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Enhanced LNAPL Recovery Event Completion Report

Former ARCO Facility No. 11060
4580 Fauntleroy Way Southwest
Seattle, Washington 98126
VCP No. NW2463

January 4, 2013

ARCADIS

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1 Introduction

On behalf of BP West Coast Products, LLC (BP), ARCADIS U.S., Inc. (ARCADIS) has prepared this Enhanced Light Non-Aqueous Phase liquid (LNAPL) Recovery Completion Report for the former Atlantic Richfield Company (ARCO) Facility No. 11060 located at 4580 Fauntleroy Way Southwest, Seattle, Washington (Site). A site aerial map is presented on **Figure 1**. This report summarizes the advancement of soil borings SB-1 through SB-4, installation of extraction wells EW-1 through EW-3, installation of monitoring well MW-10, and three multiple-phase extraction (MPE) activities. This work was performed pursuant to the *Remedial Action Plan (RAP), Former ARCO Facility No. 11060* (ARCADIS 2011), dated December 23, 2011.

2 Site Description

The site is located at the northeast corner of the intersection of Southwest Alaska Street and Fauntleroy Way Southwest in Seattle, Washington. The subject property exists in a mixed use zoning area of West Seattle. The site property is located at the intersection of Fauntleroy Way SW, and SW Alaska Street, in Seattle, Washington. The property is an operating 76-branded retail gasoline facility and convenience store.

Operations at the property include the storage and distribution of unleaded gasoline and diesel. The site currently contains two 10,000 gallon underground storage tanks (USTs) and two 5,000 gallon USTs, one of which contains diesel. The site also contains a 550 gallon aboveground storage tank (AST) associated with site LNAPL recovery activities, located to the north of the station building. A portion of the site is also located at the adjacent property to the east at 4550 Fauntleroy Way SW Seattle WA. This parcel, including the car wash and the current cycling store, is the former Huling Brothers property and is currently owned by Time Properties LLC. Site features are illustrated on **Figure 2**.

2.1 Site Geology and Hydrogeology

The site is located in the Puget Lowland, bound by the North Cascade Mountains to the east, South Cascade Mountains to the south, and Puget Sound and Olympic Mountains to the west (*Lasmanis 1991*). The Puget Lowland is underlain by unconsolidated deposits originating from continental glaciation during the Pleistocene Epoch (WA DNR 2005). Such deposits are typically sand and gravel, which are up to 3,000 feet deep, and often form discontinuous lenses. The local topography slopes to the southwest and the elevation of the site is approximately 345 feet above mean sea level (msl) (USGS 1994).

The site is located within the Puget-Willamette Trough Regional Aquifer System, which is a linear elongated basin stretching from the Canadian border in Washington to central Oregon. Specifically, the site is located in an unconsolidated-deposit aquifer, which is the principle aquifer type in the Puget Lowlands. Sand and gravel lenses that underlie the area can retain localized productive groundwater (USGS 1994). A variety of soil types have been observed at on-site and off-site wells including silty sands with gravel, clayey and sandy silts, and clays with silt and gravel. During the most recent subsurface investigation in January 2012, soils encountered consisted of fine to medium grained sand, silty sand, sandy silt, and silt.

2.2 Site History

The site property was developed in 1985, and continues to be operated as a retail gasoline station and convenience store. A notice of confirmed release indicated soil contamination was encountered during assessment work in 1993. Ecology lists the site as a leaking underground storage tank (LUST) site.

In 1992, Geraghty & Miller, Inc. installed a single groundwater monitoring well (MW-3) at the site. In May 1993, RZA AGRA Inc. (RZA) conducted subsurface characterization activities at the site, and wells MW-1, MW-2, MW-4 and MW-5 were installed. During both events, soil and ground samples were collected and Model Toxics Control Act (MTCA) Cleanup Level (CUL) exceedances were observed (Geraghty & Miller 1992, RZA1993).

In March 1995, Alisto Engineering Group (Alisto) installed one soil vapor extraction (SVE) well (VW-1) and one air sparging (AS) well (SP-1). Well VW-1 would later be called VE-1, beginning in April 1998. Soil samples were collected during the installation of VW-1 at depths of 10 and 25 feet below ground surface (bgs) and submitted for laboratory analysis. Laboratory analysis was not conducted on soil samples collected from SP-1. Upon completion of these wells, groundwater samples were collected. LNAPL was measured in VE-1 at a thickness of 0.08 foot and no groundwater sample was collected. Pilot testing for an AS/SVE system was conducted upon completion of the wells and revealed that air sparging and/or biosparging appeared to be viable technologies for remediating hydrocarbon impacts at the site; however, Alisto concluded that the saturated zone may not be conducive to groundwater extraction as a remedial technology (Alisto 1995).

In September 1996, Alisto installed seven wells at the site as part of a proposed remediation system. Six of these wells are combined SVE and AS wells (CW-1 to CW-

6) and one AS well (SP-2). The borings were drilled to a depth of 36 feet bgs in order to complete the well construction, and no samples were collected for laboratory analysis. Remediation system components were not installed at this time (Alisto 1996). These wells were later decommissioned; however, well abandonment logs, field notes and dates are not available.

In June 1997, monitoring well MW-6 was installed onsite and soil samples were collected during installation. Benzene, toluene, ethylbenzene, and total xylenes (BTEX, collectively) and gasoline range organics (GRO) were not detected above the reported detection limits in soil samples collected from depths of 15 and 21 feet bgs. Groundwater samples collected after the installation of MW-6 were below MTCA CULs for BTEX and GRO (Alisto 1997).

Monitoring well GMW-1 was installed in 2007 at the north end of the car wash as part of Phase II activities conducted by G-Logics Inc. at the former Huling Brothers Site C and D, a site found at the addresses 4550 Fauntleroy Way and 4550 38th Avenue Southwest, located east of the site at the current location of University Cycle. The monitoring well was screened from 20 to 35 feet. Six soil samples were collected from 11 to 36 feet bgs. Four of these soil samples and one groundwater sample were submitted for laboratory analysis of petroleum hydrocarbon compounds. Soil samples were submitted for GRO and BTEX analysis; no MTCA CUL exceedances were observed. Groundwater was submitted for volatiles, GRO, diesel range organics (DRO) and lead. Detectable concentrations in groundwater were below MTCA CULs (G-Logics 2008).

As part of a 2010 subsurface investigation, monitoring well MW-9 was installed in the northern portion of the adjacent property to the east of the Site. Proposed monitoring well MW-10 could not be installed due to subsurface construction debris encountered during hand clearing of the boring. Upon meeting refusal in the initial location for MW-10, the boring was moved to a suitable secondary location, where refusal was also met. Soil samples were collected for field screening at 2.5 foot intervals, beginning at 5.0 feet bgs. Field screening of soil samples was performed using a photoionization detector (PID) and visual inspection methods. Soil samples with the highest PID reading, and/or as indicated by field screening methods were submitted for laboratory analysis (ARCADIS 2010).

Groundwater monitoring has been performed at the site since 1993. LNAPL has been detected in MW-4 since March 1994, at thicknesses ranging from 4.00 feet in March 1994 to 0.05 foot in September 2000. LNAPL has been detected in well VE-1 since

September 1998, ranging in thickness from 1.31 feet in April 2005 to a slight sheen in June 2006. Groundwater Elevation Data with Select Analytical Results are presented as **Table 1.**

Product recovery activities have been ongoing at the site to address LNAPL in wells MW-4 and VE-1. To date, approximately 3,808 gallons of total fluids have been recovered from wells MW-4 and VE-1 via multiple phase extraction (MPE) activities, hand bailing and LNAPL skimming technology. A passive product recovery unit (belt skimmer) was installed in MW-4 in 1994 as an interim remedial measure for LNAPL recovery. However, in November 2008, the water table dropped below the level of the belt skimmer, making recovery with this device impossible. In November 2010, ARCADIS personnel removed and decommissioned the belt skimmer unit. Manual bailing occurred monthly at well VE-1 from June to December 2011. An average of approximately 3 gallons of total liquids was recovered during each bailing event.

2.3 Subsurface Investigation

In January 2012, ARCADIS observed Cascade Drilling, LP (Cascade) advance eight soil borings to depths of 31.5 to 51.5 feet below ground surface (bgs). The initial 6.5 to 7 feet of borehole were cleared using a vacuum truck. The borings were then advanced using a truck mounted hollow stem auger drilling rig. The screen interval for wells EW-1 through EW-3 ranged from 18 feet below top of casing (btoc) to 28 feet btoc. Monitoring well MW-10 was screened from 15 to 35 feet btoc.

During drilling, soil samples were collected for lithological description and volatile organic compound (VOC) analysis using a handheld PID at three-foot intervals from 5 feet bgs to the bottom of the boring unless poor recovery prevented the collection of the sample. A deviation to this occurred at well MW-10, in which the first sample was collected at 3.5 feet bgs and the following sample was collected at 10 feet bgs. PID readings, soil types, and other pertinent geologic data were recorded on a boring log by an ARCADIS geologist. The boring logs for borings SB-1 through SB-4, extraction wells EW-1 through EW-3, and monitoring well MW-10 are included in **Appendix A**.

Upon reaching the total depth of the borehole, the wells were installed within the annulus of the hollow-stem auger. The extraction wells were constructed of 6-inch diameter, Schedule 80 polyvinyl chloride (PVC) casing with 0.02-inch wide horizontally slotted screen. The monitoring well was constructed of 2-inch diameter, Schedule 40 PVC casing with 0.02-inch wide horizontally slotted casing. Number 10/20 sand was used as the filter pack from the total depth of the wells to one to two feet above the

screened interval. The remaining well annulus was backfilled with bentonite chips. The well was capped with a locking water tight well plug and a traffic-rated well box installed at grade.

Selected soil samples were preserved in the field in accordance with EPA Method 5035A and placed in pre-weighed and preserved 40-milliliter (mL) volatile organic analysis (VOA) vials and unpreserved four-ounce (oz.) jars. The VOA vials and jars were sealed, labeled and stored in a cooler packed with ice prior to submittal to Pace Analytical Services, Inc. (Pace) located in Seattle, Washington, a Washington State accredited laboratory, under standard chain of custody procedures.

Two to four soil samples per boring were collected from depths ranging from 5 to 40 feet bgs. Soil samples were selected based upon field observations and PID readings. Soil samples were identified as well or boring name (SB-1) and depth bgs (#' or #). Select soil samples were analyzed for:

- DRO and heavy oil range organics (HO) by Northwest Method NWTPH-Dx;
- GRO by Northwest Method NWTPH-Gx;
- Total lead by EPA Method 6010; and,
- BTEX and methyl tertiary butyl ether (MTBE) by EPA Method 8260B.
- Polynuclear Aromatic Hydrocarbons (PAHs) by EPA Method 8270 SIM.

Concentrations exceeding the MTCA Method A CULs were detected for the following constituents of concern (COCs):

- Concentrations of GRO exceeding the Method A CUL of 30 milligrams per kilogram (mg/kg) for soil containing benzene was detected in soil samples from borings SB-1, SB-2, SB-3, SB-4, EW-1, EW-2, and EW-3 at concentrations ranging from 30.1 mg/kg (EW-3-15') to 4,390 mg/kg (SB-3-20).

- Concentrations of benzene exceeding the Method A CUL of 0.03 mg/kg were detected in soil samples from borings SB-3, EW-1, EW-2, and EW-3 at concentrations ranging from 0.0317 mg/kg (EW-3-20') to 2.540 mg/kg (EW-1-25').

- A concentration of DRO exceeding the Method A CUL of 2,000 mg/kg was detected in soil sample SB-3-5, at a concentration of 2,710 mg/kg.
- A concentration of HO exceeding the Method A CUL of 2,000 mg/kg was detected in soil sample SB-3-5, at a concentration of 9,400 mg/kg.

- A concentration of toluene exceeding the Method A CUL of 7 mg/kg was detected in soil sample EW-1-25,' at a concentration of 12.7 mg/kg.

- Concentrations of ethylbenzene exceeding the Method A CUL of 6 mg/kg were detected in soil samples from borings SB-3 and EW-1at concentrations ranging from 9.15 mg/kg (EW-1-15') to 13.2 mg/kg (SB-3-20).

- Concentrations of total xylenes exceeding the Method A CUL of 9 mg/kg were detected in soil samples from borings SB-3 and EW-1 at concentrations ranging from 11.5 mg/kg (EW-1-15') to 51.8 mg/kg (EW-1-25').

- A concentration of benzo[a]pyrene exceeding the Method A CUL of 0.1 mg/kg was detected in soil sample SB-3-10, at a concentration of 7.16 mg/kg.

Laboratory analytical reports and chain of custody documentation are included as **Appendix B**. Analytical results are included as **Table 3**, **Table 4**, and **Table 5**.

3 LNAPL Recovery Events

Based on an examination of remedial alternatives in the RAP (ARCADIS 2011), portable MPE was selected to recover LNAPL observed at on-site wells until observed LNAPL thickness has been reduced to 0.01 foot or a sheen. Three MPE events were conducted by ARCADIS at the site on April 12, May 9, and August 3, 2012.

3.1 Pre-Extraction Wellhead Monitoring

Prior to each MPE extraction event, depth to water and depth to LNAPL were monitored using an electronic oil-water interface probe and volatile organic compound (VOC) concentrations were monitored using a photoionization detector (PID) at selected wells.

Depths to water during the first event ranged from 24.45 feet btoc in well EW-2 to 25.20 feet btoc in well EW-1. Depths to water during the second event ranged from 24.33 feet btoc in well EW-2 to 24.91 feet btoc in well EW-3. Depths to water during the third event ranged from 23.08 feet btoc in well MW-4 to 24.95 feet btoc in well EW-3.

Prior to the first event, measurable LNAPL was observed in wells VE-1, EW-1, and EW-3 with thicknesses of 0.10 foot, 0.70 foot, and 0.01 foot, respectively. Prior to the second event, measurable LNAPL was observed in wells VE-1 and EW-1 with thicknesses of 0.27 foot and 0.07 foot, respectively. Prior to the third event, measurable LNAPL was observed in monitoring well MW-4, with a thickness of 0.01 foot. Daily LNAPL thickness, depth to product and depth to water data are presented in **Table 2, Table 6, Table 7,** and **Table 8.**

3.2 Belt Skimmer Motor/Housing Removal

On August 8, 2012, ARCADIS observed ClearCreek Contractors (ClearCreek) remove a skimmer motor, skimmer, housing, and associated lines from the MW-4 vault, and extend the casing of monitoring well MW-4. SHJ Electric performed voltage testing on associated lines connected to the skimmer. The purpose of the work was to provide access to the well without requiring confined space entry and to allow for MPE from MW-4. During this event, the MW-4 well casing was extended by 2.2 feet. An estimated 3.5 gallons of LNAPL were removed from the skimmer, placed in a Department of Transportation-approved 55-gallon drum, and removed by ClearCreek.

