213568005	**MW-6**	EPA 3010	MPRP/36644	EPA 6010	ICP/15089
10213568006	**MW-7**	EPA 3010	MPRP/36644	EPA 6010	ICP/15089
10213568007	**MW-8**	EPA 3010	MPRP/36644	EPA 6010	ICP/15089
10213568008	**MW-9**	EPA 3010	MPRP/36644	EPA 6010	ICP/15089
10213568009	**MW-10**	EPA 3010	MPRP/36644	EPA 6010	ICP/15089
10213568001	**MW-1**	EPA 8260	MSV/22274		
10213568002	**MW-2**	EPA 8260	MSV/22274		
10213568003	**MW-4**	EPA 8260	MSV/22274		
10213568004	**MW-5**	EPA 8260	MSV/22274		
10213568005	**MW-6**	EPA 8260	MSV/22274		
10213568006	**MW-7**	EPA 8260	MSV/22274		
10213568007	**MW-8**	EPA 8260	MSV/22274		
10213568008	**MW-9**	EPA 8260	MSV/22288		
10213568009	**MW-10**	EPA 8260	MSV/22288		

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10213568

1130 1131

Page: 1 of 1

1582664

Section A Required Client Information:

Company:	ARCADIS U.S. Inc.
Address:	2300 East Lake Ave E
	Seattle, WA 98102
Email To:	harini.shanmugam@arcadis-us.com
Phone:	206-726-4739
Fax:	206-325-8218
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Harini Shanmugam
Copy To:	Alex Lopez
Purchase Order No.:	NA
Project Name:	WA-00217
Project Number:	GP09BPNAWA01

Section C Invoice Information:

Attention:	Alex Lopez
Company Name:	ARCADIS
Address:	2300 East Lake Ave E
Pace Quote Reference:	NA
Pace Project Manager:	Dan Gossett
Pace Profile #:	NA

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER Ecology

Site Location STATE: WA

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	Composite Start TIME	Composite End/Grab DATE	Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N) NWTPH-Gx (TPH-G)	BTEX by 8260	MTBE by 8260	Total Pb by 6010	Dissolved Pb by 6010	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-1	WT	G			11/26/12	15:20		14	1		1	12					X	X	X	X	X		001
2	MW-2						13:15		6	1		1	6					X	X	X	X	X		002
3	MW-4						14:45		6	1		1	6					X	X	X	X	X		003
4	MW-5						16:10		6	1		1	6					X	X	X	X	X		004
5	MW-6						12:30		6	1		1	6					X	X	X	X	X		005
6	MW-7						14:00		6	1		1	6					X	X	X	X	X		006
7	MW-8						9:40		6	1		1	6					X	X	X	X	X		007
8	MW-9						10:40		6	1		1	6					X	X	X	X	X		008
9	MW-10						11:20		6	1		1	6					X	X	X	X	X		009
10	TRIP BLANK	WT	OT			11/26/12	—		4				4											010
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Rory G. Hennek / AWS	11/26/12	18:00	refrigerator / AWS	11/26/12	18:00				
	Rory G Hennek / AWS	11/27/12	14:05	[illegible]	11/27/12	1405				
	Jack Carver	11/27/12	1500	[illegible]	11/27/12	1500	1.8 2.0	Y	N	Y
	Jyothi Sing	11/27/12	1530	[illegible]	11/28/12	9:30	2.1	Y	Y	Y

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Rory Hennek

SIGNATURE of SAMPLER: Rory G Hennek

DATE Signed (MM/DD/YY): 11/26/2012

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical	Document Name: Cooler Transfer Check List	Revised Date: 26Nov2012 Page 1 of 1
	Document Number: F-MN-C-120-rev.00	Issuing Authority: Pace Minnesota Quality Office

Cooler Transfer Check List

Client: Arcadis

Project Manager: Dan Gossett

Profile/Line #: 21925 L4

Received with Custody Seal: Yes (No)

Custody Seal Intact: Yes No (NA)

	Temp Read	Corrected Temp
Temperature C: IR Gun # IR1 IR2	1.8, 2.0°C	1.8, 2.0°C

Rush/Short Hold: std

Containers Intact: (Yes) No

Re-packed and Re-Iced: y

Temp Blank Included: (Yes) No

Shipped By/Date: NP 11/27/12

Notes:

Pace Analytical®	Document Name: Sample Condition Upon Receipt Form	Document Revised: 15Nov2012 Page 1 of 1
	Document No.: F-MN-L-213-rev.05	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Arcadis

Project #: WO#: 10213568

10213568

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other: _____

Tracking Number: 7441 5960 5966

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No **Seals Intact?** ☐ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☑ Yes ☐ No

Thermometer Used: ☑ B88A912167504 ☐ 80512447 **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has beg

Cooler Temp Read (°C): 1.6 **Cooler Temp Corrected (°C):** 2.1 **Biological Tissue Frozen?** ☐ Yes ☑ No

Temp should be above freezing to 6°C

Date and Initials of Person Examining Contents: CLF 11-28-16

				Comments:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☑ Yes	☐ No	☐ N/A	11.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☑ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	☑ Yes	☐ No	☐ N/A	13. ☑ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HC
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH>12)	☑ Yes	☐ No	☐ N/A	Sample # 1-9 1/1
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	☑ Yes	☐ No		Initial when completed: CW Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☑ No	☐ N/A	14.
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	15.
Trip Blank Custody Seals Present?	☑ Yes	☐ No	☐ N/A	
Pace Trip Blank Lot # (if purchased) Lot # Covered				4 Trip Blanks

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e c hold, incorrect preservative, out of temp, incorrect containers)