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 Groundwater Monitoring Report, 2011
Former ARCO Facility No. 11060
Multi-Site VCP No. NW2463
4580 Fauntleroy Way Southwest
Seattle, WA, 98126

Date:
January 30, 2012

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 Groundwater Monitoring Report, 2011* for the above referenced facility (the Site). The Site is currently an inactive 76 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 May 10 and November 29, 2011, ARCADIS conducted semi-annual groundwater monitoring activities at the Site. During this event, monitoring wells GMW-1, MW-1, MW-2, MW-3, MW-5, MW-6, and MW-9 were gauged and sampled via no-purge methods. Field data sheets are included as **Attachment A**. Groundwater samples were collected using a disposable bailer and were analyzed for total petroleum hydrocarbons – gasoline range organics (GRO) according to Northwest Method NWTPH-Gx, for total petroleum hydrocarbons – diesel range organics (DRO) and heavy oil (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 total lead by EPA method 6010. MTBE analysis was not done for the November 29 sampling event. 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 **Attachment B**. No investigation derived waste (IDW) was generated during this sampling event.

During the May 10, 2011 monitoring event, groundwater conditions at the Site remained generally consistent with previous events. The depth to groundwater during this sampling event ranged between 20.70 feet below top of casing (toc) in well MW-9 to 24.61 feet below toc in well MW-5. Groundwater elevations during this sampling event ranged from 243.85 feet above mean sea level (msl) in well MW-5 to 242.65 feet above msl in well MW-9. The inferred direction of groundwater flow is to the northeast. Groundwater gauging data are presented in **Table 1**. Groundwater elevations are presented on **Figure 2**.

Groundwater samples collected from five 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) and total lead (15 µg/L). The samples collected from wells GMW-1, MW-2, including its duplicate sample (DUP), MW-3 and MW-5 contained concentrations of GRO (5,930 µg/L, 5,520 µg/L, 5,000 µg/L, 3,280 µg/L and 4,710 µg/L, respectively) greater than MTCA A CULs. The samples collected from wells GMW-1, MW-1, MW-2, including its DUP and MW-3 contained concentrations of DRO (1,900 µg/L, 840 µg/L, 1,000 µg/L, 850 µg/L and 820 µg/L, respectively) greater than MTCA A CULs. The samples collected from wells MW-2, including its DUP and MW-3 contained concentrations of HO (2,000 µg/L, 1,600 µg/L and 840 µg/L, respectively) greater than MTCA A CULs. The samples collected from wells MW-1, MW-2, including its DUP, MW-3 and MW-5 contained concentrations of benzene (17.8 µg/L, 281 µg/L, 156 µg/L, 33.6 µg/L and 12.4 µg/L, respectively) greater than MTCA A CULs. The Sample collected from well GMW-1 contained a concentration of total lead (28.4 µg/L) greater than MTCA A CULs.

GRO was detected at concentrations greater than laboratory reporting limits (RLs) but less than MTCA A CULs in the samples collected from wells MW-1 and MW-6 (642 µg/L and 96.0 µg/L, respectively). DRO was detected at concentrations greater than laboratory RLs but less than MTCA A CULs in the samples collected from wells MW-5, MW-6 and MW-9 (470 µg/L, 180 µg/L and 160 µg/L, respectively). Benzene was detected at a concentration greater than laboratory RLs but less than MTCA A CULs in the sample collected from GMW-1 (2.4 µg/L). Toluene was detected at concentrations greater than laboratory RLs but less than MTCA A CULs in the samples collected from wells MW-1, MW-2 including its DUP, MW-3 and MW-5 (6.6 µg/L, 4.2 µg/L, 3.9 µg/L, 1.2 µg/L and 4.1 µg/L, respectively). Ethylbenzene was detected at concentrations greater than laboratory RLs but less than MTCA A CULs

in the samples collected from wells GMW-1, MW-1, MW-2, including its DUP, MW-3 and MW-5 (69.7 µg/L, 1.8 µg/L, 69.9 µg/L, 76.3 µg/L, 57.5 µg/L and 39.3 µg/L, respectively). Total xylenes were detected at concentrations greater than laboratory RLs but less than MTCA A CULs in the samples collected from wells GMW-1, MW-1, MW-2, including its DUP, MW-3 and MW-5 (94.8 µg/L, 10.9 µg/L, 49.9 µg/L, 53.2 µg/L, 7.9 µg/L and 25.5 µg/L, respectively). MTBE was detected at concentrations greater than laboratory RLs but less than MTCA A CULs in the samples collected from wells MW-1, MW-2, including its DUP and MW-3 (2.5 µg/L, 7.3 µg/L, 5.6 µg/L and 2.4 µg/L, respectively). Groundwater analytical data are presented in **Table 1**, and illustrated on **Figure 2**.

During the November 29, 2011 monitoring event, groundwater conditions at the Site remained generally consistent with previous events. The depth to groundwater during this sampling event ranged between 22.64 feet below toc in well MW-9 to 25.55 feet below toc in well MW-5. Groundwater elevations during this sampling event ranged from 263.35 feet above msl in well MW-9 to 268.46 feet above msl in well MW-5. The inferred direction of groundwater flow is to the northeast. Groundwater gauging data are presented in **Table 1**. Groundwater elevations are presented on **Figure 3**.

Groundwater samples collected from five monitoring wells contained COCs at concentrations greater than the MTCA A CULs for GRO, DRO and benzene. The samples collected from wells GMW-1, MW-1, MW-2, MW-3 and MW-5 contained concentrations of GRO (6,080 µg/L, 815 µg/L, 5,640 µg/L, 3,130 µg/L and 2,210 µg/L, respectively) greater than MTCA A CULs. The sample collected from well GMW-1 contained a concentration of DRO (610 µg/L) greater than MTCA A CULs. The samples collected from wells MW-1, MW-2, MW-3 and MW-5 contained concentrations of benzene (5.5 µg/L, 549 µg/L, 30.4 µg/L and 12.3 µg/L, respectively) greater than MTCA A CULs.

DRO was detected at concentrations greater than laboratory RLs but less than MTCA A CULs in the samples collected from wells MW-2 and MW-5 (98 µg/L, 95 µg/L, respectively). Toluene was detected at concentrations greater than laboratory RLs but less than MTCA A CULs in the samples collected from wells MW-2 and MW-5 (7.0 µg/L and 2.2 µg/L, respectively). Ethylbenzene was detected at concentrations greater than laboratory RLs but less than MTCA A CULs in the samples collected from wells GMW-1, MW-2, MW-3 and MW-5 (86.9 µg/L, 82.6 µg/L, 21.0 µg/L and 6.4 µg/L, respectively). Total xylenes were detected at concentrations greater than laboratory RLs but less than MTCA A CULs in the samples collected

from wells GMW-1, MW-2, MW-3 and MW-5 (113 µg/L, 61.6 µg/L, 6.9 µg/L and 3.1 µg/L, respectively). Total lead was detected at concentrations greater than laboratory RLs but less than MTCA A CULs in the samples collected from wells MW-1 and MW-5 (10.3 µg/L and 10.5 µg/L, respectively).

Analytical results for groundwater collected from monitoring wells MW-6 including its DUP and MW-9 did not identify COCs at concentrations greater than laboratory RLs. Groundwater analytical data are presented in **Table 1**, and illustrated on **Figure 3**.

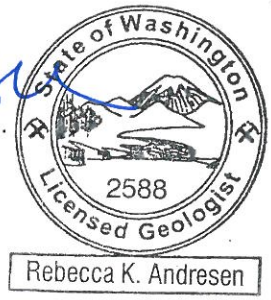
The next groundwater monitoring event at the Site is scheduled for the first half of 2012. Should you have any questions or if ARCADIS can be of further assistance, please contact Scott Zorn at (206) 726-4709.

Sincerely,

ARCADIS U.S., Inc.

Scott Zorn
Senior Geologist

Rebecca Andresen, P.G.
Technical Expert



CC: Brandon Kim; Washington Petroleum Inc.

Attachments:

Table 1	Groundwater Gauging Data and Select Analytical Results
Figure 1	Site Location Map
Figure 2	Groundwater Elevation Map with Analytical Results, May 10, 2011
Figure 3	Groundwater Elevation Map with Analytical Results, November 29, 2011
Attachment A	Groundwater Monitoring Field Data Sheets
Attachment 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	--
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	--	--	--	--	--	--	--	--	--	--	--	--
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	--

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	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	--	--	--	--
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	--	--	--	--	--
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	--

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	6/7/1993		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	--	--	--	--	--	--	--	--	--	--	--	--
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-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	--	--	--	--	--	--	--	--	--	--	--	--

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	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	--	--	--	--	--	--	--	--	--	--	--	--
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-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	--	--	--	--	--
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	--	--	--	--

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	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	--	--	--	--
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-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	--	--	--	--	--	--	--	--	--	--	--	--

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	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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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-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	--	--	--	--
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	--
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	--	--	--	--

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	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**	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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)
ND = 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
LFP = Low flow purge sampling
NP = No purge sampling
NG = Not Gauged
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

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)

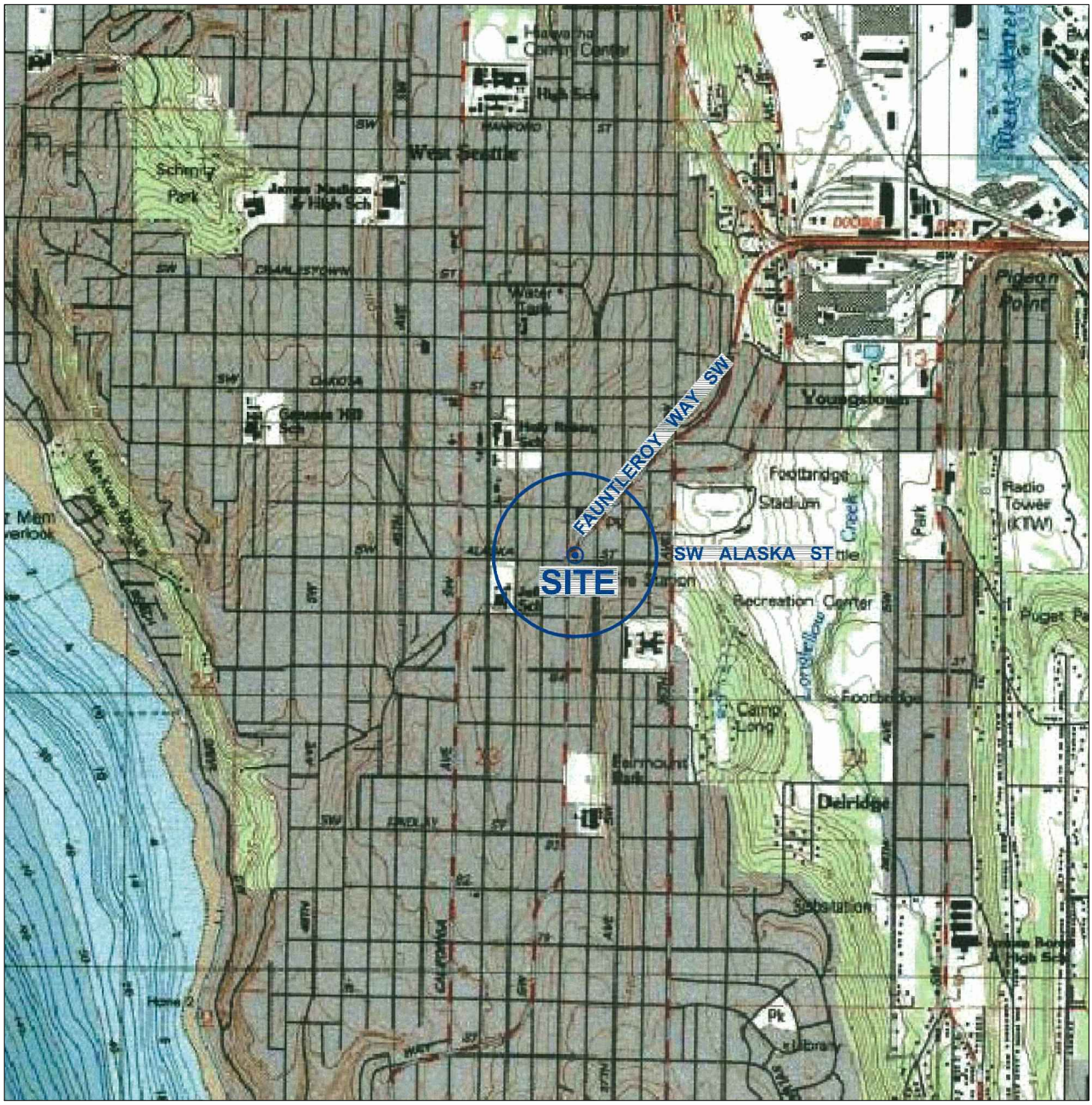
Well	Date	Notes	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	EDC	Total Lead	Dissolved Lead
Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs) in µg/L							**800/1,000**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**20**	**0.01**	**5**	**15**	**--**

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

ARCADIS

Figures



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

0 2000' 4000'