3.3 MPE Events

During the first two MPE events in April and May 2012, PVC stingers were placed 0.5 foot above the total depths of the extraction wells. Wellhead adaptors were then attached to each well. Spiralite hosing was then connected on one end to the wellhead adaptors, and on the other end to a PVC manifold. The manifold contained a vacuum gauge and sampling ports to collect VOC readings using a PID. Vacuum was then simultaneously applied to each of the extraction wells using a vacuum truck for 6 to 6.5 hours per well. Depth to water and depth to LNAPL were monitored using an oil-water interface probe, and wellhead pressure was monitored using a manometer at response wells during extraction at 0.5- to 1-hour intervals. A vacuum extraction location map for these events is presented on **Figure 4**.

On August 10, 2012, PVC stingers were placed in wells VE-1, MW-4, EW-1, and EW-2 at approximately 0.5 foot above the total depths of the wells. Vacuum was monitored using a manometer with measured pressures at the manifold of 19 inches of mercury (in Hg) during extraction from wells VE-1, MW-4, EW-1, and EW-2, with an estimated flow rate of 1,047 standard cubic feet per minute. A map showing the locations of the wells used for vacuum extraction for this event is presented on **Figure 5**.

Available applied vacuum, flow rate, VOC concentrations, depth to product, and depth to water data are presented in **Table 6, Table 7, and Table 8.**

3.4 Post-Extraction Wellhead Monitoring

Post-Extraction monitoring of wells EW-1, EW-2, EW-3, VE-1, and MW-5 was conducted following each of the events to evaluate changes in presence and distribution of LNAPL. Depth to water, depth to LNAPL, VOC concentrations, and pressure were measured using an electronic oil-water interface probe, PID, and manometer, respectively. Following the April MPE event, ARCADIS returned to the site on days 1 and 12 and gauged wells for depth to water, depth to LNAPL, and VOC concentrations. Following the May MPE event, ARCADIS returned on day 1 and gauged wells for depth to water, depth to LNAPL, and wellhead pressure. ARCADIS returned on day 15 and gauged wells for depth to water, depth to LNAPL, and VOC concentrations. Following the August 2012 event, ARCADIS returned on day 14 and gauged wells for depth to water and depth to LNAPL. During this monitoring event, MW-4 was also gauged.

4 Event Results

During the January 2012 subsurface investigation, petroleum hydrocarbon impacts to soil exceeding Method A CULs were not detected off-site at well MW-10, located in Alaska Street, south of MW-5. Petroleum hydrocarbon impacts to soil exceeding Method A CULs were encountered in the northern portion of the Site at a depth of 20 feet bgs in boring SB-2, in the eastern portion of the Site at depths of 5 to 50 feet bgs in boring SB-3, and in the southeast and southwest corners at 15 feet bgs in borings SB-1 and SB-4. Soil impacts exceeding Method A CULs were also encountered at 15, 25, and 30 feet bgs in boring EW-1.

During the April 12, 2012 MPE event, vacuum was applied to extraction wells EW-1 through EW-3 for 6.5 hours, extracting a total of 330 gallons of LNAPL-water mixture. During the May 9, 2012 MPE event, vacuum was applied to extraction wells EW-1 through EW-3 for 6 hours, extracting a total of 598 gallons of LNAPL-water mixture, of which 190 gallons were LNAPL. During the August 10, 2012 MPE event, vacuum was applied to four wells (EW-1, EW-2, VE-1, and MW-4) for 1- to 3-hour intervals over one day, extracting a total of 55 gallons of LNAPL-water mixture, of which approximately 20 gallons were LNAPL. Due to the shallower screen interval of well VE-1, extraction at adjacent deeper-screened well EW-1 caused VE-1 to dewater, making extraction of LNAPL at VE-1 difficult. Based on observed decreasing depths to

water during the first two MPE events, it is likely monitoring well MW-5 is within the radii of influence (ROI) of extraction from wells EW-1, EW-2, and EW-3. Also, based on observed decreasing depths to water, extraction well EW-3 is likely within the ROI of extraction from wells EW-1, EW-2, and MW-4.

Prior to MPE, LNAPL was observed in four wells (VE-1, MW-4, EW-1, and EW-3). LNAPL thicknesses at these wells observed during gauging events conducted in 2009 and 2012, prior to MPE events, ranged from 0.01 to 0.70 foot.

Following three MPE events, LNAPL was not measured in wells EW-1, EW-2, and EW-3. During the November 2012 groundwater monitoring event, measurable LNAPL thicknesses of greater than 0.01 foot were only observed in two wells (MW-4 and VE-1); however, the extraction wells were not monitored. Observed LNAPL thicknesses have generally decreased from the first to third MPE event.

Line graphs depicting LNAPL and groundwater elevation and LNAPL thickness for wells EW-1, EW-3, VE-1, and MW-4 are presented as **Graph 1, Graph 2, Graph 3,** and **Graph 4**, respectively.

4.1 Management of Investigation Derived Wastes

LNAPL-water mixture generated during enhanced LNAPL recovery activities was hauled offsite by Emerald for recycling at their Airport Way treatment facility. Bills of Lading are included in **Appendix C.**

5 Conclusions

Following three MPE events, LNAPL was not observed at extraction wells EW-1 and EW-3 at the conclusion of the August 2012 event. LNAPL was also not observed at extraction wells EW-2 and EW-3 and monitoring well MW-4 during October 2012 gauging. This indicates extractable LNAPL was removed from the subsurface within the radii of influence of these wells.

Petroleum hydrocarbon impacts to soil were not detected southwest of the site at monitoring well MW-10. Impacts to soil were vertically delineated to depths of 15 feet bgs in soil borings SB-1, SB-4 and EW-2, and to 20 feet bgs in SB-2 and EW-3.

A total of 983 gallons of LNAPL-groundwater mixture was extracted during the events, indicating that MPE is effective at extracting LNAPL at the site.

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Tables

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

4580 Fauntleroy Way Southwest, Seattle, WA 98126

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

Well	Date	Notes	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	EDC	Total Lead	Dissolved Lead
Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs) in µg/L							**800/1,000**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**20**	**0.01**	**5**	**15**	**--**
GMW-1	5/10/2011	(NP)	--	22.08	0.0	--	**5,930**	**1,900**	<420	2.4	<1.0	69.7	94.8	<1.0	--	--	**28.4**	--
GMW-1	11/29/2011	(NP)	--	23.83	0.0	--	**6,080**	**610**	<380	<1.0	<1.0	86.9	113	--	--	--	<10.0	--
GMW-1	6/1/2012	(NM)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--	--	--

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

4580 Fauntleroy Way Southwest, Seattle, WA 98126

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

Well	Date	Notes	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	EDC	Total Lead	Dissolved Lead
Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs) in µg/L							**800/1,000**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**20**	**0.01**	**5**	**15**	**--**
MW-1	11/15/2004	(NS)	99.89	25.11	--	74.78	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	4/14/2005	(NS)	99.89	25.10	--	74.79	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	12/18/2005	(NP)	99.89	25.46	--	74.43	**2,960**	--	--	**10.8**	2.04	1.23	2.76	<1.00	--	--	--	--
MW-1	6/11/2006	(NP)	99.89	24.54	--	75.35	**1,840**	--	--	**11.4**	1.12	1.6	2.34	19.8	--	--	--	--
MW-1	11/5/2006	(NP)	99.89	25.59	--	74.30	**3,880**	--	--	**73.2**	6.12	2.04	<6.00	--	--	--	--	--
MW-1	9/25/2007	(NP)	99.89	25.08	--	74.81	**1,640**	--	--	**27.8**	1.67	0.86	<3.00	--	--	--	--	--
MW-1	12/31/2007	(NP)	99.89	25.23	--	74.66	**1,970**	--	--	**22.7**	1.34	1.03	<3.00	--	--	--	--	--
MW-1	5/29/2008	(NP)	99.89	25.01	--	74.88	**2,370**	--	--	3.58	0.58	<0.500	<3.00	--	--	--	--	--
MW-1	10/28/2008	(NP)	99.89	25.80	--	74.09	**1,450**	--	--	2.8	1.07	<0.500	<3.00	--	--	--	--	--
MW-1	6/22/2009	(NP)	99.89	26.11	--	73.78	**2,200**	--	--	**30**	5.7	24	30.5	--	--	--	4.9	<2.00
MW-1	12/15/2009	(NP)	99.89	26.31	--	73.58	**1,500**	--	--	**11**	2	4.8	3.6	--	--	--	3.8	<2.00
MW-1	3/24/2010	(NS)	267.43	21.03	0.0	246.40	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	5/24/2010	(NP)	99.89	25.20	--	74.69	**940**	--	--	**18**	<2.5	<2.5	6.4	--	--	--	--	--
MW-1	5/24/2010	(Dup)(NP)	99.89	25.20	--	74.69	**940**	--	--	**22**	<2.5	<2.5	6.8	--	--	--	--	--
MW-1	10/12/2010	(NP)	267.43	25.09	0.0	242.34	**849**	--	--	2.8	<1.0	1.2	<3.0	5.2	--	--	<10.0	--
MW-1	5/10/2011	(NP)	267.43	23.60	0.0	243.83	642	**840**	<420	**17.8**	6.6	1.8	10.9	2.5	--	--	<10.0	--
MW-1	11/29/2011	(NP)	267.43	24.84	0.0	242.59	**815**	<75	<380	**5.5**	<1.0	<1.0	<3.0	--	--	--	10.3	--
MW-1	6/1/2012	(NP)	267.43	23.67	0.0	243.76	544	362	<396	3.6	<1.0	<1.0	3.0	7.4	--	--	<10.0	<10.0
MW-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	--	--	--	--

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Groundwater Gauging Data and Select Analytical Results
WA-11060

4580 Fauntleroy Way Southwest, Seattle, WA 98126

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

Well	Date	Notes	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	EDC	Total Lead	Dissolved Lead
Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs) in µg/L							**800/1,000**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**20**	**0.01**	**5**	**15**	**--**
MW-2	6/26/1999		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	--
MW-2	6/1/2012	(NP)	266.69	23.60	0.0	243.09	**2,940**	**2,240**	**3,080**	**107**	12.7	64.2	46.1	5.0	--	--	10.0	<10.0
MW-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	--	--	--	--	--

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WA-11060

4580 Fauntleroy Way Southwest, Seattle, WA 98126

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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	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	--	--	--	--	--

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WA-11060

4580 Fauntleroy Way Southwest, 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	9/25/2007	(NP)	98.53	23.84	--	74.69	**4,530**	--	--	**18.2**	2.34	17.1	13.8	--	--	--	--	--
MW-3	12/31/2007	(NP)	98.53	23.83	--	74.70	**4,490**	--	--	**16.5**	2.38	32.7	16.1	--	--	--	--	--
MW-3	5/29/2008	(NP)	98.53	23.90	--	74.63	**5,350**	--	--	**16.5**	1.83	14.4	15	--	--	--	--	--
MW-3	10/28/2008	(NP)	98.53	24.97	--	73.56	**3,250**	--	--	**14.4**	1.86	13.8	10.3	--	--	--	--	--
MW-3	6/22/2009	(NP)	98.53	25.29	--	73.24	**2,000**	--	--	**15**	1.7	35	7.3	--	--	--	<2.00	<2.00
MW-3	12/15/2009	(NP)	98.53	25.14	--	73.39	**2,100**	--	--	**13**	1.5	28	7.3	--	--	--	7.7	<2.00
MW-3	3/24/2010	(NS)	266.00	21.21	0.0	244.79	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	5/24/2010	(NP)	98.53	24.10	--	74.43	**2,300**	--	--	**29**	6.2	28	19	--	--	--	--	--
MW-3	10/12/2010	(NP)	266.00	24.40	0.0	241.60	**2,380**	--	--	**31.1**	<1.0	16.6	4.7	<1.0	--	--	<10.0	--
MW-3	5/10/2011	(NP)	266.00	22.55	0.0	243.45	**3,280**	**820**	**840**	**33.6**	1.2	57.5	7.9	2.4	--	--	<10.0	--
MW-3	11/29/2011	(NP)	266.00	24.19	0.0	241.81	**3,130**	<76	<380	**30.4**	<1.0	21.0	6.9	--	--	--	<10.0	--
MW-3	6/1/2012	(NP)	266.00	22.94	0.0	243.06	**2,360**	**512**	446	**29.0**	<1.0	35.9	7.6	2.6	--	--	<10.0	<10.0
MW-4	5/11/1993		100.26	23.03	--	77.23	**31,000**	--	--	**8,700**	**4,000**	57	**3,200**	--	--	--	--	--
MW-4	3/4/1994		100.26	26.83	4.00	76.63	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	7/6/1994		100.26	25.63	1.43	75.77	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	10/7/1994		100.26	26.07	1.63	75.49	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	12/28/1994		100.26	25.85	1.43	75.55	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	3/13/1995		100.26	25.59	1.88	76.17	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	6/30/1995		100.26	24.64	1.11	76.51	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	9/6/1995		100.26	24.78	1.05	76.32	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	12/8/1995		100.26	24.94	1.05	76.16	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	3/11/1996		100.26	24.68	2.38	77.48	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	6/18/1996		100.26	24.04	2.11	77.91	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	9/9/1996		100.26	24.08	1.85	77.66	--	--	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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

