ARCADIS U.S., Inc.
2300 Eastlake Avenue East
Suite 200
Seattle
Washington 98102
Tel 206.325.5254
Fax 206.325.8218
www.arcadis-us.com

ENVIRONMENT

Libby Goldstein
Washington State Department of Ecology
NW Regional Office
3190 160th Avenue Southeast
Bellevue, WA, 98008-5452

Subject:
Annual Site Activities Report, 2012
Former ARCO Facility No. 11060
Multi-Site VCP No. NW2463
4580 Fauntleroy Way Southwest
Seattle, WA, 98126

Date:
February 18, 2013

Contact:
Scott Zorn

Phone:
206-726-4709

Email:
Scott.Zorn
@arcadis-us.com

Our ref:
GP09BPNA.WA48.N0000

Dear Ms. Goldstein:

On behalf of BP West Coast Products, LLC. (BP), ARCADIS U.S., Inc. (ARCADIS) is pleased to submit this *Annual Site Activities Report, 2012* for the above referenced facility (the Site). The Site is currently an active Shell gas station and retail store located at the southwest corner of the intersection of Southwest Alaska Street and Fauntleroy Way Southwest, in King County, Washington. A Site location map is presented in **Figure 1**.

On June 1st and November 29th, 2012, ARCADIS conducted semi-annual groundwater monitoring activities at the Site. During the June 1st event, monitoring wells MW-1, MW-2, MW-3, MW-5, MW-6, and MW-10 were gauged and sampled via no purge methods, using disposable bailers. During the November 29th event, monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-10, and VE-1were gauged and monitoring wells MW-1, MW-2, MW-3, MW-5, and MW-10 were gauged and sampled via no purge methods, using disposable bailers. Monitoring wells MW-4 and VE-1 were not sampled during the November event due to the presence of non-aqueous phase liquid (NAPL), measured with a thickness of 0.10 foot in each monitoring well. Monitoring well MW-6 was not gauged or sampled during the November event; the well could not be located. Monitoring well MW-4 was not gauged or sampled during either event due to a confined space hazard. Monitoring wells MW-GW-1 and MW-9 were not gauged or sampled during either event, the wells are located in a fenced lot. Groundwater samples were analyzed for gasoline range organics (GRO) according to Northwest Method NWTPH-Gx, diesel range organics (DRO) and heavy oil range organics (HO) according to Northwest Method NWTPH-Dx, for benzene, toluene, ethylbenzene, total xylenes (BTEX collectively)

and methyl tertiary butyl ether (MTBE) by Environmental Protection Agency (EPA) Method 8260, and for dissolved and total lead by EPA Method 6010. Field data sheets are included as **Appendix A**.

Samples were collected in laboratory provided bottles and placed in a cooler with ice. Samples were submitted to Pace Analytical Services, Inc., in Seattle, Washington, under standard chain-of-custody protocol. The laboratory analytical report and chain-of-custody documentation are included as **Appendix B**.

During the June 1st, 2012 monitoring event, groundwater conditions at the Site remained generally consistent with previous years. The depth to groundwater during this sampling event ranged between 22.75 feet below top of casing (btoc) in well MW-6 to 24.60 feet btoc in well MW-5. Groundwater elevations during this sampling event ranged from 243.06 feet above mean sea level (msl) in well MW-3 to 244.10 feet above msl in well MW-10. The inferred direction of groundwater flow is to the north-northeast. Groundwater gauging data are presented in **Table 1**.

Groundwater samples collected from three monitoring wells contained constituents of concern (COCs) at concentrations greater than the Model Toxics Control Act Method A Cleanup Levels (MTCA A CULs) for GRO (800 micrograms per liter (µg/L)), DRO (500 µg/L), HO (500 µg/L), benzene (5 µg/L), or total lead (15 µg/L). The samples collected from wells MW-2, MW-3, and MW-5 and MW-5 duplicate sample (DUP) contained concentrations of GRO (2,940 µg/L, 2,360 µg/L, 1,620 µg/L, and 1,520 µg/L, respectively) greater than the MTCA A CUL. The samples collected from wells MW-2, MW-3, MW-5 and DUP contained concentrations of DRO (2,240 µg/L, 512 µg/L, 1,040 µg/L, and 1,030 µg/L, respectively) greater than the MTCA A CUL. The sample collected from well MW-2 contained a concentration of HO (3,080 µg/L) greater than the MTCA A CUL. The samples collected from wells MW-2, MW-3, MW-5, and DUP contained concentrations of benzene (107 µg/L, 29.0 µg/L, 13.3 µg/L, and 12.8 µg/L, respectively) greater than the MTCA A CUL.

Anaytical results for groundwater collected from monitoring wells MW-1 and MW-6 did not identify COCs at concentrations greater than the MTCA A CULs. Analytical results for groundwater collected from monitoring well MW-10 did not identify COCs at concentrations greater than the laboratory reporting limits (RLs). Analytical results are presented in **Table 1** and **Figure 2**.

During the November 29th, 2012 monitoring event, groundwater conditions at the Site remained generally consistent with previous years with exception of groundwater

flow direction. The depth to groundwater during this sampling event ranged between 22.90 feet btoc in well MW-3 to 25.31 feet btoc in well MW-5. Groundwater elevations during this sampling event ranged from 242.83 feet above msl in well MW-2 to 244.12 feet above msl in well VE-1. There appears to have been a shift in the apparent groundwater flow direction during this event. There is a substantial amount of construction in the vicinity of the Site, which may be affecting local groundwater flow. Groundwater gauging data are presented in **Table 1**.

Groundwater samples collected from five monitoring wells contained COCs at concentrations greater than the MTCA A CULs for GRO, DRO, HO, benzene, and total lead. The samples collected from wells MW-1, MW-2, MW-3, and MW-5 contained concentrations of GRO (1,320 µg/L, 10,400 µg/L, 2,320 µg/L, and 4,160 µg/L, respectively) greater than the MTCA A CUL. The samples collected from wells MW-2, MW-3, and MW-5 contained concentrations of DRO (2,100 µg/L, 670 µg/L, 1,100 µg/L, respectively) greater than the MTCA A CUL. The sample collected from well MW-2 contained a concentration of HO (760 µg/L) greater than the MTCA A CUL. The samples collected from wells MW-2 and MW-5 contained concentrations of benzene (399 µg/L and 18.0 µg/L, respectively) greater than the MTCA A CUL. The samples collected from wells MW-5, MW-10 and its DUP contained concentrations of total lead (42.5 µg/L, 20.4 µg/L, and 22.6 µg/L, respectively) greater than the MTCA A CUL.

Analytical results are presented in **Table 1** and **Figure 3**.

On January 23rd through 27th, 2012, four soil borings (SB-1, SB-2, SB-3, and SB-4), three extraction wells (EW-1, EW-2, and EW-3), and one monitoring well (MW-10) were installed to prepare for the installation of a remediation system. Three multi-phase extraction (MPE) events were conducted April 12th, May 9th, and August 10th, 2012. On August 8, 2012, the belt skimmer motor, housing, and associated lines from MW-4 vault were removed. All activities and well installations involved in the remedial system were reported in the Enhanced LNAPL Recovery Event Completion Report.

The next groundwater monitoring event at the Site is scheduled for the first half of 2013. Should you have any questions or if ARCADIS can be of further assistance, please contact Scott Zorn at (206) 726-4709.

Sincerely,

ARCADIS U.S., Inc.

Scott Zorn
Principal Geologist

Rebecca Andresen, P.G.
Technical Expert

State of Washington
2588
Licensed Geologist
Rebecca K. Andresen

CC: Richard Wright; Jackson Food Stores

Attachments:

Table 1	Groundwater Gauging Data and Selected Analytical Results
Figure 1	Site Location Map
Figure 2	Groundwater Map with Analytical Results June 1st, 2012
Figure 3	Groundwater Map with Analytical Results November 29th, 2012
Appendix A	Groundwater Monitoring Field Data Sheets
Appendix B	Laboratory Report and Chain-of-Custody Documentation

ARCADIS

Tables

Table 1
Groundwater Gauging Data and Select Analytical Results
WA-11060

4580 Fauntleroy Way Sw, Seattle, WA 98126

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**	**--**
GMW-1	5/10/2011	(NP)	--	22.08	0.0	--	**5,930**	**1,900**	<420	2.4	<1.0	69.7	94.8	<1.0	--	--	**28.4**	--
GMW-1	11/29/2011	(NP)	--	23.83	0.0	--	**6,080**	**610**	<380	<1.0	<1.0	86.9	113	--	--	--	<10.0	--
GMW-1	6/1/2012	(NM)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GMW-1	11/29/2012	(NM)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	5/11/1993		99.89	23.02	--	76.87	**3,300**	--	--	**82**	11	8	14	--	--	--	--	--
MW-1	3/4/1994		99.89	24.32	--	75.57	**830**	**580**	--	**6**	3	3	11	--	--	--	**38**	<3
MW-1	7/6/1994		99.89	24.60	--	75.29	**900**	<250	--	**5**	<0.5	2	10	--	--	--	--	--
MW-1	10/7/1994		99.89	24.97	--	74.92	**1,500**	--	--	**6**	<0.5	3	11	--	--	--	--	--
MW-1	12/28/1994		99.89	24.86	--	75.03	**1,400**	--	--	**5**	<0.5	2	7	--	--	--	--	--
MW-1	3/13/1995		99.89	24.16	--	75.73	**1,400**	--	--	**16**	<0.5	3	9	--	--	--	--	--
MW-1	6/30/1995		99.89	23.98	--	75.91	**1,400**	--	--	4	<0.5	3	7	--	--	--	--	--
MW-1	9/6/1995		99.89	24.30	--	75.59	**1,300**	--	--	**5**	<0.5	3	6	--	--	--	--	--
MW-1	12/8/1995		99.89	24.41	--	75.48	**1,300**	--	--	**7**	2	2	7	--	--	--	--	--
MW-1	3/11/1996		99.89	23.11	--	76.78	**900**	--	--	3	<0.5	<0.5	1	--	--	--	--	--
MW-1	6/18/1996		99.89	22.80	--	77.09	400	--	--	1	1	<0.5	2	--	--	--	--	--
MW-1	9/9/1996		99.89	23.11	--	76.78	600	--	--	2	<0.5	1	1	13	--	--	--	--
MW-1	12/11/1996		99.89	23.07	--	76.82	710	--	--	4	2	2	4	<10	--	--	--	--
MW-1	3/13/1997		99.89	22.12	--	77.77	100	--	--	<0.5	<0.5	<0.5	<1.0	<5	--	--	--	--
MW-1	6/5/1997		99.89	21.75	--	78.14	250	--	--	2	2	<0.5	<1.5	5	--	--	--	--
MW-1	9/5/1997		99.89	22.03	--	77.86	300	--	--	**8**	4	2	6	8	--	--	--	--
MW-1	4/2/1998		99.89	21.27	--	78.62	210	--	--	1	3	<0.5	<1.5	<5	--	--	--	--
MW-1	6/8/1998		99.89	21.53	--	78.36	300	--	--	<0.5	3	1	4	6	--	--	--	--
MW-1	12/9/1998		99.89	22.22	--	77.67	<500	--	--	<0.5	<5.0	<5.0	<5.0	<5.0	--	--	--	--
MW-1	6/26/1999		99.89	21.08	--	78.81	<100	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--
MW-1	9/28/1999		99.89	21.88	--	78.01	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	1/19/2000		99.89	21.46	--	78.43	<50	--	--	<0.5	4	1	3	<0.5	--	--	--	--
MW-1	3/24/2000		99.89	21.40	--	78.49	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	7/2/2000		99.89	21.92	--	77.97	120	--	--	1	<0.5	1	2	2	--	--	--	--
MW-1	9/14/2000		99.89	22.54	--	77.35	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	12/14/2000		99.89	22.81	--	77.08	**1,700**	--	--	<10	19	<10	<30	<40	--	--	--	--
MW-1	9/22/2001		99.89	23.55	--	76.34	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	12/9/2001		99.89	23.63	--	76.26	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	3/20/2002		99.89	22.88	--	77.01	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	6/11/2002		99.89	23.02	--	76.87	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	12/21/2002	(NS)	99.89	24.54	--	75.35	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	3/19/2003	(NS)	99.89	24.50	--	75.39	--	--	--	--	--	--	--	--	--	--	--	--

Table 1
Groundwater Gauging Data and Select Analytical Results
WA-11060

4580 Fauntleroy Way Sw, Seattle, WA 98126

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**	**--**
MW-1	6/18/2003	(NS)	99.89	24.36	--	75.53	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	9/23/2003	(NS)	99.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	10/21/2003	(P)	99.89	25.04	--	74.85	**3,270**	--	--	**32.5**	4.61	17.3	19.2	<1.00	--	--	--	--
MW-1	6/29/2004	(NS)	99.89	24.22	--	75.67	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	11/15/2004	(NS)	99.89	25.11	--	74.78	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	4/14/2005	(NS)	99.89	25.10	--	74.79	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	12/18/2005	(NP)	99.89	25.46	--	74.43	**2,960**	--	--	**10.8**	2.04	1.23	2.76	<1.00	--	--	--	--
MW-1	6/11/2006	(NP)	99.89	24.54	--	75.35	**1,840**	--	--	**11.4**	1.12	1.6	2.34	19.8	--	--	--	--
MW-1	11/5/2006	(NP)	99.89	25.59	--	74.30	**3,880**	--	--	**73.2**	6.12	2.04	<6.00	--	--	--	--	--
MW-1	9/25/2007	(NP)	99.89	25.08	--	74.81	**1,640**	--	--	**27.8**	1.67	0.86	<3.00	--	--	--	--	--
MW-1	12/31/2007	(NP)	99.89	25.23	--	74.66	**1,970**	--	--	**22.7**	1.34	1.03	<3.00	--	--	--	--	--
MW-1	5/29/2008	(NP)	99.89	25.01	--	74.88	**2,370**	--	--	3.58	0.58	<0.500	<3.00	--	--	--	--	--
MW-1	10/28/2008	(NP)	99.89	25.80	--	74.09	**1,450**	--	--	2.8	1.07	<0.500	<3.00	--	--	--	--	--
MW-1	6/22/2009	(NP)	99.89	26.11	--	73.78	**2,200**	--	--	**30**	5.7	24	30.5	--	--	--	4.9	<2.00
MW-1	12/15/2009	(NP)	99.89	26.31	--	73.58	**1,500**	--	--	**11**	2	4.8	3.6	--	--	--	3.8	<2.00
MW-1	3/24/2010	(NS)	267.43	21.03	0.0	246.40	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	5/24/2010	(NP)	99.89	25.20	--	74.69	**940**	--	--	**18**	<2.5	<2.5	6.4	--	--	--	--	--
MW-1	5/24/2010	(Dup)(NP)	99.89	25.20	--	74.69	**940**	--	--	**22**	<2.5	<2.5	6.8	--	--	--	--	--
MW-1	10/12/2010	(NP)	267.43	25.09	0.0	242.34	**849**	--	--	2.8	<1.0	1.2	<3.0	5.2	--	--	<10.0	--
MW-1	5/10/2011	(NP)	267.43	23.60	0.0	243.83	642	**840**	<420	**17.8**	6.6	1.8	10.9	2.5	--	--	<10.0	--
MW-1	11/29/2011	(NP)	267.43	24.84	0.0	242.59	**815**	<75	<380	**5.5**	<1.0	<1.0	<3.0	--	--	--	10.3	--
MW-1	6/1/2012	(NP)	267.43	23.67	0.0	243.76	544	362	<396	3.6	<1.0	<1.0	3.0	7.4	--	--	<10.0	<10.0
MW-1	11/29/2012	(NP)	267.43	24.00	0.0	243.43	**1,320**	<430	<430	1.2	<1.0	<1.0	<3.0	<1.0	--	--	11.3	<3.0
MW-2	5/11/1993		99.05	22.98	--	76.07	**17,000**	--	--	**2,500**	48	100	240	--	--	--	--	--
MW-2	3/4/1994		99.05	24.30	--	74.75	**4,300**	**1,300**	--	**1,500**	20	130	180	--	--	--	5	<3
MW-2	7/6/1994		99.05	24.54	--	74.51	**4,400**	390	--	**1,100**	16	53	97	--	--	--	--	--
MW-2	10/7/1994		99.05	24.94	--	74.11	**4,400**	--	--	**1,100**	18	57	82	--	--	--	--	--
MW-2	12/28/1994		99.05	24.60	--	74.45	**2,100**	--	--	**250**	5	13	14	--	--	--	--	--
MW-2	3/13/1995		99.05	23.84	--	75.21	**2,700**	--	--	**200**	12	29	50	--	--	--	--	--
MW-2	6/30/1995		99.05	23.72	--	75.33	**3,400**	--	--	**400**	8	50	39	--	--	--	--	--
MW-2	9/6/1995		99.05	23.97	--	75.08	**3,400**	--	--	**350**	8	50	35	--	--	--	--	--
MW-2	12/8/1995		99.05	23.97	--	75.08	**3,100**	--	--	**610**	5	29	36	--	--	--	--	--
MW-2	3/11/1996		99.05	22.66	--	76.39	**5,400**	--	--	**280**	12	100	120	--	--	--	--	--
MW-2	6/18/1996		99.05	22.18	--	76.87	**4,500**	--	--	**280**	12	130	56	--	--	--	--	--
MW-2	9/9/1996		99.05	22.72	--	76.33	**4,100**	--	--	**790**	5	78	35	<1.0	--	--	--	--
MW-2	12/11/1996		99.05	22.67	--	76.38	**3,700**	--	--	**460**	13	65	41	**43**	--	--	--	--
MW-2	3/13/1997		99.05	21.91	--	77.14	**3,200**	--	--	**140**	12	130	48	<50	--	--	--	--

Table 1
Groundwater Gauging Data and Select Analytical Results
WA-11060

4580 Fauntleroy Way Sw, Seattle, WA 98126

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**	**--**
MW-2	6/5/1997		99.05	21.06	--	77.99	**3,400**	--	--	**160**	22	180	79	<100	--	--	--	--
MW-2	9/5/1997		99.05	21.74	--	77.31	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	4/2/1998		99.05	20.71	--	78.34	**4,700**	--	--	**170**	51	35	210	<50	--	--	--	--
MW-2	6/8/1998		99.05	21.25	--	77.80	**3,800**	--	--	**420**	26	150	75	**140**	--	--	--	--
MW-2	9/17/1998		99.05	22.10	--	76.95	**2,900**	--	--	**720**	15	79	44	<5.0	--	--	--	--
MW-2	12/9/1998		99.05	21.99	--	77.06	**4,500**	--	--	**520**	8	100	62	<5.0	--	--	--	--
MW-2	3/17/1999		99.05	19.67	--	79.38	**5,000**	--	--	**19**	27	300	230	<5.0	--	--	--	--
MW-2	6/26/1999		99.05	21.26	--	77.79	**3,400**	--	--	**400**	29	160	130	13	--	--	--	--
MW-2	9/28/1999		99.05	21.75	--	77.30	**7,300**	--	--	**690**	20	23	110	**87**	--	--	--	--
MW-2	1/19/2000		99.05	21.12	--	77.93	**8,700**	--	--	**920**	20	260	74	<0.5	--	--	--	--
MW-2	3/24/2000		99.05	20.74	--	78.31	**10,000**	--	--	**310**	79	240	97	<5	--	--	--	--
MW-2	7/2/2000		99.05	21.51	--	77.54	**8,200**	--	--	**520**	35	190	85	**49**	--	--	--	--
MW-2	9/14/2000		99.05	22.31	--	76.74	**14,000**	--	--	**1,100**	100	110	100	<5	--	--	--	--
MW-2	12/14/2000		99.05	22.97	--	76.08	**15,000**	--	--	**740**	<10	68	<30	<40	--	--	--	--
MW-2	9/22/2001		99.05	23.59	--	75.46	**12,000**	--	--	**180**	9	240	110	**20**	--	--	--	--
MW-2	12/9/2001		99.05	23.27	--	75.78	**14,000**	--	--	**310**	9.5	100	96	<4.0	--	--	--	--
MW-2	3/20/2002		99.05	22.41	--	76.64	**15,000**	--	--	**250**	<5.0	220	98	**280**	--	--	--	--
MW-2	6/11/2002		99.05	22.61	--	76.44	**13,000**	--	--	**290**	<10	160	57	<40	--	--	--	--
MW-2	12/21/2002	(P)	99.05	24.30	--	74.75	**5,970**	--	--	**111**	13.4	211	70.3	**148**	--	--	--	--
MW-2	3/19/2003	(P)	266.69	23.90	0.0	242.79	**5,270**	--	--	**79.9**	8.71	156	55	<25.0	--	--	--	--
MW-2	6/18/2003	(P)	99.05	23.87	--	75.18	**6,770**	--	--	**36.7**	14.7	245	119	**143**	--	--	--	--
MW-2	9/23/2003	(P)	266.69	24.33	0.0	242.36	**6,490**	--	--	**40.5**	15.8	179	103	<20.0	--	--	--	--
MW-2	10/21/2003	(P)	99.05	24.38	--	74.67	**4,600**	--	--	**31.1**	9.38	86	61	<1.00	--	--	--	--
MW-2	6/29/2004	(NP)	99.05	23.74	--	75.31	**5,550**	--	--	**17.8**	11.2	228	76.5	**95.2**	--	--	--	--
MW-2	11/15/2004	(NP)	99.05	24.70	--	74.35	**5,670**	--	--	**12.3**	6.11	135	63.3	<2.00	--	--	--	--
MW-2	4/14/2005	(NP)	99.05	24.69	--	74.36	**4,680**	--	--	**130**	2.8	41.8	26.6	<2.00	--	--	--	--
MW-2	12/18/2005	(NP)	99.05	25.15	--	73.90	**5,700**	--	--	**122**	3.5	43.9	27.8	<5.00	--	--	--	--
MW-2	6/11/2006	(NP)	99.05	24.01	--	75.04	**5,450**	--	--	4.48	5.8	118	56.7	<2.00	--	--	--	--
MW-2	11/5/2006	(NP)	99.05	25.40	--	73.65	**7,490**	--	--	**263**	<5.00	46.2	<30.0	--	--	--	--	--
MW-2	9/25/2007	(NP)	99.05	24.72	--	74.33	**7,530**	--	--	**715**	9.74	50.8	64	--	--	--	--	--
MW-2	12/31/2007	(NP)	99.05	24.67	--	74.38	**6,000**	--	--	**477**	10.6	69.3	76.3	--	--	--	--	--
MW-2	5/29/2008	(NP)	99.05	24.73	--	74.32	**9,600**	--	--	**648**	11.1	55.9	48.4	--	--	--	--	--
MW-2	10/28/2008	(NP)	99.05	25.74	--	73.31	**10,300**	--	--	**1,430**	16	194	145	--	--	--	--	--
MW-2	6/22/2009	(NP)	99.05	25.91	--	73.14	**4,800**	--	--	**1,200**	40	100	130	--	--	--	<2.00	<2.00
MW-2	12/15/2009	(NP)	99.05	25.87	--	73.18	**4,300**	--	--	**1,600**	8.2	66	82	--	--	--	<2.00	<2.00
MW-2	3/24/2010	(NS)	266.69	21.11	0.0	245.58	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	5/24/2010	(NP)	99.05	24.64	--	74.41	**4,200**	--	--	**320**	7.7	69	84	--	--	--	--	--