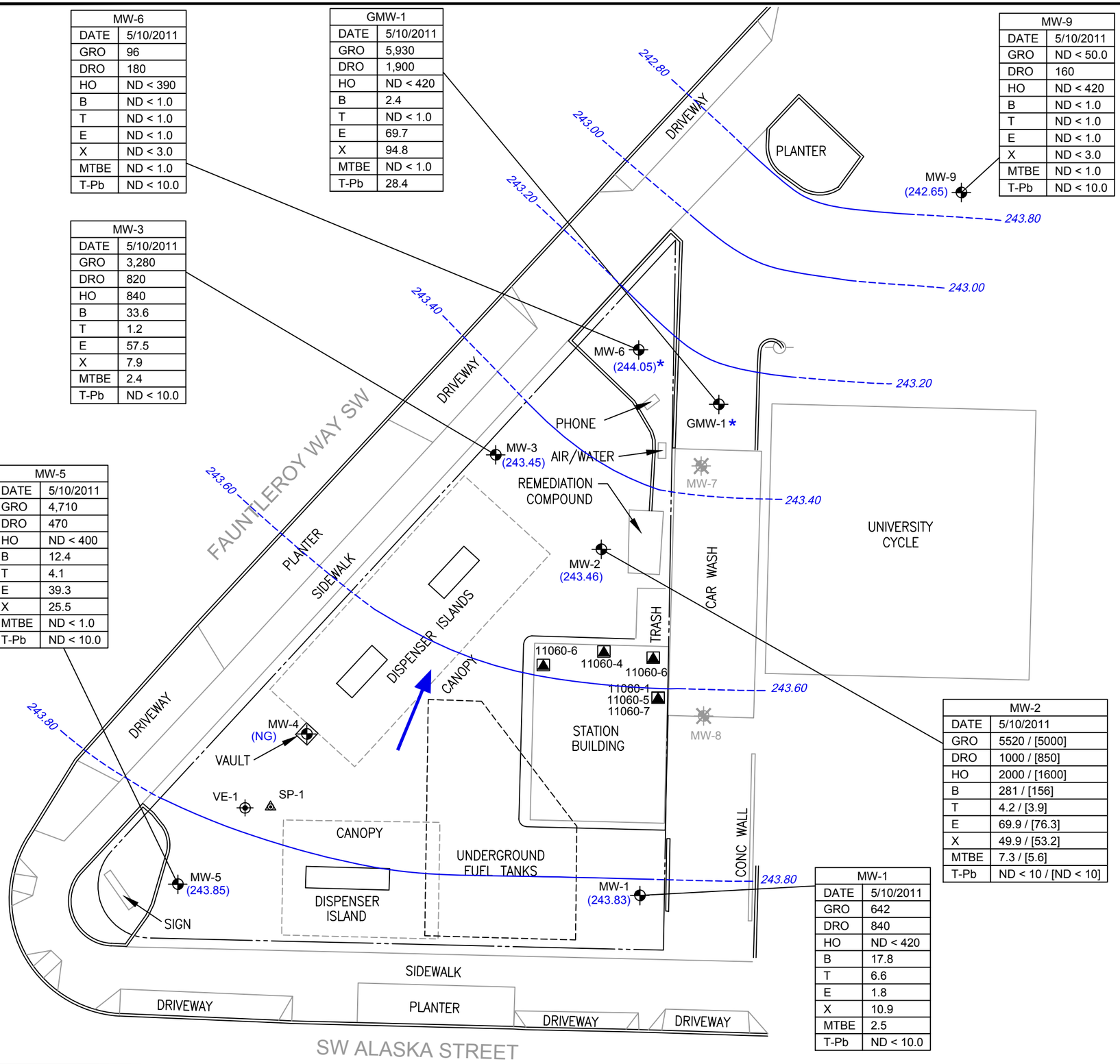
Approximate Scale: 1 in. = 2000 ft.

BP WEST COAST PRODUCTS LLC
FORMER BP STATION NO. 11060
4580 FAUNTLEROY WAY, SEATTLE, WASHINGTON
ANNUAL GROUNDWATER MONITORING REPORT 2011

SITE LOCATION MAP

ARCADIS

FIGURE
1



MW-6	
DATE	5/10/2011
GRO	96
DRO	180
HO	ND < 390
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

GMW-1	
DATE	5/10/2011
GRO	5,930
DRO	1,900
HO	ND < 420
B	2.4
T	ND < 1.0
E	69.7
X	94.8
MTBE	ND < 1.0
T-Pb	28.4

MW-9	
DATE	5/10/2011
GRO	ND < 50.0
DRO	160
HO	ND < 420
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

MW-3	
DATE	5/10/2011
GRO	3,280
DRO	820
HO	840
B	33.6
T	1.2
E	57.5
X	7.9
MTBE	2.4
T-Pb	ND < 10.0

MW-5	
DATE	5/10/2011
GRO	4,710
DRO	470
HO	ND < 400
B	12.4
T	4.1
E	39.3
X	25.5
MTBE	ND < 1.0
T-Pb	ND < 10.0

MW-2	
DATE	5/10/2011
GRO	5520 / [5000]
DRO	1000 / [850]
HO	2000 / [1600]
B	281 / [156]
T	4.2 / [3.9]
E	69.9 / [76.3]
X	49.9 / [53.2]
MTBE	7.3 / [5.6]
T-Pb	ND < 10 / [ND < 10]

MW-1	
DATE	5/10/2011
GRO	642
DRO	840
HO	ND < 420
B	17.8
T	6.6
E	1.8
X	10.9
MTBE	2.5
T-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
- (242.65) — GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- 460.0 — GROUNDWATER ELEVATION CONTOUR, DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL)
- ND — NOT DETECTED, VALUE SHOWN IS DETECTION LIMIT
- NG — NOT GAUGED
- (µg/L) — MICROGRAMS PER LITER
- * — WELLS NOT USED TO DEVELOP CONTOURS

LOCATION ID	
DATE	DATE SAMPLE COLLECTED
GRO	GASOLINE RANGE ORGANICS (µg/L) / [DUPLICATE (µg/L)]
DRO	DIESEL RANGE ORGANICS (µg/L) / [DUPLICATE (µg/L)]
HO	HEAVY OILS (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)]

NOTE:

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

0 20’ 40’

GRAPHIC SCALE

BP WEST COAST PRODUCTS LLC
FORMER BP STATION NO. 11060
4580 FAUNTLEROY WAY, SEATTLE, WASHINGTON
ANNUAL GROUNDWATER MONITORING REPORT 2011

GROUNDWATER CONTOUR MAP WITH ANALYTICAL RESULTS MAY 10, 2011

ARCADIS

FIGURE 2

MW-6	
Date	11/29/2011
GRO	ND < 50.0 / [ND < 50.0]
DRO	ND < 78 / [ND < 77]
HO	ND < 390 / [ND < 380]
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]
T-Pb	ND < 10.0 / [ND < 10.0]

GMW-1	
Date	11/29/2011
GRO	6,080
DRO	610
HO	ND < 380
B	ND < 1.0
T	ND < 1.0
E	86.9
X	113
T-Pb	ND < 10.0

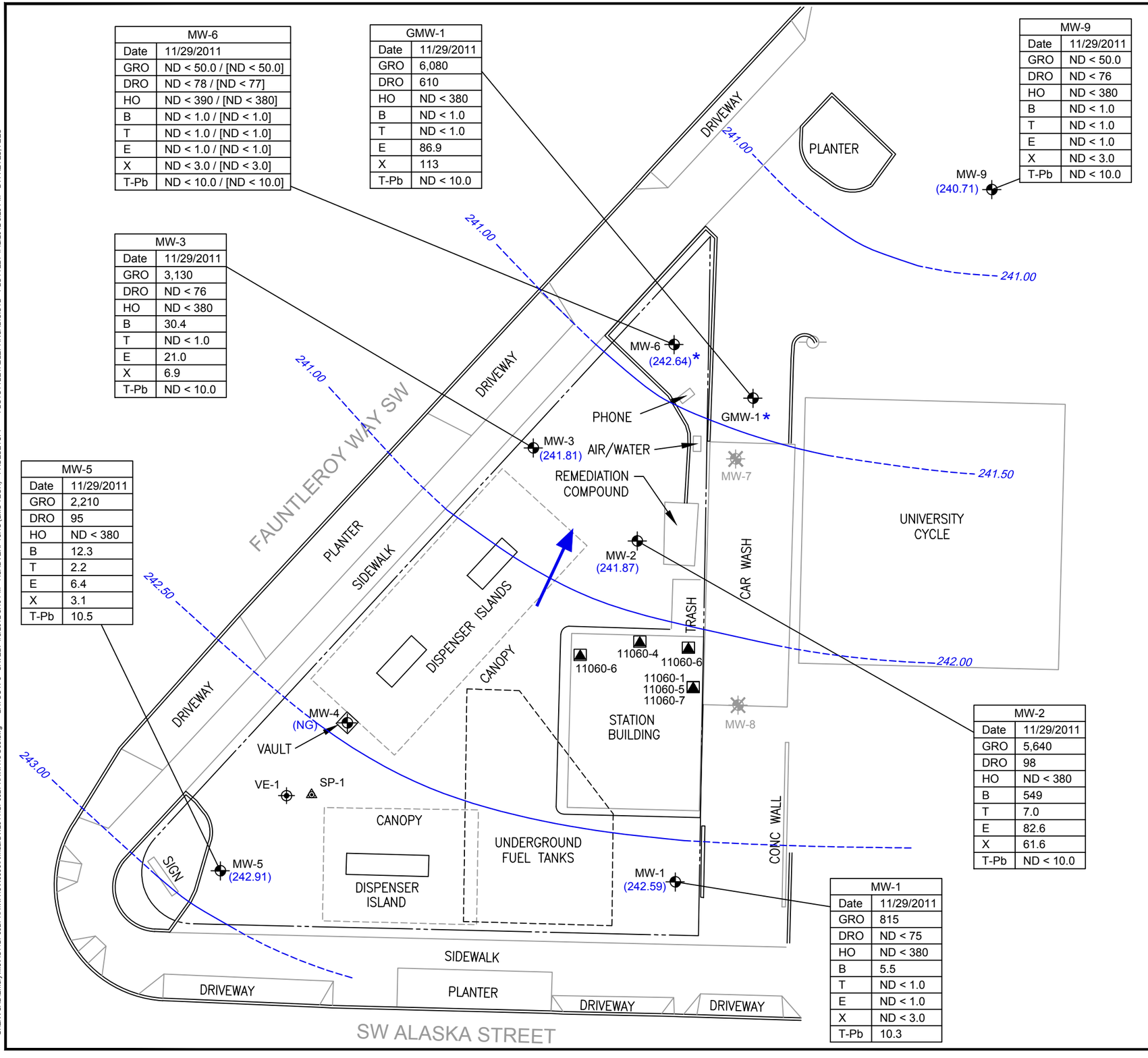
MW-9	
Date	11/29/2011
GRO	ND < 50.0
DRO	ND < 76
HO	ND < 380
B	ND < 1.0
T	ND < 1.0
E	ND < 1.0
X	ND < 3.0
T-Pb	ND < 10.0

MW-3	
Date	11/29/2011
GRO	3,130
DRO	ND < 76
HO	ND < 380
B	30.4
T	ND < 1.0
E	21.0
X	6.9
T-Pb	ND < 10.0

MW-5	
Date	11/29/2011
GRO	2,210
DRO	95
HO	ND < 380
B	12.3
T	2.2
E	6.4
X	3.1
T-Pb	10.5

MW-2	
Date	11/29/2011
GRO	5,640
DRO	98
HO	ND < 380
B	549
T	7.0
E	82.6
X	61.6
T-Pb	ND < 10.0

MW-1	
Date	11/29/2011
GRO	815
DRO	ND < 75
HO	ND < 380
B	5.5
T	ND < 1.0
E	ND < 1.0
X	ND < 3.0
T-Pb	10.3



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
- (242.65) — GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- 241.50 — GROUNDWATER ELEVATION CONTOUR, DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL)
- ND — NOT DETECTED, VALUE SHOWN IS DETECTION LIMIT
- NG — NOT GAUGED
- (µg/L) — MICROGRAMS PER LITER
- * — WELLS NOT USED TO DEVELOP CONTOURS

LOCATION ID	
DATE	DATE SAMPLE COLLECTED
GRO	GASOLINE RANGE ORGANICS (µg/L) / [DUPLICATE (µg/L)]
DRO	DIESEL RANGE ORGANICS (µg/L) / [DUPLICATE (µg/L)]
HO	HEAVY OILS (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)]

NOTE:

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

0 20' 40'

GRAPHIC SCALE

BP WEST COAST PRODUCTS LLC
FORMER BP STATION NO. 11060
4580 FAUNTLEROY WAY, SEATTLE, WASHINGTON
ANNUAL GROUNDWATER MONITORING REPORT 2011

GROUNDWATER CONTOUR MAP WITH ANALYTICAL RESULTS NOVEMBER 29, 2011

ARCADIS

FIGURE 3

ARCADIS

Attachments A

Groundwater Monitoring
Field Data Sheets

BP Tranche 2
Groundwater Monitoring
Field Data Forms

ARCADIS

GWM Event Field Notes Form

Site ID: ARCO ~~11069~~ 11060 Project #: GP09BPNA.WA~~53~~

Site Address: ~~1517 W. Dravus Street~~, Seattle WA Date: 5.10.2011

Fauntleroy

Site Conditions / Additional Field Notes:

1045 Arrived on site, greeted Station Manager.
1050 Completed PTW/Tailgate form. Reviewed HASP and SOW
1100 Began Setup for well gauging.
1200 completed well gauging, set up for groundwater Sampling.
1340 collected duplicate Sample from well MW-2
1530 completed ground water sampling.
1540 placed approx 3 gallons waste water into AST located on Site.
1600 Filled out COC, checked Samples for accuracy.
1615 Departed site for Pace Labs for Sample drop off.