4580 Fauntleroy Way Southwest, 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	9/23/2003		100.26	22.31	0.07	78.01	**75,900**	--	--	**7,140**	**8,980**	**1,270**	**8,820**	<50.0	--	--	--	--
MW-4	10/21/2003		100.26	21.79	--	78.47	**44,700**	--	--	**3,190**	**6,370**	**779**	**6,160**	<500	--	--	--	--
MW-4	6/29/2004	(NP)	267.78	22.88	0.0	244.90	**378,000**	--	--	**11,200**	**16,300**	**3,550**	**22,600**	**2,500**	--	--	--	--
MW-4	11/15/2004	(NS)	100.26	23.07	1.45	78.35	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	4/14/2005	(NS)	100.26	23.82	1.89	77.95	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	12/18/2005	(NP)	100.26	23.43	0.08	76.89	**214,000**	--	--	**9,430**	**12,800**	**2,000**	**13,500**	<100	--	--	--	--
MW-4	6/11/2006	(NP)	100.26	21.87	0.01	78.40	**117,000**	--	--	**13,000**	**18,200**	**2,300**	**14,000**	<1,000	--	--	--	--
MW-4	11/5/2006	(NP)	100.26	22.92	0.01	77.35	**120,000**	--	--	**6,950**	**10,500**	**2,070**	**13,500**	--	--	--	--	--
MW-4	9/25/2007	(NS)	100.26	22.15	0.02	78.13	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	12/31/2007	(NS)	100.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	5/29/2008	(NM)	267.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	10/28/2008	(DRY)	100.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	6/22/2009	(NS)	100.26	24.21	0.04	76.08	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	12/15/2009	(NS)	100.26	24.04	0.28	76.44	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	5/24/2010	(NM)	267.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	5/10/2011	(NM)	267.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	11/29/2011	(NM)	267.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	6/1/2012	(NM)	267.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-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	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--	--	--

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

4580 Fauntleroy Way Southwest, 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	6/26/1999		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-5	6/1/2012	(NP)	268.46	24.60	0.0	243.86	**1,620**	**1,040**	<392	**13.3**	3.0	9.6	10.7	<1.0	--	--	<10.0	<10.0
MW-5	6/1/2012	(Dup)(NP)	268.46	24.60	0.0	243.86	**1,520**	**1,030**	<388	**12.8**	2.8	8.8	10	<1.0	--	--	<10.0	<10.0
MW-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	--	--	--	--	--	--	--	--	--	--	--	--

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WA-11060

4580 Fauntleroy Way Southwest, Seattle, WA 98126

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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	12/9/1998		98.62	21.20	--	77.42	260	--	--	<1.0	<1.0	1	3	2	--	--	--	--
MW-6	3/17/1999		98.62	18.49	--	80.13	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	6/26/1999		98.62	18.49	--	80.13	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	9/28/1999		98.62	21.40	--	77.22	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	1/19/2000		98.62	20.39	--	78.23	330	--	--	<0.5	<0.5	6	10	7	--	--	--	--
MW-6	3/24/2000		98.62	19.63	--	78.99	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	9/14/2000		98.62	21.92	--	76.70	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	12/14/2000		98.62	22.51	--	76.11	**1,000**	--	--	<10	<10	<10	<30	<40	--	--	--	--
MW-6	9/22/2001		98.62	23.31	--	75.31	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	12/9/2001		98.62	22.24	--	76.38	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	3/20/2002		98.62	21.44	--	77.18	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	6/11/2002		98.62	21.90	--	76.72	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	12/21/2002	(NS)	98.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	3/19/2003	(NS)	98.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	6/18/2003	(NS)	98.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	9/23/2003	(NS)	98.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	10/21/2003	(P)	98.62	22.69	--	75.93	254	--	--	**10**	3.66	0.898	5.03	<1.00	--	--	--	--
MW-6	6/29/2004	(NP)	98.62	22.88	--	75.74	540	--	--	**6.8**	1.73	<0.500	5.65	6.35	--	--	--	--
MW-6	11/15/2004	(NP)	98.62	24.12	--	74.50	370	--	--	**43.5**	14.5	0.58	10.4	<2.00	--	--	--	--
MW-6	4/14/2005	(NP)	98.62	23.75	--	74.87	443	--	--	**6.39**	0.95	<0.500	3.75	<2.00	--	--	--	--
MW-6	12/18/2005	(NP)	98.62	24.79	--	73.83	694	--	--	<0.500	<0.500	<0.500	3.01	<1.00	--	--	--	--
MW-6	6/11/2006	(NP)	98.62	23.09	--	75.53	601	--	--	<0.500	<0.500	<0.500	<3.00	<1.00	--	--	--	--
MW-6	11/5/2006	(NP)	98.62	25.80	--	72.82	444	--	--	<0.500	<0.500	<0.500	<3.00	--	--	--	--	--
MW-6	9/25/2007	(NP)	98.62	24.13	--	74.49	321	--	--	<0.500	<0.500	<0.500	<3.00	--	--	--	--	--
MW-6	12/31/2007	(NP)	98.62	23.59	--	75.03	168	--	--	<0.500	<0.500	<0.500	<3.00	--	--	--	--	--
MW-6	5/29/2008	(NP)	98.62	24.21	--	74.41	**1,620**	--	--	<0.500	<0.500	<0.500	<3.00	--	--	--	--	--
MW-6	10/28/2008	(NP)	98.62	25.47	--	73.15	481	--	--	<0.500	<0.500	<0.500	<3.00	--	--	--	--	--
MW-6	6/22/2009	(NP)	98.62	25.32	--	73.30	<50.0	--	--	<1.00	<1.00	<1.00	<3.00	--	--	--	<2.00	<2.00
MW-6	12/15/2009	(NP)	98.62	23.33	--	75.29	190	--	--	<1.00	<1.00	<1.00	<2.00	--	--	--	<2.00	<2.00
MW-6	3/24/2010	(NS)	266.06	22.12	0.0	243.94	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	5/24/2010	(NP)	98.62	22.90	--	75.72	280	--	--	**8.1**	<2.5	<2.5	<5.0	--	--	--	--	--
MW-6	10/12/2010	(NP)	266.06	23.06	0.0	243.00	<50.0	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	--
MW-6	5/10/2011	(NP)	266.06	22.01	0.0	244.05	96.0	180	<390	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	--
MW-6	11/29/2011	(NP)	266.06	23.42	0.0	242.64	<50.0	<78	<390	<1.0	<1.0	<1.0	<3.0	--	--	--	<10.0	--
MW-6	11/29/2011	(Dup)(NP)	266.06	23.42	0.0	242.64	<50.0	<77	<380	<1.0	<1.0	<1.0	<3.0	--	--	--	<10.0	--
MW-6	6/1/2012	(NP)	266.06	22.75	0.0	243.31	124	<76.9	<385	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	<10.0
MW-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	--	--	--	--	--	--	--	--	--	--	--	--

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

4580 Fauntleroy Way Southwest, 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-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	--
MW-9	6/1/2012	(NM)	263.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	6/1/2012	(NP)	268.30	24.20	0.0	244.10	<50.0	<76.9	<385	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	<10.0	<10.0
VE-1	4/2/1998		--	--	--	--	**60,500**	--	--	**3,900**	**2,300**	**820**	**4,500**	<2,500	--	--	--	--
VE-1	9/17/1998		--	--	--	--	**240,000**	--	--	**2,700**	**2,000**	**1,400**	**7,700**	<100	--	--	--	--
VE-1	12/9/1998		--	--	--	--	**73,000**	--	--	**2,200**	**1,400**	**770**	**3,700**	<25	--	--	--	--
VE-1	3/17/1999		--	--	--	--	**42,000**	--	--	**4,000**	**2,400**	**790**	**4,100**	<25	--	--	--	--
VE-1	6/26/1999		--	--	--	--	**42,000**	--	--	**3,800**	**2,600**	670	**3,500**	<100	--	--	--	--
VE-1	9/28/1999		--	--	--	--	**25,000**	--	--	**3,400**	**2,000**	630	**3,000**	<25	--	--	--	--
VE-1	3/24/2000		--	--	--	--	**31,000**	--	--	**3,200**	610	27	**3,600**	<5	--	--	--	--
VE-1	7/2/2000		--	--	--	--	**27,000**	--	--	**3,200**	**1,900**	620	**3,000**	**130**	--	--	--	--
VE-1	9/14/2000		--	--	--	--	**29,000**	--	--	**3,200**	**2,200**	**920**	**3,000**	<5	--	--	--	--
VE-1	12/14/2000		--	23.02	--	--	**28,000**	--	--	**2,400**	**1,300**	580	**2,600**	<40	--	--	--	--
VE-1	9/22/2001		--	24.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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

4580 Fauntleroy Way Southwest, 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	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

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

4580 Fauntleroy Way Southwest, 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**	**--**

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
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

Table 2
Groundwater Gauging Data
WA-11060

4580 Fauntleroy Way Southwest, Seattle, WA 98126

Well	Date	Notes	TOC	DTW	NAPL	GWE	Comments
MW-4	4/12/2012	(NM)	267.78	--	--	--	First vac event
MW-4	4/13/2012	(NM)	267.78	--	--	--	--
MW-4	4/28/2012	(NM)	267.78	--	--	--	--
MW-4	5/10/2012	(NM)	267.78	--	--	--	Second vac event
MW-4	5/24/2012	(NM)	267.78	--	--	--	--
MW-4	6/1/2012	(NM)	267.78	--	--	--	--
MW-4	8/10/2012	(NS)	267.78	23.08	0.01	244.71	Third vac event
MW-4	8/24/2012	(NS)	267.78	24.86	0.73	243.50	--
MW-5	4/12/2012	(NS)	268.46	24.91	0.00	243.55	First vac event
MW-5	4/13/2012	(NS)	268.46	25.05	0.01	243.42	--
MW-5	4/24/2012	(NS)	268.46	24.90	0.01	243.57	--
MW-5	5/9/2012	(NM)	268.46	--	--	--	Second vac event
MW-5	5/10/2012	(NM)	268.46	24.93	0.00	243.53	--
MW-5	5/24/2012	(NS)	268.46	24.61	0.00	243.85	--
MW-5	6/1/2012	(NP)	268.46	24.60	0.00	243.86	--
MW-5	8/10/2012	(NS)	268.46	24.85	0.00	243.61	Third vac event
MW-5	8/24/2012	(NS)	268.46	24.86	0.00	243.60	--
VE-1	4/12/2012	(NS)	268.17	24.70	0.10	243.55	First vac event
VE-1	4/13/2012	(NS)	268.17	24.97	0.13	243.30	--
VE-1	5/9/2012	(NS)	268.17	24.74	0.27	243.65	Second vac event
VE-1	5/10/2012	(NS)	268.17	24.98	0.13	243.29	--
VE-1	5/24/2012	(NS)	268.17	24.56	0.16	243.74	--
VE-1	6/1/2012	(NM)	268.17	--	--	--	--
VE-1	8/10/2012	(NS)	268.17	24.39	0.00	243.78	Third vac event
VE-1	8/24/2012	(NS)	268.17	24.70	0.04	243.50	--
EW-1	4/12/2012	(NS)	268.20	25.20	0.70	243.56	First vac event
EW-1	4/13/2012	(NS)	268.20	25.01	0.10	243.27	--
EW-1	5/9/2012	(NS)	268.20	24.62	0.07	243.64	Second vac event
EW-1	5/10/2012	(NS)	268.20	24.96	0.06	243.29	--
EW-1	5/24/2012	(NS)	268.20	24.49	0.09	243.78	--
EW-1	6/1/2012	(NM)	268.20	--	--	--	--
EW-1	8/10/2012	(NS)	268.20	24.55	0.00	243.65	Third vac event
EW-1	8/24/2012	(NS)	268.20	24.70	0.00	243.50	--
EW-2	4/12/2012	(NS)	267.93	24.45	0.00	243.48	First vac event
EW-2	4/13/2012	(NS)	267.93	24.69	0.00	243.24	--
EW-2	5/9/2012	(NS)	267.93	24.33	0.00	243.60	Second vac event
EW-2	5/10/2012	(NS)	267.93	24.71	0.00	243.22	--
EW-2	5/24/2012	(NS)	267.93	24.11	0.00	243.82	--
EW-2	6/1/2012	(NM)	267.93	--	--	--	--
EW-2	8/10/2012	(NS)	267.93	24.33	0.00	243.60	Third vac event
EW-2	8/24/2012	(NS)	267.93	24.50	0.00	243.43	--

Table 2
Groundwater Gauging Data
WA-11060

4580 Fauntleroy Way Southwest, Seattle, WA 98126

Well	Date	Notes	TOC	DTW	NAPL	GWE	Comments
EW-3	4/12/2012	(NS)	268.50	25.06	0.01	243.45	First vac event
EW-3	4/13/2012	(NS)	268.50	25.29	0.00	243.21	--
EW-3	5/9/2012	(NS)	268.50	24.91	0.00	243.59	Second vac event
EW-3	5/10/2012	(NS)	268.50	25.23	0.00	243.27	--
EW-3	5/24/2012	(NS)	268.50	24.80	0.00	243.70	--
EW-3	6/1/2012	(NM)	268.50	--	--	--	--
EW-3	8/10/2012	(NM)	268.50	24.95	0.00	243.55	Third vac event
EW-3	8/24/2012	(NS)	268.50	25.09	0.00	243.41	--

msl = Mean sea level

TOC = Top of casing

GWE = Groundwater elevation above msl

DTW = Depth to water below TOC

TOC/DTW/LNAPL/GWE measurements are in feet (ft)

-- = Not analyzed/not applicable

NM = Not measured

NS = Not Sampled

NP = No Purge Sampled

NAPL = Non-Aqueous Phase Liquid Thickness

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)

Table 3
Soil Analytical Results
WA-11060

4580 Fauntleroy Way Southwest, Seattle, WA 98126

All analytical results are presented in milligrams per kilogram (mg/kg)