Table 1
Groundwater Gauging Data and Select Analytical Results
WA-11060

4580 Fauntleroy Way Sw, Seattle, WA 98126

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**	**--**
MW-2	10/12/2010	(NP)	266.69	25.03	0.0	241.66	**3,590**	--	--	**1,890**	14.8	54.8	39.7	15.5	--	--	<10.0	--
MW-2	5/10/2011	(NP)	266.69	23.23	0.0	243.46	**5,520**	**1,000**	**2,000**	**281**	4.2	69.9	49.9	7.3	--	--	<10.0	--
MW-2	5/10/2011	(Dup)(NP)	266.69	23.23	0.0	243.46	**5,000**	**850**	**1,600**	**156**	3.9	76.3	53.2	5.6	--	--	<10.0	--
MW-2	11/29/2011	(NP)	266.69	24.82	0.0	241.87	**5,640**	98	<380	**549**	7.0	82.6	61.6	--	--	--	<10.0	--
MW-2	6/1/2012	(NP)	266.69	23.60	0.0	243.09	**2,940**	**2,240**	**3,080**	**107**	12.7	64.2	46.1	5.0	--	--	10.0	<10.0
MW-2	11/29/2012	(NP)	266.69	23.86	0.0	242.83	**10,400**	**2,100**	**760**	**399**	10.2	187	154	14.7	--	--	7.7	3.2
MW-3	6/7/1993		98.53	22.28	--	76.25	**2,200**	--	--	**140**	7	13	14	--	--	--	--	--
MW-3	3/4/1994		98.53	23.62	--	74.91	**1,200**	**590**	--	**99**	2	11	10	--	--	--	4	<3
MW-3	7/6/1994		98.53	23.84	--	74.69	**1,500**	270	--	**44**	6	26	27	--	--	--	--	--
MW-3	10/7/1994		98.53	24.21	--	74.32	**1,500**	--	--	**63**	4	16	13	--	--	--	--	--
MW-3	12/28/1994		98.53	23.91	--	74.62	**1,800**	--	--	**77**	3	13	9	--	--	--	--	--
MW-3	3/13/1995		98.53	23.12	--	75.41	**1,700**	--	--	**87**	4	18	10	--	--	--	--	--
MW-3	6/30/1995		98.53	23.87	--	74.66	**1,800**	--	--	**90**	3	52	13	--	--	--	--	--
MW-3	9/6/1995		98.53	23.14	--	75.39	**1,700**	--	--	**96**	3	41	14	--	--	--	--	--
MW-3	12/8/1995		98.53	23.20	--	75.33	**1,800**	--	--	**73**	4	23	15	--	--	--	--	--
MW-3	3/11/1996		98.53	21.63	--	76.90	**2,800**	--	--	**120**	11	170	36	--	--	--	--	--
MW-3	6/18/1996		98.53	21.20	--	77.33	**3,500**	--	--	**150**	18	320	59	--	--	--	--	--
MW-3	9/9/1996		98.53	21.67	--	76.86	**3,500**	--	--	**62**	16	220	96	15	--	--	--	--
MW-3	12/11/1996		98.53	21.87	--	76.66	**2,100**	--	--	**96**	9	<0.5	34	<10	--	--	--	--
MW-3	3/13/1997		98.53	20.67	--	77.86	**3,100**	--	--	**97**	13	250	65	<50	--	--	--	--
MW-3	6/5/1997		98.53	19.83	--	78.70	**3,900**	--	--	**46**	19	250	130	<100	--	--	--	--
MW-3	9/5/1997		98.53	20.72	--	77.81	**4,400**	--	--	**98**	29	270	140	<5	--	--	--	--
MW-3	4/2/1998		98.53	19.63	--	78.90	**3,700**	--	--	**80**	25	320	150	<50	--	--	--	--
MW-3	6/8/1998		98.53	20.26	--	78.27	**3,500**	--	--	**60**	22	240	96	<50	--	--	--	--
MW-3	9/17/1998		98.53	21.21	--	77.32	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	12/9/1998		98.53	21.06	--	77.47	**3,200**	--	--	**63**	9	170	59	<5.0	--	--	--	--
MW-3	3/17/1999		98.53	18.72	--	79.81	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	6/26/1999		98.53	19.92	--	78.61	**3,100**	--	--	**72**	16	270	52	**56**	--	--	--	--
MW-3	9/28/1999		98.53	20.79	--	77.74	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	1/19/2000		98.53	20.19	--	78.34	**5,700**	--	--	**72**	29	430	110	<0.5	--	--	--	--
MW-3	3/24/2000		98.53	19.64	--	78.89	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	7/2/2000		98.53	20.53	--	78.00	**3,300**	--	--	**35**	18	230	64	7	--	--	--	--
MW-3	9/14/2000		98.53	21.34	--	77.19	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	12/14/2000		98.53	21.90	--	76.63	**5,500**	--	--	**40**	<10	210	<30	<40	--	--	--	--
MW-3	9/22/2001		98.53	22.82	--	75.71	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	12/9/2001		98.53	22.50	--	76.03	**4,200**	--	--	**42**	4.1	77	22	<4.0	--	--	--	--
MW-3	3/20/2002		98.53	21.55	--	76.98	--	--	--	--	--	--	--	--	--	--	--	--

Table 1
Groundwater Gauging Data and Select Analytical Results
WA-11060

4580 Fauntleroy Way Sw, Seattle, WA 98126

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**	**--**
MW-3	6/11/2002		98.53	21.69	--	76.84	**8,400**	--	--	**77**	<5.0	320	54	<20	--	--	--	--
MW-3	12/21/2002		98.53	24.37	--	74.16	**3,440**	--	--	**37.7**	3.31	68.6	18.3	**39.3**	--	--	--	--
MW-3	3/19/2003	(NS)	98.53	23.17	--	75.36	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	6/18/2003		98.53	22.82	--	75.71	**4,020**	--	--	**39.1**	4.22	113	30.3	**62.6**	--	--	--	--
MW-3	9/23/2003	(NS)	98.53	23.55	--	74.98	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	10/21/2003		98.53	23.52	--	75.01	**3,190**	--	--	**19.8**	2.92	31.2	16.3	<1.00	--	--	--	--
MW-3	6/29/2004	(NS)	98.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	11/15/2004	(NP)	98.53	23.95	--	74.58	**3,170**	--	--	**15.8**	2.36	20.9	11.1	2.36	--	--	--	--
MW-3	4/14/2005	(NP)	98.53	23.90	--	74.63	**3,340**	--	--	**17.1**	5.21	14.3	11.2	<2.00	--	--	--	--
MW-3	12/18/2005	(NP)	98.53	24.42	--	74.11	**4,150**	--	--	**15.1**	2.92	20.7	15.1	<1.00	--	--	--	--
MW-3	6/11/2006	(NP)	98.53	23.48	--	75.05	**4,000**	--	--	**20.9**	3.6	30	21.3	1.11	--	--	--	--
MW-3	11/5/2006	(NP)	98.53	24.59	--	73.94	**4,970**	--	--	**16.8**	2.85	19	16.6	--	--	--	--	--
MW-3	9/25/2007	(NP)	98.53	23.84	--	74.69	**4,530**	--	--	**18.2**	2.34	17.1	13.8	--	--	--	--	--
MW-3	12/31/2007	(NP)	98.53	23.83	--	74.70	**4,490**	--	--	**16.5**	2.38	32.7	16.1	--	--	--	--	--
MW-3	5/29/2008	(NP)	98.53	23.90	--	74.63	**5,350**	--	--	**16.5**	1.83	14.4	15	--	--	--	--	--
MW-3	10/28/2008	(NP)	98.53	24.97	--	73.56	**3,250**	--	--	**14.4**	1.86	13.8	10.3	--	--	--	--	--
MW-3	6/22/2009	(NP)	98.53	25.29	--	73.24	**2,000**	--	--	**15**	1.7	35	7.3	--	--	--	<2.00	<2.00
MW-3	12/15/2009	(NP)	98.53	25.14	--	73.39	**2,100**	--	--	**13**	1.5	28	7.3	--	--	--	7.7	<2.00
MW-3	3/24/2010	(NS)	266.00	21.21	0.0	244.79	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	5/24/2010	(NP)	98.53	24.10	--	74.43	**2,300**	--	--	**29**	6.2	28	19	--	--	--	--	--
MW-3	10/12/2010	(NP)	266.00	24.40	0.0	241.60	**2,380**	--	--	**31.1**	<1.0	16.6	4.7	<1.0	--	--	<10.0	--
MW-3	5/10/2011	(NP)	266.00	22.55	0.0	243.45	**3,280**	**820**	**840**	**33.6**	1.2	57.5	7.9	2.4	--	--	<10.0	--
MW-3	11/29/2011	(NP)	266.00	24.19	0.0	241.81	**3,130**	<76	<380	**30.4**	<1.0	21.0	6.9	--	--	--	<10.0	--
MW-3	6/1/2012	(NP)	266.00	22.94	0.0	243.06	**2,360**	**512**	446	**29.0**	<1.0	35.9	7.6	2.6	--	--	<10.0	<10.0
MW-3	11/29/2012	(NP)	266.00	22.90	0.0	243.10	**2,320**	**670**	**500**	3.2	1.9	40.7	10.6	1.8	--	--	4.1	<3.0
MW-4	5/11/1993		100.26	23.03	--	77.23	**31,000**	--	--	**8,700**	**4,000**	57	**3,200**	--	--	--	--	--
MW-4	3/4/1994		100.26	26.83	4.00	76.63	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	7/6/1994		100.26	25.63	1.43	75.77	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	10/7/1994		100.26	26.07	1.63	75.49	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	12/28/1994		100.26	25.85	1.43	75.55	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	3/13/1995		100.26	25.59	1.88	76.17	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	6/30/1995		100.26	24.64	1.11	76.51	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	9/6/1995		100.26	24.78	1.05	76.32	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	12/8/1995		100.26	24.94	1.05	76.16	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	3/11/1996		100.26	24.68	2.38	77.48	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	6/18/1996		100.26	24.04	2.11	77.91	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	9/9/1996		100.26	24.08	1.85	77.66	--	--	--	--	--	--	--	--	--	--	--	--

Table 1
Groundwater Gauging Data and Select Analytical Results
WA-11060

4580 Fauntleroy Way Sw, Seattle, WA 98126

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**	**--**
MW-4	12/11/1996		100.26	23.07	0.38	77.49	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	3/17/1999		100.26	--	--	--	**100,000**	--	--	**12,000**	**17,000**	**1,800**	**10,000**	<50	--	--	--	--
MW-4	9/28/1999		100.26	--	--	--	**97,000**	--	--	**27,000**	**65,000**	**18,000**	**100,000**	<1,000	--	--	--	--
MW-4	1/19/2000		100.26	--	--	--	**100,000**	--	--	**22,000**	**18,000**	**2,400**	**15,000**	<5	--	--	--	--
MW-4	3/24/2000		100.26	--	--	--	**100,000**	--	--	**13,000**	**18,000**	**2,200**	**13,000**	<5	--	--	--	--
MW-4	7/2/2000		100.26	--	--	--	**92,000**	--	--	**13,000**	**17,000**	**1,800**	**10,000**	**220**	--	--	--	--
MW-4	9/14/2000	(Dup)	100.26	--	--	--	**160,000**	--	--	**16,000**	**22,000**	<500	**7,800**	<2,000	--	--	--	--
MW-4	9/14/2000		100.26	--	--	--	**160,000**	--	--	**22,000**	**27,000**	**6,900**	**23,000**	<5	--	--	--	--
MW-4	9/22/2001		100.26	26.60	3.27	76.28	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	12/9/2001		100.26	25.50	2.37	76.66	**110,000**	--	--	**12,000**	**10,000**	**1,900**	**8,800**	<40	--	--	--	--
MW-4	3/20/2002		100.26	26.50	3.73	76.74	**100,000**	--	--	**13,000**	**19,000**	**2,500**	**13,000**	**360**	--	--	--	--
MW-4	6/11/2002		100.26	24.25	1.10	76.89	**95,000**	--	--	**13,000**	**17,000**	**2,300**	**12,000**	<400	--	--	--	--
MW-4	12/21/2002	(NS)	100.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	3/19/2003	(NS)	100.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	6/18/2003	(NS)	100.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	9/23/2003		100.26	22.31	0.07	78.01	**75,900**	--	--	**7,140**	**8,980**	**1,270**	**8,820**	<50.0	--	--	--	--
MW-4	10/21/2003		100.26	21.79	--	78.47	**44,700**	--	--	**3,190**	**6,370**	**779**	**6,160**	<500	--	--	--	--
MW-4	6/29/2004	(NP)	267.78	22.88	0.0	244.90	**378,000**	--	--	**11,200**	**16,300**	**3,550**	**22,600**	**2,500**	--	--	--	--
MW-4	11/15/2004	(NS)	100.26	23.07	1.45	78.35	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	4/14/2005	(NS)	100.26	23.82	1.89	77.95	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	12/18/2005	(NP)	100.26	23.43	0.08	76.89	**214,000**	--	--	**9,430**	**12,800**	**2,000**	**13,500**	<100	--	--	--	--
MW-4	6/11/2006	(NP)	100.26	21.87	0.01	78.40	**117,000**	--	--	**13,000**	**18,200**	**2,300**	**14,000**	<1,000	--	--	--	--
MW-4	11/5/2006	(NP)	100.26	22.92	0.01	77.35	**120,000**	--	--	**6,950**	**10,500**	**2,070**	**13,500**	--	--	--	--	--
MW-4	9/25/2007	(NS)	100.26	22.15	0.02	78.13	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	12/31/2007	(NS)	100.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	5/29/2008	(NM)	267.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	10/28/2008	(DRY)	100.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	6/22/2009	(NS)	100.26	24.21	0.04	76.08	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	12/15/2009	(NS)	100.26	24.04	0.28	76.44	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	5/24/2010	(NM)	267.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	5/10/2011	(NM)	267.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	11/29/2011	(NM)	267.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	6/1/2012	(NM)	267.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	11/29/2012	(NS)	267.78	24.00	0.10	243.86	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	5/11/1993		100.88	22.97	--	77.91	**1,800**	--	--	**130**	25	23	22	--	--	--	--	--
MW-5	3/4/1994		100.88	24.35	--	76.53	710	420	--	**26**	6	11	8	--	--	--	**27**	<3
MW-5	7/6/1994		100.88	24.72	--	76.16	400	<250	--	**11**	3	1	4	--	--	--	--	--

Table 1
Groundwater Gauging Data and Select Analytical Results
WA-11060

4580 Fauntleroy Way Sw, Seattle, WA 98126

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**	**--**
MW-5	10/7/1994		100.88	25.02	--	75.86	510	--	--	**13**	4	2	4	--	--	--	--	--
MW-5	12/28/1994		100.88	24.98	--	75.90	**1,300**	--	--	**46**	13	20	22	--	--	--	--	--
MW-5	3/13/1995		100.88	24.41	--	76.47	**2,800**	--	--	**34**	8	40	28	--	--	--	--	--
MW-5	6/30/1995		100.88	24.06	--	76.82	**1,100**	--	--	**50**	11	12	15	--	--	--	--	--
MW-5	9/6/1995		100.88	24.27	--	76.61	**1,100**	--	--	**42**	14	30	18	--	--	--	--	--
MW-5	12/8/1995		100.88	24.49	--	76.39	**1,700**	--	--	**32**	7	42	62	--	--	--	--	--
MW-5	3/11/1996		100.88	23.33	--	77.55	**8,100**	--	--	**85**	9	210	140	--	--	--	--	--
MW-5	6/18/1996		100.88	22.91	--	77.97	**2,700**	--	--	**100**	17	88	25	--	--	--	--	--
MW-5	9/9/1996		100.88	23.07	--	77.81	**2,200**	--	--	**180**	29	100	27	<1.0	--	--	--	--
MW-5	12/11/1996		100.88	23.13	--	77.75	**4,900**	--	--	**110**	18	96	250	12	--	--	--	--
MW-5	3/13/1997		100.88	22.28	--	78.60	**5,500**	--	--	**190**	35	190	73	<50	--	--	--	--
MW-5	6/5/1997		100.88	21.78	--	79.10	**4,100**	--	--	**290**	42	200	37	<100	--	--	--	--
MW-5	9/5/1997		100.88	21.92	--	78.96	**3,100**	--	--	**420**	83	190	730	<50	--	--	--	--
MW-5	4/2/1998		100.88	21.35	--	79.53	**5,400**	--	--	**470**	89	340	83	<50	--	--	--	--
MW-5	6/8/1998		100.88	21.48	--	79.40	**4,200**	--	--	**360**	110	220	66	**71**	--	--	--	--
MW-5	9/17/1998		100.88	22.12	--	78.76	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	12/9/1998		100.88	22.33	--	78.55	**4,900**	--	--	**170**	41	120	120	<1.0	--	--	--	--
MW-5	3/17/1999		100.88	20.93	--	79.95	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	6/26/1999		100.88	21.02	--	79.86	**3,300**	--	--	**180**	82	210	24	8	--	--	--	--
MW-5	9/28/1999		100.88	21.76	--	79.12	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	1/19/2000		100.88	21.65	--	79.23	**6,500**	--	--	**480**	350	370	87	<0.5	--	--	--	--
MW-5	3/24/2000		100.88	21.48	--	79.40	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	7/2/2000		100.88	22.01	--	78.87	**6,100**	--	--	**390**	110	290	54	**20**	--	--	--	--
MW-5	9/14/2000		100.88	22.59	--	78.29	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	12/14/2000		100.88	22.95	--	77.93	**4,000**	--	--	**26**	<10	<10	<30	<40	--	--	--	--
MW-5	9/22/2001		100.88	23.86	--	77.02	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	12/9/2001		100.88	23.90	--	76.98	**12,000**	--	--	**51**	<10	120	140	<10	--	--	--	--
MW-5	3/20/2002		100.88	23.13	--	77.75	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	6/11/2002		100.88	23.09	--	77.79	**5,700**	--	--	**94**	21	110	24	<20	--	--	--	--
MW-5	12/21/2002		100.88	24.65	--	76.23	**1,300**	--	--	**6.32**	2.95	6.59	11.1	5.88	--	--	--	--
MW-5	3/19/2003		100.88	24.68	--	76.20	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	6/18/2003		100.88	24.37	--	76.51	**1,950**	--	--	**7.18**	1.95	12	24.7	6	--	--	--	--
MW-5	9/23/2003		100.88	24.88	--	76.00	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	10/21/2003		100.88	24.99	--	75.89	322	--	--	1.18	2.19	0.732	3.38	<1.00	--	--	--	--
MW-5	6/29/2004	(NP)	100.88	24.22	--	76.66	**1,180**	--	--	**5.4**	3.24	4.79	14.1	6.95	--	--	--	--
MW-5	11/15/2004	(NP)	100.88	24.97	--	75.91	399	--	--	0.74	<0.500	<0.500	<1.00	<2.00	--	--	--	--
MW-5	4/14/2005	(NP)	100.88	25.08	--	75.80	**2,900**	--	--	**14.3**	13.4	33.9	40	<2.00	--	--	--	--

Table 1
Groundwater Gauging Data and Select Analytical Results
WA-11060

4580 Fauntleroy Way Sw, Seattle, WA 98126

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**	**--**
MW-5	12/18/2005	(NP)	100.88	25.47	--	75.41	661	--	--	2.49	2.43	3.58	5.11	<1.00	--	--	--	--
MW-5	6/11/2006	(NP)	100.88	24.43	--	76.45	**2,830**	--	--	**6.08**	1.05	2.78	3.1	<1.00	--	--	--	--
MW-5	11/5/2006	(NP)	100.88	25.55	--	75.33	723	--	--	1.41	0.78	1.29	<3.00	--	--	--	--	--
MW-5	9/25/2007	(NP)	100.88	24.95	--	75.93	712	--	--	1.86	0.53	0.77	<3.00	--	--	--	--	--
MW-5	12/31/2007	(NP)	100.88	25.16	--	75.72	**7,190**	--	--	**9.4**	11.3	38.1	75.7	--	--	--	--	--
MW-5	5/29/2008	(NP)	100.88	25.01	--	75.87	**2,740**	--	--	**7.47**	9.12	15.7	23.7	--	--	--	--	--
MW-5	10/28/2008	(NP)	100.88	25.89	--	74.99	516	--	--	2.01	1.46	<0.500	3.48	--	--	--	--	--
MW-5	6/22/2009	(NP)	100.88	26.95	--	73.93	**4,800**	--	--	**36**	24	87	49.9	--	--	--	**23**	--
MW-5	12/15/2009	(NP)	100.88	26.57	--	74.31	**2,300**	--	--	**24**	19	29	23	--	--	--	12	11
MW-5	5/24/2010	(NP)	100.88	25.55	--	75.33	**4,200**	--	--	**59**	8.4	96	41	--	--	--	--	--
MW-5	10/12/2010	(NP)	268.46	25.74	0.0	242.72	**2,320**	--	--	**31.4**	2.6	12.7	4.8	<1.0	--	--	<10.0	--
MW-5	10/12/2010	(Dup)(NP)	268.46	25.74	0.0	242.72	**2,260**	--	--	**31.6**	2.6	12.6	4.8	<1.0	--	--	--	--
MW-5	5/10/2011	(NP)	268.46	24.61	0.0	243.85	**4,710**	470	<400	**12.4**	4.1	39.3	25.5	<1.0	--	--	<10.0	--
MW-5	11/29/2011	(NP)	268.46	25.55	0.0	242.91	**2,210**	95	<380	**12.3**	2.2	6.4	3.1	--	--	--	10.5	--
MW-5	6/1/2012	(NP)	268.46	24.60	0.0	243.86	**1,620**	**1,040**	<392	**13.3**	3.0	9.6	10.7	<1.0	--	--	<10.0	<10.0
MW-5	6/1/2012	(Dup)(NP)	268.46	24.60	0.0	243.86	**1,520**	**1,030**	<388	**12.8**	2.8	8.8	10	<1.0	--	--	<10.0	<10.0
MW-5	11/29/2012	(NP)	268.46	25.31	0.0	243.15	**4,160**	**1,100**	<440	**18.0**	8.0	61.7	28.2	<1.0	--	--	**42.5**	<3.0
MW-6	9/5/1997		98.62	21.20	--	77.42	**930**	--	--	<0.5	19	6	15	**32**	--	--	--	--
MW-6	4/2/1998		98.62	19.70	--	78.92	600	--	--	<0.5	10	3	11	6	--	--	--	--
MW-6	6/8/1998		98.62	20.58	--	78.04	430	--	--	<0.5	6	2	5	10	--	--	--	--
MW-6	9/17/1998		98.62	21.87	--	76.75	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	12/9/1998		98.62	21.20	--	77.42	260	--	--	<1.0	<1.0	1	3	2	--	--	--	--
MW-6	3/17/1999		98.62	18.49	--	80.13	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	6/26/1999		98.62	18.49	--	80.13	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	9/28/1999		98.62	21.40	--	77.22	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	1/19/2000		98.62	20.39	--	78.23	330	--	--	<0.5	<0.5	6	10	7	--	--	--	--
MW-6	3/24/2000		98.62	19.63	--	78.99	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	9/14/2000		98.62	21.92	--	76.70	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	12/14/2000		98.62	22.51	--	76.11	**1,000**	--	--	<10	<10	<10	<30	<40	--	--	--	--
MW-6	9/22/2001		98.62	23.31	--	75.31	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	12/9/2001		98.62	22.24	--	76.38	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	3/20/2002		98.62	21.44	--	77.18	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	6/11/2002		98.62	21.90	--	76.72	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	12/21/2002	(NS)	98.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	3/19/2003	(NS)	98.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	6/18/2003	(NS)	98.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	9/23/2003	(NS)	98.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1
Groundwater Gauging Data and Select Analytical Results
WA-11060