NAD

Page ___ of ___

ARCADIS

Groundwater Monitoring Well Gauging Form

Site ID: ARCO ~~11069~~ 11060 Project #: GP09BPNA.WA~~58~~

Site Address: ~~1517 W. Dravus St.~~ Seattle Date: 5.10.2011

Fauntleroy

Well ID	Time	Sheen/ Odor	LNAPL Depth	LNAPL Thinkness	DTW	TD	Notes
MW-6	1105	N	∅	∅	22.01	NM	3 of 3 Stripped PID = 0.3
MW-1	1115	~~N~~ / Y	∅	∅	23.60	NM	2 of 2 stripped PID = 977
MW-5	1125	N / Y	∅	∅	24.61	27.75	2 of 2 Stripped PID = 743
MW-2	1133	N / Y	∅	∅	23.23	28.0	1 of 2 good PID = 600
MW-3	1142	N / Y	∅	∅	22.55	34.20	2 of 2 Stripped PID = 630
MW-9	1147	N / N	∅	∅	20.70	34.95	3 of 3 good PID = 1.3
GMW-1	1155	N / Y	∅	∅	22.08	NM	PID = 440 3 of 3 good
VE-1					NM		
MW-4		/	/	/	/	/	No access well in Vault

Page ___ of ___

ARCADIS Groundwater Sampling Form

Project No. GP09BPNA.WA~~53~~ Well ID MW-3 Date 5.10.011

Project Name/Locatior ARCO ~~11069~~ 11060 ~~1517 W. Dravus Street, Seattle, WA~~ Fauntleroy Weather

Measuring Pt. Description North Side | Screen Setting (ft-bmp) | Casing Diameter (in.) | Well Material x PVC ___ SS

Static Water Level (ft-btoc) 22.55 | Total Depth (ft-btoc) | Water Column/ Gallons in Well | Initial PID Reading (ppm)

TOC Elevation | Pump Intake (ft-btoc) | Purge Method: No Purge / Centrifugal / Submersible / Other Bailer | Sample Method grab

Pump On/Off | Volumes Purged

Sample Time: Label 1410 Start End | Replicate/ Code No. | Sampled by N Olivier

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance Color	Appearance Odor
1415	—	—	—	—	5.99	0.418	/	/	12.00	/	C.	Slight

Constituents Sampled	Container	Number	Preservative
GRO	40 mL VOA	3	HCL
DRO/HO	1 L Amber	2	HCL
BTEX/MTBE	40 mL VOA	3	HCL
Total Lead	250 mL Poly	1	HNO3

Well Casing Volumes

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

Well Information

Well Location: N side, sidewalk | Well Locked at Arrival: Yes / No

Condition of Well: 2 of 2 Stripped | Well Locked at Departure: Yes / No

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

ARCADIS Groundwater Sampling Form

Project No. GP09BPNA.WA53 Well ID MW-2 Date 5.10.011

Project Name/Location 11060 Fauntleroy ARCO ~~41069 1517 W. Dravus Street,~~ Seattle, WA Weather

Measuring Pt. Description black Mark Screen Setting (ft-bmp) Casing Diameter (in.) Well Material x PVC ___ SS

Static Water Level (ft-btoc) 23.23 Total Depth (ft-btoc) Water Column/ Gallons in Well Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-btoc) Purge Method: No Purge ___ Centrifugal ___ Submersible ___ Other Bailer Sample Method grab

Pump On/Off Volumes Purged

Sample Time: Label 1340 Start ___ End ___ Replicate/ Code No. Dup Sampled by N Olivier

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
1345		✓	✓	✓	6.54	0.370	✓	✓	12.27	✓	C	slight

Constituents Sampled	Container	Number	Preservative
GRO	40 mL VOA	3	HCL
DRO/HO	1 L Amber	2	HCL
BTEX/MTBE	40 mL VOA	3	HCL
Total Lead	250 mL Poly	1	HNO3

Well Casing Volumes

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

Well Information

Well Location: by AST

Condition of Well: 2 of 2 Stripped

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Key Number To Well:

GW Samp Form 5/10/2011

ARCADIS Groundwater Sampling Form

Project No. GP09BPNA.WA~~58~~ Well ID MW-5 Date 5.10.011

Project Name/Locatior ARCO ~~11069~~ 11060 Fauntleroy ~~1517 W. Dravus Street~~, Seattle, WA Weather

Measuring Pt. Description: black mark; Screen Setting (ft-bmp); Casing Diameter (in.); Well Material: x PVC, SS

Static Water Level (ft-btoc): 24.61; Total Depth (ft-btoc); Water Column/ Gallons in Well; Initial PID Reading (ppm)

TOC Elevation; Pump Intake (ft-btoc); Purge Method: No Purge, Centrifugal, Submersible, Other: Bailer; Sample Method: grab

Pump On/Off; Volumes Purged

Sample Time: Label 1310, Start, End; Replicate/ Code No.; Sampled by N Olivier

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
1315	/	/	/	/	6.50	0.367	/	/	12.18	/	C	N

Constituents Sampled	Container	Number	Preservative
GRO	40 mL VOA	3	HCL
DRO/HO	1 L Amber	2	HCL
BTEX/MTBE	40 mL VOA	3	HCL
Total Lead	250 mL Poly	1	HNO3

Well Casing Volumes

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

Well Information

Well Location: SW corner

Condition of Well: 2 of 2 stripped

Well Completion: (Flush Mount) / Stick Up

Well Locked at Arrival: Yes / (No)

Well Locked at Departure: Yes / (No)

Key Number To Well:

ARCADIS Groundwater Sampling Form

Project No. GP09BPNA.WA~~03~~ Well ID MW-1 Date 5.10.011

Project Name/Location ARCO ~~11069~~ 11060 ~~1517 W. Dravus Street~~ Fauntleroy, Seattle, WA Weather

Measuring Pt. Description black Mark Screen Setting (ft-bmp) Casing Diameter (in.) Well Material x PVC ___ SS

Static Water Level (ft-btoc) 2360 Total Depth (ft-btoc) Water Column/ Gallons in Well Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-btoc) Purge Method: No Purge / Centrifugal / Submersible / Other Bailer Sample Method grab

Pump On/Off Volumes Purged

Sample Time: Label 1245 Start End Replicate/ Code No. Sampled by N Olivier

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
1250	✓	✓	✓	✓	6.22	0.593	✓	✓	11.94	✓	C ✓	Y

Constituents Sampled	Container	Number	Preservative
GRO	40 mL VOA	3	HCL
DRO/HO	1 L Amber	2	HCL
BTEX/MTBE	40 mL VOA	3	HCL
Total Lead	250 mL Poly	1	HNO3

Well Casing Volumes

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

Well Information

Well Location: S. Side of Station

Condition of Well: 2 of 2 Stripped

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Key Number To Well:

GW Samp Form 5/10/2011

ARCADIS Groundwater Sampling Form

Project No. GP09BPNA.WA68 Well ID GMW-1 Date 5.10.011

Project Name/Location ARCO ~~11069~~ 11660 Fauntleroy ~~1517 W. Dravus Street,~~ Seattle, WA Weather

Measuring Pt. Description Black Mark Screen Setting (ft-bmp) Casing Diameter (in.) 2 Well Material x PVC ___ SS

Static Water Level (ft-btoc) 22.08 Total Depth (ft-btoc) Water Column/ Gallons in Well Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-btoc) Purge Method: No Purge ___ Centrifugal ___ Submersible ___ Other Bailer Sample Method grab

Pump On/Off Volumes Purged

Sample Time: Label 1450 Start ___ End ___ Replicate/ Code No. Sampled by N Olivier

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance Color	Appearance Odor
1455		✓	✓	✓	6.12	0.685	✓	✓	12.31	✓	✓	Y

Constituents Sampled	Container	Number	Preservative
GRO	40 mL VOA	3	HCL
DRO/HO	1 L Amber	2	HCL
BTEX/MTBE	40 mL VOA	3	HCL
Total Lead	250 mL Poly	1	HNO3

Well Casing Volumes

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

Well Information

Well Location: car wash drive

Condition of Well: 3 of 3 good

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Key Number To Well:

ARCADIS Groundwater Sampling Form

Project No. GP09BPNA.WA~~58~~ Well ID MW-9 Date 5.10.011

Project Name/Location ARCO ~~11069~~ 1060 Fauntleroy ~~1517 W. Dravus Street,~~ Seattle, WA Weather

Measuring Pt. Description black Mark | Screen Setting (ft-bmp) | Casing Diameter (in.) 2 | Well Material x PVC ___ SS

Static Water Level (ft-btoc) 3 20 70 | Total Depth (ft-btoc) | Water Column/ Gallons in Well | Initial PID Reading (ppm)

TOC Elevation | Pump Intake (ft-btoc) | Purge Method: No Purge / Centrifugal / Submersible / Other Bailer | Sample Method grab

Pump On/Off | Volumes Purged

Sample Time: Label 1515 Start 1510 End | Replicate/ Code No.

Sampled by N Olivier

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance Color	Appearance Odor
1520		✓	✓	✓	6.58	0 409	✓	✓	12.92	✓	✓	✓

Constituents Sampled	Container	Number	Preservative
GRO	40 mL VOA	3	HCL
DRO/HO	1 L Amber	2	HCL
BTEX/MTBE	40 mL VOA	3	HCL
Total Lead	250 mL Poly	1	HNO3

Well Casing Volumes

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

Well Information

Well Location: Cycle University

Condition of Well: 2 of 3 good

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Key Number To Well:

ARCADIS Groundwater Sampling Form

Project No. GP09BPNA.WA~~53~~ Well ID MW-6 Date 5.10.011

Project Name/Location ARCO-~~11069~~ 11060 ~~1517 W. Dravus Street~~ Fauntleroy, Seattle, WA Weather

Measuring Pt. Description black MWK | Screen Setting (ft-bmp) | Casing Diameter (in.) 2 | Well Material x PVC ___ SS

Static Water Level (ft-btoc) 22.01 | Total Depth (ft-btoc) | Water Column/ Gallons in Well | Initial PID Reading (ppm)

TOC Elevation | Pump Intake (ft-btoc) | Purge Method: No Purge / Centrifugal / Submersible / Other Bailer | Sample Method grab

Pump On/Off | Volumes Purged

Sample Time: Label 1215 Start 1210 End | Replicate/ Code No.

Sampled by N Olivier

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
1220		/	/	/	6.32	0.363	/	/	12.24	/	C	N

Constituents Sampled	Container	Number	Preservative
GRO	40 mL VOA	3	HCL
DRO/HO	1 L Amber	2	HCL
BTEX/MTBE	40 mL VOA	3	HCL
Total Lead	250 mL Poly	1	HNO3
Dx QC Sample Collected	1 L Amber	1	HCL

Well Casing Volumes

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

Well Information

Well Location: Planter N end

Condition of Well: 3 of 3 Stripped

Well Completion: (Flush Mount) / Stick Up

Well Locked at Arrival: Yes / (No)

Well Locked at Departure: Yes / (No)

Key Number To Well:

11-29-11 Former ARCO 11060

8:30 Arrive on site, safety tailgate, scope of work, don PPE BA

8:49 MOB to MW-6 DTW - 23.42 PID = 0.2

8:55 Take YSI readings

°C	DO mg/L	SPC	pH	ORP mV
13.3	0.78	337.0	5.18	170.1

9:15 Sample MW-6

9:30 MOB to MW-1 DTW - 24.81 PID = 47 very hot

935 Log YSI Readings

°C	DO	SPC	pH	ORP mV
13.3	2.53	1052	5.87	160.7

940 Sample MW-1

952 MOB to MW-5 DTW 25.55 PID 12.1 v. hot

1000 YSI readings

°C	DO	SPC	pH	ORP mV
13.6	2.47	972	6.18	151.3

1010 Sample MW-5

1020 Gauge MW-2 DTW = 24.82 PID = 180

1045 Sample MW-2. Get YSI readings:

°C	DO	SPC	pH	ORP mV
12.5	2.14	593.8	6.49	84.9

1100 Gauge MW-3 DTW = 24.19 PID = 115

1115 Sample MW-3. Collect YSI parameters:

C°	PH	DO	SPEC COND	ORP MV
12.2	6.45	1.12	611.4	71.9

*ALSO SAMPLE FOR QC CNWTPHDX

1130 Gauge MW-9. DTW: 22.64 PID: 0.1

1145 Sample MW-9 & DUP-1. Collect YSI parameters:

C°	PH	DO	SPEC COND	ORP MV
12.9	6.72	0.70	806	48.9

1205 Gauge MW-GW-1. DTW: 23.83 PID: 438

1220 Sample MW-GW-1. Collect YSI parameters:

C°	PH	DO	SPEC COND	ORP MV
13.5	6.46	0.95	268.3	41.9

1230 STOP sampling. Clear down well and pack samples on ice. Mob to VE-1 to bail product.

1250 Open VE-1. Gauge at DTW: 24.22 PID: Not used to not burn out lamp
DTP = 24.20

1305 Finish bailing product. ≈ 0.25 gallons of product purged and .75 gallons of water. All waste was put in on site AST. Ladder was used to climb up on AST. Waste was put into AST via drum funnel. Funnel and bucket were decon'd, then put in trash bag and sealed.