Sample ID	Depth	Date	TPH-GRO	TPH-DRO	TPH-HO	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Pb
MTCA Method A Cleanup Levels			**30/100**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**	**0.1**	**250**
MW-10-15	15	1/23/2012	<6.3	<17.9	<71.6	<0.0034	<0.0034	<0.0034	<0.0103	<0.0034	1.9
MW-10-20	20	1/23/2012	<6.7	<19.3	<77.1	<0.0044	<0.0044	<0.0044	<0.0133	<0.0044	2.4
MW-10-25	25	1/23/2012	<6.7	<19.2	<76.8	<0.0034	<0.0034	<0.0034	<0.0103	<0.0034	1.9
MW-10-35	35	1/23/2012	<6.1	<19.0	<75.8	<0.0030	<0.0030	<0.0030	<0.0089	<0.0030	2.7
SB-1-15	15	1/23/2012	**555**	<17.3	<69.2	0.0057	0.0092	0.488	0.135	<0.0027	5.3
SB-1-15[D]	15	1/23/2012	**1,220**	<17.4	<69.5	<0.0024	<0.0024	0.887	0.0432	<0.0024	2.4
SB-1-25	25	1/23/2012	<6.4	<19.3	<77.1	<0.0031	<0.0031	<0.0031	<0.0093	<0.0031	1.6
SB-1-35	35	1/23/2012	<6.7	<19.6	<78.2	<0.0033	<0.0033	<0.0033	<0.0098	<0.0033	2.2
SB-1-40	40	1/23/2012	<6.4	<19.4	<77.7	<0.0031	<0.0031	<0.0031	<0.0094	<0.0031	2.2
SB-2-20	20	1/24/2012	**1,500**	<18.1	<72.2	<0.0034	<0.0034	0.848	0.0178	<0.0034	2.9
SB-2-35	35	1/24/2012	<6.5	<19.0	<75.8	<0.0030	<0.0030	<0.0030	<0.0090	<0.0030	2.7
SB-3-5	5	1/23/2012	**392**	**2,710**	**9,400**	0.0088	<0.0035	0.0071	<0.0106	<0.0035	11.4
SB-3-10	10	1/24/2012	**111**	68.4	330	<0.0031	<0.0031	<0.0031	<0.0093	<0.0031	11.4
SB-3-20	20	1/24/2012	**4,390**	102	<68.4	**0.0956**	5.140	**13.2**	**50.8**	<0.0558	4.4
SB-3-50	50	1/24/2012	<6.6	<19.5	<77.8	**0.589**	<0.0035	0.0368	0.0105	<0.0035	4.4
SB-4-15'	15	1/25/2012	**109**	<17.0	<68.2	<0.0031	<0.0031	<0.0031	<0.0092	<0.0031	3.0
SB-4-20'	20	1/25/2012	5.7	<16.8	<67.1	<0.0029	<0.0029	<0.0029	<0.0086	<0.0029	2.5
SB-4-35'	35	1/25/2012	<6.5	<19.6	<78.4	<0.0029	<0.0029	<0.0029	<0.0087	<0.0029	4.5
EW-1-15'	15	1/25/2012	**2,160**	59.9	<70.8	**0.177**	0.530	**9.150**	**11.500**	<0.0598	3.9
EW-1-25'	25	1/26/2012	**3,270**	123	<71.7	**2.540**	**12.700**	**10.500**	**51.800**	<2.660	6.7
EW-1-30'	30	1/26/2012	**97.6**	<18.8	<75.4	**0.259**	0.0942	0.0849	1.850	<0.0031	3.2
EW-2-10'	10	1/26/2012	**38.1**	<19.6	<78.4	0.0042	0.0054	0.0055	0.0310	<0.0030	8.3
EW-2-15'	15	1/26/2012	**2,270**	25.5	<73.9	**0.129**	0.0142	2.010	0.103	<0.0027	5.1

Table 3
Soil Analytical Results
WA-11060

4580 Fauntleroy Way Southwest, Seattle, WA 98126

All analytical results are presented in milligrams per kilogram (mg/kg)

Sample ID	Depth	Date	TPH-GRO	TPH-DRO	TPH-HO	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Pb
MTCA Method A Cleanup Levels			**30/100**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**	**0.1**	**250**
EW-2-30'	30	1/26/2012	9.8	<19.0	<76.0	0.0050	<0.0027	<0.0027	<0.0081	<0.0027	3.3
EW-3-15'	15	1/25/2012	**30.1**	<19.0	<75.9	<0.0035	<0.0035	<0.0035	<0.0105	<0.0035	6.6
EW-3-20'	20	1/25/2012	**621**	29.7	<64.5	**0.0690**	0.0923	0.232	0.699	<0.0031	2.9
EW-3-20'[D]	20	1/25/2012	**443**	30.5	<65.9	**0.0317**	0.0658	0.215	0.682	<0.0028	2.7
EW-3-30'	30	1/25/2012	<6.8	<18.7	<74.8	0.0201	0.0101	0.0113	0.0360	<0.0031	3.2

MTCA = Model Toxics Control Act
mg/kg = Milligrams per kilogram
< = Less than laboratory reporting limits
Sample Depth = Feet below ground surface
TPH-GRO = Total Petroleum Hydrocarbons as Gasoline by Northwest Method NWTPH-Gx
TPH-DRO = Total Petroleum Hydrocarbons as Diesel by Northwest Method NWTPH-Dx
TPH-HO = Total Petroleum Hydrocarbons as Heavy Oil by Northwest Method NWTPH-Dx
Benzene = Benzene by Environmental Protection Agency (EPA) Method 8260
Toluene = Toluene by Environmental Protection Agency (EPA) Method 8260
Ethylbenzene = Ethylbenzene by Environmental Protection Agency (EPA) Method 8260
Xylenes = Total xylenes by Environmental Protection Agency (EPA) Method 8260
Pb = Total Lead by EPA Method 6010
BOLD = Above MTCA Method A Cleanup Levels
[D] = Duplicate samples listed as DUP-1 and DUP-2 in the laboratory analytical reports. See Appendix A.
-- = Not analyzed

Table 4
Polynuclear Aromatic Hydrocarbon Soil Sample Analytical Results
WA-11060
4680 Fauntleroy Way Southwest, Seattle, WA 98126

All analytical results are presented in milligrams per kilogram (mg/kg)

Sample ID	Depth (feet)	Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) Anthracene	Benzo(a)Pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) Perylene	Benzo(k) Fluoranthene	Chrysene	Dibenzo(a,h) Anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd) Pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Total Adjusted cPAHs
Model Toxics Control Act (MTCA) Method A Cleanup Levels			**ND**	**ND**	**ND**	**ND**	**0.1**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**5**	**ND**	**ND**	**0.1**
SB-3-5	5	1/23/2012	<0.0089	<0.0089	0.0099	<0.0889	<0.0889	<0.0889	0.113	<0.0889	<0.0889	<0.0889	<0.0889	<0.0089	<0.0889	0.0156	0.0376	0.0404	0.0208	0.106	0.0671
SB-3-10	10	1/24/2012	0.618	0.0514	1.290	4.590	**7.160**	5.990	4.820	3.340	5.210	0.978	6.080	0.690	4.630	0.121	0.147	0.188	5.730	7.770	**9.165**
EW-1-25'	25	1/26/2012	0.0079	0.0079	0.0079	0.0079	0.0079	0.0079	0.0079	0.0079	0.0079	0.0079	0.0079	0.0079	0.0079	0.878	2.020	4.920	0.0079	0.0079	0.0596

Notes:

Bold and shaded cells represent concentrations greater than MTCA Method A Cleanup Levels

NA = Not analyzed

< = Not detected greater than laboratory detection limit. Value listed is laboratory detection limit.

Depths are listed in feet below ground surface

Analytical Method = EPA Method 8270 SIM

ND = Not determined.

cPAHs adjusted for toxicity according to WAC 173-340-708(8) and *Air Toxics Hot Spots Program Risk Assessment Guidelines, Part II Technical Support Document for Describing Available Cancer Potency Factors*. Office of Environmental Health Hazard Assessment, California EPA, May 2005. If one or more adjusted cPAH constituents were reported as Non-Detect, half of the reporting limit was used in calculations.

Table 5
Extractable and Volatile Petroleum Hydrocarbon Soil Sample Analytical Results
WA-11060
4680 Fauntleroy Way Southwest, Seattle, WA 98126

All analytical results are presented in milligrams per kilogram (mg/kg)

Sample ID	Depth (feet)	Date	Ali. (C8-C10)	Ali. (C10-C12)	Ali. (C12-C16)	Ali. (C16-C21)	Ali. (C21-C34)	Aro. (C8-C10)	Aro. (C10-C12)	Aro. (C12-C16)	Aro. (C16-C21)	Aro. (C21-C34)	Ali. (C5-C6)	Ali. (C6-C8)	Ali. (C8-C10)	Ali. (C10-C12)	Aro. (C8-C10)	Aro. (C10-C12)	Aro. (C12-C13)
			Extractable Petroleum Hydrocarbons										Volatile Petroleum Hydrocarbons						
EW-3-25'	25	1/26/2012	<4.85	<4.85	<4.85	<4.85	<4.85	<4.85	<4.85	<4.85	<4.85	<4.85	<0.342	0.962	10.2	8.13	10.1	17.4	3.33

Notes:

All analytical results are in milligrams per kilogram (mg/kg)

< = Not detected greater than laboratory detection limit. Value listed is laboratory detection limit.

Depths are listed in feet below ground surface

Analytical Methods = Northwest Method Extractable Petroleum Hydrocarbons and Northwest Method Volatile Petroleum Hydrocarbons

Ali. = Aliphatic Hydrocarbon

Aro. = Aromatic Hydrocarbon

Table 6
Field Data Summary - MPE Event 1
WA-11060

4580 Fauntleroy Way Southwest, Seattle, WA 98126

Job Name: ARCO 11060	Date: 4/12/2012	Time: 8:00-17:30
Job Number: GP09BPNAWA48.C0000	Field Personnel : Seamas McGuire	PM: Scott Zorn
Extraction Well **EW-1-, EW-2, EW-3**	Weather Conditions: Sunny, 60 degrees F	Engineer/Task Manager: Sam Miles

Well name →				**VE-1**				**MW-5**				**EW-1**				**EW-2**				**EW-3**				
Time	**Time Elapsed (h)**	**Applied Vacuum (in Hg)**	**Flow rate (scfm)**	**VOC Conc. (ppmv)**	**Meas. Vac. (in wc)**	**DTP (feet btoc)**	**DTW (feet btoc)**	**VOC Conc. (ppmv)**	**Meas. Vac. (in wc)**	**DTP (feet btoc)**	**DTW (feet btoc)**	**VOC Conc. (ppmv)**	**Meas. Vac. (in wc)**	**DTP (feet btoc)**	**DTW (feet btoc)**	**VOC Conc. (ppmv)**	**Meas. Vac. (in wc)**	**DTP (feet btoc)**	**DTW (feet btoc)**	**VOC Conc. (ppmv)**	**Meas. Vac. (in wc)**	**DTP (feet btoc)**	**DTW (feet btoc)**	**Notes**
8:10	-1.8	-	-	543	-	24.60	24.70	909	-	-	24.91	374.9	-	24.50	25.20	>500	-	-	24.45	>800	-	25.05	25.06	
10:00	0	-	-	-	-	-	-	-	-	-	-	-				-				-				started at wells EW-1, EW-2, and EW-3
10:30	0.5	-	-	-	-	-	-	-	-	-	-	-				-				-				stopped due to elevated VOC concentrations in ambient
11:30	1.0	-	-	-	-	26.00	26.02	-	-	-	25.04	-				-				-				
12:00	1.5	-	-	-	-	26.16	26.18	-	-	-	25.12	-				-				-				
12:30	2.0	-	-	-	-	Dry	Dry	-	-	-	25.20	976.8				884.2				611.4				
13:00	2.5	-	-	-	-	Dry	Dry	-	-	-	25.29	-				-				-				
13:30	3.0	-	-	-	-	Dry	Dry	-	-	-	25.39	1074.8				861.9				599.9				
14:00	3.5	-	-	-	-	Dry	Dry	-	-	-	25.44	-				-				-				
14:30	4.0	-	-	-	-	Dry	Dry	-	-	-	25.48	991.2				782.6				677.3				
15:00	4.5	-	-	-	-	Dry	Dry	-	-	-	25.49	-				-				-				
15:30	5.0	-	-	-	-	Dry	Dry	-	-	-	25.54	1043.3				921.5				641.0				
16:00	5.5	-	-	-	-	Dry	Dry	-	-	-	25.56	-				-				-				
16:30	6.0	-	-	-	-	Dry	Dry	-	-	-	25.57	1009.4				984.4				637.5				
16:45	6.3	-	-	-	-	Dry	Dry	-	-	-	25.57	-	-	27.30	27.31	-	-	-	27.50	-	-	-	28.43	
17:00	6.5	-	-	-	-	Dry	Dry	-	-	-	25.57	-	-	27.12	27.13	-	-	-	27.40	-	-	-	28.40	
17:15	6.8	-	-	-	-	Dry	Dry	-	-	-	25.45	-	-	27.12	27.13	-	-	-	27.32	-	-	-	28.19	
17:30	6.5	-	-	-	-	Dry	Dry	-	-	-	25.42	-	-	26.95	26.97	-	-	-	27.25	-	-	-	28.19	

Vac applied at EW-1. Stinger set at 27.5 ft btoc

Vac applied at EW-2. Stinger set at 28.5 ft btoc

Vac applied at EW-3. Stinger set at 27.5 ft btoc

Vac resumed at 11:00

Comments/Notes:

Total Volume collected during event: 330 gallons NAPL-Water Mixture
EW-1, EW-2, and EW-3 were under vacuum simultaneously
Dry - All water was removed from well due to vacuum
Multi-Phase Extraction took place at various wells: see notes column at right
VOC Conc. = Volatile Organic Compounds screened using photoionization detector
Meas. Vac = Measured vacuum at wellhead using manometer

Vac. = vacuum at wellhead
h = hours
in wc = inches water column
- = not measured
btoc = below top of casing
in Hg = inches mercury

NAPL = Non-Aqueous Phase Liquid
DTP = Depth to Product
DTW = Depth to Water
ppmv = Parts per million by volume
scfm = Standard cubic feet per minute

Table 7
Field Data Summary - MPE Event 2
WA-11060

4580 Fauntleroy Way Southwest, Seattle, WA 98126

Job Name:	ARCO 11060	Date: 5/9/2012	Time: 8:15-16:00
Job Number:	GP09BPNA.WA48.C0000	Field Personnel: Seamas McGuire	PM: Scott Zorn
Extraction Well	**EW-1, EW-2, EW-3**	Weather Conditions: Cloudy, rain	Engineer/Task Manager Sam Miles