4580 Fauntleroy Way Sw, Seattle, WA 98126

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**	**--**
MW-6	10/21/2003	(P)	98.62	22.69	--	75.93	254	--	--	**10**	3.66	0.898	5.03	<1.00	--	--	--	--
MW-6	6/29/2004	(NP)	98.62	22.88	--	75.74	540	--	--	**6.8**	1.73	<0.500	5.65	6.35	--	--	--	--
MW-6	11/15/2004	(NP)	98.62	24.12	--	74.50	370	--	--	**43.5**	14.5	0.58	10.4	<2.00	--	--	--	--
MW-6	4/14/2005	(NP)	98.62	23.75	--	74.87	443	--	--	**6.39**	0.95	<0.500	3.75	<2.00	--	--	--	--
MW-6	12/18/2005	(NP)	98.62	24.79	--	73.83	694	--	--	<0.500	<0.500	<0.500	3.01	<1.00	--	--	--	--
MW-6	6/11/2006	(NP)	98.62	23.09	--	75.53	601	--	--	<0.500	<0.500	<0.500	<3.00	<1.00	--	--	--	--
MW-6	11/5/2006	(NP)	98.62	25.80	--	72.82	444	--	--	<0.500	<0.500	<0.500	<3.00	--	--	--	--	--
MW-6	9/25/2007	(NP)	98.62	24.13	--	74.49	321	--	--	<0.500	<0.500	<0.500	<3.00	--	--	--	--	--
MW-6	12/31/2007	(NP)	98.62	23.59	--	75.03	168	--	--	<0.500	<0.500	<0.500	<3.00	--	--	--	--	--
MW-6	5/29/2008	(NP)	98.62	24.21	--	74.41	**1,620**	--	--	<0.500	<0.500	<0.500	<3.00	--	--	--	--	--
MW-6	10/28/2008	(NP)	98.62	25.47	--	73.15	481	--	--	<0.500	<0.500	<0.500	<3.00	--	--	--	--	--
MW-6	6/22/2009	(NP)	98.62	25.32	--	73.30	<50.0	--	--	<1.00	<1.00	<1.00	<3.00	--	--	--	<2.00	<2.00
MW-6	12/15/2009	(NP)	98.62	23.33	--	75.29	190	--	--	<1.00	<1.00	<1.00	<2.00	--	--	--	<2.00	<2.00
MW-6	3/24/2010	(NS)	266.06	22.12	0.0	243.94	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	5/24/2010	(NP)	98.62	22.90	--	75.72	280	--	--	**8.1**	<2.5	<2.5	<5.0	--	--	--	--	--
MW-6	10/12/2010	(NP)	266.06	23.06	0.0	243.00	<50.0	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	--
MW-6	5/10/2011	(NP)	266.06	22.01	0.0	244.05	96.0	180	<390	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	--
MW-6	11/29/2011	(NP)	266.06	23.42	0.0	242.64	<50.0	<78	<390	<1.0	<1.0	<1.0	<3.0	--	--	--	<10.0	--
MW-6	11/29/2011	(Dup)(NP)	266.06	23.42	0.0	242.64	<50.0	<77	<380	<1.0	<1.0	<1.0	<3.0	--	--	--	<10.0	--
MW-6	6/1/2012	(NP)	266.06	22.75	0.0	243.31	124	<76.9	<385	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	<10.0
MW-6	11/29/2012	(NM)	266.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	4/2/1998		97.32	18.79	--	78.53	**13,100**	--	--	<5	35	480	**1,100**	<50	--	--	--	--
MW-7	6/8/1998		97.32	19.60	--	77.72	**12,000**	--	--	<5.0	40	420	810	**63**	--	--	--	--
MW-7	9/17/1998		97.32	20.82	--	76.50	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	12/9/1998		97.32	20.21	--	77.11	**9,600**	--	--	<5.0	26	360	610	11	--	--	--	--
MW-7	3/17/1999		97.32	17.61	--	79.71	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	6/26/1999		97.32	19.29	--	78.03	**8,300**	--	--	**11**	24	410	600	<5.0	--	--	--	--
MW-7	12/14/2000		97.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	12/9/2001		97.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	3/20/2002		97.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	6/11/2002		97.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	6/18/2003	(ABANDONED)	97.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	3/24/2010		97.32	20.65	--	76.67	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	4/2/1998		98.49	19.99	--	78.50	<100	--	--	<0.5	1	<0.5	<1.5	<5	--	--	--	--
MW-8	6/8/1998		98.49	20.39	--	78.10	<100	--	--	<0.5	1	2	<1.5	<5.0	--	--	--	--
MW-8	9/17/1998		98.49	21.21	--	77.28	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	12/9/1998		98.49	21.03	--	77.46	<500	--	--	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--	--

Table 1
Groundwater Gauging Data and Select Analytical Results
WA-11060

4580 Fauntleroy Way Sw, Seattle, WA 98126

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**	**--**
MW-8	3/17/1999		98.49	19.03	--	79.46	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	6/26/1999		98.49	20.02	--	78.47	<500	--	--	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--	--
MW-8	12/14/2000		98.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	12/9/2001		98.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	3/20/2002		98.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	6/11/2002		98.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	6/18/2003	(ABANDONED)	98.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	3/24/2010		98.49	19.78	--	78.71	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	10/12/2010	(NP)	263.35	23.89	0.0	239.46	<50.0	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	--
MW-9	5/10/2011	(NP)	263.35	20.70	0.0	242.65	<50.0	160	<420	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	--
MW-9	11/29/2011	(NP)	263.35	22.64	0.0	240.71	<50.0	<76	<380	<1.0	<1.0	<1.0	<3.0	--	--	--	<10.0	--
MW-9	6/1/2012	(NM)	263.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	11/29/2012	(NM)	263.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	6/1/2012	(NP)	268.30	24.20	0.0	244.10	<50.0	<76.9	<385	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	<10.0
MW-10	11/29/2012	(NP)	268.30	25.00	0.0	243.30	<100	<420	<420	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	**20.4**	<3.0
MW-10	11/29/2012	(Dup)(NP)	268.30	25.00	0.0	243.30	146	<470	<470	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	**22.6**	<3.0
VE-1	4/2/1998		--	--	--	--	**60,500**	--	--	**3,900**	**2,300**	**820**	**4,500**	<2,500	--	--	--	--
VE-1	9/17/1998		--	--	--	--	**240,000**	--	--	**2,700**	**2,000**	**1,400**	**7,700**	<100	--	--	--	--
VE-1	12/9/1998		--	--	--	--	**73,000**	--	--	**2,200**	**1,400**	**770**	**3,700**	<25	--	--	--	--
VE-1	3/17/1999		--	--	--	--	**42,000**	--	--	**4,000**	**2,400**	**790**	**4,100**	<25	--	--	--	--
VE-1	6/26/1999		--	--	--	--	**42,000**	--	--	**3,800**	**2,600**	670	**3,500**	<100	--	--	--	--
VE-1	9/28/1999		--	--	--	--	**25,000**	--	--	**3,400**	**2,000**	630	**3,000**	<25	--	--	--	--
VE-1	3/24/2000		--	--	--	--	**31,000**	--	--	**3,200**	610	27	**3,600**	<5	--	--	--	--
VE-1	7/2/2000		--	--	--	--	**27,000**	--	--	**3,200**	**1,900**	620	**3,000**	**130**	--	--	--	--
VE-1	9/14/2000		--	--	--	--	**29,000**	--	--	**3,200**	**2,200**	**920**	**3,000**	<5	--	--	--	--
VE-1	12/14/2000		--	23.02	--	--	**28,000**	--	--	**2,400**	**1,300**	580	**2,600**	<40	--	--	--	--
VE-1	9/22/2001		--	24.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VE-1	12/9/2001		--	23.90	0.07	--	**24,000**	--	--	**1,300**	880	510	**2,400**	<40	--	--	--	--
VE-1	3/20/2002		--	23.30	0.05	--	**52,000**	--	--	**1,800**	**1,300**	560	**2,400**	**280**	--	--	--	--
VE-1	6/11/2002		--	23.25	0.11	--	**26,000**	--	--	**2,800**	**1,600**	650	**2,900**	<80	--	--	--	--
VE-1	12/21/2002	(P)	268.17	24.89	0.0	243.28	**25,900**	--	--	**1,630**	**1,150**	**741**	**3,660**	<200	--	--	--	--
VE-1	3/19/2003	(P)	268.17	24.71	0.0	243.46	**27,100**	--	--	**1,590**	**1,450**	**743**	**3,640**	<250	--	--	--	--
VE-1	6/18/2003	(P)	--	24.50	0.05	--	**37,000**	--	--	**2,190**	**1,710**	**929**	**5,230**	**79.8**	--	--	--	--
VE-1	9/23/2003	(P)	--	25.01	0.03	--	**28,300**	--	--	**1,620**	**1,270**	**704**	**3,500**	<20.0	--	--	--	--
VE-1	10/22/2003	(P)	--	24.98	0.17	--	**36,700**	--	--	**3,360**	**1,850**	**847**	**4,130**	<50.0	--	--	--	--
VE-1	6/29/2004	(NP)	268.17	25.12	0.0	243.05	**192,000**	--	--	**8,070**	**7,030**	**2,230**	**10,400**	**820**	--	--	--	--

Table 1
Groundwater Gauging Data and Select Analytical Results
WA-11060

4580 Fauntleroy Way Sw, Seattle, WA 98126

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**	**--**
VE-1	11/15/2004	(NP)	--	25.40	0.61	--	**99,900**	--	--	**5,680**	**6,280**	**3,430**	**17,600**	<100	--	--	--	--
VE-1	4/14/2005	(NP)	--	26.15	1.31	--	**39,600**	--	--	**3,120**	**3,300**	**1,210**	**5,560**	<40.0	--	--	--	--
VE-1	12/18/2005	(NP)	--	26.00	0.35	--	**142,000**	--	--	**6,140**	**5,850**	**1,400**	**6,750**	<100	--	--	--	--
VE-1	6/11/2006	(NP)	--	26.53	--	--	**68,300**	--	--	**7,200**	**8,100**	**3,900**	**25,100**	<500	--	--	--	--
VE-1	11/5/2006	(NP)	--	26.33	0.45	--	**60,500**	--	--	**3,780**	**4,320**	**1,190**	**6,390**	--	--	--	--	--
VE-1	9/25/2007	(NS)	--	25.02	0.14	--	--	--	--	--	--	--	--	--	--	--	--	--
VE-1	12/31/2007	(NS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VE-1	5/29/2008	(NS)	--	25.63	0.84	--	--	--	--	--	--	--	--	--	--	--	--	--
VE-1	10/28/2008	(NS)	--	26.07	0.27	--	--	--	--	--	--	--	--	--	--	--	--	--
VE-1	6/22/2009	(DRY, NE)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VE-1	12/15/2009	(NS)	--	26.56	0.06	--	--	--	--	--	--	--	--	--	--	--	--	--
VE-1	5/24/2010	(NS)	268.17	26.70	0.0	241.47	--	--	--	--	--	--	--	--	--	--	--	--
VE-1	5/10/2011	(NM)	268.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VE-1	11/29/2012	(NS)	268.17	24.05	0.10	244.12	--	--	--	--	--	--	--	--	--	--	--	--

msl = Mean sea level
TOC = Top of casing
GWE = Groundwater elevation above msl
DTW = Depth to water below TOC
ABD = Well abandoned
All analytical results are in micrograms per liter (µg/L)
TOC/DTW/LNAPL/GWE measurements are in feet (ft)
< = Not detected at or above the laboratory reporting limit
-- = Not analyzed/not applicable
NA = Not analyzed
NM = Not measured
NE = Top of casing not established
DUP = Duplicate sample
NS = Not Sampled
NAPL = Non-Aqueous Phase Liquid Thickness
GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics
DRO = Total Petroleum Hydrocarbons - Diesel Range Organics
HO = Total Petroleum Hydrocarbons- Heavy Oil Range Organics
EDB = Ethylene Dibromide
EDC = 1,2-Dichloroethane
MTBE = Methyl Tertiary Butyl Ether
BTEX = Benzene, Toluene, Ethylbenzene and Total Xylenes
P = Purge sampling

Table 1
Groundwater Gauging Data and Select Analytical Results
WA-11060

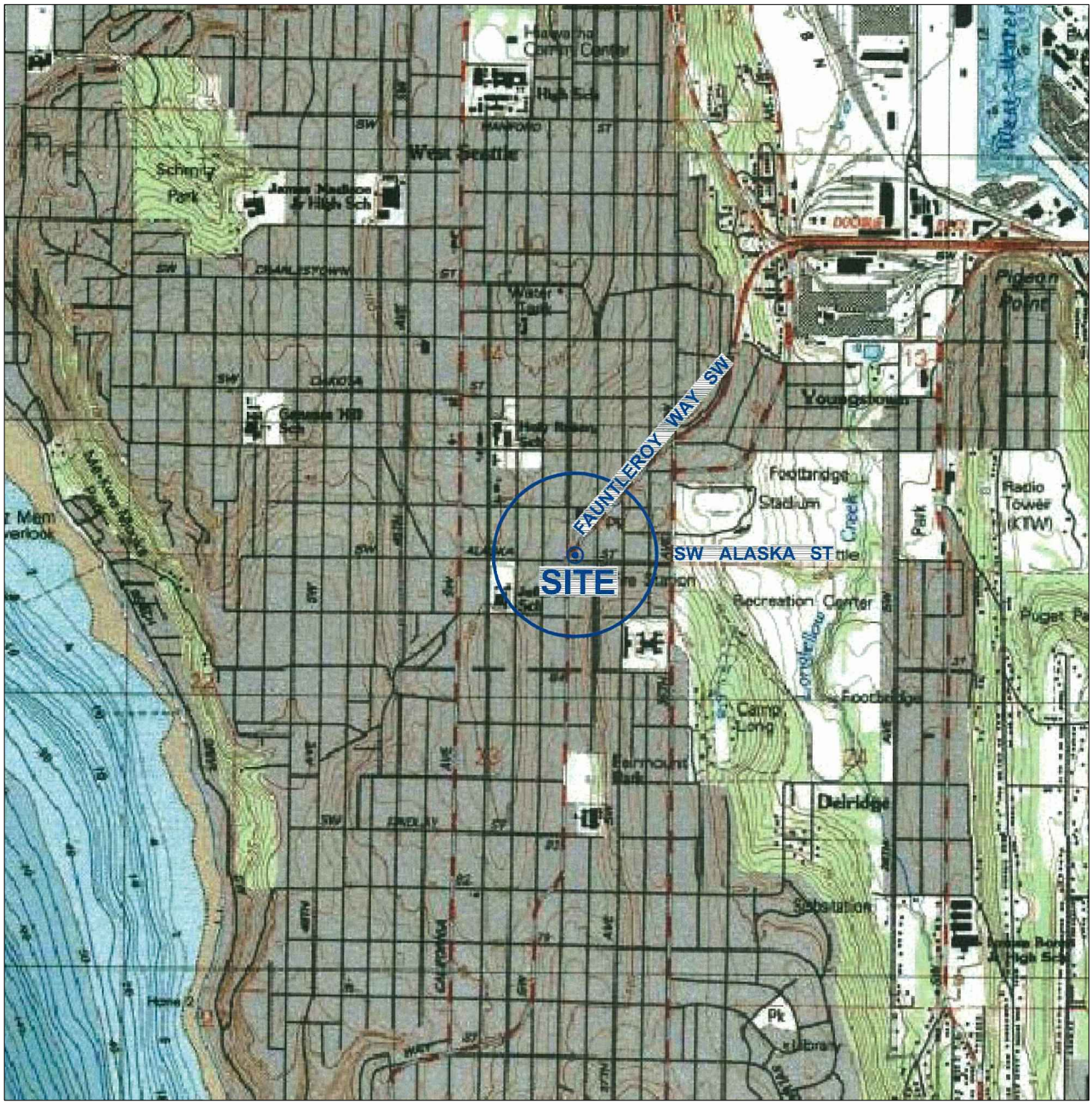
4580 Fauntleroy Way Sw, Seattle, WA 98126

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

LFP = Low flow purge sampling
NP = No purge sampling
GRO, DRO, HO methods by Ecology NW Methods; BTEX, MTBE and EDB by 8260B, lead by EPA 6000/7000 Series, EDC by EPA 8011
Historic analysis by former consultant of BTEX, MTBE and EDB by EPA 8021B and confirmed with EPA 8260B if necessary
Groundwater Elevation - If NAPL is present, the elevation is corrected according to the following formula, (TOC elevation - depth to water) + (0.8 X NAPL Thickness)
800/1,000 = GRO MTCA cleanup levels with benzene present (800) and without (1,000)
Data collected prior to 2010 have been provided by previous consultants and are included as historical reference only
Site resurveyed in 2010. TOC elevation in reference to vertical datum N.A.V.D. 88 and horizontal datum NAD 83/98

BOLD constituent detected above MTCA Cleanup Levels

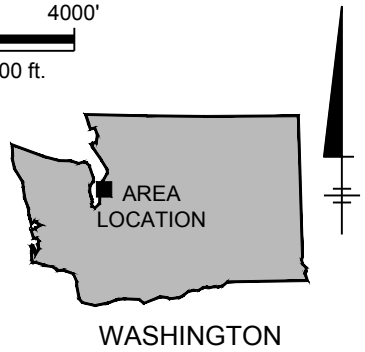
Figures



REFERENCE: BASE MAP USGS 7.5X15. MIN. TOPO. QUAD.,SEATTLE SOUTH, WA, 1983.

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.