1315 All equipment packed. SM and RL leave site.

Seamus McGinn

DRUM SITUATION: All waste stored in AST on site. Ladder not left on site.

METHODOLOGY: All work was done as per SAW. PID/YSI used and calibrated. Clean bailers were used in every well. Samples were brought by ARCADIS to LAB

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-6	8:50	-	-	-	23.42	-	PID 0.2
MW-1	930	HC Odor	-	-	24.84	-	PID 4/9/1 V. Hot 1
MW-5	1000	-	-	-	23.55	-	PID 4/24 V. Hot
MW-2	1028	HC Odor/ Sheen	-	-	24.82	-	PID 182 2/2 Bolts/ 1/2 stripped
MW-3	1200	-	-	-	24.19	-	PID 115 2/2 Bolts Stripped shrimped
MW-4	WAS ELIMINATED DUE TO CONFINED SPACE						
MW-9	1130	-	-	-	22.64	-	3/3 Bolts Good PID = 0.1
MW-Grab	1205	YES Both	-	-	23.83		3/3 Bolts Good PID = 430

ARCADIS

Attachment B

Laboratory Report and
Chain-of-Custody Documentation

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

May 23, 2011

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

RE: Project: ARCO #11060
Pace Project No.: 257594

Dear Scott Zorn:
Enclosed are the analytical results for sample(s) received by the laboratory on May 10, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Regina SteMarie

regina.stemarie@pacelabs.com
Project Manager

Enclosures

cc: Alan Kahal, Arcadis U.S., Inc.
Nick Olivier, 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: ARCO #11060
Pace Project No.: 257594

Washington Certification IDs

940 South Harney Street, Seattle, WA 98108
Alaska CS Certification #: UST-025
Alaska Drinking Water VOC Certification #: WA01230
Alaska Drinking Water Micro Certification #: WA01230
California Certification #: 01153CA
Florida/NELAP Certification #: E87617
Oregon Certification #: WA200007
Washington Certification #: C1229

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

SAMPLE ANALYTE COUNT

Project: ARCO #11060
Pace Project No.: 257594

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
257594001	**MW-9**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LNH	9	PASI-S
		NWTPH-Gx	LNH	2	PASI-S
257594002	**GMW-1**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LNH	9	PASI-S
		NWTPH-Gx	LNH	2	PASI-S
257594003	**MW-6**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LNH	9	PASI-S
		NWTPH-Gx	LNH	2	PASI-S
257594004	**MW-1**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Gx	LNH	2	PASI-S
257594005	**MW-5**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Gx	LNH	2	PASI-S
257594006	**MW-2**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Gx	LNH	2	PASI-S
257594007	**MW-3**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Gx	LNH	2	PASI-S
257594008	**DUP**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Gx	LNH	2	PASI-S
257594009	**Trip Blank**	EPA 5030B/8260	LNH	9	PASI-S
		NWTPH-Gx	LNH	2	PASI-S

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

PROJECT NARRATIVE

Project: ARCO #11060
Pace Project No.: 257594

Method: **NWTPH-Dx**
Description: NWTPH-Dx GCS
Client: Arcadis U.S., Inc.
Date: May 23, 2011

General Information:
8 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: ARCO #11060
Pace Project No.: 257594

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Arcadis U.S., Inc.
Date: May 23, 2011

General Information:
8 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: ARCO #11060
Pace Project No.: 257594

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Arcadis U.S., Inc.
Date: May 23, 2011

General Information:
9 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: ARCO #11060
Pace Project No.: 257594

Method: **NWTPH-Gx**
Description: NWTPH-Gx MSV
Client: Arcadis U.S., Inc.
Date: May 23, 2011

General Information:
9 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: ARCO #11060
Pace Project No.: 257594

Sample: MW-9 **Lab ID: 257594001** Collected: 05/10/11 15:15 Received: 05/10/11 16:20 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	**0.16**	mg/L	0.083	1	05/12/11 11:00	05/12/11 21:18		
Motor Oil Range	ND	mg/L	0.42	1	05/12/11 11:00	05/12/11 21:18	64742-65-0	
n-Octacosane (S)	109	%	50-150	1	05/12/11 11:00	05/12/11 21:18	630-02-4	
o-Terphenyl (S)	93	%	50-150	1	05/12/11 11:00	05/12/11 21:18	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	05/17/11 10:06	05/17/11 16:08	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		05/12/11 01:55	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		05/12/11 01:55	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/12/11 01:55	1634-04-4	
Toluene	ND	ug/L	1.0	1		05/12/11 01:55	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		05/12/11 01:55	1330-20-7	
4-Bromofluorobenzene (S)	99	%	80-120	1		05/12/11 01:55	460-00-4	
Dibromofluoromethane (S)	94	%	80-122	1		05/12/11 01:55	1868-53-7	
1,2-Dichloroethane-d4 (S)	95	%	80-124	1		05/12/11 01:55	17060-07-0	
Toluene-d8 (S)	98	%	80-123	1		05/12/11 01:55	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		05/12/11 01:55		
4-Bromofluorobenzene (S)	99	%	50-150	1		05/12/11 01:55	460-00-4	

Sample: GMW-1 **Lab ID: 257594002** Collected: 05/10/11 14:50 Received: 05/10/11 16:20 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	**1.9**	mg/L	0.083	1	05/12/11 11:00	05/12/11 21:34		
Motor Oil Range	ND	mg/L	0.42	1	05/12/11 11:00	05/12/11 21:34	64742-65-0	
n-Octacosane (S)	112	%	50-150	1	05/12/11 11:00	05/12/11 21:34	630-02-4	
o-Terphenyl (S)	97	%	50-150	1	05/12/11 11:00	05/12/11 21:34	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	**28.4**	ug/L	10.0	1	05/17/11 10:06	05/17/11 16:17	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**2.4**	ug/L	1.0	1		05/12/11 04:11	71-43-2	
Ethylbenzene	**69.7**	ug/L	1.0	1		05/12/11 04:11	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/12/11 04:11	1634-04-4	
Toluene	ND	ug/L	1.0	1		05/12/11 04:11	108-88-3	
Xylene (Total)	**94.8**	ug/L	3.0	1		05/12/11 04:11	1330-20-7	
4-Bromofluorobenzene (S)	97	%	80-120	1		05/12/11 04:11	460-00-4	
Dibromofluoromethane (S)	98	%	80-122	1		05/12/11 04:11	1868-53-7	
1,2-Dichloroethane-d4 (S)	92	%	80-124	1		05/12/11 04:11	17060-07-0	

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

ANALYTICAL RESULTS

Project: ARCO #11060
Pace Project No.: 257594

Sample: GMW-1 **Lab ID: 257594002** Collected: 05/10/11 14:50 Received: 05/10/11 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Toluene-d8 (S)	100	%	80-123	1		05/12/11 04:11	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**5930**	ug/L	50.0	1		05/12/11 04:11		
4-Bromofluorobenzene (S)	97	%	50-150	1		05/12/11 04:11	460-00-4	

Sample: MW-6 **Lab ID: 257594003** Collected: 05/10/11 12:15 Received: 05/10/11 16:20 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	**0.18**	mg/L	0.078	1	05/12/11 11:00	05/12/11 21:51		
Motor Oil Range	ND	mg/L	0.39	1	05/12/11 11:00	05/12/11 21:51	64742-65-0	
n-Octacosane (S)	110	%	50-150	1	05/12/11 11:00	05/12/11 21:51	630-02-4	
o-Terphenyl (S)	95	%	50-150	1	05/12/11 11:00	05/12/11 21:51	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	05/17/11 10:06	05/17/11 16:20	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		05/12/11 02:29	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		05/12/11 02:29	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/12/11 02:29	1634-04-4	
Toluene	ND	ug/L	1.0	1		05/12/11 02:29	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		05/12/11 02:29	1330-20-7	
4-Bromofluorobenzene (S)	97	%	80-120	1		05/12/11 02:29	460-00-4	
Dibromofluoromethane (S)	94	%	80-122	1		05/12/11 02:29	1868-53-7	
1,2-Dichloroethane-d4 (S)	92	%	80-124	1		05/12/11 02:29	17060-07-0	
Toluene-d8 (S)	99	%	80-123	1		05/12/11 02:29	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**96.0**	ug/L	50.0	1		05/18/11 01:13		
4-Bromofluorobenzene (S)	102	%	50-150	1		05/18/11 01:13	460-00-4	

Sample: MW-1 **Lab ID: 257594004** Collected: 05/10/11 12:45 Received: 05/10/11 16:20 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	**0.84**	mg/L	0.084	1	05/12/11 11:00	05/12/11 22:23		
Motor Oil Range	ND	mg/L	0.42	1	05/12/11 11:00	05/12/11 22:23	64742-65-0	
n-Octacosane (S)	108	%	50-150	1	05/12/11 11:00	05/12/11 22:23	630-02-4	
o-Terphenyl (S)	98	%	50-150	1	05/12/11 11:00	05/12/11 22:23	84-15-1	

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

ANALYTICAL RESULTS

Project: ARCO #11060
Pace Project No.: 257594

Sample: MW-1 **Lab ID: 257594004** Collected: 05/10/11 12:45 Received: 05/10/11 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	05/17/11 10:06	05/17/11 16:23	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**17.8**	ug/L	1.0	1		05/13/11 14:33	71-43-2	
Ethylbenzene	**1.8**	ug/L	1.0	1		05/13/11 14:33	100-41-4	
Methyl-tert-butyl ether	**2.5**	ug/L	1.0	1		05/13/11 14:33	1634-04-4	
Toluene	**6.6**	ug/L	1.0	1		05/13/11 14:33	108-88-3	
Xylene (Total)	**10.9**	ug/L	3.0	1		05/13/11 14:33	1330-20-7	
4-Bromofluorobenzene (S)	98	%	80-120	1		05/13/11 14:33	460-00-4	
Dibromofluoromethane (S)	96	%	80-122	1		05/13/11 14:33	1868-53-7	
1,2-Dichloroethane-d4 (S)	94	%	80-124	1		05/13/11 14:33	17060-07-0	
Toluene-d8 (S)	100	%	80-123	1		05/13/11 14:33	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**642**	ug/L	50.0	1		05/12/11 02:46		
4-Bromofluorobenzene (S)	98	%	50-150	1		05/12/11 02:46	460-00-4	

Sample: MW-5 **Lab ID: 257594005** Collected: 05/10/11 13:10 Received: 05/10/11 16:20 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	**0.47**	mg/L	0.079	1	05/12/11 11:00	05/12/11 22:40		
Motor Oil Range	ND	mg/L	0.40	1	05/12/11 11:00	05/12/11 22:40	64742-65-0	
n-Octacosane (S)	110	%	50-150	1	05/12/11 11:00	05/12/11 22:40	630-02-4	
o-Terphenyl (S)	98	%	50-150	1	05/12/11 11:00	05/12/11 22:40	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	05/17/11 10:06	05/17/11 16:26	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**12.4**	ug/L	1.0	1		05/13/11 14:50	71-43-2	
Ethylbenzene	**39.3**	ug/L	1.0	1		05/13/11 14:50	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/13/11 14:50	1634-04-4	
Toluene	**4.1**	ug/L	1.0	1		05/13/11 14:50	108-88-3	
Xylene (Total)	**25.5**	ug/L	3.0	1		05/13/11 14:50	1330-20-7	
4-Bromofluorobenzene (S)	100	%	80-120	1		05/13/11 14:50	460-00-4	
Dibromofluoromethane (S)	95	%	80-122	1		05/13/11 14:50	1868-53-7	
1,2-Dichloroethane-d4 (S)	95	%	80-124	1		05/13/11 14:50	17060-07-0	
Toluene-d8 (S)	101	%	80-123	1		05/13/11 14:50	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**4710**	ug/L	50.0	1		05/12/11 03:03		
4-Bromofluorobenzene (S)	107	%	50-150	1		05/12/11 03:03	460-00-4	