Well name →				**VE-1**				**MW-5**				**EW-1**				**EW-2**				**EW-3**				
Time	**Time Elapsed (h)**	**Applied Vacuum (in Hg)**	**Flow Rate (scfm)**	**VOC Conc. (ppmv)**	**Meas. Vac. (in wc)**	**DTP (feet btoc)**	**DTW (feet btoc)**	**VOC Conc. (ppmv)**	**Meas. Vac. (in wc)**	**DTP (feet btoc)**	**DTW (feet btoc)**	**VOC Conc. (ppmv)**	**Meas. Vac. (in wc)**	**DTP (feet btoc)**	**DTW (feet btoc)**	**VOC Conc. (ppmv)**	**Meas. Vac. (in wc)**	**DTP (feet btoc)**	**DTW (feet btoc)**	**VOC Conc. (ppmv)**	**Meas. Vac. (in wc)**	**DTP (feet btoc)**	**DTW (feet btoc)**	**Notes**
8:15	-0.75	-	-	>171	-	24.47	24.74	>387	-	-	24.80	>482	-	24.55	24.62	>147	-	-	24.33	>597	-	-	24.91	
9:00	0.00	-	-	-	-	-	-	-	-	-	-	-	Vac applied at EW-1. Stinger set at 27.5 ft btoc			-	Vac applied at EW-2. Stinger set at 28.5 ft btoc			-	Vac applied at EW-3. Stinger set at 27.5 ft btoc			Vac started at 9:00
9:50	0.83	-	-	-	-	26.11	26.45	-	-	-	24.93	-				-				-				
10:30	1.50	-	-	-	-	Dry	Dry	-	-	-	25.04	15.5				12.6				48.7				
11:00	2.00	-	-	-	-	Dry	Dry	-	-	-	25.18	-				-				-				
11:30	2.50	-	-	-	-	Dry	Dry	-	-	-	25.23	-				-				-				
12:00	3.00	-	-	-	-	Dry	Dry	-	-	-	25.33	>840				364				>802				
12:30	3.50	-	-	-	-	Dry	Dry	-	-	-	25.39	>899				472				>874				
13:00	4.00	-	-	-	-	Dry	Dry	-	-	-	25.43	578				396				>847				
13:30	4.50	-	-	-	-	Dry	Dry	-	-	-	25.46	372				396				743				
14:00	5.00	-	-	-	-	Dry	Dry	-	-	-	25.49	535				388				617				
14:30	5.50	-	-	-	-	Dry	Dry	-	-	-	25.53	587				344				422				
15:00	6.00	-	-	-	-	Dry	Dry	-	-	-	25.55	468				382				698				
15:30	6.50	-	-	-	-	Dry	Dry	-	-	-	25.50	-	-	-	27.99	-	-	-	27.77	-	-	-	29.72	
15:45	6.75	-	-	-	-	Dry	Dry	-	-	-	25.46	-	-	27.93	27.94	-	-	-	27.77	-	-	-	29.65	
16:00	7.00	-	-	-	-	-	27.71	-	-	-	25.42	-	-	27.67	27.68	-	-	-	-	-	-	-	29.43	

Comments/Notes:

Total Volume collected during event: 598 gallons: 408 gallons of water, 190 gallons of NAPL
EW-1, EW-2, and EW-3 were under vacuum simultaneously
Dry - All water was removed from well due to vacuum
Multi-Phase Extraction took place at various wells: see notes column at right
VOC Conc. = Volatile Organic Compounds screened using photoionization detector
Meas. Vac = Measured vacuum at wellhead using manometer

Vac. = vacuum at wellhead
h = hours
in wc = inches water column
- = not measured
btoc = below top of casing
in Hg = inches mercury

NAPL = Non-Aqueous Phase Liquid
DTP = Depth to Product
DTW = Depth to Water
ppmv = Parts per million by volume
scfm = Standard cubic feet per minute

Table 8
Field Data Summary - MPE Event 3
Former BP 11060

4580 Fauntleroy Way Southwest, Seattle, WA 98126

Job Name:	ARCO 11060	Date: 8/10/2012	Time: 8:10-16:10
Job Number:	GP09BPNA.WA48.C0000	Field Personnel: Seamas McGuire	PM: Scott Zorn
Extraction Wells	**EW-1, EW-2, VE-1, MW-4**	Weather Conditions Sunny, 80 degrees F	Engineer/Task Manager: Sam Miles

Well name →				**VE-1**				**MW-3**				**MW-4**				**MW-5**				**EW-1**				**EW-2**				**EW-3**				**NOTES**
Time	**Time Elapsed (h)**	**Applied Vacuum (in Hg)**	**Flow Rate (scfm)**	**VOC Conc. (ppmv)**	**Meas. Vac. (in wc)**	**DTP (feet btoc)**	**DTW (feet btoc)**	**VOC Conc. (ppmv)**	**Meas. Vac. (in wc)**	**DTP (feet btoc)**	**DTW (feet btoc)**	**VOC Conc. (ppmv)**	**Meas. Vac. (in wc)**	**DTP (feet btoc)**	**DTW (feet btoc)**	**VOC Conc. (ppmv)**	**Meas. Vac. (in wc)**	**DTP (feet btoc)**	**DTW (feet btoc)**	**VOC Conc. (ppmv)**	**Meas. Vac. (in wc)**	**DTP (feet btoc)**	**DTW (feet btoc)**	**VOC Conc. (ppmv)**	**Meas. Vac. (in wc)**	**DTP (feet btoc)**	**DTW (feet btoc)**	**VOC Conc. (ppmv)**	**Meas. Vac. (in wc)**	**DTP (feet btoc)**	**DTW (feet btoc)**	
8:10	-1.00	-	-	135.1	-	-	24.39	791	-	-	24.70	424	-	23.07	23.08	-	-	-	-	389.1	-	-	24.55	441	-	-	24.33	879	-	-	24.95	
9:10	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Vac at EW-1. Stinger set at 27.5 ft btoc.			-	Vac at EW-2. Stinger set at 28.5 ft btoc.			-	-	-	-	9:10 to 9:50 vac on MW-4, EW-1, and EW-2. 10:10 to 12:10 vac on MW-4 only (MW-4 went dry)
9:50	0.67	19	1047	-	-	-	-	-	-	-	-	-	Vac at MW-4			-	-	-	-	-				-				-	-	-	-	
10:40	1.50	19	1047	-	-	Sheen	24.81	-	-	-	-	-				-	-	-	24.85	-	-	-	-	-	-	-	-	-	-	-	25.30	
11:10	2.00	19	1047	-	-	Sheen	24.82	-	-	-	-	-				-	-	-	24.85	-	-	-	-	-	-	-	-	-	-	-	25.31	
11:40	2.50	19	1047	-	-	Sheen	24.82	-	-	-	-	50.4				-	-	-	24.85	-	-	-	-	-	-	-	-	-	-	-	25.28	
12:40	3.50	19	1047	-	-	Sheen	25.00	-	-	-	-	-	-	-	25.33	-	-	-	24.78	-	Vac at EW-1. Stinger set at 27.5 ft btoc.			-	-	-	-	-	-	-	25.40	12:10 to 13:45 vac on EW-1 only
13:10	4.00	19	1047	-	-	Sheen	25.04	-	-	-	-	-	-	-	24.68	-	-	-	24.76	-				-	-	-	-	-	-	-	25.42	
13:40	4.50	19	1047	-	-	Sheen	25.04	-	-	-	-	-	-	Sheen	24.80	-	-	-	24.75	-				-	-	-	-	-	-	-	25.41	
14:10	5.00	19	1047	-	Vac at VE-1			-	-	-	-	-	Vac at MW-4			-	-	-	24.80	-	-	-	27.94	-	-	-	28.91	-	-	-	25.46	13:45 to 15:10 vac on VE-1 and MW-4 at same time
14:40	5.50	19	1047	-				-	-	-	-	-				-	-	-	24.80	-	-	-	27.72	-	-	-	25.00	-	-	-	25.50	
15:10	6.00	19	1047	-				-	-	-	-	-				-	-	-	24.80	-	-	-	27.22	-	-	-	25.04	-	-	-	25.50	
16:10	7.00	-	-	-	-	-	27.42	-	-	-	-	-	-	-	24.68	-	-	-	24.80	-	-	-	27.09	-	-	-	25.00	-	-	-	25.47	

Comments/Notes:

Total Volume collected during event: 55 gallons, including ~ 20 gallons of NAPL	Vac. =	vacuum at wellhead	NAPL =	Non-Aqueous Phase Liquid
EW-1, EW-2, and EW-3 were under vacuum simultaneously	h =	hours	DTP =	Depth to Product
Dry - All water was removed from well due to vacuum	in wc =	inches water column	DTW =	Depth to Water
Multi-Phase Extraction took place at various wells: see notes column at right	- =	not measured	ppmv =	Parts per million by volume
VOC Conc. = Volatile Organic Compounds screened using photoionization detector	btoc =	below top of casing	scfm =	Standard cubic feet per minute calculated using formula: where F = flow rate, r = radius of 2 in, v = velocity in feet per minute,
Meas. Vac = Measured vacuum at wellhead using manometer	in Hg =	inches mercury		$F = v^*\pi r2$

ARCADIS

Figures

N

0 200 400

SCALE IN FEET

REFERENCE: THIS FIGURE IS BASED IN AN IMAGE PROVIDED BY GOOGLE EARTH PRO

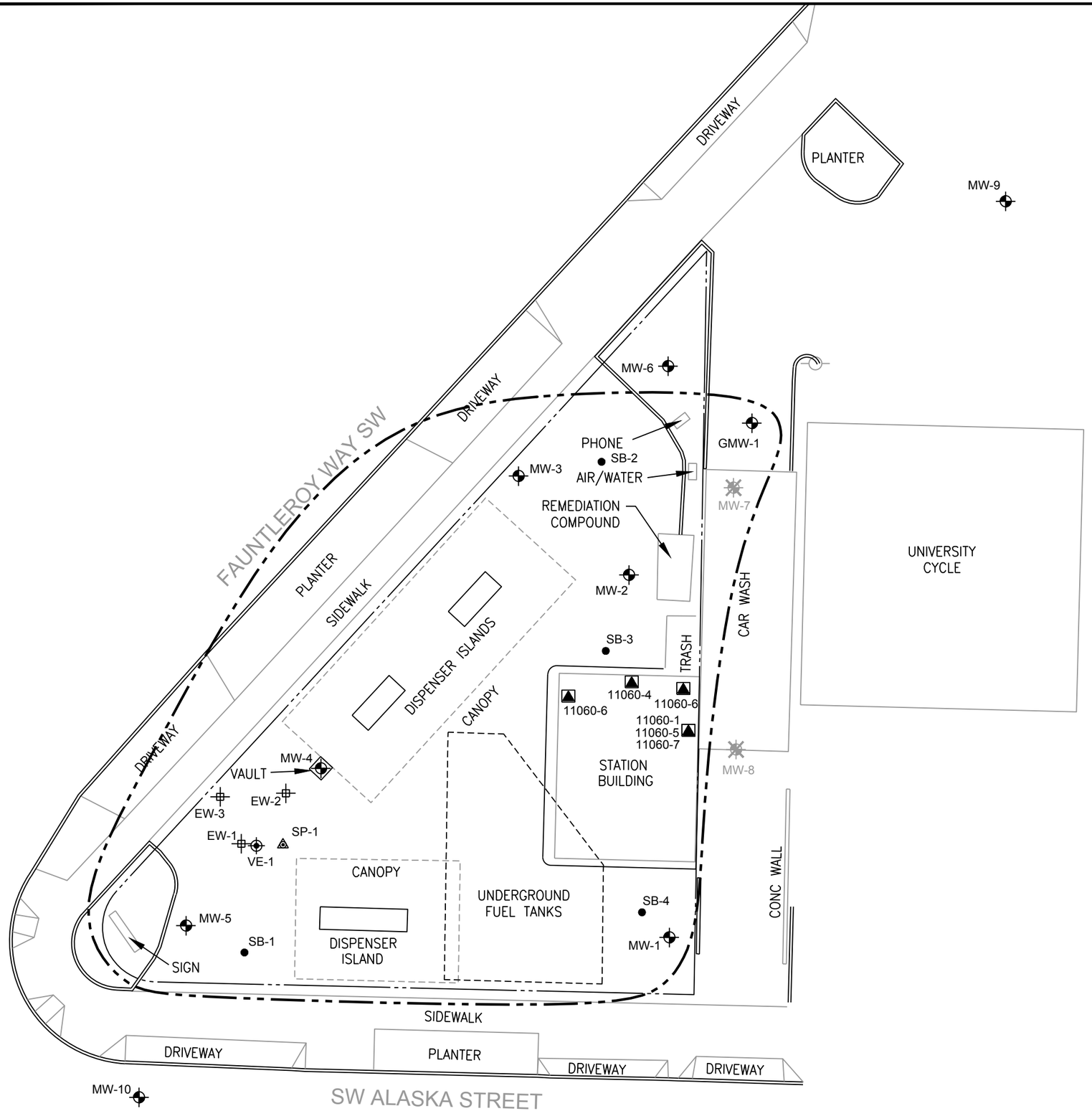
FORMER BP STATION NO. 11060
4580 FAUNTLEROY WAY SW
SEATTLE, WASHINGTON

ENHANCED LNAPL RECOVERY EVENT REPORT

SITE AERIAL PHOTO

ARCADIS

FIGURE
1



LEGEND

- APPROXIMATE PROPERTY LINE
- MW-2 — MONITORING WELL LOCATION
- MW-7 — ABANDONED MONITORING WELL LOCATION
- SP-1 — AIR SPARGING WELL LOCATION
- VE-1 — VAPOR EXTRACTION WELL LOCATION
- 11060-1 — PASSIVE VAPOR MONITORING LOCATION
- SB-1 — SOIL BORING
- EW-1 — EXTRACTION WELL
- INFERRED SITE BOUNDARY

0 20' 40'