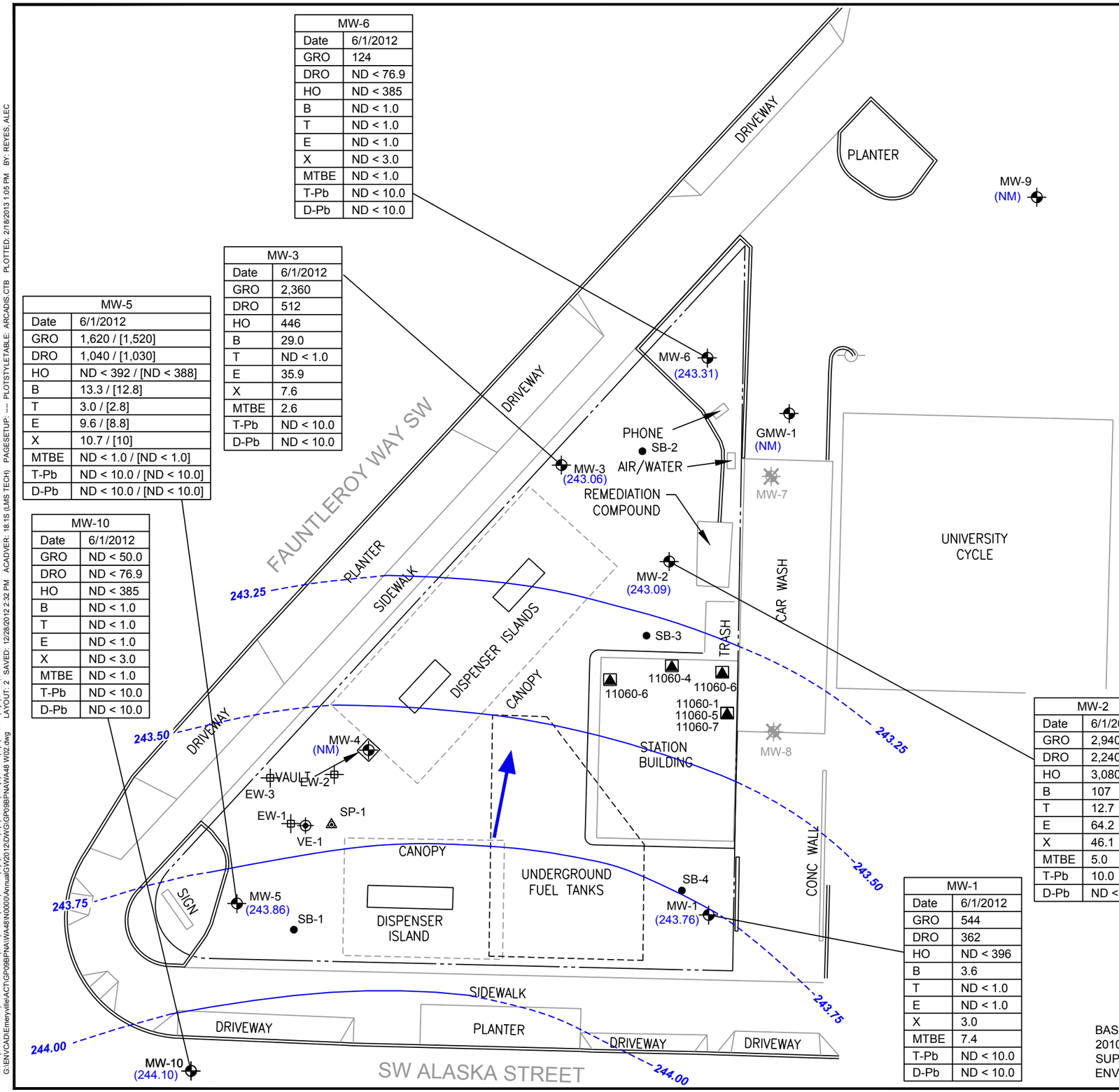


BP WEST COAST PRODUCTS LLC
FORMER BP STATION NO. 11060
4580 FAUNTLEROY WAY, SEATTLE, WASHINGTON
ANNUAL GROUNDWATER MONITORING REPORT 2012

SITE LOCATION MAP

ARCADIS

FIGURE
1



MW-6	
Date	6/1/2012
GRO	124
DRO	ND < 76.9
HO	ND < 385
B	ND < 1.0
T	ND < 1.0
E	ND < 1.0
X	ND < 3.0
MTBE	ND < 1.0
T-Pb	ND < 10.0
D-Pb	ND < 10.0

MW-3	
Date	6/1/2012
GRO	2,360
DRO	512
HO	446
B	29.0
T	ND < 1.0
E	35.9
X	7.6
MTBE	2.6
T-Pb	ND < 10.0
D-Pb	ND < 10.0

MW-5	
Date	6/1/2012
GRO	1,620 / [1,520]
DRO	1,040 / [1,030]
HO	ND < 392 / [ND < 388]
B	13.3 / [12.8]
T	3.0 / [2.8]
E	9.6 / [8.8]
X	10.7 / [10]
MTBE	ND < 1.0 / [ND < 1.0]
T-Pb	ND < 10.0 / [ND < 10.0]
D-Pb	ND < 10.0 / [ND < 10.0]

MW-10	
Date	6/1/2012
GRO	ND < 50.0
DRO	ND < 76.9
HO	ND < 385
B	ND < 1.0
T	ND < 1.0
E	ND < 1.0
X	ND < 3.0
MTBE	ND < 1.0
T-Pb	ND < 10.0
D-Pb	ND < 10.0

MW-2	
Date	6/1/2012
GRO	2,940
DRO	2,240
HO	3,080
B	107
T	12.7
E	64.2
X	46.1
MTBE	5.0
T-Pb	10.0
D-Pb	ND < 10.0

MW-1	
Date	6/1/2012
GRO	544
DRO	362
HO	ND < 396
B	3.6
T	ND < 1.0
E	ND < 1.0
X	3.0
MTBE	7.4
T-Pb	ND < 10.0
D-Pb	ND < 10.0

LEGEND

- APPROXIMATE PROPERTY LINE
- MW-2 — MONITORING WELL LOCATION
- MW-7 — ABANDONED MONITORING WELL LOCATION
- SP-1 — AIR SPARGING WELL LOCATION
- VE-1 — VAPOR EXTRACTION WELL LOCATION
- 11060-1 — PASSIVE VAPOR MONITORING LOCATION
- SB-1 — SOIL BORING
- EW-1 — EXTRACTION WELL
- (243.31) — GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- 243.31 — GROUNDWATER ELEVATION CONTOUR, DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL)
- ND — NOT DETECTED, VALUE SHOWN IS DETECTION LIMIT
- NM — NOT MEASURED
- (µg/L) — MICROGRAMS PER LITER

LOCATION ID	
GRO	Gasoline Range Organics (µg/L) / [Duplicate (µg/L)]
DRO	Diesel Range Organics (µg/L) / [Duplicate (µg/L)]
HO	Heavy Oil (µg/L) / [Duplicate (µg/L)]
B	Benzene (µg/L) / [Duplicate (µg/L)]
T	Toluene (µg/L) / [Duplicate (µg/L)]
E	Ethylbenzene (µg/L) / [Duplicate (µg/L)]
X	Total Xylenes (µg/L) / [Duplicate (µg/L)]
MTBE	Methy Tertiary Butyl Ether (µg/L) / [Duplicate (µg/L)]
T-Pb	Total Lead (µg/L) / [Duplicate (µg/L)]
D-Pb	Dissolved Lead (µg/L) / [Duplicate (µg/L)]

0 20' 40'

GRAPHIC SCALE

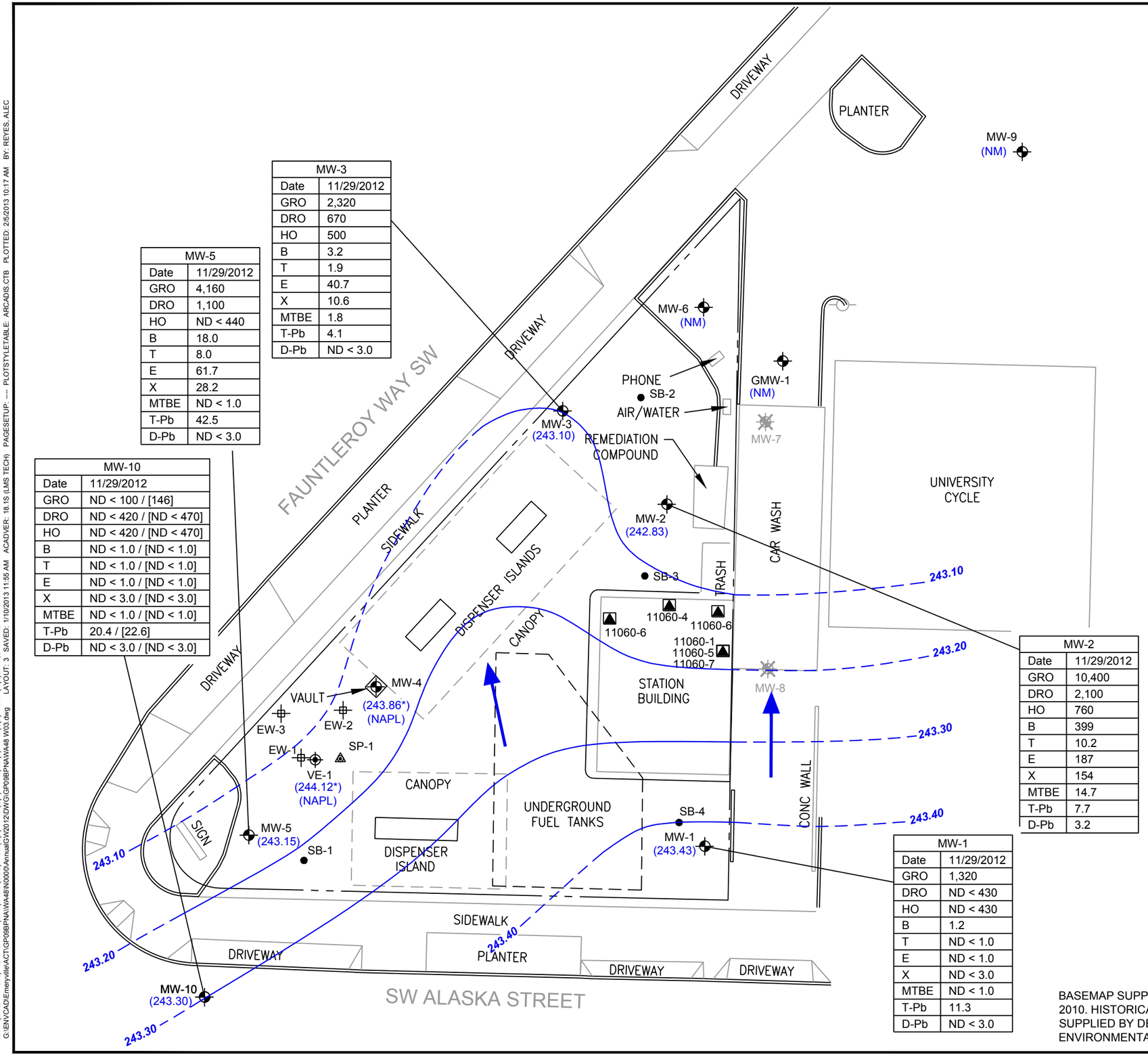
BASEMAP SUPPLIED BY OTAK, INC., IN 2010. HISTORICAL INFORMATION SUPPLIED BY DELTA ENVIRONMENTAL CONSULTANTS, INC.

BP WEST COAST PRODUCTS LLC
FORMER BP STATION NO. 11060
4580 FAUNTLEROY WAY, SEATTLE, WASHINGTON
ANNUAL GROUNDWATER MONITORING REPORT 2012

GROUNDWATER CONTOUR MAP WITH ANALYTICAL RESULTS JUNE 1, 2012

ARCADIS

FIGURE 2



MW-3	
Date	11/29/2012
GRO	2,320
DRO	670
HO	500
B	3.2
T	1.9
E	40.7
X	10.6
MTBE	1.8
T-Pb	4.1
D-Pb	ND < 3.0

MW-5	
Date	11/29/2012
GRO	4,160
DRO	1,100
HO	ND < 440
B	18.0
T	8.0
E	61.7
X	28.2
MTBE	ND < 1.0
T-Pb	42.5
D-Pb	ND < 3.0

MW-10	
Date	11/29/2012
GRO	ND < 100 / [146]
DRO	ND < 420 / [ND < 470]
HO	ND < 420 / [ND < 470]
B	ND < 1.0 / [ND < 1.0]
T	ND < 1.0 / [ND < 1.0]
E	ND < 1.0 / [ND < 1.0]
X	ND < 3.0 / [ND < 3.0]
MTBE	ND < 1.0 / [ND < 1.0]
T-Pb	20.4 / [22.6]
D-Pb	ND < 3.0 / [ND < 3.0]

MW-2	
Date	11/29/2012
GRO	10,400
DRO	2,100
HO	760
B	399
T	10.2
E	187
X	154
MTBE	14.7
T-Pb	7.7
D-Pb	3.2

MW-1	
Date	11/29/2012
GRO	1,320
DRO	ND < 430
HO	ND < 430
B	1.2
T	ND < 1.0
E	ND < 1.0
X	ND < 3.0
MTBE	ND < 1.0
T-Pb	11.3
D-Pb	ND < 3.0

LEGEND

	APPROXIMATE PROPERTY LINE
MW-2	MONITORING WELL LOCATION
MW-7	ABANDONED MONITORING WELL LOCATION
SP-1	AIR SPARGING WELL LOCATION
VE-1	VAPOR EXTRACTION WELL LOCATION
11060-1	PASSIVE VAPOR MONITORING LOCATION
SB-1	SOIL BORING
EW-1	EXTRACTION WELL
(243.10)	GROUNDWATER ELEVATION (FEET ABOVE MSL)
	APPROXIMATE GROUNDWATER FLOW DIRECTION
243.31	GROUNDWATER ELEVATION CONTOUR, DASHED WHERE INFERRED (FEET ABOVE MSL)
MSL	MEAN SEA LEVEL
NAPL	NON-AQUEOUS PHASE LIQUID
*	WELL NOT USED TO DEVELOP CONTOURS
ND	NOT DETECTED, VALUE SHOWN IS DETECTION LIMIT
NM	NOT MEASURED
(µg/L)	MICROGRAMS PER LITER

LOCATION ID	
GRO	Gasoline Range Organics (µg/L) / [Duplicate (µg/L)]
DRO	Diesel Range Organics (µg/L) / [Duplicate (µg/L)]
HO	Heavy Oil (µg/L) / [Duplicate (µg/L)]
B	Benzene (µg/L) / [Duplicate (µg/L)]
T	Toluene (µg/L) / [Duplicate (µg/L)]
E	Ethylbenzene (µg/L) / [Duplicate (µg/L)]
X	Total Xylenes (µg/L) / [Duplicate (µg/L)]
MTBE	Methyl Tertiary Butyl Ether (µg/L) / [Duplicate (µg/L)]
T-Pb	Total Lead (µg/L) / [Duplicate (µg/L)]
D-Pb	Dissolved Lead (µg/L) / [Duplicate (µg/L)]

0 20' 40'

GRAPHIC SCALE

BASEMAP SUPPLIED BY OTAK, INC., IN 2010. HISTORICAL INFORMATION SUPPLIED BY DELTA ENVIRONMENTAL CONSULTANTS, INC.

BP WEST COAST PRODUCTS LLC
FORMER BP STATION NO. 11060
4580 FAUNTLEROY WAY, SEATTLE, WASHINGTON
ANNUAL GROUNDWATER MONITORING REPORT 2012

GROUNDWATER CONTOUR MAP WITH ANALYTICAL RESULTS NOVEMBER 29, 2012

ARCADIS

FIGURE 3

ARCADIS

Appendix A

Groundwater Monitoring
Field Data Sheets

11060 GWM, SURVEY, LANE CLOSURE 6-1-12 S. MCGUIRE

0845 SM arrives on site. Meets Sam Miles of ARCADIS and Gecka and JOSH of OTAK. Conducts H&S tailgate meeting and discuss SOW. Talk to traffic control National Barricade about setting up for well. Will secure / sample & survey well first to avoid blocking lane for longer than needed.

0900 Close lane and gauge MW-10 @ 24.20 dtw and 144.1 on PID.

0920 Sample MW-10. YSI Parameters taken:

	COND	PH	ORP	DO
17.9° C	0.78	6.74	126.8	2.33

0940 Move back to van and organize equipment for sampling. Sam Miles does TIP and leaves site.

1030 OTAK finishes work and leaves site.

1050 SM samples MW-1. Gauge @ 23.67 DTW and 394.7 PID.

YSI Parameters:	TEMP	COND	DO	PH	ORP
	17.9	1.22	2.05	6.67	130.8

1110 SM samples MW-3 Gauge @ 22.94 DTW and 249 PID.

YSI Parameters:	TEMP	COND	DO	PH	ORP
	18.0	0.063	2.91	6.82	54.2

1130 SM samples MW-2. Gauge @ 23.60 DTW and 895 PID.

YSI PARAMETERS:	TEMP	COND	DO	PH	ORP
	16.9	1.19	1.92	6.67	35.7

1200 Finish Sampling MW-2. Organize / decon equipment and bottles. Call Sam Miles about MW-GW-1 and MW-9 which are in other lot behind locked fence. Sam Miles tells Seamus to eliminate wells. SM stands by to collect bottles for remaining wells.

1300 MW-4 is eliminated due to confined space hazard.

Sample MW-6 @ 22.75 DTW and 3 PID.

YSI Parameters:	TEMP	COND	DO	PH	ORP
	16.5	0.385	2.18	7.07	-0.2

11060 GWM CONTINUED ... 6-1-12 S. MCGUIRE

1330	Sample MW-5 @ 29.60 DTW and 358.0 PID					
	*also DUP-1 YSI:	TEMP	DO	COND	PH	ORP
		18.6	2.26	0.71	6.59	-19.7
1430	Finish sampling MW-5. Start cleaning up site.					
1495	All small amounts of purge were put in onsite drums					
1500	All samples packed on ice.					
1515	Site is locked up / all equipment put away.					
1530	SM OUT.					

DRUM SITUATION: One drum on site ≈ 1/3 full (55 GALLON DRUM). It is next to old tank.

Thomas McGuire

ARCADIS

Groundwater Monitoring Well Gauging Form

Site ID: ARCO # 11060 Project #: GP09BPNA.WA48

Site Address: 4580 Fauntleroy Way SW, Seattle, WA Date: 6-1-12 ~~11/29/2011~~

Well ID	Time	Sheen/ Odor	LNAPL Depth	LNAPL Thinkness	DTW	TD	PID ~~Notes~~
MW-10	0920	HCLO	—	—	24.20	—	144.1
MW-1	1050	HCLO	—	—	23.67	—	394.7
MW-3	1110	HCLO	—	—	22.94	—	249
MW-2	1130	HCLO	—	—	23.60	—	895
MW-4	CONFINED SPACE: ELIMINATED						
MW-6	1300	NONE	—	—	22.75	—	3.9
MW-5	1330	HCLO	—	—	24.60	—	368.0
MW-GW-1 MW-9	IN FENCED OFF LOT: ELIMINATED						

Page ___ of ___

GENERAL PERMIT TO WORK /BP DAILY TAILGATE FORM

Facility # | **Project #**

Project Address: | **ARCADIS PM:**

Designated Health and Safety Supervior: SEAMAS MCGUIRE | **Total # On-site Workers:**

Today's Date: | **Time Written:** | **Time Closed-out:**

1.	a. Have necessary work permits been obtained (including those for subcontractors)?	☑ Yes ☐ No ☐ N
	b. If **CONFINED SPACE** activities are to be conducted has the CONFINED SPACE portion of the HIGH RISK WORK PERMIT been completed?	☐ Yes ☐ No ☑ N
	c. If **EXCAVATION / TRENCHING / DRILLING / OVERHEAD CLEARANCE** activities deeper than 4 feet and/or within 10 feet of a high pressure gas line and/or within 3 feet of a buried active product or electric line or overhead work involving equipment within 15 feet of an overhead electric line or pole supporting the line are to be conducted has the applicable portion of the HIGH RISK WORK PERMIT been completed?	☐ Yes ☐ No ☑ N
	d. If **HOTWORK** activities are to be conducted has the HOTWORK and FIRE MONITOR ACTIVITY LOG portions of the HIGH RISK WORK PERMIT been completed?	☐ Yes ☐ No ☑ N
	e (i). If **LOCK OUT / TAG OUT (LO/TO)** activities are to be conducted has the LO/TO portion of the HIGH RISK WORK PERMIT been completed? *See e (ii) below.*	☐ Yes ☐ No ☑ N
	f. If workers are **WORKING AT an ELEVATION over 6 feet** has the WORKING AT ELEVATION portion of the HIGH RISK WORK PERMIT been completed?	☐ Yes ☐ No ☑ N
	g. If **DEMOLITION, REMOVAL OF PIPELINES AND BURIED STRUCTURES** work activities are to be conducted has the EXCAVATION / TRENCHING / DRILLING / OVERHEAD CLEARANCE and DEMOLITION, REMOVAL OF PIPELINES AND BURIED STRUCTURES portions of the HIGH RISK WORK PERMIT been completed?	☐ Yes ☐ No ☑ N
2.	Have applicable vehicle inspection checklists been completed by ARCADIS personnel and ARCADIS subcontractors (if applicable)? Has subcontractor paperwork been inspected?	☑ Yes ☐ No ☐ N
3.	Has the HASP been signed by appropriate on-site personnel?	☑ Yes ☐ No ☐ N
4.	Have all sections of the HASP applying to today's tasks been reviewed by all workers and visitors?	☑ Yes ☐ No ☐ N
5.	Has the scope of work/work plan been reviewed and fully understood?	☑ Yes ☐ No ☐ N
6.	Has everyone reviewed the HASP section related to emergencies and know his/her role during an emergency?	☑ Yes ☐ No ☐ N
7.	Does everyone know the location, directions to, and name of the nearest hospital?	☑ Yes ☐ No ☐ N
8.	Where will the scope of work or work plan and HASP be kept on site?	**Location:** SUV
9.	What level of PPE is required (See note on following page)?	☐ A ☐ B ☐ C ☐ D ☑ Other
10.	Are appropriate tools on-site to complete tasks safety and appropriately?	☑ Yes ☐ No ☐ N
11.	Has ARCADIS hand safety policy been discussed and highlighted during the health and safety meeting?	☑ Yes ☐ No ☐ N
12.	Has everyone reviewed the applicable SOPs and JLAs for their assigned work duties?	☑ Yes ☐ No ☐ N
13.	Has JLA been modified in the field to include up-to-minute site conditions and notation of puncture resistant footwear required/not required?	☑ Yes ☐ No ☐ N
14.	Have the action levels and work zones been identified and reviewed?	☑ Yes ☐ No ☐ N
15.	a. If monitoring is required, what type of monitoring will be performed?	**Type:** PID *(See 15b-15d)* ☐ N/A
	b. Is monitoring equipment present and properly calibrated?	☑ Yes ☐ No ☐ N
	c. Have HASP requirements for air monitoring been reviewed?	☑ Yes ☐ No ☐ N
	d. Will Air Monitoring Log be completed by Health & Safety Supervisor (HSS)?	☑ Yes ☐ No ☐ N
16.	Will work conducted by others in the area affect/conflict your work area?	☑ Yes ☐ No ☐ N
17.	Will GFCI in-line protectors, positioned next to the power source, be tested and utilized if AC-powered equipment is used?	☑ Yes ☐ No ☐ N
18.	Are above-ground utilities identified and clearly visible by equipment operators? Underground utilities marked?	☑ Yes ☐ No ☐ N
19.	Has the underground/overhead utilities checklist been completed?	☑ Yes ☐ No ☐ N
20.	Have shut-off switches/valves been located (as required by scope work)?	☐ N/A ☑ Electric ☑ Gas ☐ Water
21.	Are proper traffic and/or fire control measures in-place? Has the STAR plan been reviewed?	☑ Traffic ☑ Fire Prevention ☐ N/A
22.	Where is the support zone located?	**Location:** BEHIND SITE
23.	Has an evacuation signal (i.e. emergency alarm, hand signal) been communicated to site personnel?	☑ Yes ☐ No ☐ N
24.	Where is the nearest working phone located (non-cell phone)	**Location:** SUV
25.	What is the local emergency phone number?	**Number:** 911
26.	Where is the location of the primary first aid kit (to include portable eyewash & CPR shield)	**Location:** TOTE
27.	Where is the location of the primary fire extinguisher?	**Location:** TOTE
28.	Document last inspection date of primary fire extinguisher and expiration of primary first aid kit contents:	**Extinguisher -** 6-1 **First Aid Kit -** 6-1
29.	Have modifications to safety procedures (e.g JLAs) been made and communicated to onsite personnel?	☑ Yes ☐ No ☐
30.	Has a plan been established to sample, store, label and dispose of waste properly?	☑ Yes ☐ No ☐
31.	Are MSDS for ALL chemicals being used at site (oils, detergents, preservatives, etc.) included in HASP?	☑ Yes ☐ No ☐
32.	Are personnel qualified to perform work at site? Training records verified?	☑ Yes ☐ No ☐
33.	Has operating vehicle/machinery in reverse been discouraged duringtailgate? Will spotters be used when available?	☑ Yes ☐ No ☐

Special Safety Concerns For Today

Personnel wishing to volunteer information relating to allergies/ailments/illnesses AND whether s/he is wearing contact lenses:

Last Name:	Note:	Last Name:	Note:
Last Name:	Note:	Last Name:	Note:
Last Name:	Note:	Last Name:	Note:

Stop Work Authority: You are responsible and authorized to stop any work that is not safe. There will be NO repercussions for initiating Stop Work Authority.