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

ANALYTICAL RESULTS

Project: ARCO #11060
Pace Project No.: 257594

Sample: MW-2 **Lab ID: 257594006** Collected: 05/10/11 13:40 Received: 05/10/11 16:20 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	**1.0**	mg/L	0.083	1	05/12/11 11:00	05/12/11 22:56		
Motor Oil Range	**2.0**	mg/L	0.42	1	05/12/11 11:00	05/12/11 22:56	64742-65-0	
n-Octacosane (S)	107	%	50-150	1	05/12/11 11:00	05/12/11 22:56	630-02-4	
o-Terphenyl (S)	96	%	50-150	1	05/12/11 11:00	05/12/11 22:56	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	05/17/11 10:06	05/17/11 16:29	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**281**	ug/L	1.0	1		05/13/11 15:07	71-43-2	
Ethylbenzene	**69.9**	ug/L	1.0	1		05/13/11 15:07	100-41-4	
Methyl-tert-butyl ether	**7.3**	ug/L	1.0	1		05/13/11 15:07	1634-04-4	
Toluene	**4.2**	ug/L	1.0	1		05/13/11 15:07	108-88-3	
Xylene (Total)	**49.9**	ug/L	3.0	1		05/13/11 15:07	1330-20-7	
4-Bromofluorobenzene (S)	97	%	80-120	1		05/13/11 15:07	460-00-4	
Dibromofluoromethane (S)	82	%	80-122	1		05/13/11 15:07	1868-53-7	
1,2-Dichloroethane-d4 (S)	92	%	80-124	1		05/13/11 15:07	17060-07-0	
Toluene-d8 (S)	100	%	80-123	1		05/13/11 15:07	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**5520**	ug/L	50.0	1		05/12/11 04:47		
4-Bromofluorobenzene (S)	95	%	50-150	1		05/12/11 04:47	460-00-4	

Sample: MW-3 **Lab ID: 257594007** Collected: 05/10/11 14:10 Received: 05/10/11 16:20 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	**0.82**	mg/L	0.082	1	05/12/11 11:00	05/12/11 23:45		
Motor Oil Range	**0.84**	mg/L	0.41	1	05/12/11 11:00	05/12/11 23:45	64742-65-0	
n-Octacosane (S)	110	%	50-150	1	05/12/11 11:00	05/12/11 23:45	630-02-4	
o-Terphenyl (S)	98	%	50-150	1	05/12/11 11:00	05/12/11 23:45	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	05/17/11 10:06	05/17/11 16:38	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**33.6**	ug/L	1.0	1		05/13/11 15:24	71-43-2	
Ethylbenzene	**57.5**	ug/L	1.0	1		05/13/11 15:24	100-41-4	
Methyl-tert-butyl ether	**2.4**	ug/L	1.0	1		05/13/11 15:24	1634-04-4	
Toluene	**1.2**	ug/L	1.0	1		05/13/11 15:24	108-88-3	
Xylene (Total)	**7.9**	ug/L	3.0	1		05/13/11 15:24	1330-20-7	
4-Bromofluorobenzene (S)	105	%	80-120	1		05/13/11 15:24	460-00-4	
Dibromofluoromethane (S)	87	%	80-122	1		05/13/11 15:24	1868-53-7	
1,2-Dichloroethane-d4 (S)	94	%	80-124	1		05/13/11 15:24	17060-07-0	

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

ANALYTICAL RESULTS

Project: ARCO #11060
Pace Project No.: 257594

Sample: MW-3 **Lab ID: 257594007** Collected: 05/10/11 14:10 Received: 05/10/11 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Toluene-d8 (S)	100	%	80-123	1		05/13/11 15:24	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**3280**	ug/L	50.0	1		05/12/11 03:20		
4-Bromofluorobenzene (S)	104	%	50-150	1		05/12/11 03:20	460-00-4	

Sample: DUP **Lab ID: 257594008** Collected: 05/10/11 00:00 Received: 05/10/11 16:20 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	**0.85**	mg/L	0.083	1	05/12/11 11:00	05/13/11 00:01		
Motor Oil Range	**1.6**	mg/L	0.42	1	05/12/11 11:00	05/13/11 00:01	64742-65-0	
n-Octacosane (S)	104	%	50-150	1	05/12/11 11:00	05/13/11 00:01	630-02-4	
o-Terphenyl (S)	92	%	50-150	1	05/12/11 11:00	05/13/11 00:01	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	05/17/11 10:06	05/17/11 16:41	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**156**	ug/L	1.0	1		05/13/11 15:41	71-43-2	
Ethylbenzene	**76.3**	ug/L	1.0	1		05/13/11 15:41	100-41-4	
Methyl-tert-butyl ether	**5.6**	ug/L	1.0	1		05/13/11 15:41	1634-04-4	
Toluene	**3.9**	ug/L	1.0	1		05/13/11 15:41	108-88-3	
Xylene (Total)	**53.2**	ug/L	3.0	1		05/13/11 15:41	1330-20-7	
4-Bromofluorobenzene (S)	99	%	80-120	1		05/13/11 15:41	460-00-4	
Dibromofluoromethane (S)	85	%	80-122	1		05/13/11 15:41	1868-53-7	
1,2-Dichloroethane-d4 (S)	94	%	80-124	1		05/13/11 15:41	17060-07-0	
Toluene-d8 (S)	101	%	80-123	1		05/13/11 15:41	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**5000**	ug/L	50.0	1		05/12/11 03:54		
4-Bromofluorobenzene (S)	94	%	50-150	1		05/12/11 03:54	460-00-4	

Sample: Trip Blank **Lab ID: 257594009** Collected: 05/10/11 00:00 Received: 05/10/11 16:20 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		05/11/11 22:30	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		05/11/11 22:30	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/11/11 22:30	1634-04-4	
Toluene	ND	ug/L	1.0	1		05/11/11 22:30	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		05/11/11 22:30	1330-20-7	

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

ANALYTICAL RESULTS

Project: ARCO #11060
Pace Project No.: 257594

Sample: Trip Blank **Lab ID: 257594009** Collected: 05/10/11 00:00 Received: 05/10/11 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
4-Bromofluorobenzene (S)	97	%	80-120	1		05/11/11 22:30	460-00-4	
Dibromofluoromethane (S)	94	%	80-122	1		05/11/11 22:30	1868-53-7	
1,2-Dichloroethane-d4 (S)	94	%	80-124	1		05/11/11 22:30	17060-07-0	
Toluene-d8 (S)	98	%	80-123	1		05/11/11 22:30	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		05/11/11 22:30		
4-Bromofluorobenzene (S)	97	%	50-150	1		05/11/11 22:30	460-00-4	

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

QUALITY CONTROL DATA

Project: ARCO #11060
Pace Project No.: 257594

QC Batch: OEXT/3694 Analysis Method: NWTPH-Dx
QC Batch Method: EPA 3510 Analysis Description: NWTPH-Dx GCS
Associated Lab Samples: 257594001, 257594002, 257594003, 257594004, 257594005, 257594006, 257594007, 257594008

METHOD BLANK: 69784 Matrix: Water
Associated Lab Samples: 257594001, 257594002, 257594003, 257594004, 257594005, 257594006, 257594007, 257594008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range	mg/L	ND	0.080	05/12/11 20:45	
Motor Oil Range	mg/L	ND	0.40	05/12/11 20:45	
n-Octacosane (S)	%	107	50-150	05/12/11 20:45	
o-Terphenyl (S)	%	91	50-150	05/12/11 20:45	

LABORATORY CONTROL SAMPLE: 69785

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Range	mg/L	5	4.5	90	51-147	
Motor Oil Range	mg/L	5	5.2	103	20-160	
n-Octacosane (S)	%			109	50-150	
o-Terphenyl (S)	%			112	50-150	

SAMPLE DUPLICATE: 69786

Parameter	Units	257594003 Result	Dup Result	RPD	Qualifiers
Diesel Range	mg/L	0.18	0.16	10	
Motor Oil Range	mg/L	ND	.25J		
n-Octacosane (S)	%	110	111	.9	
o-Terphenyl (S)	%	95	97	.1	

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

QUALITY CONTROL DATA

Project: ARCO #11060
Pace Project No.: 257594

QC Batch: MPRP/2219 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 257594001, 257594002, 257594003, 257594004, 257594005, 257594006, 257594007, 257594008

METHOD BLANK: 70400 Matrix: Water
Associated Lab Samples: 257594001, 257594002, 257594003, 257594004, 257594005, 257594006, 257594007, 257594008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	ND	10.0	05/17/11 16:02	

LABORATORY CONTROL SAMPLE: 70401

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	559	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70402 70403

Parameter	Units	257594001 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	539	533	106	105	75-125	1	

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

QUALITY CONTROL DATA

Project: ARCO #11060
Pace Project No.: 257594

QC Batch: MSV/4402 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 257594001, 257594002, 257594003, 257594009

METHOD BLANK: 69658 Matrix: Water
Associated Lab Samples: 257594001, 257594002, 257594003, 257594009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	05/11/11 21:56	
Ethylbenzene	ug/L	ND	1.0	05/11/11 21:56	
Methyl-tert-butyl ether	ug/L	ND	1.0	05/11/11 21:56	
Toluene	ug/L	ND	1.0	05/11/11 21:56	
Xylene (Total)	ug/L	ND	3.0	05/11/11 21:56	
1,2-Dichloroethane-d4 (S)	%	94	80-124	05/11/11 21:56	
4-Bromofluorobenzene (S)	%	99	80-120	05/11/11 21:56	
Dibromofluoromethane (S)	%	95	80-122	05/11/11 21:56	
Toluene-d8 (S)	%	98	80-123	05/11/11 21:56	

LABORATORY CONTROL SAMPLE: 69659

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.7	93	76-127	
Ethylbenzene	ug/L	20	19.6	98	72-125	
Methyl-tert-butyl ether	ug/L	20	20.8	104	58-145	
Toluene	ug/L	20	19.7	98	69-125	
Xylene (Total)	ug/L	60	60.4	101	74-124	
1,2-Dichloroethane-d4 (S)	%			96	80-124	
4-Bromofluorobenzene (S)	%			98	80-120	
Dibromofluoromethane (S)	%			96	80-122	
Toluene-d8 (S)	%			98	80-123	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 69768 69769

Parameter	Units	257564004 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	20.2	18.5	100	92	75-124	9	
Ethylbenzene	ug/L	ND	20	20	20.7	19.2	102	94	76-124	7	
Methyl-tert-butyl ether	ug/L	ND	20	20	21.1	19.2	105	96	72-130	9	
Toluene	ug/L	ND	20	20	20.6	19.2	100	93	75-124	7	
Xylene (Total)	ug/L	ND	60	60	63.7	59.2	103	96	76-123	7	
1,2-Dichloroethane-d4 (S)	%						95	95	80-124		
4-Bromofluorobenzene (S)	%						98	97	80-120		
Dibromofluoromethane (S)	%						96	96	80-122		
Toluene-d8 (S)	%						98	98	80-123		

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

QUALITY CONTROL DATA

Project: ARCO #11060
Pace Project No.: 257594

QC Batch: MSV/4419 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 257594004, 257594005, 257594006, 257594007, 257594008

METHOD BLANK: 70014 Matrix: Water
Associated Lab Samples: 257594004, 257594005, 257594006, 257594007, 257594008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	05/13/11 11:27	
Ethylbenzene	ug/L	ND	1.0	05/13/11 11:27	
Methyl-tert-butyl ether	ug/L	ND	1.0	05/13/11 11:27	
Toluene	ug/L	ND	1.0	05/13/11 11:27	
Xylene (Total)	ug/L	ND	3.0	05/13/11 11:27	
1,2-Dichloroethane-d4 (S)	%	93	80-124	05/13/11 11:27	
4-Bromofluorobenzene (S)	%	100	80-120	05/13/11 11:27	
Dibromofluoromethane (S)	%	95	80-122	05/13/11 11:27	
Toluene-d8 (S)	%	99	80-123	05/13/11 11:27	

LABORATORY CONTROL SAMPLE: 70015

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.3	91	76-127	
Ethylbenzene	ug/L	20	18.9	94	72-125	
Methyl-tert-butyl ether	ug/L	20	18.8	94	58-145	
Toluene	ug/L	20	18.5	92	69-125	
Xylene (Total)	ug/L	60	57.1	95	74-124	
1,2-Dichloroethane-d4 (S)	%			92	80-124	
4-Bromofluorobenzene (S)	%			98	80-120	
Dibromofluoromethane (S)	%			97	80-122	
Toluene-d8 (S)	%			99	80-123	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70016 70017

Parameter	Units	257594004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzene	ug/L	17.8	20	20	37.8	39.0	100	106	75-124	3	
Ethylbenzene	ug/L	1.8	20	20	22.1	21.9	102	101	76-124	1	
Methyl-tert-butyl ether	ug/L	2.5	20	20	19.4	20.8	84	91	72-130	7	
Toluene	ug/L	6.6	20	20	27.0	27.4	102	104	75-124	1	
Xylene (Total)	ug/L	10.9	60	60	69.9	70.7	98	100	76-123	1	
1,2-Dichloroethane-d4 (S)	%						89	92	80-124		
4-Bromofluorobenzene (S)	%						99	99	80-120		
Dibromofluoromethane (S)	%						97	98	80-122		
Toluene-d8 (S)	%						102	101	80-123		

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

QUALITY CONTROL DATA

Project: ARCO #11060
Pace Project No.: 257594

QC Batch: MSV/4401 Analysis Method: NWTPH-Gx
QC Batch Method: NWTPH-Gx Analysis Description: NWTPH-Gx MSV Water
Associated Lab Samples: 257594001, 257594002, 257594004, 257594005, 257594006, 257594007, 257594008, 257594009

METHOD BLANK: 69655 Matrix: Water
Associated Lab Samples: 257594001, 257594002, 257594004, 257594005, 257594006, 257594007, 257594008, 257594009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	50.0	05/11/11 21:56	
4-Bromofluorobenzene (S)	%	99	50-150	05/11/11 21:56	

LABORATORY CONTROL SAMPLE: 69656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	ug/L	500	451	90	50-163	
4-Bromofluorobenzene (S)	%			99	50-150	

SAMPLE DUPLICATE: 69755

Parameter	Units	257564002 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	ug/L	ND	29.2J		
4-Bromofluorobenzene (S)	%	98	99	.7	

SAMPLE DUPLICATE: 69756

Parameter	Units	257594001 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	ug/L	ND	21.9J		
4-Bromofluorobenzene (S)	%	99	99	.01	

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

QUALITY CONTROL DATA

Project: ARCO #11060
Pace Project No.: 257594

QC Batch: MSV/4454
QC Batch Method: NWTPH-Gx
Analysis Method: NWTPH-Gx
Analysis Description: NWTPH-Gx MSV Water
Associated Lab Samples: 257594003

METHOD BLANK: 70490
Matrix: Water
Associated Lab Samples: 257594003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	50.0	05/17/11 22:39	
4-Bromofluorobenzene (S)	%	102	50-150	05/17/11 22:39	

LABORATORY CONTROL SAMPLE: 70491

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	ug/L	500	503	101	50-163	
4-Bromofluorobenzene (S)	%			101	50-150	

SAMPLE DUPLICATE: 70535

Parameter	Units	257520004 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	ug/L	109	123	12	
4-Bromofluorobenzene (S)	%	101	101	.5	

SAMPLE DUPLICATE: 70536

Parameter	Units	257564006 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	ug/L	58.4	67.3	14	
4-Bromofluorobenzene (S)	%	101	100	1	

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

QUALIFIERS

Project: ARCO #11060
Pace Project No.: 257594

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.