GRAPHIC SCALE

FORMER BP STATION NO. 11060
4580 FAUNTLEROY WAY SW
SEATTLE, WASHINGTON

ENHANCED LNAPL RECOVERY EVENT REPORT

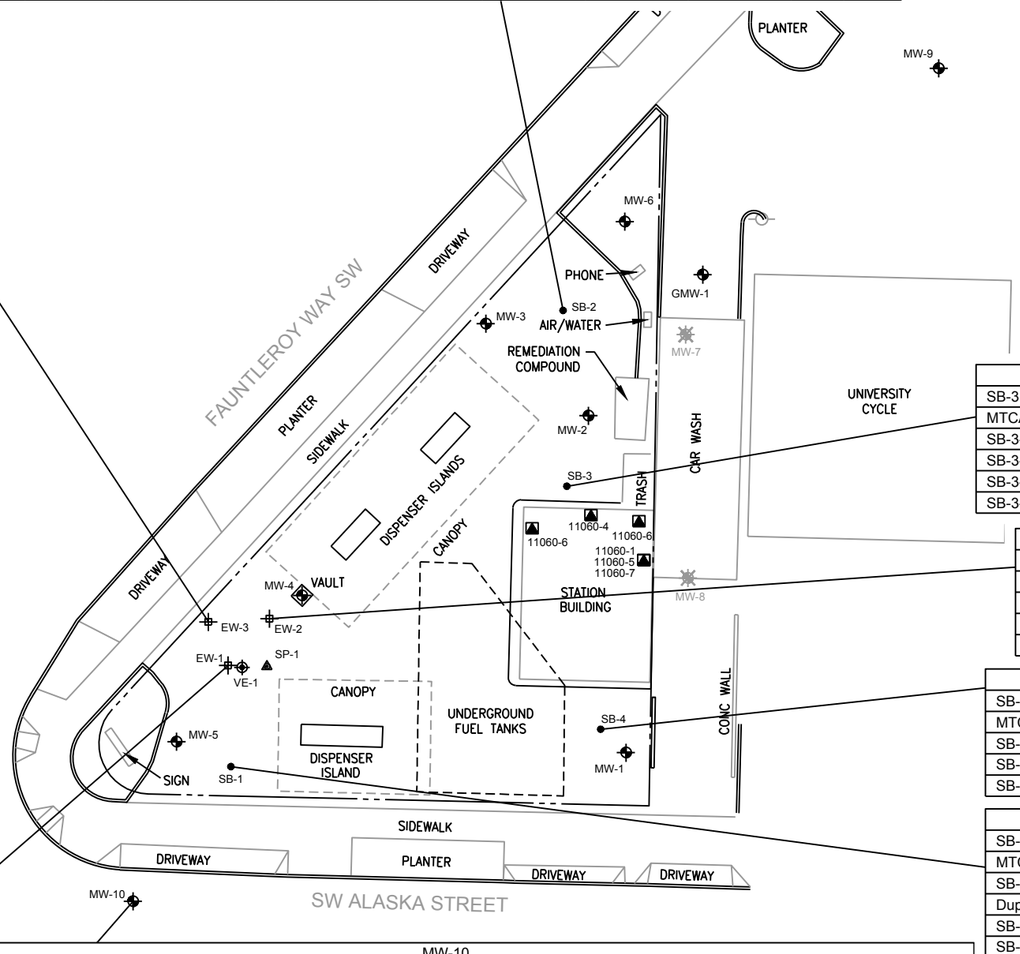
SITE PLAN

ARCADIS

FIGURE
2

EW-3											
EW-3	Date	GRO	DRO	HO	B	T	E	X	MTBE	T-Pb	cPAH
MTCA CUL		30/100	2,000	2,000	0.03	7	6	9	0.1	250	0.1
EW-3-15'	1/25/2012	30.1	ND < 19.0	ND < 75.9	ND < 0.0035	ND < 0.0035	ND < 0.0035	ND < 0.0105	ND < 0.0035	6.6	--
EW-3-20'	1/25/2012	**621**	29.7	ND < 64.5	**0.069**	0.0923	0.232	0.699	ND < 0.0031	2.9	--
Dup-2	1/25/2012	**443**	30.5	ND < 65.9	**0.0317**	0.0658	0.215	0.682	ND < 0.0028	2.7	--
EW-3-30'	1/25/2012	ND < 6.8	ND < 18.7	ND < 74.8	0.0201	0.0101	0.0113	0.036	ND < 0.0031	3.2	--

SB-2											
SB-2	Date	GRO	DRO	HO	B	T	E	X	MTBE	T-Pb	cPAH
MTCA CUL		30/100	2,000	2,000	0.03	7	6	9	0.1	250	0.1
SB-2-20'	1/24/2012	**1,500**	ND < 18.1	ND < 72.2	ND < 0.0034	ND < 0.0034	0.848	0.0178	ND < 0.0034	2.9	--
SB-2-35'	1/24/2012	ND < 6.5	ND < 19.0	ND < 75.8	ND < 0.0030	ND < 0.0030	ND < 0.0030	ND < 0.0090	ND < 0.0030	2.7	--



MW-10											
MW-10	Date	GRO	DRO	HO	B	T	E	X	MTBE	T-Pb	cPAH
MTCA CUL		30/100	2,000	2,000	0.03	7	6	9	0.1	250	0.1
MW-10-15'	1/23/2012	ND < 6.3	ND < 17.9	ND < 71.6	ND < 0.0034	ND < 0.0034	ND < 0.0034	ND < 0.0103	ND < 0.0034	1.9	--
MW-10-20'	1/23/2012	ND < 6.7	ND < 19.3	ND < 77.1	ND < 0.0044	ND < 0.0044	ND < 0.0044	ND < 0.0133	ND < 0.0044	2.4	--
MW-10-25'	1/23/2012	ND < 6.7	ND < 19.2	ND < 76.8	ND < 0.0034	ND < 0.0034	ND < 0.0034	ND < 0.0103	ND < 0.0034	1.9	--
MW-10-35'	1/23/2012	ND < 6.1	ND < 19.0	ND < 75.8	ND < 0.0030	ND < 0.0030	ND < 0.0030	ND < 0.0089	ND < 0.0030	2.7	--

EW-1											
EW-1	Date	GRO	DRO	HO	B	T	E	X	MTBE	T-Pb	cPAH
MTCA CUL		30/100	2,000	2,000	0.03	7	6	9	0.1	250	0.1
EW-1-15'	1/25/2012	**2,160**	59.9	ND < 70.8	**0.177**	0.53	**9.15**	**11.5**	ND < 0.0598	3.9	--
EW-1-25'	1/26/2012	**3,270**	123	ND < 71.7	**2.54**	**12.7**	**10.5**	**51.8**	ND < 2.66	6.7	0.0596
EW-1-30'	1/26/2012	**97.6**	ND < 18.8	ND < 75.4	**0.259**	0.0942	0.0849	1.85	ND < 0.0031	3.2	--

LEGEND

- APPROXIMATE PROPERTY LINE
- MW-2 MONITORING WELL LOCATION
- MW-7 ABANDONED MONITORING WELL LOCATION
- SP-1 AIR SPARGING WELL LOCATION
- VE-1 VAPOR EXTRACTION WELL LOCATION
- 11060-1 PASSIVE VAPOR MONITORING LOCATION
- SB-1 SOIL BORING
- EW-1 EXTRACTION WELL
- **BOLD** ABOVE MTCA (A) CULs
- MTCA CUL MODEL TOXICS CONTROL ACT CLEANUP LEVEL

LOCATION ID	
GRO	Gasoline Range Organics (mg/kg)
DRO	Diesel Range Organics (mg/kg)
HO	Heavy Oils (mg/kg)
B	Benzene (mg/kg)
T	Toluene (mg/kg)
E	Ethylbenzene (mg/kg)
X	Total Xylenes (mg/kg)
T-Pb	Total Lead (mg/kg)
MTBE	Methyl Tertiary Butyl Ether (mg/kg)
cPAh	Carcinogenic Polycyclic Aromatic Hydrocarbons (mg/kg)

SB-3											
SB-3	Date	GRO	DRO	HO	B	T	E	X	MTBE	T-Pb	cPAH
MTCA CUL		30/100	2,000	2,000	0.03	7	6	9	0.1	250	0.1
SB-3-5'	1/23/2012	**392**	**2,710**	**9,400**	0.0088	ND < 0.0035	0.0071	ND < 0.0106	ND < 0.0035	11.4	0.0671
SB-3-10'	1/24/2012	**111**	68.4	330	ND < 0.0031	ND < 0.0031	ND < 0.0031	ND < 0.0093	ND < 0.0031	11.4	**9.165**
SB-3-20'	1/24/2012	**4,390**	102	ND < 68.4	**0.0956**	5,140	**13.2**	**50.8**	ND < 0.0558	4.4	--
SB-3-50'	1/24/2012	ND < 6.6	ND < 19.5	ND < 77.8	**0.589**	ND < 0.0035	0.0368	ND < 0.0105	ND < 0.0035	4.4	--

EW-2											
EW-2	Date	GRO	DRO	HO	B	T	E	X	MTBE	T-Pb	cPAH
MTCA CUL		30/100	2,000	2,000	0.03	7	6	9	0.1	250	0.1
EW-2-10'	1/26/2012	**38.1**	ND < 19.6	ND < 78.4	0.0042	0.0054	0.0055	0.031	ND < 0.0030	8.3	--
EW-2-15'	1/26/2012	**2,270**	25.5	ND < 73.9	**0.129**	0.0142	2.01	0.103	ND < 0.0027	5.1	--
EW-2-30'	1/26/2012	9.8	ND < 19.0	ND < 76.0	0.005	ND < 0.0027	ND < 0.0027	ND < 0.0081	ND <0.0027	3.3	--

SB-4											
SB-4	Date	GRO	DRO	HO	B	T	E	X	MTBE	T-Pb	cPAH
MTCA CUL		30/100	2,000	2,000	0.03	7	6	9	0.1	250	0.1
SB-4-15'	1/25/2012	**109**	ND < 17.0	ND < 68.2	ND < 0.0031	ND < 0.0031	ND < 0.0031	ND < 0.0092	ND < 0.0031	3.0	--
SB-4-20'	1/25/2012	5.7	ND < 16.8	ND < 67.1	ND < 0.0029	ND < 0.0029	ND < 0.0029	ND < 0.0086	ND < 0.0029	2.5	--
SB-4-35'	1/25/2012	ND < 6.5	ND < 19.6	ND < 78.4	ND < 0.0035	ND < 0.0035	ND < 0.0035	ND < 0.0105	ND < 0.0035	1.2	--

SB-1											
SB-1	Date	GRO	DRO	HO	B	T	E	X	MTBE	T-Pb	cPAH
MTCA CUL		30/100	2,000	2,000	0.03	7	6	9	0.1	250	0.1
SB-1-15'	1/23/2012	**555**	ND < 17.3	ND < 69.2	0.0057	0.0092	0.488	0.135	ND < 0.0027	5.3	--
Dup-1	1/23/2012	**1,220**	ND < 17.4	ND < 69.5	ND < 0.0024	ND < 0.0024	0.887	0.0432	ND < 0.0024	2.4	--
SB-1-25'	1/23/2012	ND < 6.4	ND < 19.3	ND < 77.1	ND < 0.0031	ND < 0.0031	ND < 0.0031	ND < 0.0093	ND < 0.0031	1.6	--
SB-1-35'	1/23/2012	ND < 6.7	ND < 19.6	ND < 78.2	ND < 0.0033	ND < 0.0033	ND < 0.0033	ND < 0.0098	ND < 0.0033	2.2	--
SB-1-40'	1/23/2012	ND < 6.4	ND < 19.4	ND < 77.7	ND < 0.0031	ND < 0.0031	ND < 0.0031	ND < 0.0094	ND < 0.0031	2.2	--

0 30' 60'

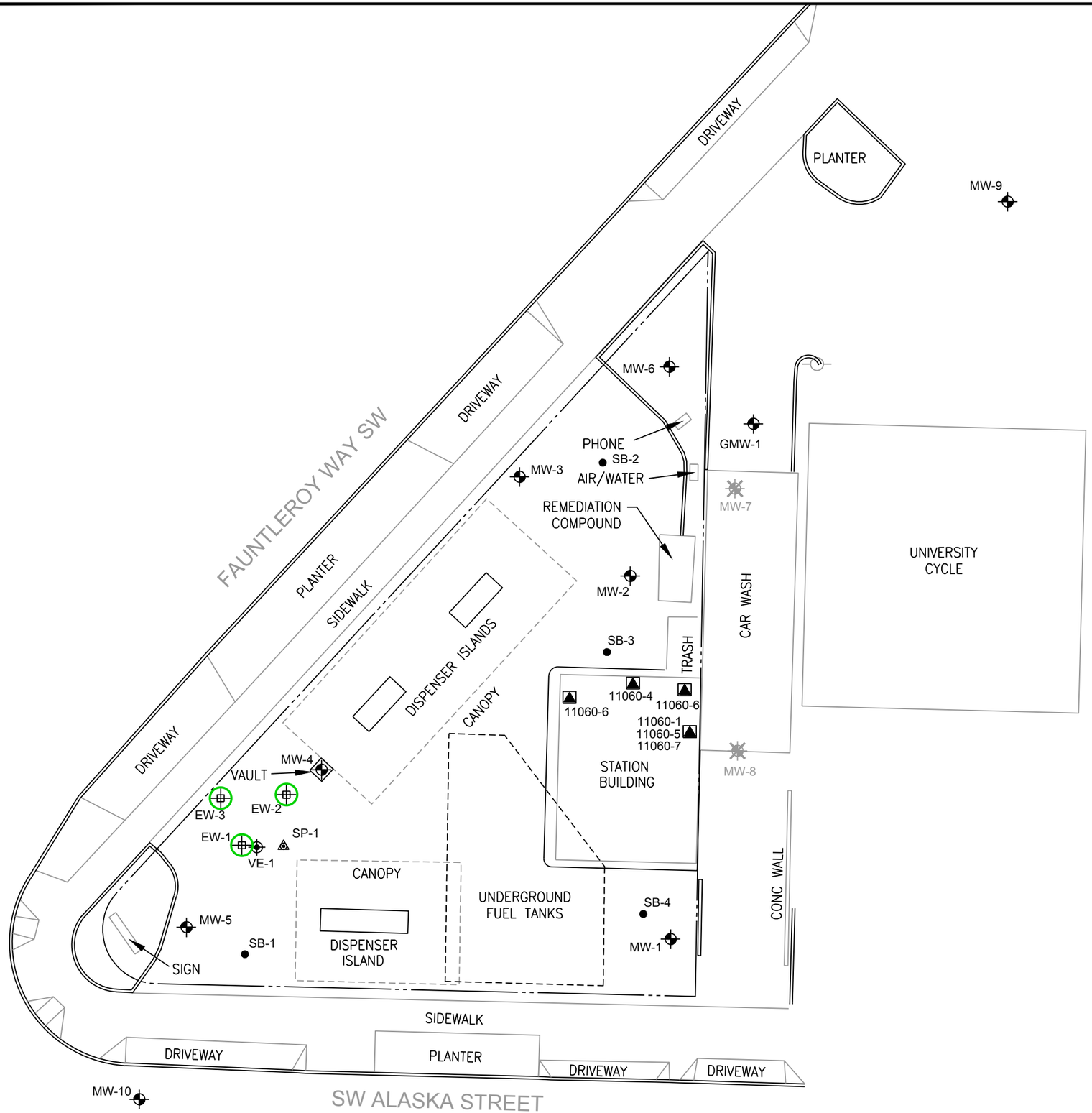
GRAPHIC SCALE

FORMER BP STATION NO. 11060
4580 FAUNTLEROY WAY SW
SEATTLE, WASHINGTON
ENHANCED LNAPL RECOVERY EVENT REPORT

SOIL ASSESSMENT MAP
JANUARY 2012

ARCADIS

FIGURE
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
- SB-1 — SOIL BORING
- EW-1 — EXTRACTION WELL
- EXTRACTION LOCATION