NOTICE TO ALL WORKERS: – By signing below, you agree that you have read and fully understand the JLAs applicable to you and your assigned duties.

Signature Section

Name (PRINT)	Company	Before Work (Time)	Signature	Mid Day (Time)	Initials (Mid- Day Meeting)
1. SEAMAS MCGUIRE	ARCADIS	0900			
2. IAN CARSTOFFERSON	OTAK	0900			
3. CASE ORENDORFF	OTAK	0900			
4. Cain Miles	Arcadis	0900			
6.					
7.					
8.					

"I have assessed the risks posed by work activities planned for today and steps to mitigate those risks (e.g. E-HASP, JLA, PTW, tailgate meeting, coordination with other parties on site, etc.) have been completed to the best of our ability. Work is safe to proceed. If site conditions change, Stop Work Authority will be used to assess work conditions."

Permit Writer/Holder: Seamas McGuire **Date** 06 / 1 / 13

Reference Section

5 Keys to Operational Discipline

1. Everyone knows how to do their job correctly and safely.
2. Workers recognize hazards and anticipate unusual situations.
3. When unusual situations occur, work is stopped and change is effectively managed.
4. Supervisors and leaders reinforce the right behaviors and correct poor behavior and performance.
5. Workers expect and demand that their coworkers follow procedures.

T Don't just list out the major tasks of the project or job – Brainstorming sessions, workshops, group sessions with people involved in the work to truly understand all of the work that will be done and how it will get done

R Identify the hazards by sources using our 12 Hazard Source Categories – provide detail – who, what, when, how, etc.

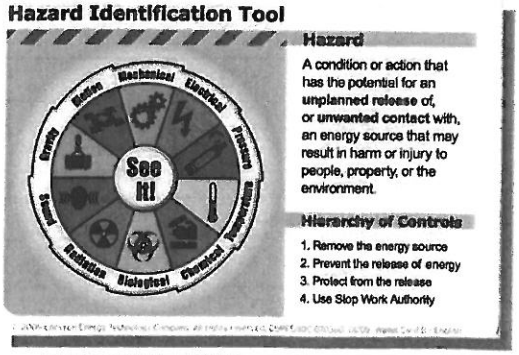
A For each hazard identified, assess the level of risk: determine the likelihood it will occur, what is the most likely or feasible consequence, and how frequent the hazard is present to determine the level of risk.

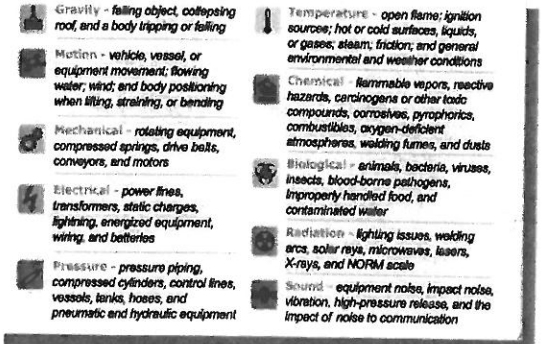
C Use the hierarchy of controls to determine the best, most practical controls for each hazard – eliminate, substitute, isolate, engineer out, administratively manage, then consider PPE

K Don't start work until all hazards are appropriately controlled.

29.20
19.1

Hazard Identification Tool





Identified Hazards	Steps to Mitigate
GRAVITY → S,T,F	CLEAR PATHWAYS
MOTION → TRAFFIC	CAREFUL OUTSIDE FENCE
TEMPERATURE	STAY WARM
CHEMICAL	PID / PPE

ORDER NO. 306557
THIS ORDER NUMBER WILL APPEAR ON YOUR INVOICE

24 HOUR NUMBER (206) 523-4045 • (253) 589-2256 • (800) 884-4045 • FAX (206) 525-2042

NATIONAL BARRICADE CO., LLC

ESTABLISHED IN 1951

6518 RAVENNA AVENUE N.E. SEATTLE, WASHINGTON 98115-7096

Email: nabco@barricade.com • www.barricade.com

ACCOUNT NO. ARCAD

Taken By Stacey

DELIVERY TYPE NEW DELIVERY

CUSTOMER Arcadis US, Inc

ADDRESS Attention: Accounts Payable

P.O. BOX 630 Plaza Drive, Suite 600

CITY, STATE Highlands Ranch CO

ZIP CODE 80129

JOB ADDRESS Fauntleroy Way SW & SW Alaska Street 954-2960 3131

1726 Seattle WA

OFFICE 720/344-3500

JOB

MOBILE (206) 726-4720

Our Truck X Will Call

Date Ordered 05/31/12 Time

Del. /P.U. Date 6/1/12 Time

Billing Date 06/01/12

Ordered By Sam Miles

Job Foreman

P.O. No.

Job No.

Please set up by 9am Friday please! (unable to confirm no parking situation on site as of 1:30 pm Thursday)
EOJ same day? Please confirm on site / goes w/ AB!

QUANTITY ORDERED	QUANTITY DELIVERED	DESCRIPTION	QUANTITY TO BE P.U.	QUANTITY P.U.	QUANTITY LOST	BOOK COUNT	LEFT ON JOB AFTER P.U.
*13	13	Barricade, Type 1					
*7	7	30" Flagger Ahead (symbol) refl. sign					
*4	4	30" Road Work Ahead refl. sign					
*1	1	30" Right Lane Closed Ahead refl. sign					
*1	1	30" Trans Left (symbol) refl. sign					
30	30	28" Cone, Refl					

1/2 Hour Set
1/2 Hour Take Down

AUTHORIZED BY

RENTER'S SIGNATURE X

OVERTIME _____ HRS.

*CUSTOMER RESPONSIBLE FOR LOSS, THEFT OR DAMAGE.

* CUSTOMER AGREES TO THE TERMS AND CONDITIONS OF RENTAL AGREEMENT ON THE BACK OF THIS PAGE.

NOTICE: NATIONAL BARRICADE SHALL BE HELD HARMLESS FOR THE QUANTITY OF EQUIPMENT ORDERED AND THE PLACING OF THE EQUIPMENT ON THE JOB.

CUSTOMER COPY

ORDER NUMBER
16924
THIS ORDER NUMBER WILL APPEAR ON YOUR INVOICE

NATIONAL BARRICADE COMPANY LLC

6518 RAVENNA AVE NE, SEATTLE WA 98115-7096
206-523-4045 800-884-4045
FAX 206-525-2042
www.barricade.com

ACCOUNT # ARCAD
BY Stacey

DELIVERY [X]
PICK UP [ ]

RENTAL RATE
$ /MIN
$ /WK
$ /MO

one day 205?

DELIVER WITH ORDER # 201557

EQUIPMENT RENTAL AGREEMENT

1 OF 1

CUSTOMER Arcadis
ADDRESS/P.O. BOX
CITY STATE ZIP

ORDER DATE 5/31/12 TIME
DELIVERY DATE 6/1/12
BILLING DATE 6/1/12
OUR TRUCK X WILL CALL
ORDERED BY Sam Miles
JOB FOREMAN
P.O. # JOB #

DELIVER BY: 9am

PHONE OFFICE
JOB PHONE
CELL PHONE (206) 726-4720

DELIVERY ADDRESS Seattle; Fauntleroy Way SW & SW Alaska St.

SERVICE [ ] EXCHANGE [ ]

RETURNED
UNIT TAKEN TO:

ARROWTRAILER

OPERATION

	YES	NO
DOES UNIT FUNCTION?		
WINCH & CABLE OK?		

BATTERY LEVEL

100%	
90%-75%	
50%-75%	
40%-50%	
DEAD	

UNIT # 104
REPAIR ORDER #

SOLAR UNITS

	OK	NOT OK
SOLAR PANELS		
BATTERY PACK		
TAILLIGHTS		
HITCH		
PIGTAIL PLUG		
LEVELING JACKS		
SLIDE JACKS		
TIRES		

NOTE ALL VISIBLE DAMAGE UPON DELIVERY / RETURN

DO NOT TOW WITH PANEL IN UPRIGHT POSITION!
SOLAR UNITS: SOLAR PANELS MUST BE CLEANED DAILY!
UNIT WILL NOT FUNCTION IF SOLAR PANELS ARE DIRTY

CUSTOMER RESPONSIBILITIES: The customer is responsible for any all damages to the equipment referenced above. All fluids must be checked daily and properly maintained. Solar panels must be cleaned daily. The customer is solely responsible for the proper training, operation and maintenance by its employees, sub-contractors and any other individuals or entity that may operate said equipment. The unit is to be returned in the same condition as delivered Charges will be assessed for all damages, and cleaning costs. Point of origin for service calls is National Barricade Co LLC's Seattle Office, 6518 Ravenna Ave NE, Seattle WA 98115-7096. Any and all service calls for above referenced equipment will be billed for, including, but not limited to, travel time, service time, parts, labor and incidentals. Labor rate not to exceed $65.00/hr straight time. Replacement value, if stolen or destroyed, is $6,000.00 U.S.D. Rental contract only. Lease purchase of above equipment is not offered. . Please read reverse side of agreement for additional terms and conditions which are part of this agreement

CUSTOMER (Print Company Name):
By (Signature)
Title

NBC SIGNATURE

DELIVERY CHARGE	MILES
OVERTIME CHARGE	TIME

arbd form revj1.cdr 02/05

CUSTOMER COPY

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

1532903

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: ARCADIS	Report To: SAM MILES	Attention:
Address: 2300 EASTLAKE AVE E SEATTLE, WA 98102	Copy To: AL HAHAL, DAVE RASAIR	Company Name:
Email To: SCOTT ZORN	Purchase Order No.: 6909BPNA.WA10.N0000	Address:
Phone: Fax:	Project Name: FORMER ARCO 11060	Pace Quote Reference:
Requested Due Date/TAT:	Project Number: 11060	Pace Project Manager:
		Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: _____

Section D Required Client Information

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

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

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	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Requested Analysis Filtered (Y/N): MNTPH-GX	BTEX/MTBE	DRO/RRO	TOTAL LEAD	DLS LEAD	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-10	WT	G	6-1	0920					1		1	HCl						✓	✓	✓	✓	✓		
2	MW-1	WT	G	6-1	1050					1		1	HCl						✓	✓	✓	✓	✓		
3	MW-3	WT	G	6-1	1140					1		1	HCl						✓	✓	✓	✓	✓		
4	MW-2	WT	G	6-1	1130					1		1	HCl						✓	✓	✓	✓	✓		
5	MW-6	WT	G	6-1	1300					1		1	HCl						✓	✓	✓	✓	✓		
6	MW-5	WT	G	6-1	1330					1		1	HCl						✓	✓	✓	✓	✓		
7	TRIP BLANK	WT	—	—	—				4	4									✓	✓					
8	DUP-1	WT	G	6-1	—					1		1	HCl						✓	✓	✓	✓	✓		
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Seamas McGuire / ARCADIS	6-1-12	1520	Colette Weaver / PACE	060112	1520	21.0	Y	Y	Y
							18.8			

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: SEAMAS MCGUIRE

SIGNATURE of SAMPLER: Seamas McGuire DATE Signed (MM/DD/YY): 06/01/12

2

*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.

11-29-12 11060 GWM EVENT 39° S. McGuire

0900 → Arrive on site. Meet national barricade. Begin placing traffic control on street. Talk to attendant. She requests I walk across street to talk to owner. SCM does and he is fine with work.

0930 → prepare equipment. Will gauge during sampling round.

1000 → Gauge MW-10 @ 25.00 DTW / 122 PID. Sampled.

TEMP	COND	PH	DO	ORP
11.09	0.776	6.78	7.91	137.4

1040 → Gauge MW-5 @ 25.31 DTW / 705 PID. Sampled.

TEMP	COND	PH	DO	ORP
12.22	1.041	6.68	8.97	-65.9

1115 → Gauge MW-1 @ 24.00 DTW / 556 PID. Sampled.

TEMP	COND	PH	DO	ORP
11.72	0.912	6.80	4.15	-60.2

1200 → United Baricade picks up exclusion zone, located in Street.

1230 → Gauge MW-2 @ 23.86 DTW / 1.72 PID. Sampled.

TEMP	COND	PH	DO	ORP
12.21	1.091	6.64	76.4	-12.1

1315 → Gauge MW-3 @ 22.90 DTW / 1.04 PID. SAMPLED.

TEMP	COND	PH	DO	ORP
13.36	0.774	6.94	4.15	-84.1

1345 → Gauge MW-4 @ 23.90 DTP / 24.00 DTW / 594 PID. Not Sampled due to presence of LNAPL

1400 → Gauge VE-1 @ 23.95 DTP / 24.05 DTW / 821 PID.

1405 → MW-GW-1 not sampled due to being under unmovable vehicle. MW-6 is not found in brush. Next time need to bring breaker bar to look for well.

1430 → SCM cleans up and leaves site.

[signature]

METHODOLOGY ... PID ... SOIL "Rite in the Rain"

ARCADIS

Groundwater Monitoring Well Gauging Form

Site ID: ARCO # 11060 Project #: GP09BPNA.WA48

Site Address: 4580 Fauntleroy Way SW, Seattle, WA Date: 11/29/2011

Well ID	Time	Sheen/ Odor	LNAPL Depth	LNAPL Thinkness	DTW	TD	Notes
MW-10	1000	N/A	N/A	N/A	25.00	35.00	PID=122 GOOD CONDITION
MW-5	1040	YES/Y	N/A	N/A	25.31	27.75	PID=705 GOOD CONDITION
MW-1	1115	YES/Y	N/A	N/A	24.00	27.23	PID=556 GOOD CONDITION
MW-2	1230	YES/N	N/A	N/A	23.86	28.00	PID=972 GOOD CONDITION
MW-3	1315	Y/N	N/A	N/A	22.90	34.20	PID=409 GOOD CONDITION
MW-4	1345	Y/Y	23.90	0.10	24.00	24.91	PID=594 GOOD CONDITION
VE-1	1400	Y/Y	23.95	0.10	24.05	27.30	PID=821 GOOD CONDITION

* DTBS used from past event to prevent X-contamination.

GENERAL PERMIT TO WORK /BP DAILY TAILGATE FORM

Facility # 11060 **Project #** 11060

Project Address: FRANKLIN, SEATTLE, WA **ARCADIS PM:** JOHN

Designated Health and Safety Supervisor: SEAMUS MCGUIRE **Total # On-site Workers:** 1

Today's Date: 11-29 **Time Written:** **Time Closed-out:**

1.	a. Have necessary work permits been obtained (including those for subcontractors)?	☑ Yes ☐ No ☐ N
	b. If **CONFINED SPACE** activities are to be conducted has the CONFINED SPACE portion of the HIGH RISK WORK PERMIT been completed?	☐ Yes ☐ No ☑ N
	c. If **EXCAVATION / TRENCHING / DRILLING / OVERHEAD CLEARANCE** activities deeper than 4 feet and/or within 10 feet of a high pressure gas line and/or within 3 feet of a buried active product or electric line or overhead work involving equipment within 15 feet of an overhead electric line or pole supporting the line are to be conducted has the applicable portion of the HIGH RISK WORK PERMIT been completed?	☐ Yes ☐ No ☑ N
	d. If **HOTWORK** activities are to be conducted has the HOTWORK and FIRE MONITOR ACTIVITY LOG portions of the HIGH RISK WORK PERMIT been completed?	☐ Yes ☐ No ☑ N
	e (i). If **LOCK OUT / TAG OUT (LO/TO)** activities are to be conducted has the LO/TO portion of the HIGH RISK WORK PERMIT been completed? *See e (ii) below.*	☐ Yes ☐ No ☑ N
	f. If workers are **WORKING AT an ELEVATION over 6 feet** has the WORKING AT ELEVATION portion of the HIGH RISK WORK PERMIT been completed?	☐ Yes ☐ No ☑ N
	g. If **DEMOLITION, REMOVAL OF PIPELINES AND BURIED STRUCTURES** work activities are to be conducted has the EXCAVATION / TRENCHING / DRILLING / OVERHEAD CLEARANCE and DEMOLITION, REMOVAL OF PIPELINES AND BURIED STRUCTURES portions of the HIGH RISK WORK PERMIT been completed?	☐ Yes ☐ No ☑ N
2.	Have applicable vehicle inspection checklists been completed by ARCADIS personnel and ARCADIS subcontractors (if applicable)? Has subcontractor paperwork been inspected?	☑ Yes ☐ No ☐ N
3.	Has the HASP been signed by appropriate on-site personnel?	☑ Yes ☐ No ☐ N
4.	Have all sections of the HASP applying to today's tasks been reviewed by all workers and visitors?	☑ Yes ☐ No ☐ N
5.	Has the scope of work/work plan been reviewed and fully understood?	☑ Yes ☐ No ☐ N
6.	Has everyone reviewed the HASP section related to emergencies and know his/her role during an emergency?	☑ Yes ☐ No ☐ N
7.	Does everyone know the location, directions to, and name of the nearest hospital?	☑ Yes ☐ No ☐ N
8.	Where will the scope of work or work plan and HASP be kept on site?	**Location:** SU ✓
9.	What level of PPE is required (See note on following page)?	A ☐ B ☐ C ☐ D ☑ Other
10.	Are appropriate tools on-site to complete tasks safety and appropriately?	☑ Yes ☐ No ☐ N
11.	Has ARCADIS hand safety policy been discussed and highlighted during the health and safety meeting?	☑ Yes ☐ No ☐ N
12.	Has everyone reviewed the applicable SOPs and JLAs for their assigned work duties?	☑ Yes ☐ No ☐ N
13.	Has JLA been modified in the field to include up-to-minute site conditions and notation of puncture resistant footwear required/not required?	☑ Yes ☐ No ☐ N
14.	Have the action levels and work zones been identified and reviewed?	☑ Yes ☐ No ☐ N
15.	a. If monitoring is required, what type of monitoring will be performed?	**Type:** PID / DX *(See 15b-15d)* ☐ N/A
	b. Is monitoring equipment present and properly calibrated?	☑ Yes ☐ No ☐ N
	c. Have HASP requirements for air monitoring been reviewed?	☑ Yes ☐ No ☐ N
	d. Will Air Monitoring Log be completed by Health & Safety Supervisor (HSS)?	☑ Yes ☐ No ☐ N
16.	Will work conducted by others in the area affect/conflict your work area?	☑ Yes ☐ No ☐ N
17.	Will GFCI in-line protectors, positioned next to the power source, be tested and utilized if AC-powered equipment is used?	☑ Yes ☐ No ☐ N
18.	Are above-ground utilities identified and clearly visible by equipment operators? Underground utilities marked?	☑ Yes ☐ No ☐ N
19.	Has the underground/overhead utilities checklist been completed?	☐ Yes ☐ No ☐ N
20.	Have shut-off switches/valves been located (as required by scope work)?	☐ N/A ☐ Electric ☑ Gas ☐ Water
21.	Are proper traffic and/or fire control measures in-place? Has the STAR plan been reviewed?	☑ Traffic ☑ Fire Prevention ☐ N/A
22.	Where is the support zone located?	**Location:** SUV
23.	Has an evacuation signal (i.e. emergency alarm, hand signal) been communicated to site personnel?	☑ Yes ☐ No ☐ N
24.	Where is the nearest working phone located (non-cell phone)	**Location:** SUV
25.	What is the local emergency phone number?	**Number:** 911
26.	Where is the location of the primary first aid kit (to include portable eyewash & CPR shield)	**Location:** SUV
27.	Where is the location of the primary fire extinguisher?	**Location:** SUV
28.	Document last inspection date of primary fire extinguisher and expiration of primary first aid kit contents:	**Extinguisher -** 11.1 **First Aid Kit -** 11.1
29.	Have modifications to safety procedures (e.g JLAs) been made and communicated to onsite personnel?	☑ Yes ☐ No ☐
30.	Has a plan been established to sample, store, label and dispose of waste properly?	☑ Yes ☐ No ☐
31.	Are MSDS for ALL chemicals being used at site (oils, detergents, preservatives, etc.) included in HASP?	☑ Yes ☐ No ☐
32.	Are personnel qualified to perform work at site? Training records verified?	☑ Yes ☐ No ☐
33.	Has operating vehicle/machinery in reverse been discouraged duringtailgate? Will spotters be used when available?	☑ Yes ☐ No ☐

Special Safety Concerns For Today

Personnel wishing to volunteer information relating to allergies/ailments/illnesses AND whether s/he is wearing contact lenses:

Last Name:	Note:	Last Name:	Note:
Last Name:	Note:	Last Name:	Note:
Last Name:	Note:	Last Name:	Note:

Stop Work Authority: You are responsible and authorized to stop any work that is not safe. There will be NO repercussions for initiating Stop Work Authority.

NOTICE TO ALL WORKERS: – By signing below, you agree that you have read and fully understand the JLAs applicable to you and your assigned duties.

Signature Section

	Name (PRINT)	Company	Before Work (Time)	Signature	Mid Day (Time)	Initials (Mid- Day Meeting)
1.	SEAMUS MCGUIRE	ARCADIS	930	Seamus McGuire		
2.						
3.						
4.						
6.						
7.						
8.						

"I have assessed the risks posed by work activities planned for today and steps to mitigate those risks (e.g. E-HASP, JLA, PTW, tailgate meeting, coordination with other parties on site, etc.) have been completed to the best of our ability. Work is safe to proceed. If site conditions change, Stop Work Authority will be used to assess work conditions."

Permit Writer/Holder: ______________________________ **Date (___/___/___)**

Reference Section

5 Keys to Operational Discipline

1. Everyone knows how to do their job correctly and safely.
2. Workers recognize hazards and anticipate unusual situations.
3. When unusual situations occur, work is stopped and change is effectively managed.
4. Supervisors and leaders reinforce the right behaviors and correct poor behavior and performance.
5. Workers expect and demand that their coworkers follow procedures.