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 NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-S Pace Analytical Services - Seattle

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: ARCO #11060
Pace Project No.: 257594

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
257594001	**MW-9**	EPA 3510	OEXT/3694	NWTPH-Dx	GCSV/2487
257594002	**GMW-1**	EPA 3510	OEXT/3694	NWTPH-Dx	GCSV/2487
257594003	**MW-6**	EPA 3510	OEXT/3694	NWTPH-Dx	GCSV/2487
257594004	**MW-1**	EPA 3510	OEXT/3694	NWTPH-Dx	GCSV/2487
257594005	**MW-5**	EPA 3510	OEXT/3694	NWTPH-Dx	GCSV/2487
257594006	**MW-2**	EPA 3510	OEXT/3694	NWTPH-Dx	GCSV/2487
257594007	**MW-3**	EPA 3510	OEXT/3694	NWTPH-Dx	GCSV/2487
257594008	**DUP**	EPA 3510	OEXT/3694	NWTPH-Dx	GCSV/2487
257594001	**MW-9**	EPA 3010	MPRP/2219	EPA 6010	ICP/2126
257594002	**GMW-1**	EPA 3010	MPRP/2219	EPA 6010	ICP/2126
257594003	**MW-6**	EPA 3010	MPRP/2219	EPA 6010	ICP/2126
257594004	**MW-1**	EPA 3010	MPRP/2219	EPA 6010	ICP/2126
257594005	**MW-5**	EPA 3010	MPRP/2219	EPA 6010	ICP/2126
257594006	**MW-2**	EPA 3010	MPRP/2219	EPA 6010	ICP/2126
257594007	**MW-3**	EPA 3010	MPRP/2219	EPA 6010	ICP/2126
257594008	**DUP**	EPA 3010	MPRP/2219	EPA 6010	ICP/2126
257594001	**MW-9**	EPA 5030B/8260	MSV/4402		
257594002	**GMW-1**	EPA 5030B/8260	MSV/4402		
257594003	**MW-6**	EPA 5030B/8260	MSV/4402		
257594004	**MW-1**	EPA 5030B/8260	MSV/4419		
257594005	**MW-5**	EPA 5030B/8260	MSV/4419		
257594006	**MW-2**	EPA 5030B/8260	MSV/4419		
257594007	**MW-3**	EPA 5030B/8260	MSV/4419		
257594008	**DUP**	EPA 5030B/8260	MSV/4419		
257594009	**Trip Blank**	EPA 5030B/8260	MSV/4402		
257594001	**MW-9**	NWTPH-Gx	MSV/4401		
257594002	**GMW-1**	NWTPH-Gx	MSV/4401		
257594003	**MW-6**	NWTPH-Gx	MSV/4454		
257594004	**MW-1**	NWTPH-Gx	MSV/4401		
257594005	**MW-5**	NWTPH-Gx	MSV/4401		
257594006	**MW-2**	NWTPH-Gx	MSV/4401		
257594007	**MW-3**	NWTPH-Gx	MSV/4401		
257594008	**DUP**	NWTPH-Gx	MSV/4401		
257594009	**Trip Blank**	NWTPH-Gx	MSV/4401		

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.

257594

Page: 1 of 1

1467727

Section A Required Client Information:

Company: Arcadis
Address: 2300 Eastlake Ave E. Seattle WA 98102
Email To: Scott.Zorn@Arcadis-us.com
Phone: Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Dave Resar
Copy To: Alan Kahal
Purchase Order No.: GP09BPNA.WA48
Project Name: ARCO # 11060
Project Number:

Section C Invoice Information:

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

REGULATORY AGENCY

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

Site Location STATE: WA

Section D Required Client Information

Matrix Codes (MATRIX / CODE)

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED 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	NWTPH-Gx	NWTPH-Dx	BTEX/MTBE 8260	Total Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-9	WT	G	5/10	1515				9			1	8					X	X	X	X			
2	GMW-1				1450				9			1	8					X	X	X	X			
3	MW-6				1215				10			1	9					X	X	X	X			
4	MW-1				1245				9			1	8					X	X	X	X			
5	MW-5				1310				9			1	8					X	X	X	X			
6	MW-2				1340				9			1	8					X	X	X	X			
7	MW-3				1410				9			1	8					X	X	X	X			
8	Dup								9			1	8					X	X	X	X			
9	Trip Blank								4				4					X		X				
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)
	Nick Olivier/Arcadis	5/10	1620	Jyothi Sway/PACE	5/10/11	1620	0.9c	Y	N	Y
							8.6c			
							13.8c			

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick Olivier

SIGNATURE of SAMPLER:

DATE Signed (MM/DD/YY): 5/10/11

*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.

257594

Sample Container Count

CLIENT: Arcadis

Pace Analytical
www.pacelabs.com

COC PAGE 1 of 1
COC ID# 146721

Sample Line Item	VG9H	AG1H	AG1U	BG1H	BP1U	BP2U	BP3U	BP2N	BP2S	WGFU	WGKU	BP3N			Comments
1	6	2 ZZ										1 ZZ			
2		↓													
3		3													
4		2													
5															
6															
7															
8	↓	↓ ↓										↓ ↓			
9	4														
10															
11															
12															Trip Blank? Yes

AG1H	1 liter HCL amber glass		BP2S	500mL H2SO4 plastic	JGFU	4oz unpreserved amber wide
AG1U	1liter unpreserved amber glass		BP2U	500mL unpreserved plastic	R	terra core kit
AG2S	500mL H2SO4 amber glass		BP2Z	500mL NaOH, Zn Ac	U	Summa Can
AG2U	500mL unpreserved amber glass		BP3C	250mL NaOH plastic	VG9H	40mL HCL clear vial
AG3S	250mL H2SO4 amber glass		BP3N	250mL HNO3 plastic	VG9T	40mL Na Thio. clear vial
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 glass vial preweighted (EPA 5035)
BP1N	1 liter HNO3 plastic		DG9B	40mL Na Bisulfate amber vial	VSG	Headspace septa vial & HCL
BP1S	1 liter H2SO4 plastic		DG9H	40mL HCL amber voa vial	WGFU	4oz clear soil jar
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	ZPLC	Ziploc Bag
BP2N	500mL HNO3 plastic		DG9U	40mL unpreserved **amber** vial		
BP2O	500mL NaOH plastic		I	Wipe/Swab		

Sample Condition Upon Receipt

Pace Analytical

Client Name: Arcadis Project # 257594

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 101731982 or 226099 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.9c, 8.6c, 13.8c Biological Tissue is Frozen: Yes No

Temp should be above freezing ≤ 6°C

Date and Initials of person examining contents: 05/10/11 CW

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 & Signature on COC:	☐Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☐Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☐No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☐No	☐N/A	7.
Follow Up / Hold Analysis Requested:	☐Yes	☐No	☐N/A	8.
Sufficient Volume:	☐Yes	☐No	☐N/A	9.
Correct Containers Used:	☐Yes	☐No	☐N/A	10.
-Pace Containers Used:	☐Yes	☐No	☐N/A	
Containers Intact:	☐Yes	☐No	☐N/A	11.
Filtered volume received for Dissolved tests	☐Yes	☐No	☐N/A	12.
Sample Labels match COC:	☐Yes	☐No	☐N/A	13.
-Includes date/time/ID/Analysis Matrix: _____				
All containers needing preservation have been checked.	☐Yes	☐No	☐N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☐N/A	
Exceptions: VOA, coliform, TOC, O&G				Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No	☐N/A	15.
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☐N/A	16.
Trip Blanks Present:	☐Yes	☐No	☐N/A	17.
Trip Blank Custody Seals Present	☐Yes	☐No	☐N/A	
Pace Trip Blank Lot # (if purchased): _____				

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

Person Contacted: Alan Kahal Date/Time: 05/11/11 11:21

Comments/ Resolution:

Alan Kahal Confirmed Silica Gel is not needed on these Dx Samples. RSM

Project Manager Review: RSM **Date:** 05/11/11

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)

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

December 13, 2011

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

RE: Project: 11060
Pace Project No.: 2510157

Dear Scott Zorn:
Enclosed are the analytical results for sample(s) received by the laboratory on November 29, 2011. 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,

Regina SteMarie

regina.stemarie@pacelabs.com
Project Manager

Enclosures

cc: Alan Kahal, 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: 11060
Pace Project No.: 2510157

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: 11060
Pace Project No.: 2510157

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2510157001	**MW-6**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	CC	8	PASI-S
		NWTPH-Gx	CC	2	PASI-S
2510157002	**MW-1**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	CC	8	PASI-S
		NWTPH-Gx	CC	2	PASI-S
2510157003	**MW-5**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	CC	8	PASI-S
		NWTPH-Gx	CC	2	PASI-S
2510157004	**MW-2**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LNH	8	PASI-S
		NWTPH-Gx	CC	2	PASI-S
2510157005	**MW-3**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	CC	8	PASI-S
		NWTPH-Gx	CC	2	PASI-S
2510157006	**MW-9**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	CC	8	PASI-S
		NWTPH-Gx	CC	2	PASI-S
2510157007	**MW-GW-1**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LNH	8	PASI-S
		NWTPH-Gx	CC	2	PASI-S
2510157008	**DUP-1**	NWTPH-Dx	AY1	4	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 5030B/8260	LNH	8	PASI-S
		NWTPH-Gx	CC	2	PASI-S
2510157009	**TRIP BLANK**	EPA 5030B/8260	CC	8	PASI-S
		NWTPH-Gx	CC	2	PASI-S

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

PROJECT NARRATIVE

Project: 11060
Pace Project No.: 2510157

Method: **NWTPH-Dx**
Description: NWTPH-Dx GCS Silica Gel
Client: Arcadis U.S., Inc.
Date: December 13, 2011

General Information:
8 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: 11060
Pace Project No.: 2510157

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Arcadis U.S., Inc.
Date: December 13, 2011

General Information:
8 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: 11060
Pace Project No.: 2510157

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Arcadis U.S., Inc.
Date: December 13, 2011

General Information:
9 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.

QC Batch: MSV/5966

S0: Surrogate recovery outside laboratory control limits.

- MSD (Lab ID: 96096)
  - 4-Bromofluorobenzene (S)

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: 11060
Pace Project No.: 2510157

Method: **NWTPH-Gx**
Description: NWTPH-Gx MSV
Client: Arcadis U.S., Inc.
Date: December 13, 2011

General Information:
9 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.