0 20' 40'

GRAPHIC SCALE

FORMER BP STATION NO. 11060
4580 FAUNTLEROY WAY SW
SEATTLE, WASHINGTON
ENHANCED LNAPL RECOVERY EVENT REPORT

SITE PLAN WITH EXTRACTION LOCATIONS APRIL AND MAY 2012

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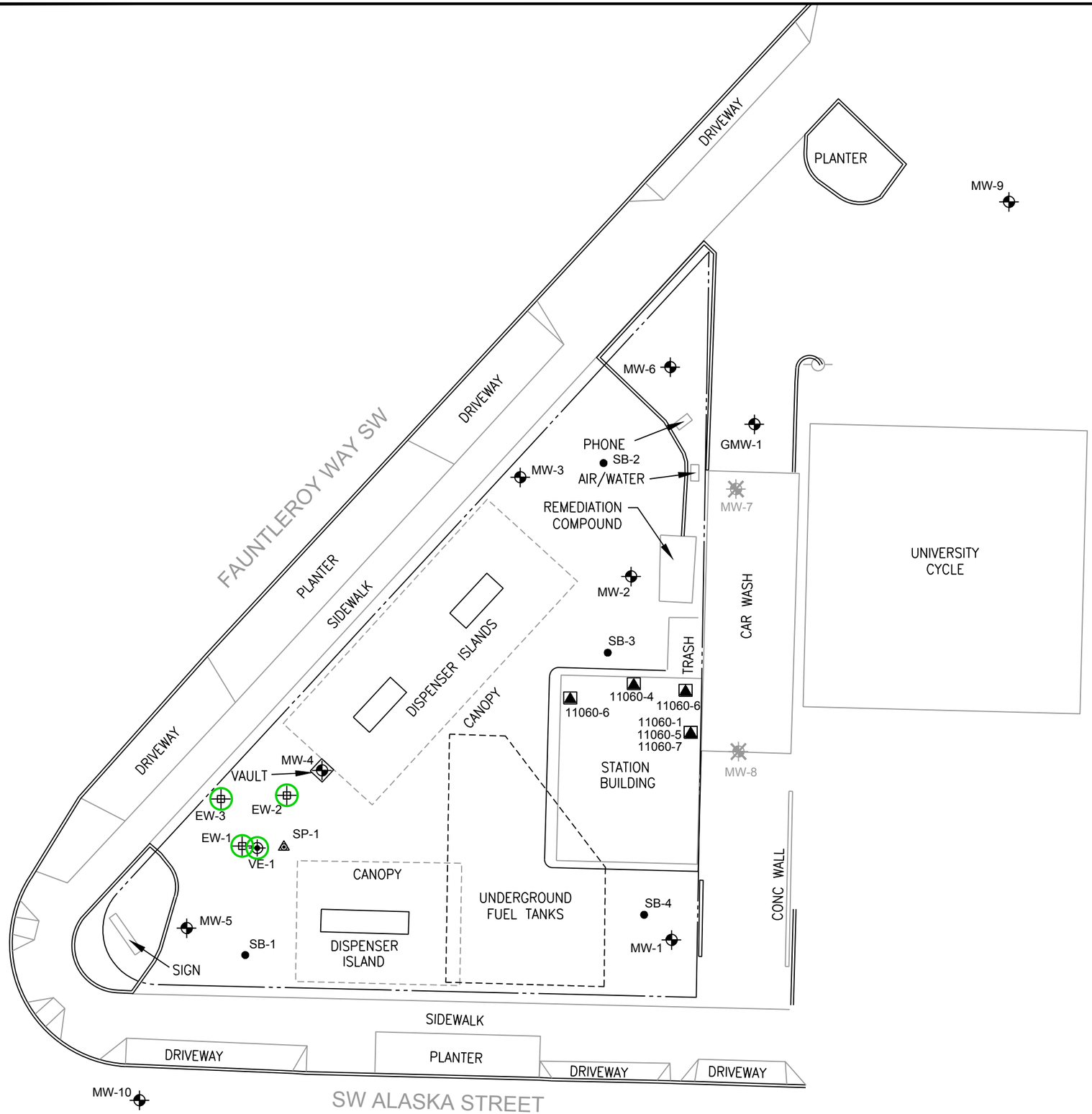
FIGURE 4



LEGEND

- APPROXIMATE PROPERTY LINE
- MW-2 — MONITORING WELL LOCATION
- MW-7 — ABANDONED MONITORING WELL LOCATION
- SP-1 — AIR SPARGING WELL LOCATION
- VE-1 — VAPOR EXTRACTION WELL LOCATION
- 11060-1 — PASSIVE VAPOR MONITORING LOCATION
- SB-1 — SOIL BORING
- EW-1 — EXTRACTION WELL
- EXTRACTION LOCATION

0 20’ 40’

GRAPHIC SCALE

FORMER BP STATION NO. 11060
4580 FAUNTLEROY WAY SW
SEATTLE, WASHINGTON
ENHANCED LNAPL RECOVERY EVENT REPORT

SITE PLAN WITH EXTRACTION LOCATIONS AUGUST 2012

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FIGURE 5

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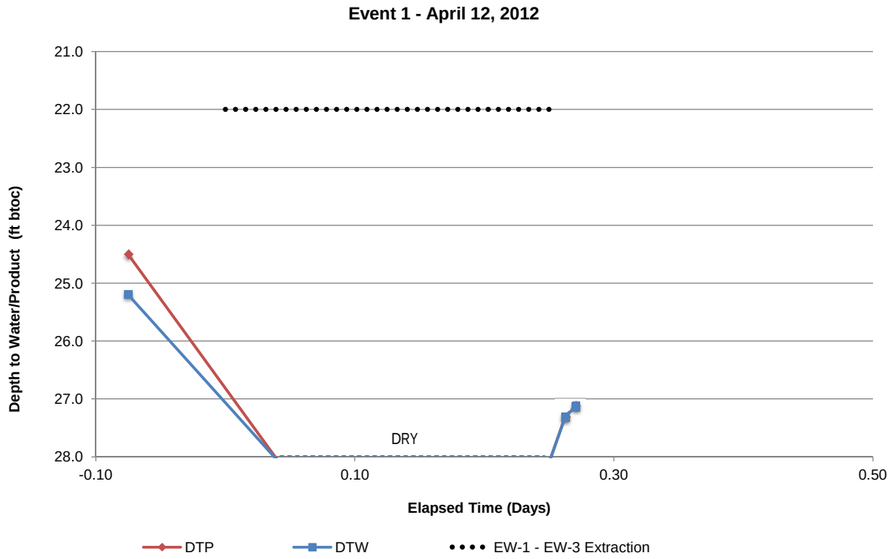
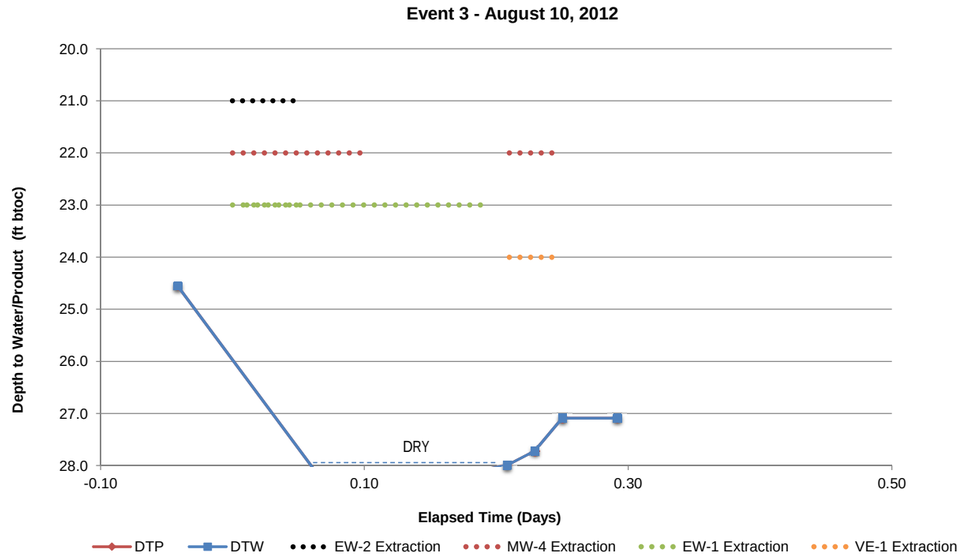
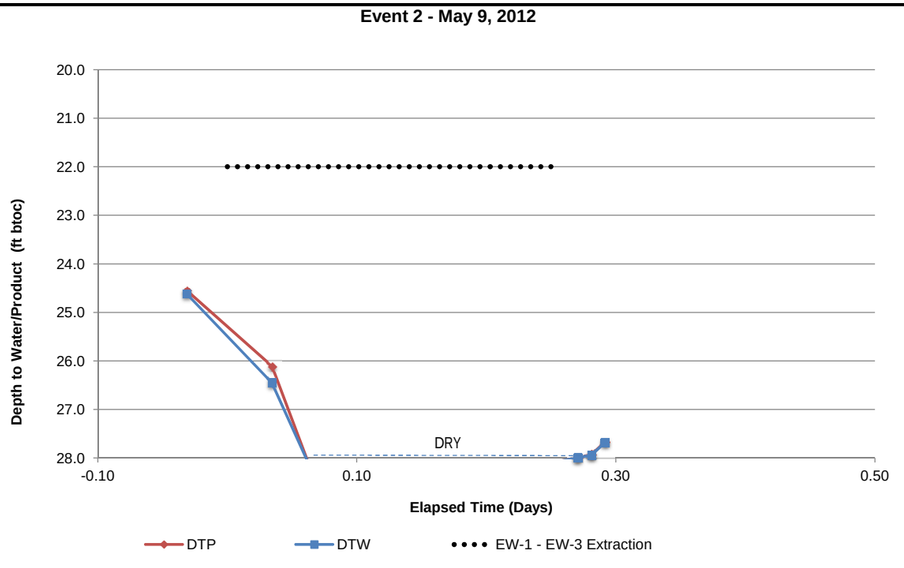
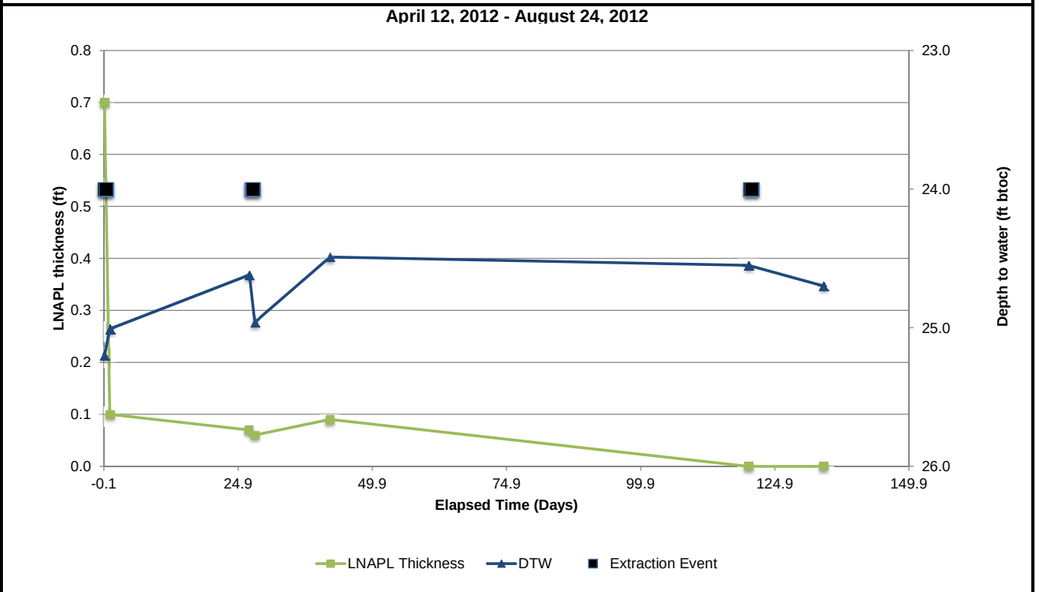
Graphs









EXPLANATION
ft = feet
btoc = below top of casing
DTP = depth to product
DTW = depth to water
LNAPL = light non-aqueous phase liquid

WA-11060
4580 Fauntleroy Way Southwest
Seattle, Washington 98126

Groundwater Elevation and LNAPL Thickness - EW-1

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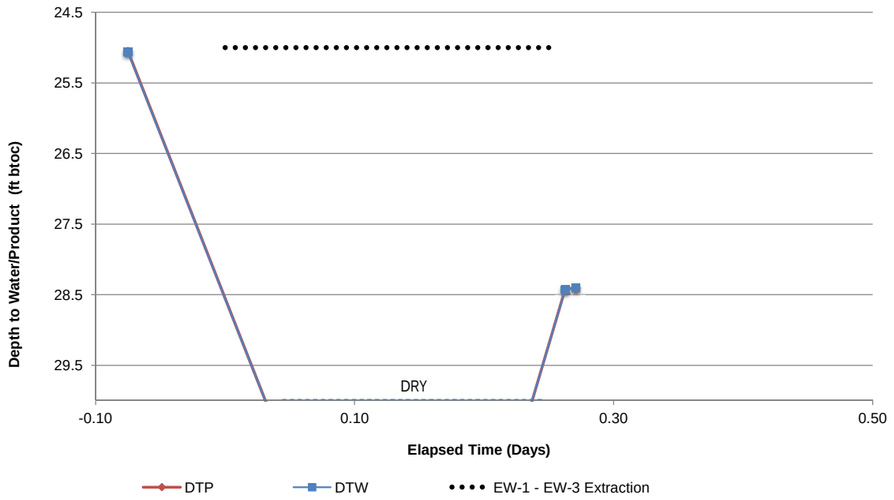
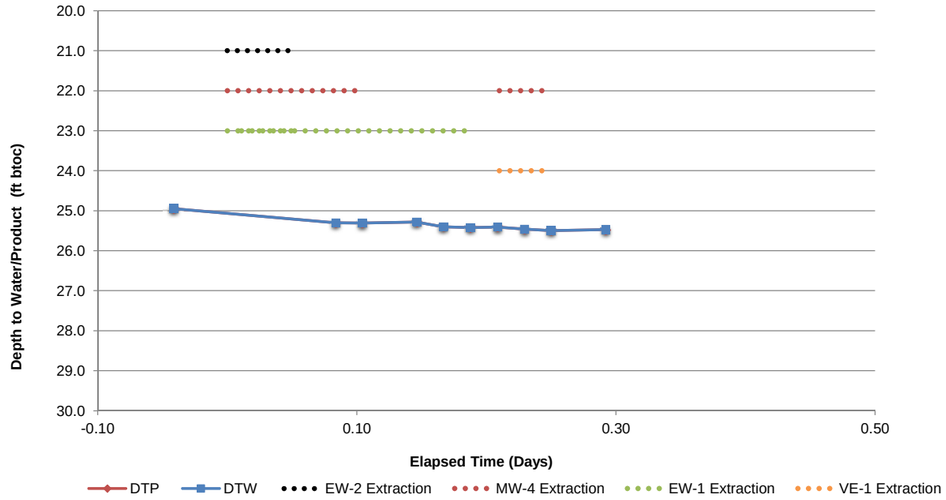
GRAPH
1