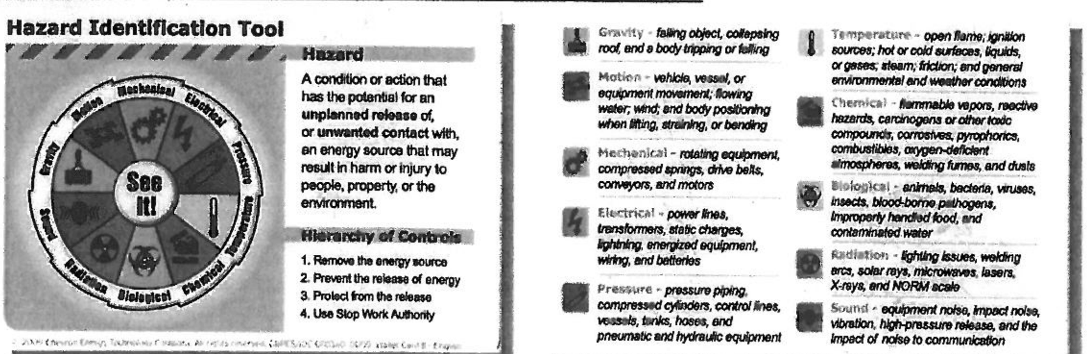
T — Don't just list out the major tasks of the project or job – Brainstorming sessions, workshops, group sessions with people involved in the work to truly understand all of the work that will be done and how it will get done

R — Identify the hazards by sources using our 12 Hazard Source Categories – provide detail – who, what, when, how, etc.

A — For each hazard identified, assess the level of risk: determine the likelihood it will occur, what is the most likely or feasible consequence, and how frequent the hazard is present to determine the level of risk.

C — Use the hierarchy of controls to determine the best, most practical controls for each hazard – eliminate, substitute, isolate, engineer out, administratively manage, then consider PPE

K — Don't start work until all hazards are appropriately controlled.



Identified Hazards	Steps to Mitigate
GRAVITY → S, T, F	CLEAR PATHWAYS
MOTION → TRAFFIC	DELINEATION
TEMPERATURE → COLD / WET	STAY WARM
CHEMICAL → GW / VAPOR / LNAPL	PPE

ARCADIS

Appendix B

Laboratory Report and
Chain-of-Custody Documentation

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

June 14, 2012

Scott Zorn
Arcadis U.S., Inc.
2300 Eastlake Ave E. Ste. 200
Seattle, WA 98102

RE: Project: FORMER ARCO 11060
Pace Project No.: 2512416

Dear Scott Zorn:
Enclosed are the analytical results for sample(s) received by the laboratory on June 01, 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: Alan Kahal, Arcadis U.S., Inc.
Samuel Miles, Arcadis U.S., Inc.
David Rasar, Arcadis U.S., Inc.
Rick Rodriguez, Arcadis U.S., Inc.

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

CERTIFICATIONS

Project: FORMER ARCO 11060
Pace Project No.: 2512416

Washington Certification IDs
940 South Harney Street, Seattle, WA 98108
Alaska CS Certification #: UST-025
Arizona Certification #: AZ0770
California Certification #: 01153CA
Florida/NELAP Certification #: E87617
Oregon Certification #: WA200007
Washington Certification #: C555

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

SAMPLE ANALYTE COUNT

Project: FORMER ARCO 11060
Pace Project No.: 2512416

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2512416001	**MW-10**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Gx	LPM	2	PASI-S
2512416002	**MW-1**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Gx	LPM	2	PASI-S
2512416003	**MW-3**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Gx	LPM	2	PASI-S
2512416004	**MW-2**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Gx	LPM	2	PASI-S
2512416005	**MW-6**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Gx	LPM	2	PASI-S
2512416006	**MW-5**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Gx	LPM	2	PASI-S
2512416007	**TRIP BLANK**	EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Gx	LPM	2	PASI-S
2512416008	**DUP-1**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Gx	LPM	2	PASI-S

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

PROJECT NARRATIVE

Project: FORMER ARCO 11060
Pace Project No.: 2512416

Method: **NWTPH-Dx**
Description: NWTPH-Dx GCS
Client: Arcadis U.S., Inc.
Date: June 14, 2012

General Information:
7 samples were analyzed for NWTPH-Dx. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

PROJECT NARRATIVE

Project: FORMER ARCO 11060
Pace Project No.: 2512416

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Arcadis U.S., Inc.
Date: June 14, 2012

General Information:
7 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

PROJECT NARRATIVE

Project: FORMER ARCO 11060
Pace Project No.: 2512416

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved (LF)
Client: Arcadis U.S., Inc.
Date: June 14, 2012

General Information:
7 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

PROJECT NARRATIVE

Project: FORMER ARCO 11060
Pace Project No.: 2512416

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Arcadis U.S., Inc.
Date: June 14, 2012

General Information:
8 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

PROJECT NARRATIVE

Project: FORMER ARCO 11060
Pace Project No.: 2512416

Method: **NWTPH-Gx**
Description: NWTPH-Gx MSV
Client: Arcadis U.S., Inc.
Date: June 14, 2012

General Information:
8 samples were analyzed for NWTPH-Gx. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

ANALYTICAL RESULTS

Project: FORMER ARCO 11060
Pace Project No.: 2512416

Sample: MW-10 **Lab ID: 2512416001** Collected: 06/01/12 09:20 Received: 06/01/12 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range	ND	ug/L	76.9	1	06/06/12 09:30	06/07/12 07:09		
Motor Oil Range	ND	ug/L	385	1	06/06/12 09:30	06/07/12 07:09	64742-65-0	
Surrogates								
n-Octacosane (S)	98	%	50-150	1	06/06/12 09:30	06/07/12 07:09	630-02-4	
o-Terphenyl (S)	94	%	50-150	1	06/06/12 09:30	06/07/12 07:09	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	06/07/12 10:10	06/11/12 13:51	7439-92-1	
6010 MET ICP, Dissolved (LF)	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	10.0	1	06/07/12 10:10	06/11/12 11:13	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		06/05/12 20:09	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/05/12 20:09	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		06/05/12 20:09	1634-04-4	
Toluene	ND	ug/L	1.0	1		06/05/12 20:09	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/05/12 20:09	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%	79-121	1		06/05/12 20:09	460-00-4	
Dibromofluoromethane (S)	102	%	81-119	1		06/05/12 20:09	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	72-127	1		06/05/12 20:09	17060-07-0	
Toluene-d8 (S)	95	%	77-120	1		06/05/12 20:09	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		06/05/12 20:09		
Surrogates								
4-Bromofluorobenzene (S)	98	%	50-150	1		06/05/12 20:09	460-00-4	

Sample: MW-1 **Lab ID: 2512416002** Collected: 06/01/12 10:50 Received: 06/01/12 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range	**362**	ug/L	79.2	1	06/06/12 09:30	06/07/12 07:26		
Motor Oil Range	ND	ug/L	396	1	06/06/12 09:30	06/07/12 07:26	64742-65-0	
Surrogates								
n-Octacosane (S)	89	%	50-150	1	06/06/12 09:30	06/07/12 07:26	630-02-4	
o-Terphenyl (S)	86	%	50-150	1	06/06/12 09:30	06/07/12 07:26	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	06/07/12 10:10	06/11/12 13:55	7439-92-1	
6010 MET ICP, Dissolved (LF)	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	10.0	1	06/07/12 10:10	06/11/12 11:24	7439-92-1	

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

ANALYTICAL RESULTS

Project: FORMER ARCO 11060
Pace Project No.: 2512416

Sample: MW-1 **Lab ID: 2512416002** Collected: 06/01/12 10:50 Received: 06/01/12 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**3.6**	ug/L	1.0	1		06/05/12 20:28	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/05/12 20:28	100-41-4	
Methyl-tert-butyl ether	**7.4**	ug/L	1.0	1		06/05/12 20:28	1634-04-4	
Toluene	ND	ug/L	1.0	1		06/05/12 20:28	108-88-3	
Xylene (Total)	**3.0**	ug/L	3.0	1		06/05/12 20:28	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	91	%	79-121	1		06/05/12 20:28	460-00-4	
Dibromofluoromethane (S)	106	%	81-119	1		06/05/12 20:28	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	72-127	1		06/05/12 20:28	17060-07-0	
Toluene-d8 (S)	95	%	77-120	1		06/05/12 20:28	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**544**	ug/L	50.0	1		06/05/12 20:28		
Surrogates								
4-Bromofluorobenzene (S)	91	%	50-150	1		06/05/12 20:28	460-00-4	

Sample: MW-3 **Lab ID: 2512416003** Collected: 06/01/12 11:10 Received: 06/01/12 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range	**512**	ug/L	80.8	1	06/06/12 09:30	06/07/12 07:43		
Motor Oil Range	**446**	ug/L	404	1	06/06/12 09:30	06/07/12 07:43	64742-65-0	
Surrogates								
n-Octacosane (S)	94	%	50-150	1	06/06/12 09:30	06/07/12 07:43	630-02-4	
o-Terphenyl (S)	90	%	50-150	1	06/06/12 09:30	06/07/12 07:43	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	06/07/12 10:10	06/11/12 13:58	7439-92-1	
6010 MET ICP, Dissolved (LF)	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	10.0	1	06/07/12 10:10	06/11/12 11:27	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**29.0**	ug/L	1.0	1		06/05/12 20:46	71-43-2	
Ethylbenzene	**35.9**	ug/L	1.0	1		06/05/12 20:46	100-41-4	
Methyl-tert-butyl ether	**2.6**	ug/L	1.0	1		06/05/12 20:46	1634-04-4	
Toluene	ND	ug/L	1.0	1		06/05/12 20:46	108-88-3	
Xylene (Total)	**7.6**	ug/L	3.0	1		06/05/12 20:46	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	84	%	79-121	1		06/05/12 20:46	460-00-4	
Dibromofluoromethane (S)	108	%	81-119	1		06/05/12 20:46	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	72-127	1		06/05/12 20:46	17060-07-0	
Toluene-d8 (S)	96	%	77-120	1		06/05/12 20:46	2037-26-5	

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

ANALYTICAL RESULTS

Project: FORMER ARCO 11060
Pace Project No.: 2512416

Sample: MW-3 **Lab ID: 2512416003** Collected: 06/01/12 11:10 Received: 06/01/12 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**2360**	ug/L	50.0	1		06/05/12 20:46		
Surrogates								
4-Bromofluorobenzene (S)	84	%	50-150	1		06/05/12 20:46	460-00-4	

Sample: MW-2 **Lab ID: 2512416004** Collected: 06/01/12 11:30 Received: 06/01/12 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range	**2240**	ug/L	81.6	1	06/06/12 09:30	06/07/12 08:00		
Motor Oil Range	**3080**	ug/L	408	1	06/06/12 09:30	06/07/12 08:00	64742-65-0	
Surrogates								
n-Octacosane (S)	87	%	50-150	1	06/06/12 09:30	06/07/12 08:00	630-02-4	
o-Terphenyl (S)	84	%	50-150	1	06/06/12 09:30	06/07/12 08:00	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	**10.0**	ug/L	10.0	1	06/07/12 10:10	06/11/12 14:02	7439-92-1	
6010 MET ICP, Dissolved (LF)	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	10.0	1	06/07/12 10:10	06/11/12 11:31	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**107**	ug/L	1.0	1		06/05/12 21:04	71-43-2	
Ethylbenzene	**64.2**	ug/L	1.0	1		06/05/12 21:04	100-41-4	
Methyl-tert-butyl ether	**5.0**	ug/L	1.0	1		06/05/12 21:04	1634-04-4	
Toluene	**12.7**	ug/L	1.0	1		06/05/12 21:04	108-88-3	
Xylene (Total)	**46.1**	ug/L	3.0	1		06/05/12 21:04	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	86	%	79-121	1		06/05/12 21:04	460-00-4	
Dibromofluoromethane (S)	105	%	81-119	1		06/05/12 21:04	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	72-127	1		06/05/12 21:04	17060-07-0	
Toluene-d8 (S)	94	%	77-120	1		06/05/12 21:04	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**2940**	ug/L	50.0	1		06/05/12 21:04		
Surrogates								
4-Bromofluorobenzene (S)	86	%	50-150	1		06/05/12 21:04	460-00-4	

Sample: MW-6 **Lab ID: 2512416005** Collected: 06/01/12 13:00 Received: 06/01/12 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range	ND	ug/L	76.9	1	06/06/12 09:30	06/07/12 08:17		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

ANALYTICAL RESULTS

Project: FORMER ARCO 11060
Pace Project No.: 2512416

Sample: MW-6 **Lab ID: 2512416005** Collected: 06/01/12 13:00 Received: 06/01/12 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Motor Oil Range	ND	ug/L	385	1	06/06/12 09:30	06/07/12 08:17	64742-65-0	
Surrogates								
n-Octacosane (S)	87	%	50-150	1	06/06/12 09:30	06/07/12 08:17	630-02-4	
o-Terphenyl (S)	82	%	50-150	1	06/06/12 09:30	06/07/12 08:17	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	06/07/12 10:10	06/11/12 14:06	7439-92-1	
6010 MET ICP, Dissolved (LF)	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	10.0	1	06/07/12 10:10	06/11/12 11:42	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		06/05/12 21:23	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/05/12 21:23	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		06/05/12 21:23	1634-04-4	
Toluene	ND	ug/L	1.0	1		06/05/12 21:23	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/05/12 21:23	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	95	%	79-121	1		06/05/12 21:23	460-00-4	
Dibromofluoromethane (S)	99	%	81-119	1		06/05/12 21:23	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	72-127	1		06/05/12 21:23	17060-07-0	
Toluene-d8 (S)	96	%	77-120	1		06/05/12 21:23	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**124**	ug/L	50.0	1		06/05/12 21:23		
Surrogates								
4-Bromofluorobenzene (S)	95	%	50-150	1		06/05/12 21:23	460-00-4	

Sample: MW-5 **Lab ID: 2512416006** Collected: 06/01/12 13:30 Received: 06/01/12 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range	**1040**	ug/L	78.4	1	06/08/12 10:10	06/08/12 22:35		
Motor Oil Range	ND	ug/L	392	1	06/08/12 10:10	06/08/12 22:35	64742-65-0	
Surrogates								
n-Octacosane (S)	94	%	50-150	1	06/08/12 10:10	06/08/12 22:35	630-02-4	
o-Terphenyl (S)	90	%	50-150	1	06/08/12 10:10	06/08/12 22:35	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	06/07/12 10:10	06/11/12 14:09	7439-92-1	
6010 MET ICP, Dissolved (LF)	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	10.0	1	06/07/12 10:10	06/11/12 11:46	7439-92-1	

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

ANALYTICAL RESULTS

Project: FORMER ARCO 11060
Pace Project No.: 2512416

Sample: MW-5 **Lab ID: 2512416006** Collected: 06/01/12 13:30 Received: 06/01/12 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**13.3**	ug/L	1.0	1		06/05/12 21:41	71-43-2	
Ethylbenzene	**9.6**	ug/L	1.0	1		06/05/12 21:41	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		06/05/12 21:41	1634-04-4	
Toluene	**3.0**	ug/L	1.0	1		06/05/12 21:41	108-88-3	
Xylene (Total)	**10.7**	ug/L	3.0	1		06/05/12 21:41	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	92	%	79-121	1		06/05/12 21:41	460-00-4	
Dibromofluoromethane (S)	104	%	81-119	1		06/05/12 21:41	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	72-127	1		06/05/12 21:41	17060-07-0	
Toluene-d8 (S)	94	%	77-120	1		06/05/12 21:41	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**1620**	ug/L	50.0	1		06/05/12 21:41		
Surrogates								
4-Bromofluorobenzene (S)	92	%	50-150	1		06/05/12 21:41	460-00-4	

Sample: TRIP BLANK **Lab ID: 2512416007** Collected: 06/01/12 00:00 Received: 06/01/12 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		06/05/12 14:54	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/05/12 14:54	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		06/05/12 14:54	1634-04-4	
Toluene	ND	ug/L	1.0	1		06/05/12 14:54	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/05/12 14:54	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	101	%	79-121	1		06/05/12 14:54	460-00-4	
Dibromofluoromethane (S)	100	%	81-119	1		06/05/12 14:54	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	72-127	1		06/05/12 14:54	17060-07-0	
Toluene-d8 (S)	97	%	77-120	1		06/05/12 14:54	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		06/05/12 14:54		
Surrogates								
4-Bromofluorobenzene (S)	101	%	50-150	1		06/05/12 14:54	460-00-4	

Sample: DUP-1 **Lab ID: 2512416008** Collected: 06/01/12 00:00 Received: 06/01/12 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range	**1030**	ug/L	77.7	1	06/08/12 10:10	06/08/12 22:53		
Motor Oil Range	ND	ug/L	388	1	06/08/12 10:10	06/08/12 22:53	64742-65-0	

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

ANALYTICAL RESULTS

Project: FORMER ARCO 11060
Pace Project No.: 2512416

Sample: DUP-1 **Lab ID: 2512416008** Collected: 06/01/12 00:00 Received: 06/01/12 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Surrogates								
n-Octacosane (S)	87	%	50-150	1	06/08/12 10:10	06/08/12 22:53	630-02-4	
o-Terphenyl (S)	84	%	50-150	1	06/08/12 10:10	06/08/12 22:53	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	06/07/12 10:10	06/11/12 14:20	7439-92-1	
6010 MET ICP, Dissolved (LF)	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	10.0	1	06/07/12 10:10	06/11/12 11:49	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**12.8**	ug/L	1.0	1		06/05/12 22:00	71-43-2	
Ethylbenzene	**8.8**	ug/L	1.0	1		06/05/12 22:00	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		06/05/12 22:00	1634-04-4	
Toluene	**2.8**	ug/L	1.0	1		06/05/12 22:00	108-88-3	
Xylene (Total)	**10**	ug/L	3.0	1		06/05/12 22:00	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	87	%	79-121	1		06/05/12 22:00	460-00-4	
Dibromofluoromethane (S)	103	%	81-119	1		06/05/12 22:00	1868-53-7	
1,2-Dichloroethane-d4 (S)	96	%	72-127	1		06/05/12 22:00	17060-07-0	
Toluene-d8 (S)	94	%	77-120	1		06/05/12 22:00	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**1520**	ug/L	50.0	1		06/05/12 22:00		
Surrogates								
4-Bromofluorobenzene (S)	87	%	50-150	1		06/05/12 22:00	460-00-4	

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

QUALITY CONTROL DATA

Project: FORMER ARCO 11060
Pace Project No.: 2512416

QC Batch: MPRP/3075 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 2512416001, 2512416002, 2512416003, 2512416004, 2512416005, 2512416006, 2512416008

METHOD BLANK: 118083 Matrix: Water
Associated Lab Samples: 2512416001, 2512416002, 2512416003, 2512416004, 2512416005, 2512416006, 2512416008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	ND	10.0	06/11/12 12:53	

LABORATORY CONTROL SAMPLE: 118084

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	470	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 118085 118086

Parameter	Units	2512414001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Lead	ug/L	ND	500	500	472	474	94	95	75-125	.5	

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

QUALITY CONTROL DATA

Project: FORMER ARCO 11060
Pace Project No.: 2512416

QC Batch: MPRP/3076 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 2512416001, 2512416002, 2512416003, 2512416004, 2512416005, 2512416006, 2512416008

METHOD BLANK: 118087 Matrix: Water
Associated Lab Samples: 2512416001, 2512416002, 2512416003, 2512416004, 2512416005, 2512416006, 2512416008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead, Dissolved	ug/L	ND	10.0	06/11/12 11:06	

LABORATORY CONTROL SAMPLE: 118088

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead, Dissolved	ug/L	500	475	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 118089 118090

Parameter	Units	2512416001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Lead, Dissolved	ug/L	ND	500	500	475	473	95	95	75-125	.3	

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

QUALITY CONTROL DATA

Project: FORMER ARCO 11060
Pace Project No.: 2512416

QC Batch: MSV/7146 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 2512416001, 2512416002, 2512416003, 2512416004, 2512416005, 2512416006, 2512416007, 2512416008

METHOD BLANK: 117847 Matrix: Water
Associated Lab Samples: 2512416001, 2512416002, 2512416003, 2512416004, 2512416005, 2512416006, 2512416007, 2512416008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	06/05/12 14:36	
Ethylbenzene	ug/L	ND	1.0	06/05/12 14:36	
Methyl-tert-butyl ether	ug/L	ND	1.0	06/05/12 14:36	
Toluene	ug/L	ND	1.0	06/05/12 14:36	
Xylene (Total)	ug/L	ND	3.0	06/05/12 14:36	
1,2-Dichloroethane-d4 (S)	%	99	72-127	06/05/12 14:36	
4-Bromofluorobenzene (S)	%	101	79-121	06/05/12 14:36	
Dibromofluoromethane (S)	%	101	81-119	06/05/12 14:36	
Toluene-d8 (S)	%	95	77-120	06/05/12 14:36	

LABORATORY CONTROL SAMPLE: 117848

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	14.6	73	66-123	
Ethylbenzene	ug/L	20	18.5	92	67-122	
Methyl-tert-butyl ether	ug/L	20	16.7	84	65-138	
Toluene	ug/L	20	16.1	81	64-118	
Xylene (Total)	ug/L	60	58.1	97	68-122	
1,2-Dichloroethane-d4 (S)	%			100	72-127	
4-Bromofluorobenzene (S)	%			91	79-121	
Dibromofluoromethane (S)	%			102	81-119	
Toluene-d8 (S)	%			97	77-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 118081 118082

Parameter	Units	2512416001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzene	ug/L	ND	20	20	15.4	15.9	74	77	63-138	3	
Ethylbenzene	ug/L	ND	20	20	18.7	19.0	91	92	65-135	2	
Methyl-tert-butyl ether	ug/L	ND	20	20	16.6	16.8	83	84	59-143	1	
Toluene	ug/L	ND	20	20	16.0	16.5	80	82	64-128	3	
Xylene (Total)	ug/L	ND	60	60	57.5	58.9	96	98	65-133	2	
1,2-Dichloroethane-d4 (S)	%						101	99	72-127		
4-Bromofluorobenzene (S)	%						90	91	79-121		
Dibromofluoromethane (S)	%						101	100	81-119		
Toluene-d8 (S)	%						94	96	77-120		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

QUALITY CONTROL DATA

Project: FORMER ARCO 11060
Pace Project No.: 2512416

QC Batch: MSV/7145 Analysis Method: NWTPH-Gx
QC Batch Method: NWTPH-Gx Analysis Description: NWTPH-Gx MSV Water
Associated Lab Samples: 2512416001, 2512416002, 2512416003, 2512416004, 2512416005, 2512416006, 2512416007, 2512416008

METHOD BLANK: 117845 Matrix: Water
Associated Lab Samples: 2512416001, 2512416002, 2512416003, 2512416004, 2512416005, 2512416006, 2512416007, 2512416008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	50.0	06/05/12 14:36	
4-Bromofluorobenzene (S)	%	101	50-150	06/05/12 14:36	