QC Batch: MSV/5967

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2510166003

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

- MS (Lab ID: 96099)
  - Gasoline Range Organics
- MSD (Lab ID: 96100)
  - Gasoline Range Organics

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: 11060
Pace Project No.: 2510157

Sample: MW-6 **Lab ID: 2510157001** Collected: 11/29/11 09:15 Received: 11/29/11 14:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range SG	ND	mg/L	0.078	1	11/30/11 09:20	12/01/11 01:33		
Motor Oil Range SG	ND	mg/L	0.39	1	11/30/11 09:20	12/01/11 01:33	64742-65-0	
Surrogates								
n-Octacosane (S) SG	99	%	50-150	1	11/30/11 09:20	12/01/11 01:33	630-02-4	
o-Terphenyl (S) SG	87	%	50-150	1	11/30/11 09:20	12/01/11 01:33	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	12/05/11 07:58	12/06/11 11:13	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		12/02/11 19:07	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/02/11 19:07	100-41-4	
Toluene	ND	ug/L	1.0	1		12/02/11 19:07	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/02/11 19:07	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	95	%	79-121	1		12/02/11 19:07	460-00-4	
Dibromofluoromethane (S)	107	%	81-119	1		12/02/11 19:07	1868-53-7	
1,2-Dichloroethane-d4 (S)	111	%	72-127	1		12/02/11 19:07	17060-07-0	
Toluene-d8 (S)	97	%	77-120	1		12/02/11 19:07	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		12/02/11 19:07		
Surrogates								
4-Bromofluorobenzene (S)	95	%	50-150	1		12/02/11 19:07	460-00-4	

Sample: MW-1 **Lab ID: 2510157002** Collected: 11/29/11 09:40 Received: 11/29/11 14:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range SG	ND	mg/L	0.075	1	11/30/11 09:20	12/01/11 03:13		
Motor Oil Range SG	ND	mg/L	0.38	1	11/30/11 09:20	12/01/11 03:13	64742-65-0	
Surrogates								
n-Octacosane (S) SG	100	%	50-150	1	11/30/11 09:20	12/01/11 03:13	630-02-4	
o-Terphenyl (S) SG	87	%	50-150	1	11/30/11 09:20	12/01/11 03:13	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	**10.3**	ug/L	10.0	1	12/05/11 07:58	12/06/11 11:24	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**5.5**	ug/L	1.0	1		12/02/11 19:25	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/02/11 19:25	100-41-4	
Toluene	ND	ug/L	1.0	1		12/02/11 19:25	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/02/11 19:25	1330-20-7	

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

ANALYTICAL RESULTS

Project: 11060
Pace Project No.: 2510157

Sample: MW-1 **Lab ID: 2510157002** Collected: 11/29/11 09:40 Received: 11/29/11 14:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Surrogates								
4-Bromofluorobenzene (S)	97	%	79-121	1		12/02/11 19:25	460-00-4	
Dibromofluoromethane (S)	107	%	81-119	1		12/02/11 19:25	1868-53-7	
1,2-Dichloroethane-d4 (S)	109	%	72-127	1		12/02/11 19:25	17060-07-0	
Toluene-d8 (S)	98	%	77-120	1		12/02/11 19:25	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**815**	ug/L	50.0	1		12/02/11 19:25		
Surrogates								
4-Bromofluorobenzene (S)	97	%	50-150	1		12/02/11 19:25	460-00-4	

Sample: MW-5 **Lab ID: 2510157003** Collected: 11/29/11 10:10 Received: 11/29/11 14:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range SG	**0.095**	mg/L	0.077	1	11/30/11 09:20	12/01/11 03:38		
Motor Oil Range SG	ND	mg/L	0.38	1	11/30/11 09:20	12/01/11 03:38	64742-65-0	
Surrogates								
n-Octacosane (S) SG	98	%	50-150	1	11/30/11 09:20	12/01/11 03:38	630-02-4	
o-Terphenyl (S) SG	86	%	50-150	1	11/30/11 09:20	12/01/11 03:38	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	**10.5**	ug/L	10.0	1	12/05/11 07:58	12/06/11 11:42	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**12.3**	ug/L	1.0	1		12/02/11 21:48	71-43-2	
Ethylbenzene	**6.4**	ug/L	1.0	1		12/02/11 21:48	100-41-4	
Toluene	**2.2**	ug/L	1.0	1		12/02/11 21:48	108-88-3	
Xylene (Total)	**3.1**	ug/L	3.0	1		12/02/11 21:48	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	99	%	79-121	1		12/02/11 21:48	460-00-4	
Dibromofluoromethane (S)	113	%	81-119	1		12/02/11 21:48	1868-53-7	
1,2-Dichloroethane-d4 (S)	112	%	72-127	1		12/02/11 21:48	17060-07-0	
Toluene-d8 (S)	100	%	77-120	1		12/02/11 21:48	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**2210**	ug/L	50.0	1		12/02/11 21:48		
Surrogates								
4-Bromofluorobenzene (S)	99	%	50-150	1		12/02/11 21:48	460-00-4	

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

ANALYTICAL RESULTS

Project: 11060
Pace Project No.: 2510157

Sample: MW-2 **Lab ID: 2510157004** Collected: 11/29/11 10:45 Received: 11/29/11 14:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range SG	**0.098**	mg/L	0.077	1	11/30/11 09:20	12/01/11 04:03		
Motor Oil Range SG	ND	mg/L	0.38	1	11/30/11 09:20	12/01/11 04:03	64742-65-0	
Surrogates								
n-Octacosane (S) SG	101	%	50-150	1	11/30/11 09:20	12/01/11 04:03	630-02-4	
o-Terphenyl (S) SG	88	%	50-150	1	11/30/11 09:20	12/01/11 04:03	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	12/05/11 07:58	12/06/11 11:45	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**549**	ug/L	5.0	5		12/07/11 23:14	71-43-2	
Ethylbenzene	**82.6**	ug/L	1.0	1		12/07/11 23:31	100-41-4	
Toluene	**7.0**	ug/L	1.0	1		12/07/11 23:31	108-88-3	
Xylene (Total)	**61.6**	ug/L	3.0	1		12/07/11 23:31	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	108	%	79-121	1		12/07/11 23:31	460-00-4	
Dibromofluoromethane (S)	96	%	81-119	1		12/07/11 23:31	1868-53-7	
1,2-Dichloroethane-d4 (S)	92	%	72-127	1		12/07/11 23:31	17060-07-0	
Toluene-d8 (S)	106	%	77-120	1		12/07/11 23:31	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**5640**	ug/L	50.0	1		12/02/11 22:05		
Surrogates								
4-Bromofluorobenzene (S)	80	%	50-150	1		12/02/11 22:05	460-00-4	

Sample: MW-3 **Lab ID: 2510157005** Collected: 11/29/11 11:15 Received: 11/29/11 14:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range SG	ND	mg/L	0.076	1	11/30/11 09:20	12/01/11 04:29		
Motor Oil Range SG	ND	mg/L	0.38	1	11/30/11 09:20	12/01/11 04:29	64742-65-0	
Surrogates								
n-Octacosane (S) SG	83	%	50-150	1	11/30/11 09:20	12/01/11 04:29	630-02-4	
o-Terphenyl (S) SG	72	%	50-150	1	11/30/11 09:20	12/01/11 04:29	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	12/05/11 07:58	12/06/11 11:49	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**30.4**	ug/L	1.0	1		12/02/11 20:18	71-43-2	
Ethylbenzene	**21.0**	ug/L	1.0	1		12/02/11 20:18	100-41-4	
Toluene	ND	ug/L	1.0	1		12/02/11 20:18	108-88-3	
Xylene (Total)	**6.9**	ug/L	3.0	1		12/02/11 20:18	1330-20-7	

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

ANALYTICAL RESULTS

Project: 11060
Pace Project No.: 2510157

Sample: MW-3 **Lab ID: 2510157005** Collected: 11/29/11 11:15 Received: 11/29/11 14:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Surrogates								
4-Bromofluorobenzene (S)	98	%	79-121	1		12/02/11 20:18	460-00-4	
Dibromofluoromethane (S)	110	%	81-119	1		12/02/11 20:18	1868-53-7	
1,2-Dichloroethane-d4 (S)	118	%	72-127	1		12/02/11 20:18	17060-07-0	
Toluene-d8 (S)	101	%	77-120	1		12/02/11 20:18	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**3130**	ug/L	50.0	1		12/02/11 20:18		
Surrogates								
4-Bromofluorobenzene (S)	98	%	50-150	1		12/02/11 20:18	460-00-4	

Sample: MW-9 **Lab ID: 2510157006** Collected: 11/29/11 11:45 Received: 11/29/11 14:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range SG	ND	mg/L	0.076	1	11/30/11 09:20	12/01/11 04:53		
Motor Oil Range SG	ND	mg/L	0.38	1	11/30/11 09:20	12/01/11 04:53	64742-65-0	
Surrogates								
n-Octacosane (S) SG	99	%	50-150	1	11/30/11 09:20	12/01/11 04:53	630-02-4	
o-Terphenyl (S) SG	86	%	50-150	1	11/30/11 09:20	12/01/11 04:53	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	12/05/11 07:58	12/06/11 11:52	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		12/02/11 19:43	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/02/11 19:43	100-41-4	
Toluene	ND	ug/L	1.0	1		12/02/11 19:43	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/02/11 19:43	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	96	%	79-121	1		12/02/11 19:43	460-00-4	
Dibromofluoromethane (S)	105	%	81-119	1		12/02/11 19:43	1868-53-7	
1,2-Dichloroethane-d4 (S)	110	%	72-127	1		12/02/11 19:43	17060-07-0	
Toluene-d8 (S)	98	%	77-120	1		12/02/11 19:43	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		12/02/11 19:43		
Surrogates								
4-Bromofluorobenzene (S)	96	%	50-150	1		12/02/11 19:43	460-00-4	

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

ANALYTICAL RESULTS

Project: 11060
Pace Project No.: 2510157

Sample: MW-GW-1 **Lab ID: 2510157007** Collected: 11/29/11 12:20 Received: 11/29/11 14:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range SG	**0.61**	mg/L	0.077	1	11/30/11 09:20	12/01/11 05:18		
Motor Oil Range SG	ND	mg/L	0.38	1	11/30/11 09:20	12/01/11 05:18	64742-65-0	
Surrogates								
n-Octacosane (S) SG	92	%	50-150	1	11/30/11 09:20	12/01/11 05:18	630-02-4	
o-Terphenyl (S) SG	80	%	50-150	1	11/30/11 09:20	12/01/11 05:18	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	12/05/11 07:58	12/06/11 11:56	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		12/07/11 20:41	71-43-2	
Ethylbenzene	**86.9**	ug/L	1.0	1		12/07/11 20:41	100-41-4	
Toluene	ND	ug/L	1.0	1		12/07/11 20:41	108-88-3	
Xylene (Total)	**113**	ug/L	3.0	1		12/07/11 20:41	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	105	%	79-121	1		12/07/11 20:41	460-00-4	
Dibromofluoromethane (S)	96	%	81-119	1		12/07/11 20:41	1868-53-7	
1,2-Dichloroethane-d4 (S)	87	%	72-127	1		12/07/11 20:41	17060-07-0	
Toluene-d8 (S)	102	%	77-120	1		12/07/11 20:41	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**6080**	ug/L	50.0	1		12/02/11 22:23		
Surrogates								
4-Bromofluorobenzene (S)	97	%	50-150	1		12/02/11 22:23	460-00-4	

Sample: DUP-1 **Lab ID: 2510157008** Collected: 11/29/11 00:00 Received: 11/29/11 14:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range SG	ND	mg/L	0.077	1	11/30/11 09:20	12/01/11 05:42		
Motor Oil Range SG	ND	mg/L	0.38	1	11/30/11 09:20	12/01/11 05:42	64742-65-0	
Surrogates								
n-Octacosane (S) SG	88	%	50-150	1	11/30/11 09:20	12/01/11 05:42	630-02-4	
o-Terphenyl (S) SG	75	%	50-150	1	11/30/11 09:20	12/01/11 05:42	84-15-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	12/05/11 07:58	12/06/11 11:59	7439-92-1	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		12/07/11 17:32	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/07/11 17:32	100-41-4	
Toluene	ND	ug/L	1.0	1		12/07/11 17:32	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/07/11 17:32	1330-20-7	

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

ANALYTICAL RESULTS

Project: 11060
Pace Project No.: 2510157

Sample: DUP-1 **Lab ID: 2510157008** Collected: 11/29/11 00:00 Received: 11/29/11 14:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Surrogates								
4-Bromofluorobenzene (S)	110	%	79-121	1		12/07/11 17:32	460-00-4	
Dibromofluoromethane (S)	101	%	81-119	1		12/07/11 17:32	1868-53-7	
1,2-Dichloroethane-d4 (S)	95	%	72-127	1		12/07/11 17:32	17060-07-0	
Toluene-d8 (S)	98	%	77-120	1		12/07/11 17:32	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		12/02/11 22:41		
Surrogates								
4-Bromofluorobenzene (S)	96	%	50-150	1		12/02/11 22:41	460-00-4	

Sample: TRIP BLANK **Lab ID: 2510157009** Collected: 11/29/11 00:00 Received: 11/29/11 14:15 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		12/02/11 15:50	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/02/11 15:50	100-41-4	
Toluene	ND	ug/L	1.0	1		12/02/11 15:50	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/02/11 15:50	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	97	%	79-121	1		12/02/11 15:50	460-00-4	
Dibromofluoromethane (S)	106	%	81-119	1		12/02/11 15:50	1868-53-7	
1,2-Dichloroethane-d4 (S)	115	%	72-127	1		12/02/11 15:50	17060-07-0	
Toluene-d8 (S)	97	%	77-120	1		12/02/11 15:50	2037-26-5	
NWTPH-Gx MSV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		12/02/11 15:50		
Surrogates								
4-Bromofluorobenzene (S)	97	%	50-150	1		12/02/11 15:50	460-00-4	

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

QUALITY CONTROL DATA

Project: 11060
Pace Project No.: 2510157

QC Batch: MPRP/2671 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 2510157001, 2510157002, 2510157003, 2510157004, 2510157005, 2510157006, 2510157007, 2510157008

METHOD BLANK: 96194 Matrix: Water
Associated Lab Samples: 2510157001, 2510157002, 2510157003, 2510157004, 2510157005, 2510157006, 2510157007, 2510157008

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

LABORATORY CONTROL SAMPLE: 96195

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	543	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 96196 96197

Parameter	Units	2510157001 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	558	534	112	107	75-125	4	