LABORATORY CONTROL SAMPLE: 117846

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	ug/L	500	401	80	65-139	
4-Bromofluorobenzene (S)	%			96	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 118076 118077

Parameter	Units	2512416002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Gasoline Range Organics	ug/L	544	500	500	938	1020	79	95	48-147	8	
4-Bromofluorobenzene (S)	%						92	93	50-150		

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

QUALITY CONTROL DATA

Project: FORMER ARCO 11060
Pace Project No.: 2512416

QC Batch: OEXT/5614 Analysis Method: NWTPH-Dx
QC Batch Method: EPA 3510 Analysis Description: NWTPH-Dx GCS
Associated Lab Samples: 2512416001, 2512416002, 2512416003, 2512416004, 2512416005

METHOD BLANK: 117903 Matrix: Water
Associated Lab Samples: 2512416001, 2512416002, 2512416003, 2512416004, 2512416005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range	ug/L	ND	80.0	06/07/12 01:58	
Motor Oil Range	ug/L	ND	400	06/07/12 01:58	
n-Octacosane (S)	%	87	50-150	06/07/12 01:58	
o-Terphenyl (S)	%	83	50-150	06/07/12 01:58	

LABORATORY CONTROL SAMPLE: 117904

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Range	ug/L	4000	3690	92	51-114	
Motor Oil Range	ug/L	4000	4010	100	62-120	
n-Octacosane (S)	%			97	50-150	
o-Terphenyl (S)	%			93	50-150	

SAMPLE DUPLICATE: 117905

Parameter	Units	2512366001 Result	Dup Result	RPD	Qualifiers
Diesel Range	ug/L	ND	ND		
Motor Oil Range	ug/L	ND	ND		
n-Octacosane (S)	%	93	94	6	
o-Terphenyl (S)	%	86	90	2	

SAMPLE DUPLICATE: 117909

Parameter	Units	2512392004 Result	Dup Result	RPD	Qualifiers
Diesel Range	ug/L	ND	55.2J		
Motor Oil Range	ug/L	ND	ND		
n-Octacosane (S)	%	90	97	8	
o-Terphenyl (S)	%	85	93	9	

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

QUALITY CONTROL DATA

Project: FORMER ARCO 11060
Pace Project No.: 2512416

QC Batch: OEXT/5625 Analysis Method: NWTPH-Dx
QC Batch Method: EPA 3510 Analysis Description: NWTPH-Dx GCS
Associated Lab Samples: 2512416006, 2512416008

METHOD BLANK: 118335 Matrix: Water
Associated Lab Samples: 2512416006, 2512416008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range	ug/L	ND	80.0	06/08/12 22:00	
Motor Oil Range	ug/L	ND	400	06/08/12 22:00	
n-Octacosane (S)	%	95	50-150	06/08/12 22:00	
o-Terphenyl (S)	%	92	50-150	06/08/12 22:00	

LABORATORY CONTROL SAMPLE: 118336

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Range	ug/L	4000	3970	99	51-114	
Motor Oil Range	ug/L	4000	4680	117	62-120	
n-Octacosane (S)	%			98	50-150	
o-Terphenyl (S)	%			97	50-150	

SAMPLE DUPLICATE: 118337

Parameter	Units	2512467001 Result	Dup Result	RPD	Qualifiers
Diesel Range	ug/L	0.17 mg/L	183	5	
Motor Oil Range	ug/L	0.46 mg/L	392J		R3
n-Octacosane (S)	%	94	88	7	
o-Terphenyl (S)	%	91	85	6	

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

QUALIFIERS

Project: FORMER ARCO 11060
Pace Project No.: 2512416

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

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.

LABORATORIES

PASI-S	Pace Analytical Services - Seattle

ANALYTE QUALIFIERS

R3	RPD value was outside control limits due to uncertainty of values at or near the PRL.

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORMER ARCO 11060
Pace Project No.: 2512416

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2512416001	**MW-10**	EPA 3510	OEXT/5614	NWTPH-Dx	GCSV/3593
2512416002	**MW-1**	EPA 3510	OEXT/5614	NWTPH-Dx	GCSV/3593
2512416003	**MW-3**	EPA 3510	OEXT/5614	NWTPH-Dx	GCSV/3593
2512416004	**MW-2**	EPA 3510	OEXT/5614	NWTPH-Dx	GCSV/3593
2512416005	**MW-6**	EPA 3510	OEXT/5614	NWTPH-Dx	GCSV/3593
2512416006	**MW-5**	EPA 3510	OEXT/5625	NWTPH-Dx	GCSV/3602
2512416008	**DUP-1**	EPA 3510	OEXT/5625	NWTPH-Dx	GCSV/3602
2512416001	**MW-10**	EPA 3010	MPRP/3075	EPA 6010	ICP/2863
2512416002	**MW-1**	EPA 3010	MPRP/3075	EPA 6010	ICP/2863
2512416003	**MW-3**	EPA 3010	MPRP/3075	EPA 6010	ICP/2863
2512416004	**MW-2**	EPA 3010	MPRP/3075	EPA 6010	ICP/2863
2512416005	**MW-6**	EPA 3010	MPRP/3075	EPA 6010	ICP/2863
2512416006	**MW-5**	EPA 3010	MPRP/3075	EPA 6010	ICP/2863
2512416008	**DUP-1**	EPA 3010	MPRP/3075	EPA 6010	ICP/2863
2512416001	**MW-10**	EPA 3010	MPRP/3076	EPA 6010	ICP/2864
2512416002	**MW-1**	EPA 3010	MPRP/3076	EPA 6010	ICP/2864
2512416003	**MW-3**	EPA 3010	MPRP/3076	EPA 6010	ICP/2864
2512416004	**MW-2**	EPA 3010	MPRP/3076	EPA 6010	ICP/2864
2512416005	**MW-6**	EPA 3010	MPRP/3076	EPA 6010	ICP/2864
2512416006	**MW-5**	EPA 3010	MPRP/3076	EPA 6010	ICP/2864
2512416008	**DUP-1**	EPA 3010	MPRP/3076	EPA 6010	ICP/2864
2512416001	**MW-10**	EPA 5030B/8260	MSV/7146		
2512416002	**MW-1**	EPA 5030B/8260	MSV/7146		
2512416003	**MW-3**	EPA 5030B/8260	MSV/7146		
2512416004	**MW-2**	EPA 5030B/8260	MSV/7146		
2512416005	**MW-6**	EPA 5030B/8260	MSV/7146		
2512416006	**MW-5**	EPA 5030B/8260	MSV/7146		
2512416007	**TRIP BLANK**	EPA 5030B/8260	MSV/7146		
2512416008	**DUP-1**	EPA 5030B/8260	MSV/7146		
2512416001	**MW-10**	NWTPH-Gx	MSV/7145		
2512416002	**MW-1**	NWTPH-Gx	MSV/7145		
2512416003	**MW-3**	NWTPH-Gx	MSV/7145		
2512416004	**MW-2**	NWTPH-Gx	MSV/7145		
2512416005	**MW-6**	NWTPH-Gx	MSV/7145		
2512416006	**MW-5**	NWTPH-Gx	MSV/7145		
2512416007	**TRIP BLANK**	NWTPH-Gx	MSV/7145		
2512416008	**DUP-1**	NWTPH-Gx	MSV/7145		

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

2512416

Page: 1 of 1

1532903

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	ARCADIS	Report To:	SAM MILES	Attention:	
Address:	2300 EASTLAKE AVE E SEATTLE, WA 98102	Copy To:	AL UGHAL / DAVE RASHR	Company Name:	
Email To:	SCOTT ZORN	Purchase Order No.:	GP09BPNA.WA18.N0000	Address:	
Phone:	Fax:	Project Name:	FORMER ARCO 11060	Pace Quote Reference:	
Requested Due Date/TAT:		Project Number:	11060	Pace Project Manager:	
				Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER ______

Site Location STATE: ______

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	TIME	COMPOSITE END/GRAB DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	MTPH-Gx	BTEX/MTBE	DRO/RRO	TOTAL LEAD	DIS LEAD	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-10	WT	G	6-1	0920					1		1	8						✓	✓	✓	✓	✓		
2	MW-1	WT	G	6-1	1050					1		1	8						✓	✓	✓	✓	✓		
3	MW-3	WT	G	6-1	1110					1		1	8						✓	✓	✓	✓	✓		
4	MW-2	WT	G	6-1	1130					1		1	8						✓	✓	✓	✓	✓		
5	MW-6	WT	G	6-1	1300					1		1	8						✓	✓	✓	✓	✓		
6	MW-5	WT	G	6-1	1330					1		1	8						✓	✓	✓	✓	✓		
7	TRIP BLANK	WT	—	—	—				4	4									✓	✓					
8	DUP-1	WT	G	6-1	—					1		1	8						✓	✓	✓	✓	✓		
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature] / ARCADIS	6-1-12	1520	Colette Weaver / PACE	060112	1520	21.0 18.8	Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: SEAMAS MCGUIRE

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 06/01/12

*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

Sample Container Count

CLIENT: Arcadis

2512416

COC PAGE 1 of 1

COC ID#

Trip Blank(s) Provided? Y (N)

Pace Analytical

Sample Line Item	VG9H	AG1H	AG1U	BP1U	BP2U	BP3U	BP3N	BP3S	WGKU	WGFU	WG2U	DG9M	DG9B	VG9W	VSG				Comments
1	6	2				1	1												
2	↓	1				1	1												
3	↓	1				1	1												
4	4	1				1	1												
5	6	1				1	1												
6	↓	↓				↓	↓												
7	4	→				~	→												
8	6	2				1	1												
9																			
10																			
11																			
12																			

AG1H	1 liter HCL amber glass	BP2S	500mL H2SO4 plastic	JGFU	4 oz amber glass soil jar
AG1U	1liter unpreserved amber glass	BP2U	500mL unpreserved plastic	WGKU	8 oz clear glass soil jar
AG2S	500mL H2SO4 amber glass	BP2Z	500mL NaOH, Zn Ac	WGFU	4 oz clear glass soil jar
AG2U	500mL unpreserved amber glass	BP3C	250mL NaOH plastic	WG2U	2 oz clear glass soil jar
AG3S	250mL H2SO4 amber glass	BP3N	250mL HNO3 plastic	JGFM	4 oz amber glass soil jar with MeOH
BG1H	1 liter HCL clear glass	BP3S	250mL H2SO4 plastic	VG9U	40mL unpreserved clear vial
BG1U	1 liter unpreserved glass	BP3U	250mL unpreserved plastic	VG9W	40mL clear vial pre-weighted with DI water
BP1N	1 liter HNO3 plastic	DG9B	40mL Na Bisulfate clear vial	VSG	Headspace septa vial
BP1S	1 liter H2SO4 plastic	DG9H	40mL HCL amber voa vial	VG9H	40mL HCL clear vial
BP1U	1 liter unpreserved plastic	DG9M	40mL MeOH clear vial	WGFX	4oz wide jar w/hexane wipe
BP1Z	1 liter NaOH, Zn, Ac	DG9T	40mL Na Thio amber vial	VG9T	40mL Na Thio. clear vial
BP2N	500mL HNO3 plastic	DG9U	40mL unpreserved amber vial	ZPLC	Ziploc Bag
BP2O	500mL NaOH plastic	I	Wipe/Swab	U	Summa Can

Sample Condition Upon Receipt

Pace Analytical

Client Name: Arcadis Project # 2512416

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

Tracking #: _____

Custody Seal on Cooler/Box Present: ☑ Yes ☐ No Seals intact: ☑ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____ Temp. Blank Yes ____ No ____

Thermometer Used 132013 or 101731962 or 226099 Type of Ice: Wet Blue None ☑ Samples on ice, cooling process has begun

Cooler Temperature 21.0, 18.8 Biological Tissue is Frozen: Yes No

Temp should be above freezing ≤ 6°C Comments:

Date and Initials of person examining contents: 6/1/12 hs

Chain of Custody Present:	☑Yes	☐No	☐N/A
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A
Follow Up / Hold Analysis Requested:	☐Yes	☐No	☑N/A
Sufficient Volume:	☑Yes	☐No	☐N/A
Correct Containers Used:	☑Yes	☐No	☐N/A
-Pace Containers Used:	☑Yes	☐No	☐N/A
Containers Intact:	☐Yes	☑No	☐N/A
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A
Sample Labels match COC:	☑Yes	☐No	☐N/A
-Includes date/time/ID/Analysis Matrix: WT			
All containers needing preservation have been checked.	☐Yes	☐No	☐N/A
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A
Exceptions: VOA, coliform, TOC, O&G	☑Yes	☐No	☐N/A
Samples checked for dechlorination:	☐Yes	☐No	☑N/A
Headspace in VOA Vials (>6mm):	☐Yes	☑No	☐N/A
Trip Blanks Present:	☑Yes	☐No	☐N/A
Trip Blank Custody Seals Present	☐Yes	☑No	☐N/A
Pace Trip Blank Creation Date:			

1.
2.
3.
4.
5.
6.
7.
8.
9.
10. (of 6)
11. 2x HCl 9H broken for MW-2
12.
13.
14.

Initial when completed: hs Lot # of added preservative:

15.
16.
17.

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Sam Miles Date/Time: 6/1 1815

Comments/ Resolution:

Informed Client Broken Vials for MW-2 Received

Project Manager Review: DG **Date:** 6/1

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 out of hold, incorrect preservative, out of temp, incorrect containers)

December 13, 2012

Scott Zorn
Arcadis U.S., Inc.
2300 Eastlake Ave E. Ste. 200
Seattle, WA 98102

RE: Project: 11060 Former Arco 11060
Pace Project No.: 10213969

Dear Scott Zorn:
Enclosed are the analytical results for sample(s) received by the laboratory on November 30, 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: Samuel Miles, Arcadis U.S., Inc.
Accounts Payable, Arcadis U.S., Inc.
Rick Rodriguez, Arcadis U.S., Inc.

CERTIFICATIONS

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

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

SAMPLE SUMMARY

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10213969001	**MW-1**	Water	11/29/12 11:15	11/30/12 12:30
10213969002	**MW-2**	Water	11/29/12 12:30	11/30/12 12:30
10213969003	**MW-3**	Water	11/29/12 13:15	11/30/12 12:30
10213969004	**MW-5**	Water	11/29/12 10:40	11/30/12 12:30
10213969005	**MW-10**	Water	11/29/12 10:00	11/30/12 12:30
10213969006	**DUP**	Water	11/29/12 00:00	11/30/12 12:30
10213969007	**Trip Blank**	Water	11/29/12 00:00	11/30/12 12:30

SAMPLE ANALYTE COUNT

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10213969001	**MW-1**	NWTPH-Dx	KL1	3	PASI-M
		NWTPH-Gx/8021	MJH	2	PASI-M
		EPA 6010	IP	1	PASI-M
		EPA 6010	IP	1	PASI-M
		EPA 8260	EB2	9	PASI-M
10213969002	**MW-2**	NWTPH-Dx	KL1	3	PASI-M
		NWTPH-Gx/8021	MJH	2	PASI-M
		EPA 6010	IP	1	PASI-M
		EPA 6010	IP	1	PASI-M
		EPA 8260	EB2	9	PASI-M
10213969003	**MW-3**	NWTPH-Dx	KL1	3	PASI-M
		NWTPH-Gx/8021	MJH	2	PASI-M
		EPA 6010	IP	1	PASI-M
		EPA 6010	IP	1	PASI-M
		EPA 8260	EB2	9	PASI-M
10213969004	**MW-5**	NWTPH-Dx	KL1	3	PASI-M
		NWTPH-Gx/8021	MJH	2	PASI-M
		EPA 6010	IP	1	PASI-M
		EPA 6010	IP	1	PASI-M
		EPA 8260	EB2	9	PASI-M
10213969005	**MW-10**	NWTPH-Dx	KL1	3	PASI-M
		NWTPH-Gx/8021	MJH	2	PASI-M
		EPA 6010	IP	1	PASI-M
		EPA 6010	IP	1	PASI-M
		EPA 8260	EB2	9	PASI-M
10213969006	**DUP**	NWTPH-Dx	KL1	3	PASI-M
		NWTPH-Gx/8021	MJH	2	PASI-M
		EPA 6010	IP	1	PASI-M
		EPA 6010	IP	1	PASI-M
		EPA 8260	EB2	9	PASI-M
10213969007	**Trip Blank**	NWTPH-Gx/8021	MJH	2	PASI-M
		EPA 8260	EB2	9	PASI-M

ANALYTICAL RESULTS

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

Sample: MW-1 **Lab ID: 10213969001** Collected: 11/29/12 11:15 Received: 11/30/12 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range	ND	mg/L	0.43	1	12/06/12 07:18	12/11/12 21:05		
Motor Oil Range	ND	mg/L	0.43	1	12/06/12 07:18	12/11/12 21:05		
Surrogates								
n-Pentacosane (S)	51	%	50-150	1	12/06/12 07:18	12/11/12 21:05	629-99-2	
NWTPH-Gx/8021BGx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	**1320**	ug/L	100	1		12/07/12 16:58		
Surrogates								
a,a,a-Trifluorotoluene (S)	109	%	75-131	1		12/07/12 16:58	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	**11.3**	ug/L	3.0	1	12/06/12 10:19	12/11/12 15:37	7439-92-1	
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	3.0	1	12/04/12 11:47	12/05/12 17:30	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	**1.2**	ug/L	1.0	1		12/06/12 12:12	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/06/12 12:12	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		12/06/12 12:12	1634-04-4	
Toluene	ND	ug/L	1.0	1		12/06/12 12:12	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/06/12 12:12	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	94	%	75-125	1		12/06/12 12:12	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	75-125	1		12/06/12 12:12	17060-07-0	
Toluene-d8 (S)	101	%	75-125	1		12/06/12 12:12	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125	1		12/06/12 12:12	460-00-4	

Sample: MW-2 **Lab ID: 10213969002** Collected: 11/29/12 12:30 Received: 11/30/12 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range	**2.1**	mg/L	0.43	1	12/06/12 07:18	12/11/12 21:28		
Motor Oil Range	**0.76**	mg/L	0.43	1	12/06/12 07:18	12/11/12 21:28		
Surrogates								
n-Pentacosane (S)	67	%	50-150	1	12/06/12 07:18	12/11/12 21:28	629-99-2	
NWTPH-Gx/8021BGx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	**10400**	ug/L	500	5		12/07/12 18:35		
Surrogates								
a,a,a-Trifluorotoluene (S)	96	%	75-131	5		12/07/12 18:35	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	**7.7**	ug/L	3.0	1	12/06/12 10:19	12/11/12 15:56	7439-92-1	

REPORT OF LABORATORY ANALYSIS

ANALYTICAL RESULTS

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

Sample: MW-2 **Lab ID: 10213969002** Collected: 11/29/12 12:30 Received: 11/30/12 12:30 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	**3.2**	ug/L	3.0	1	12/04/12 11:47	12/05/12 17:45	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	**399**	ug/L	5.0	5		12/07/12 15:58	71-43-2	
Ethylbenzene	**187**	ug/L	1.0	1		12/05/12 20:22	100-41-4	
Methyl-tert-butyl ether	**14.7**	ug/L	1.0	1		12/05/12 20:22	1634-04-4	
Toluene	**10.2**	ug/L	1.0	1		12/05/12 20:22	108-88-3	
Xylene (Total)	**154**	ug/L	3.0	1		12/05/12 20:22	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%	75-125	1		12/05/12 20:22	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	75-125	1		12/05/12 20:22	17060-07-0	
Toluene-d8 (S)	114	%	75-125	1		12/05/12 20:22	2037-26-5	
4-Bromofluorobenzene (S)	102	%	75-125	1		12/05/12 20:22	460-00-4	

Sample: MW-3 **Lab ID: 10213969003** Collected: 11/29/12 13:15 Received: 11/30/12 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range	**0.67**	mg/L	0.41	1	12/06/12 07:18	12/11/12 21:51		
Motor Oil Range	**0.50**	mg/L	0.41	1	12/06/12 07:18	12/11/12 21:51		
Surrogates								
n-Pentacosane (S)	63	%	50-150	1	12/06/12 07:18	12/11/12 21:51	629-99-2	
NWTPH-Gx/8021BGx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	**2320**	ug/L	100	1		12/07/12 17:36		
Surrogates								
a,a,a-Trifluorotoluene (S)	110	%	75-131	1		12/07/12 17:36	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	**4.1**	ug/L	3.0	1	12/06/12 10:19	12/11/12 17:31	7439-92-1	
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	3.0	1	12/04/12 11:47	12/05/12 17:52	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	**3.2**	ug/L	1.0	1		12/07/12 10:57	71-43-2	
Ethylbenzene	**40.7**	ug/L	1.0	1		12/07/12 10:57	100-41-4	
Methyl-tert-butyl ether	**1.8**	ug/L	1.0	1		12/07/12 10:57	1634-04-4	
Toluene	**1.9**	ug/L	1.0	1		12/07/12 10:57	108-88-3	
Xylene (Total)	**10.6**	ug/L	3.0	1		12/07/12 10:57	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	95	%	75-125	1		12/07/12 10:57	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	75-125	1		12/07/12 10:57	17060-07-0	
Toluene-d8 (S)	101	%	75-125	1		12/07/12 10:57	2037-26-5	

ANALYTICAL RESULTS

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

Sample: MW-3 **Lab ID: 10213969003** Collected: 11/29/12 13:15 Received: 11/30/12 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical Method: EPA 8260							
Surrogates								
4-Bromofluorobenzene (S)	103	%	75-125	1		12/07/12 10:57	460-00-4	

Sample: MW-5 **Lab ID: 10213969004** Collected: 11/29/12 10:40 Received: 11/30/12 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range	**1.1**	mg/L	0.44	1	12/06/12 07:18	12/11/12 22:14		
Motor Oil Range	ND	mg/L	0.44	1	12/06/12 07:18	12/11/12 22:14		
Surrogates								
n-Pentacosane (S)	65	%	50-150	1	12/06/12 07:18	12/11/12 22:14	629-99-2	
NWTPH-Gx/8021BGx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	**4160**	ug/L	500	5		12/08/12 21:08		
Surrogates								
a,a,a-Trifluorotoluene (S)	104	%	75-131	5		12/08/12 21:08	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	**42.5**	ug/L	3.0	1	12/06/12 10:19	12/11/12 17:38	7439-92-1	
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	3.0	1	12/04/12 11:47	12/05/12 17:57	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	**18.0**	ug/L	1.0	1		12/05/12 20:52	71-43-2	
Ethylbenzene	**61.7**	ug/L	1.0	1		12/05/12 20:52	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		12/05/12 20:52	1634-04-4	
Toluene	**8.0**	ug/L	1.0	1		12/05/12 20:52	108-88-3	
Xylene (Total)	**28.2**	ug/L	3.0	1		12/05/12 20:52	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	93	%	75-125	1		12/05/12 20:52	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	75-125	1		12/05/12 20:52	17060-07-0	
Toluene-d8 (S)	105	%	75-125	1		12/05/12 20:52	2037-26-5	
4-Bromofluorobenzene (S)	107	%	75-125	1		12/05/12 20:52	460-00-4	