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

QUALITY CONTROL DATA

Project: 11060
Pace Project No.: 2510157

QC Batch: MSV/5966 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 2510157001, 2510157002, 2510157003, 2510157005, 2510157006, 2510157009

METHOD BLANK: 96093 Matrix: Water
Associated Lab Samples: 2510157001, 2510157002, 2510157003, 2510157005, 2510157006, 2510157009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	12/02/11 15:14	
Ethylbenzene	ug/L	ND	1.0	12/02/11 15:14	
Toluene	ug/L	ND	1.0	12/02/11 15:14	
Xylene (Total)	ug/L	ND	3.0	12/02/11 15:14	
1,2-Dichloroethane-d4 (S)	%	111	72-127	12/02/11 15:14	
4-Bromofluorobenzene (S)	%	97	79-121	12/02/11 15:14	
Dibromofluoromethane (S)	%	103	81-119	12/02/11 15:14	
Toluene-d8 (S)	%	97	77-120	12/02/11 15:14	

LABORATORY CONTROL SAMPLE: 96094

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.4	92	66-123	
Ethylbenzene	ug/L	20	18.8	94	67-122	
Toluene	ug/L	20	17.3	86	64-118	
Xylene (Total)	ug/L	60	56.5	94	68-122	
1,2-Dichloroethane-d4 (S)	%			114	72-127	
4-Bromofluorobenzene (S)	%			97	79-121	
Dibromofluoromethane (S)	%			106	81-119	
Toluene-d8 (S)	%			98	77-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 96095 96096

Parameter	Units	2510166003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzene	ug/L	48.5	20	20	65.2	65.6	83	86	63-138	.7	
Ethylbenzene	ug/L	43.6	20	20	66.3	61.0	113	87	65-135	8	
Toluene	ug/L	ND	20	20	16.8	18.1	80	86	64-128	7	
Xylene (Total)	ug/L	98.3	60	60	163	152	108	89	65-133	7	
1,2-Dichloroethane-d4 (S)	%						111	111	72-127		
4-Bromofluorobenzene (S)	%						101	182	79-121		S0
Dibromofluoromethane (S)	%						108	108	81-119		
Toluene-d8 (S)	%						97	96	77-120		

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

QUALITY CONTROL DATA

Project: 11060
Pace Project No.: 2510157

QC Batch: MSV/5987 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 2510157004, 2510157007, 2510157008

METHOD BLANK: 96549 Matrix: Water
Associated Lab Samples: 2510157004, 2510157007, 2510157008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	12/07/11 16:39	
Ethylbenzene	ug/L	ND	1.0	12/07/11 16:39	
Toluene	ug/L	ND	1.0	12/07/11 16:39	
Xylene (Total)	ug/L	ND	3.0	12/07/11 16:39	
1,2-Dichloroethane-d4 (S)	%	92	72-127	12/07/11 16:39	
4-Bromofluorobenzene (S)	%	112	79-121	12/07/11 16:39	
Dibromofluoromethane (S)	%	99	81-119	12/07/11 16:39	
Toluene-d8 (S)	%	101	77-120	12/07/11 16:39	

LABORATORY CONTROL SAMPLE: 96550

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	16.8	84	66-123	
Ethylbenzene	ug/L	20	16.9	85	67-122	
Toluene	ug/L	20	16.1	81	64-118	
Xylene (Total)	ug/L	60	49.7	83	68-122	
1,2-Dichloroethane-d4 (S)	%			86	72-127	
4-Bromofluorobenzene (S)	%			105	79-121	
Dibromofluoromethane (S)	%			96	81-119	
Toluene-d8 (S)	%			102	77-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 96670 96671

Parameter	Units	2510157008 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	20.0	19.7	99	97	63-138	2	
Ethylbenzene	ug/L	ND	20	20	20.2	19.8	100	98	65-135	2	
Toluene	ug/L	ND	20	20	19.7	19.2	97	95	64-128	3	
Xylene (Total)	ug/L	ND	60	60	60.5	59.0	100	97	65-133	3	
1,2-Dichloroethane-d4 (S)	%						87	91	72-127		
4-Bromofluorobenzene (S)	%						104	103	79-121		
Dibromofluoromethane (S)	%						97	97	81-119		
Toluene-d8 (S)	%						103	103	77-120		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 11060
Pace Project No.: 2510157

QC Batch: MSV/5967 Analysis Method: NWTPH-Gx
QC Batch Method: NWTPH-Gx Analysis Description: NWTPH-Gx MSV Water
Associated Lab Samples: 2510157001, 2510157002, 2510157003, 2510157004, 2510157005, 2510157006, 2510157007, 2510157008, 2510157009

METHOD BLANK: 96097 Matrix: Water
Associated Lab Samples: 2510157001, 2510157002, 2510157003, 2510157004, 2510157005, 2510157006, 2510157007, 2510157008, 2510157009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	50.0	12/02/11 15:14	
4-Bromofluorobenzene (S)	%	97	50-150	12/02/11 15:14	

LABORATORY CONTROL SAMPLE: 96098

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	ug/L	500	541	108	65-139	
4-Bromofluorobenzene (S)	%			99	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 96099 96100

Parameter	Units	2510166003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Gasoline Range Organics	ug/L	4510	500	500	8670	7610	832	619	48-147	13	M1
4-Bromofluorobenzene (S)	%						103	99	50-150		

SAMPLE DUPLICATE: 96101

Parameter	Units	2510166003 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	ug/L	4510	5240	15	
4-Bromofluorobenzene (S)	%	99	100	.7	

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

QUALITY CONTROL DATA

Project: 11060
Pace Project No.: 2510157

QC Batch: OEXT/4798 Analysis Method: NWTPH-Dx
QC Batch Method: EPA 3510 Analysis Description: NWTPH-Dx GCS SG
Associated Lab Samples: 2510157001, 2510157002, 2510157003, 2510157004, 2510157005, 2510157006, 2510157007, 2510157008

METHOD BLANK: 95769 Matrix: Water
Associated Lab Samples: 2510157001, 2510157002, 2510157003, 2510157004, 2510157005, 2510157006, 2510157007, 2510157008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range SG	mg/L	ND	0.080	12/01/11 00:43	
Motor Oil Range SG	mg/L	ND	0.40	12/01/11 00:43	
n-Octacosane (S) SG	%	96	50-150	12/01/11 00:43	
o-Terphenyl (S) SG	%	83	50-150	12/01/11 00:43	

LABORATORY CONTROL SAMPLE: 95770

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Range SG	mg/L	4	2.8	71	59-114	
Motor Oil Range SG	mg/L	4	3.3	82	69-124	
n-Octacosane (S) SG	%			91	50-150	
o-Terphenyl (S) SG	%			84	50-150	

SAMPLE DUPLICATE: 95771

Parameter	Units	2510157001 Result	Dup Result	RPD	Qualifiers
Diesel Range SG	mg/L	ND	ND		
Motor Oil Range SG	mg/L	ND	ND		
n-Octacosane (S) SG	%	99	98	7	
o-Terphenyl (S) SG	%	87	85	6	

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

QUALIFIERS

Project: 11060
Pace Project No.: 2510157

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.

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.

LABORATORIES

PASI-S	Pace Analytical Services - Seattle

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S0	Surrogate recovery outside laboratory control limits.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 11060
Pace Project No.: 2510157

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2510157001	**MW-6**	EPA 3510	OEXT/4798	NWTPH-Dx	GCSV/3131
2510157002	**MW-1**	EPA 3510	OEXT/4798	NWTPH-Dx	GCSV/3131
2510157003	**MW-5**	EPA 3510	OEXT/4798	NWTPH-Dx	GCSV/3131
2510157004	**MW-2**	EPA 3510	OEXT/4798	NWTPH-Dx	GCSV/3131
2510157005	**MW-3**	EPA 3510	OEXT/4798	NWTPH-Dx	GCSV/3131
2510157006	**MW-9**	EPA 3510	OEXT/4798	NWTPH-Dx	GCSV/3131
2510157007	**MW-GW-1**	EPA 3510	OEXT/4798	NWTPH-Dx	GCSV/3131
2510157008	**DUP-1**	EPA 3510	OEXT/4798	NWTPH-Dx	GCSV/3131
2510157001	**MW-6**	EPA 3010	MPRP/2671	EPA 6010	ICP/2530
2510157002	**MW-1**	EPA 3010	MPRP/2671	EPA 6010	ICP/2530
2510157003	**MW-5**	EPA 3010	MPRP/2671	EPA 6010	ICP/2530
2510157004	**MW-2**	EPA 3010	MPRP/2671	EPA 6010	ICP/2530
2510157005	**MW-3**	EPA 3010	MPRP/2671	EPA 6010	ICP/2530
2510157006	**MW-9**	EPA 3010	MPRP/2671	EPA 6010	ICP/2530
2510157007	**MW-GW-1**	EPA 3010	MPRP/2671	EPA 6010	ICP/2530
2510157008	**DUP-1**	EPA 3010	MPRP/2671	EPA 6010	ICP/2530
2510157001	**MW-6**	EPA 5030B/8260	MSV/5966		
2510157002	**MW-1**	EPA 5030B/8260	MSV/5966		
2510157003	**MW-5**	EPA 5030B/8260	MSV/5966		
2510157004	**MW-2**	EPA 5030B/8260	MSV/5987		
2510157005	**MW-3**	EPA 5030B/8260	MSV/5966		
2510157006	**MW-9**	EPA 5030B/8260	MSV/5966		
2510157007	**MW-GW-1**	EPA 5030B/8260	MSV/5987		
2510157008	**DUP-1**	EPA 5030B/8260	MSV/5987		
2510157009	**TRIP BLANK**	EPA 5030B/8260	MSV/5966		
2510157001	**MW-6**	NWTPH-Gx	MSV/5967		
2510157002	**MW-1**	NWTPH-Gx	MSV/5967		
2510157003	**MW-5**	NWTPH-Gx	MSV/5967		
2510157004	**MW-2**	NWTPH-Gx	MSV/5967		
2510157005	**MW-3**	NWTPH-Gx	MSV/5967		
2510157006	**MW-9**	NWTPH-Gx	MSV/5967		
2510157007	**MW-GW-1**	NWTPH-Gx	MSV/5967		
2510157008	**DUP-1**	NWTPH-Gx	MSV/5967		
2510157009	**TRIP BLANK**	NWTPH-Gx	MSV/5967		

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.

2510157

Page: 1 of 1

1467535

Section A Required Client Information:

Company: ARCADIS
Address: 2300 Eastlake Ave E
Seattle WA 98102
Email To: Scott Zorn
Phone: Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Sam Miles
Copy To: Al Kahal
Purchase Order No.: GP09BPNAWA48.N0000
Project Name: ~~TAMM~~ Former ARCO 11060
Project Number: 11060

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: 22095/L12

REGULATORY AGENCY

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

Site Location STATE: WA

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	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED 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	DRO/HO	BTEX/MTBE	Total Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-6	WT	G	11-29-11	915				9			1							X		X			
2	MW-1				940				9			1							X		X			
3	MW-5				1010				9			1							X		X			
4	MW-2				1045				9			1							X		X			
5	MW-3				1115				10			1							X		X			
6	MW-9				1145				9			1							X		X			
7	MW-GW-1				1220				9			1							X		X			
8	DUP-1				—				9			1							X		X			
9	TRIP BLANK				—				4	4									X		X			
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
No silica gel cleanup	Ross LaGrandeur / Arcadis	11-29-11	2:15	Colette Weaver / PACE	112911	1415	11.6	Y	Y	Y
							12.3			
							11.3			

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: ROSS LAGRANDEUR

SIGNATURE of SAMPLER:

DATE Signed (MM/DD/YY): 11-29-11

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

*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

2510157

CLIENT: Arcadis

COC PAGE 1 of 1

COC ID# _____

Trip Blank(s) Provided? (Y) / N

Sample Line Item	VG9H	AG1H	AG1U	BP1U	BP2U	BP3U	BP3N	BP3S	WGKU	WGFU	WG2U	DG9M	DG9B	VG9W	VSG				Comments
1	6	2 x2					1 x2												
2																			
3																			
4																			
5		3																	
6		2																	
7																			
8																			
9	4																		
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

2510157

Sample Condition Upon Receipt

Pace Analytical

Client Name: Arcadis Project #

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 11.6c, 12.3c, 11.3c Biological Tissue is Frozen: Yes No

Temp should be above freezing ≤ 6°C

Comments:

Date and Initials of person examining contents: 11/29/11 CW

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 & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Follow Up / Hold Analysis Requested:	☐Yes ☑No ☐N/A	8.
Sufficient Volume:	☑Yes ☐No ☐N/A	9.
Correct Containers Used:	☑Yes ☐No ☐N/A	10.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	11.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	12.
Sample Labels match COC:	☑Yes ☐No ☐N/A	13.
-Includes date/time/ID/Analysis Matrix: WT		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
Exceptions: VOA, coliform, TOC, O&G		Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	15.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	16.
Trip Blanks Present:	☑Yes ☐No ☐N/A	17.
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Creation Date: 100511		

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

Person Contacted: S. McQuie Date/Time: 11/29/11

Comments/ Resolution:

Per client - do not run MTBE despite it being on the COC. RSM

Project Manager Review: RSM **Date:** 11/29/11

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)