Sample: MW-10 **Lab ID: 10213969005** Collected: 11/29/12 10:00 Received: 11/30/12 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range	ND	mg/L	0.42	1	12/06/12 07:18	12/11/12 22:37		
Motor Oil Range	ND	mg/L	0.42	1	12/06/12 07:18	12/11/12 22:37		

ANALYTICAL RESULTS

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

Sample: MW-10 **Lab ID: 10213969005** Collected: 11/29/12 10:00 Received: 11/30/12 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Surrogates								
n-Pentacosane (S)	61	%	50-150	1	12/06/12 07:18	12/11/12 22:37	629-99-2	
NWTPH-Gx/8021BGx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND	ug/L	100	1		12/07/12 20:52		
Surrogates								
a,a,a-Trifluorotoluene (S)	94	%	75-131	1		12/07/12 20:52	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	**20.4**	ug/L	3.0	1	12/06/12 10:19	12/11/12 17:44	7439-92-1	
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	3.0	1	12/04/12 11:47	12/05/12 18:04	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		12/05/12 21:07	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/05/12 21:07	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		12/05/12 21:07	1634-04-4	
Toluene	ND	ug/L	1.0	1		12/05/12 21:07	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/05/12 21:07	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	96	%	75-125	1		12/05/12 21:07	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	75-125	1		12/05/12 21:07	17060-07-0	
Toluene-d8 (S)	99	%	75-125	1		12/05/12 21:07	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125	1		12/05/12 21:07	460-00-4	

Sample: DUP **Lab ID: 10213969006** Collected: 11/29/12 00:00 Received: 11/30/12 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range	ND	mg/L	0.47	1	12/06/12 07:18	12/11/12 23:00		
Motor Oil Range	ND	mg/L	0.47	1	12/06/12 07:18	12/11/12 23:00		
Surrogates								
n-Pentacosane (S)	71	%	50-150	1	12/06/12 07:18	12/11/12 23:00	629-99-2	
NWTPH-Gx/8021BGx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	**146**	ug/L	100	1		12/07/12 21:12		
Surrogates								
a,a,a-Trifluorotoluene (S)	97	%	75-131	1		12/07/12 21:12	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	**22.6**	ug/L	3.0	1	12/06/12 10:19	12/11/12 17:51	7439-92-1	

ANALYTICAL RESULTS

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

Sample: DUP **Lab ID: 10213969006** Collected: 11/29/12 00:00 Received: 11/30/12 12:30 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	12/04/12 11:47	12/05/12 18:10	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		12/05/12 21:22	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/05/12 21:22	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		12/05/12 21:22	1634-04-4	
Toluene	ND	ug/L	1.0	1		12/05/12 21:22	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/05/12 21:22	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	94	%	75-125	1		12/05/12 21:22	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	75-125	1		12/05/12 21:22	17060-07-0	
Toluene-d8 (S)	101	%	75-125	1		12/05/12 21:22	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125	1		12/05/12 21:22	460-00-4	

Sample: Trip Blank **Lab ID: 10213969007** Collected: 11/29/12 00:00 Received: 11/30/12 12:30 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		12/07/12 20:13		
Surrogates								
a,a,a-Trifluorotoluene (S)	96	%	75-131	1		12/07/12 20:13	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		12/05/12 17:51	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/05/12 17:51	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		12/05/12 17:51	1634-04-4	
Toluene	ND	ug/L	1.0	1		12/05/12 17:51	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/05/12 17:51	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%	75-125	1		12/05/12 17:51	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	75-125	1		12/05/12 17:51	17060-07-0	
Toluene-d8 (S)	100	%	75-125	1		12/05/12 17:51	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125	1		12/05/12 17:51	460-00-4	

QUALITY CONTROL DATA

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

QC Batch: GCV/10135 Analysis Method: NWTPH-Gx/8021
QC Batch Method: NWTPH-Gx/8021 Analysis Description: NWTPH-Gx/8021B Water
Associated Lab Samples: 10213969001, 10213969002, 10213969003

METHOD BLANK: 1345425 Matrix: Water
Associated Lab Samples: 10213969001, 10213969002, 10213969003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	12/07/12 12:04	
a,a,a-Trifluorotoluene (S)	%	95	75-131	12/07/12 12:04	

LABORATORY CONTROL SAMPLE & LCSD: 1345426 1345427

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	1000	1080	100	108	75-125	7	20	
a,a,a-Trifluorotoluene (S)	%				96	93	75-131			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1345428 1345429

Parameter	Units	10213814003 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	771	1000	1000	1900	1820	112	105	70-130	4	30	
a,a,a-Trifluorotoluene (S)	%						100	99	75-131			

QUALITY CONTROL DATA

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

QC Batch: GCV/10144 Analysis Method: NWTPH-Gx/8021
QC Batch Method: NWTPH-Gx/8021 Analysis Description: NWTPH-Gx/8021B Water
Associated Lab Samples: 10213969005, 10213969006, 10213969007

METHOD BLANK: 1346125 Matrix: Water
Associated Lab Samples: 10213969005, 10213969006, 10213969007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	12/07/12 19:53	
a,a,a-Trifluorotoluene (S)	%	97	75-131	12/07/12 19:53	

LABORATORY CONTROL SAMPLE & LCSD: 1346126 1346127

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	1010	910	101	91	75-125	10	20	
a,a,a-Trifluorotoluene (S)	%				94	96	75-131			

QUALITY CONTROL DATA

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

QC Batch: GCV/10156
QC Batch Method: NWTPH-Gx/8021
Analysis Method: NWTPH-Gx/8021
Analysis Description: NWTPH-Gx/8021B Water
Associated Lab Samples: 10213969004

METHOD BLANK: 1347734 Matrix: Water
Associated Lab Samples: 10213969004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	12/08/12 15:36	
a,a,a-Trifluorotoluene (S)	%	96	75-131	12/08/12 15:36	

LABORATORY CONTROL SAMPLE & LCSD: 1347735 1347736

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	934	1030	93	103	75-125	9	20	
a,a,a-Trifluorotoluene (S)	%				95	93	75-131			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1347737 1347738

Parameter	Units	10214042001 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	1110	1070	111	107	70-130	4	30	
a,a,a-Trifluorotoluene (S)	%						91	91	75-131			

QUALITY CONTROL DATA

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

QC Batch: MPRP/36712 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 10213969001, 10213969002, 10213969003, 10213969004, 10213969005, 10213969006

METHOD BLANK: 1344022 Matrix: Water
Associated Lab Samples: 10213969001, 10213969002, 10213969003, 10213969004, 10213969005, 10213969006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	ND	3.0	12/11/12 15:29	

LABORATORY CONTROL SAMPLE: 1344023

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	1000	836	84	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1344024 1344025

Parameter	Units	10213969001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	ug/L	11.3	1000	1000	808	814	80	80	75-125	.7	20	

MATRIX SPIKE SAMPLE: 1344026

Parameter	Units	10213972009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	ND	1000	998	100	75-125	

QUALITY CONTROL DATA

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

QC Batch: MPRP/36714 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 10213969001, 10213969002, 10213969003, 10213969004, 10213969005, 10213969006

METHOD BLANK: 1344035 Matrix: Water
Associated Lab Samples: 10213969001, 10213969002, 10213969003, 10213969004, 10213969005, 10213969006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead, Dissolved	ug/L	ND	3.0	12/05/12 16:46	

LABORATORY CONTROL SAMPLE: 1344036

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead, Dissolved	ug/L	1000	903	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1344037 1344038

Parameter	Units	10213845001 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		1000	1000	850	844	85	84	75-125	.7	20	

MATRIX SPIKE SAMPLE: 1344084

Parameter	Units	10213972009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead, Dissolved	ug/L	ND	1000	888	89	75-125	

QUALITY CONTROL DATA

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

QC Batch: MSV/22342 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10213969002, 10213969004, 10213969005, 10213969006, 10213969007

METHOD BLANK: 1345481 Matrix: Water
Associated Lab Samples: 10213969002, 10213969004, 10213969005, 10213969006, 10213969007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	12/05/12 17:36	
Ethylbenzene	ug/L	ND	1.0	12/05/12 17:36	
Methyl-tert-butyl ether	ug/L	ND	1.0	12/05/12 17:36	
Toluene	ug/L	ND	1.0	12/05/12 17:36	
Xylene (Total)	ug/L	ND	3.0	12/05/12 17:36	
1,2-Dichloroethane-d4 (S)	%	101	75-125	12/05/12 17:36	
4-Bromofluorobenzene (S)	%	97	75-125	12/05/12 17:36	
Dibromofluoromethane (S)	%	95	75-125	12/05/12 17:36	
Toluene-d8 (S)	%	98	75-125	12/05/12 17:36	

LABORATORY CONTROL SAMPLE: 1345482

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	43.1	86	75-132	
Ethylbenzene	ug/L	50	44.8	90	75-125	
Methyl-tert-butyl ether	ug/L	50	50.6	101	74-130	
Toluene	ug/L	50	43.7	87	75-125	
Xylene (Total)	ug/L	150	134	89	75-125	
1,2-Dichloroethane-d4 (S)	%			100	75-125	
4-Bromofluorobenzene (S)	%			100	75-125	
Dibromofluoromethane (S)	%			97	75-125	
Toluene-d8 (S)	%			102	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1345483 1345484

Parameter	Units	10214042001 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	42.5	48.7	85	97	75-146	14	30	
Ethylbenzene	ug/L	ND	50	50	43.8	50.4	88	101	75-132	14	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	46.6	53.6	93	107	71-137	14	30	
Toluene	ug/L	ND	50	50	43.4	50.0	87	100	75-131	14	30	
Xylene (Total)	ug/L	ND	150	150	129	147	86	98	75-129	13	30	
1,2-Dichloroethane-d4 (S)	%						100	99	75-125			
4-Bromofluorobenzene (S)	%						98	97	75-125			
Dibromofluoromethane (S)	%						97	95	75-125			
Toluene-d8 (S)	%						102	103	75-125			

QUALITY CONTROL DATA

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

QC Batch: MSV/22344
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10213969001

METHOD BLANK: 1345796 Matrix: Water
Associated Lab Samples: 10213969001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	12/06/12 09:41	
Ethylbenzene	ug/L	ND	1.0	12/06/12 09:41	
Methyl-tert-butyl ether	ug/L	ND	1.0	12/06/12 09:41	
Toluene	ug/L	ND	1.0	12/06/12 09:41	
Xylene (Total)	ug/L	ND	3.0	12/06/12 09:41	
1,2-Dichloroethane-d4 (S)	%	101	75-125	12/06/12 09:41	
4-Bromofluorobenzene (S)	%	97	75-125	12/06/12 09:41	
Dibromofluoromethane (S)	%	93	75-125	12/06/12 09:41	
Toluene-d8 (S)	%	99	75-125	12/06/12 09:41	

LABORATORY CONTROL SAMPLE: 1345797

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	39.9	80	75-132	
Ethylbenzene	ug/L	50	41.2	82	75-125	
Methyl-tert-butyl ether	ug/L	50	48.6	97	74-130	
Toluene	ug/L	50	41.4	83	75-125	
Xylene (Total)	ug/L	150	122	82	75-125	
1,2-Dichloroethane-d4 (S)	%			97	75-125	
4-Bromofluorobenzene (S)	%			99	75-125	
Dibromofluoromethane (S)	%			95	75-125	
Toluene-d8 (S)	%			102	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1345798 1345799

Parameter	Units	10214043005 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	48.0	47.1	96	94	75-146	2	30	
Ethylbenzene	ug/L	ND	50	50	49.5	50.0	99	100	75-132	1	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	53.2	51.5	106	103	71-137	3	30	
Toluene	ug/L	ND	50	50	49.3	49.3	99	99	75-131	.2	30	
Xylene (Total)	ug/L	ND	150	150	145	146	97	97	75-129	.4	30	
1,2-Dichloroethane-d4 (S)	%						98	96	75-125			
4-Bromofluorobenzene (S)	%						99	99	75-125			
Dibromofluoromethane (S)	%						97	94	75-125			
Toluene-d8 (S)	%						103	102	75-125			

REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

QC Batch: MSV/22352
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10213969003

METHOD BLANK: 1346164 Matrix: Water
Associated Lab Samples: 10213969003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	12/07/12 09:56	
Ethylbenzene	ug/L	ND	1.0	12/07/12 09:56	
Methyl-tert-butyl ether	ug/L	ND	1.0	12/07/12 09:56	
Toluene	ug/L	ND	1.0	12/07/12 09:56	
Xylene (Total)	ug/L	ND	3.0	12/07/12 09:56	
1,2-Dichloroethane-d4 (S)	%	106	75-125	12/07/12 09:56	
4-Bromofluorobenzene (S)	%	98	75-125	12/07/12 09:56	
Dibromofluoromethane (S)	%	98	75-125	12/07/12 09:56	
Toluene-d8 (S)	%	100	75-125	12/07/12 09:56	

LABORATORY CONTROL SAMPLE: 1346165

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	44.9	90	75-132	
Ethylbenzene	ug/L	50	46.7	93	75-125	
Methyl-tert-butyl ether	ug/L	50	52.1	104	74-130	
Toluene	ug/L	50	45.5	91	75-125	
Xylene (Total)	ug/L	150	137	91	75-125	
1,2-Dichloroethane-d4 (S)	%			103	75-125	
4-Bromofluorobenzene (S)	%			99	75-125	
Dibromofluoromethane (S)	%			97	75-125	
Toluene-d8 (S)	%			104	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1346166 1346167

Parameter	Units	10214344001 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	46.5	45.0	93	90	75-146	3	30	
Ethylbenzene	ug/L	ND	50	50	49.4	47.9	99	96	75-132	3	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	54.2	51.9	108	104	71-137	4	30	
Toluene	ug/L	ND	50	50	48.5	46.4	97	93	75-131	4	30	
Xylene (Total)	ug/L	ND	150	150	143	139	96	92	75-129	3	30	
1,2-Dichloroethane-d4 (S)	%						104	104	75-125			
4-Bromofluorobenzene (S)	%						99	100	75-125			
Dibromofluoromethane (S)	%						97	96	75-125			
Toluene-d8 (S)	%						104	102	75-125			

REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

QC Batch: OEXT/20442 Analysis Method: NWTPH-Dx
QC Batch Method: EPA 3510 Analysis Description: NWTPH-Dx GCS
Associated Lab Samples: 10213969001, 10213969002, 10213969003, 10213969004, 10213969005, 10213969006

METHOD BLANK: 1345738 Matrix: Water
Associated Lab Samples: 10213969001, 10213969002, 10213969003, 10213969004, 10213969005, 10213969006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Fuel Range	mg/L	ND	0.40	12/11/12 20:20	
Motor Oil Range	mg/L	ND	0.40	12/11/12 20:20	
n-Pentacosane (S)	%	52	50-150	12/11/12 20:20	

LABORATORY CONTROL SAMPLE & LCSD: 1345739 1345740

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Fuel Range	mg/L	2	1.5	1.4	74	71	50-150	4	20	
n-Pentacosane (S)	%				69	65	50-150			

SAMPLE DUPLICATE: 1345741

Parameter	Units	10214043005 Result	Dup Result	RPD	Max RPD	Qualifiers
Diesel Fuel Range	mg/L	ND	ND		30	
Motor Oil Range	mg/L	ND	ND		30	
n-Pentacosane (S)	%	65	67	2		

QUALIFIERS

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

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.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

BATCH QUALIFIERS

Batch: GCV/10144

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 11060 Former Arco 11060
Pace Project No.: 10213969

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10213969001	**MW-1**	EPA 3510	OEXT/20442	NWTPH-Dx	GCSV/10589
10213969002	**MW-2**	EPA 3510	OEXT/20442	NWTPH-Dx	GCSV/10589
10213969003	**MW-3**	EPA 3510	OEXT/20442	NWTPH-Dx	GCSV/10589
10213969004	**MW-5**	EPA 3510	OEXT/20442	NWTPH-Dx	GCSV/10589
10213969005	**MW-10**	EPA 3510	OEXT/20442	NWTPH-Dx	GCSV/10589
10213969006	**DUP**	EPA 3510	OEXT/20442	NWTPH-Dx	GCSV/10589
10213969001	**MW-1**	NWTPH-Gx/8021	GCV/10135		
10213969002	**MW-2**	NWTPH-Gx/8021	GCV/10135		
10213969003	**MW-3**	NWTPH-Gx/8021	GCV/10135		
10213969004	**MW-5**	NWTPH-Gx/8021	GCV/10156		
10213969005	**MW-10**	NWTPH-Gx/8021	GCV/10144		
10213969006	**DUP**	NWTPH-Gx/8021	GCV/10144		
10213969007	**Trip Blank**	NWTPH-Gx/8021	GCV/10144		
10213969001	**MW-1**	EPA 3010	MPRP/36712	EPA 6010	ICP/15127
10213969002	**MW-2**	EPA 3010	MPRP/36712	EPA 6010	ICP/15127
10213969003	**MW-3**	EPA 3010	MPRP/36712	EPA 6010	ICP/15127
10213969004	**MW-5**	EPA 3010	MPRP/36712	EPA 6010	ICP/15127
10213969005	**MW-10**	EPA 3010	MPRP/36712	EPA 6010	ICP/15127
10213969006	**DUP**	EPA 3010	MPRP/36712	EPA 6010	ICP/15127
10213969001	**MW-1**	EPA 3010	MPRP/36714	EPA 6010	ICP/15110
10213969002	**MW-2**	EPA 3010	MPRP/36714	EPA 6010	ICP/15110
10213969003	**MW-3**	EPA 3010	MPRP/36714	EPA 6010	ICP/15110
10213969004	**MW-5**	EPA 3010	MPRP/36714	EPA 6010	ICP/15110
10213969005	**MW-10**	EPA 3010	MPRP/36714	EPA 6010	ICP/15110
10213969006	**DUP**	EPA 3010	MPRP/36714	EPA 6010	ICP/15110
10213969001	**MW-1**	EPA 8260	MSV/22344		
10213969002	**MW-2**	EPA 8260	MSV/22342		
10213969003	**MW-3**	EPA 8260	MSV/22352		
10213969004	**MW-5**	EPA 8260	MSV/22342		
10213969005	**MW-10**	EPA 8260	MSV/22342		
10213969006	**DUP**	EPA 8260	MSV/22342		
10213969007	**Trip Blank**	EPA 8260	MSV/22342		

CHAIN-OF-CUSTODY / Analytical Request Document

Pace Analytical® www.pacelabs.com

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

10213969

Page: 1 of 1

1582695

Section A Required Client Information:

Company: ARCADIS
Address: 2300 EASTLAKE AVE E
SEATTLE, WA 98125
Email To: SCOTT ZORN
Phone: 206-726-1709 Fax: —
Requested Due Date/TAT: STAT

Section B Required Project Information:

Report To: AL KAHAL
Copy To: SAM MYLES
DAVE RAESAR
Purchase Order No.: GP09BPNA.WA1B.N0000
Project Name: FORMER ARCO 11060
Project Number: 11060

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: 27527 L2

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: _____

Section D Required Client Information

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

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

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	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	GRO	BTEX/MTBE	DRO/RRO	TOTAL LEAD	DIS. LEAD	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-1	WT	G	11-29	1115				10	1		1	8						✓	✓	✓	✓	✓		001
2	MW-2	WT	G	11-29	1230				10	1		1	8						✓	✓	✓	✓	✓		002
3	MW-3	WT	G	11-29	1315				10	1		1	8						✓	✓	✓	✓	✓		003
4	MW-5	WT	G	11-29	1040				10	1		1	8						✓	✓	✓	✓	✓		004
5	MW-10	WT	G	11-29	1000														✓	✓	✓	✓	✓		005
6	DUP	WT	G	11-29	—														✓	✓					006
7	TRIP BLANK	WT	G	—	—																				007
8																										
9																										
10																										
11																										
12																										

21 of 23

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* DO NOT RUN SILICA GEL CLEANUP.	Sam Myles / Arcadis	11/30/12	1200	Pat Bay	11/30	1200				
	Pace Courier	11/30/12	1230	Yoshi Swig	11/30/12	1230	08	4	N	4
	Yoshi Swig	11/30/12	1400	K Epperson	12/1/12	0900	2.0	4	4	4

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: SEAMAS MCGUIRE

SIGNATURE of SAMPLER: Seamas McGuire DATE Signed (MM/DD/YY): 11/29/12

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

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-02Drev.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 #: 2527 Line 21

Received with Custody Seal: Yes (No)

Custody Seal Intact: Yes No (NA)

	Temp Read	Corrected Temp
Temperature C:	0.8	0.8

IR Gun # (IR1) IR2

Rush/Short Hold: std

Containers Intact: (Yes) No

Re-packed and Re-Iced: Y

Temp Blank Included: (Yes) No

Shipped By/Date: MD 11/30/12

Notes:

Pace Analytical®	Document Name: Sample Condition Upon Receipt Form	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# : 10213969

10213969

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

Tracking Number: 7941 9028 2672

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: ☑ 88A912167504 ☐ 80512447 **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 1.5 **Cooler Temp Corrected (°C):** 2.0 **Biological Tissue Frozen?** ☐ Yes ☐ No

Temp should be above freezing to 6°C

Date and Initials of Person Examining Contents: 12/1/12 L

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? 12/1/12	☑ Yes	☐ No	☐ N/A	10. 2 vials of mw-2 & 2 vials of
Filtered Volume Received for Dissolved Tests?	☑ Yes	☐ No	☐ N/A	11. Also 1 vial for Dup was broken MW-1 CW 12-1-12
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. All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH>12) Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	☑ Yes ☑ Yes ☑ Yes	☐ No ☐ No ☐ No	☐ N/A	13. ☑ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl Sample # MW-1, 2, 3, 5, 10 & Dup Initial when completed: LC Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☑ No	☐ N/A	14.
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	15. 4 wt trips
Trip Blank Custody Seals Present?	☑ Yes	☐ No	☐ N/A	
Pace Trip Blank Lot # (if purchased): 11212-1				

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 ou hold, incorrect preservative, out of temp, incorrect containers)