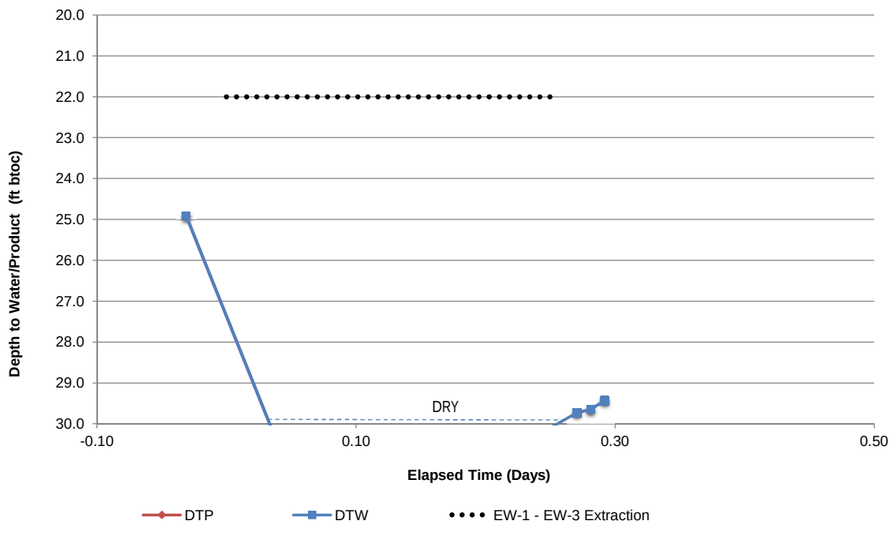
Event 1 - April 12, 2012



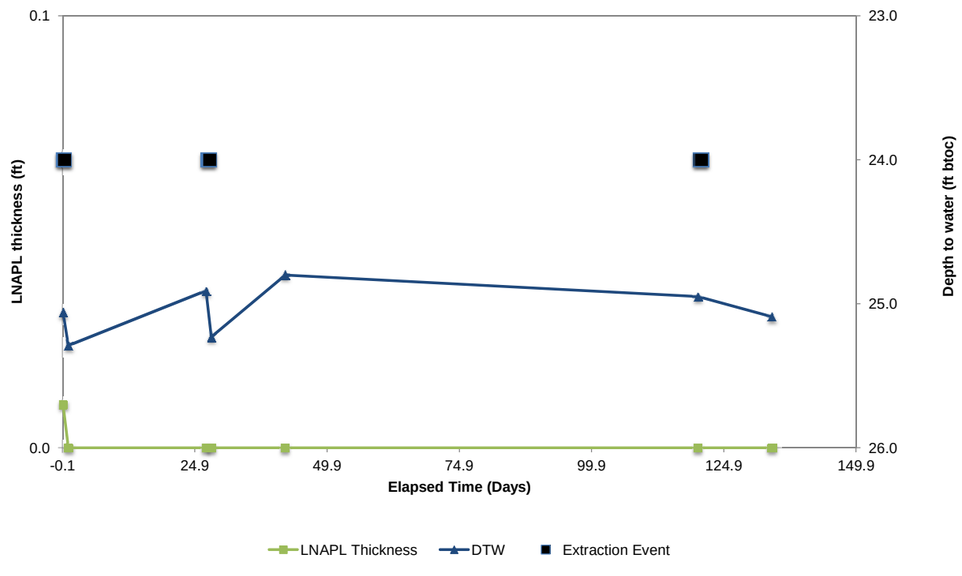
Event 3 - August 10, 2012



Event 2 - May 9, 2012



April 12, 2012 - August 24, 2012



EXPLANATION
ft = feet
btoc = below top of casing
DTP = depth to product
DTW = depth to water
LNAPL = light non-aqueous phase liquid

WA-11060
4580 Fauntleroy Way Southwest
Seattle, Washington 98126

Groundwater Elevation and LNAPL Thickness - EW-3

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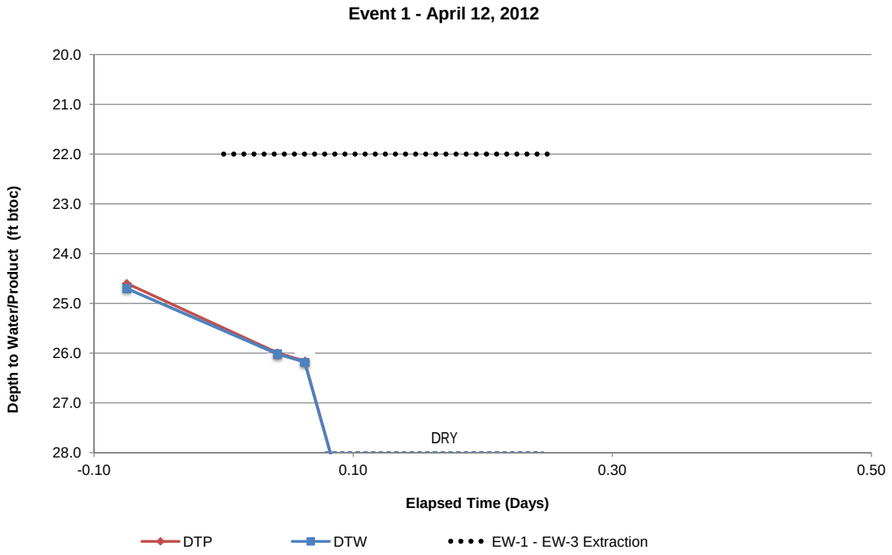
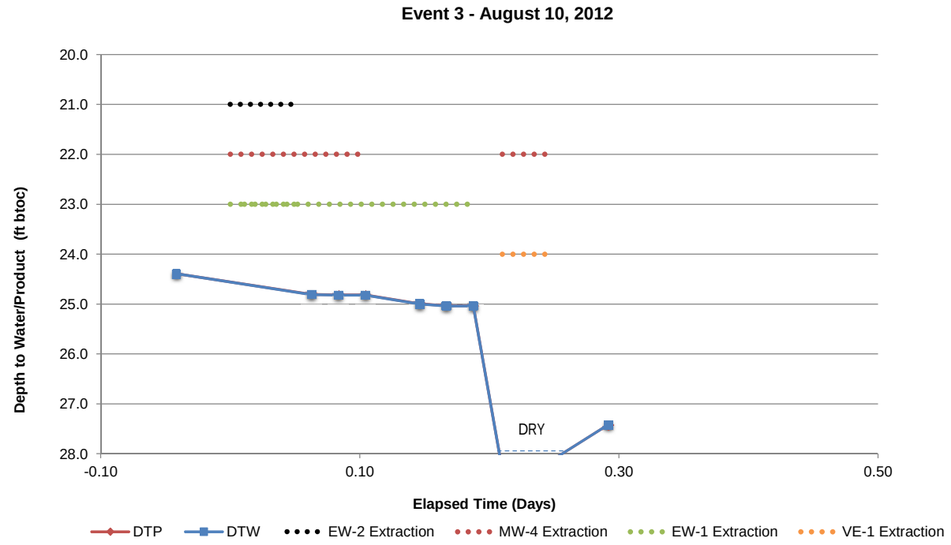
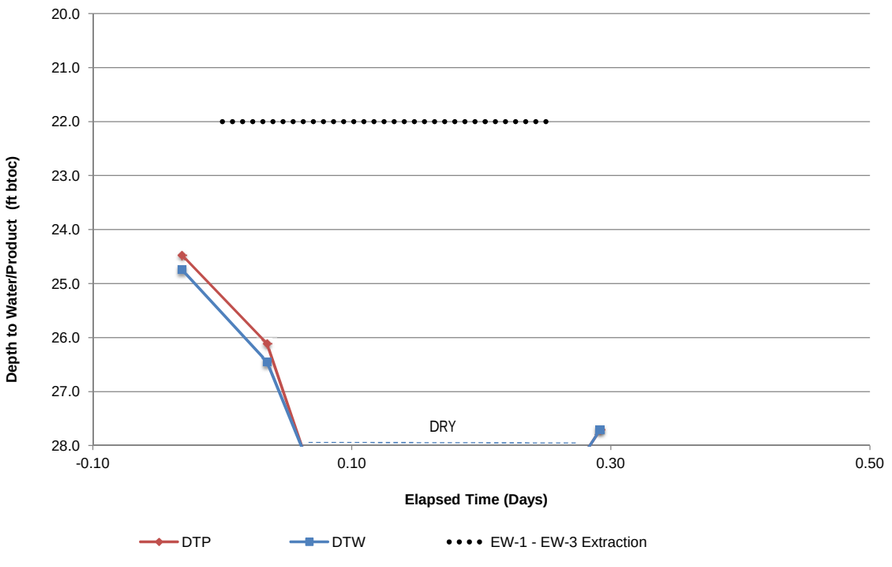
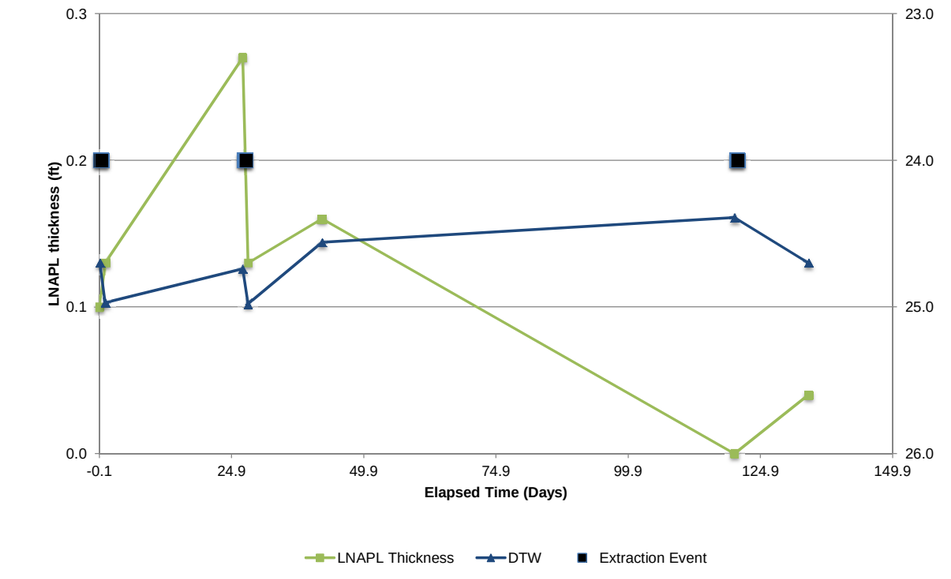
GRAPH
2









EXPLANATION
ft = feet
btoc = below top of casing
DTP = depth to product
DTW = depth to water
LNAPL = light non-aqueous phase liquid

WA-11060
4580 Fauntleroy Way Southwest
Seattle, Washington 98126

Groundwater Elevation and LNAPL Thickness - VE-1

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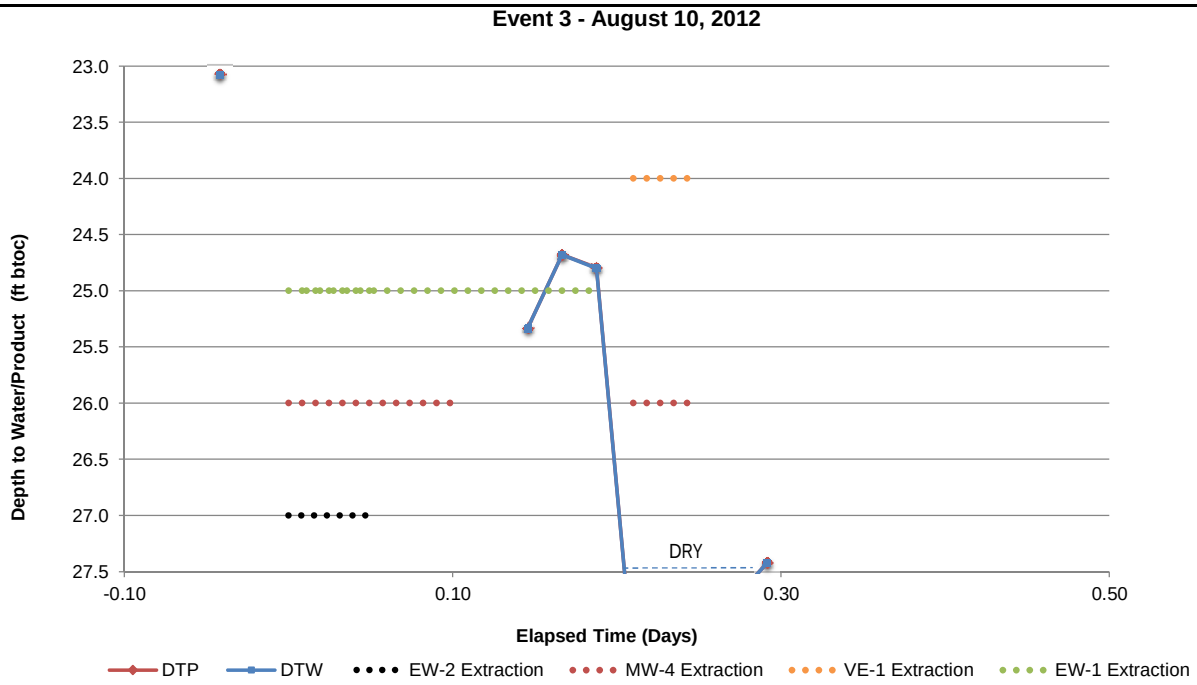
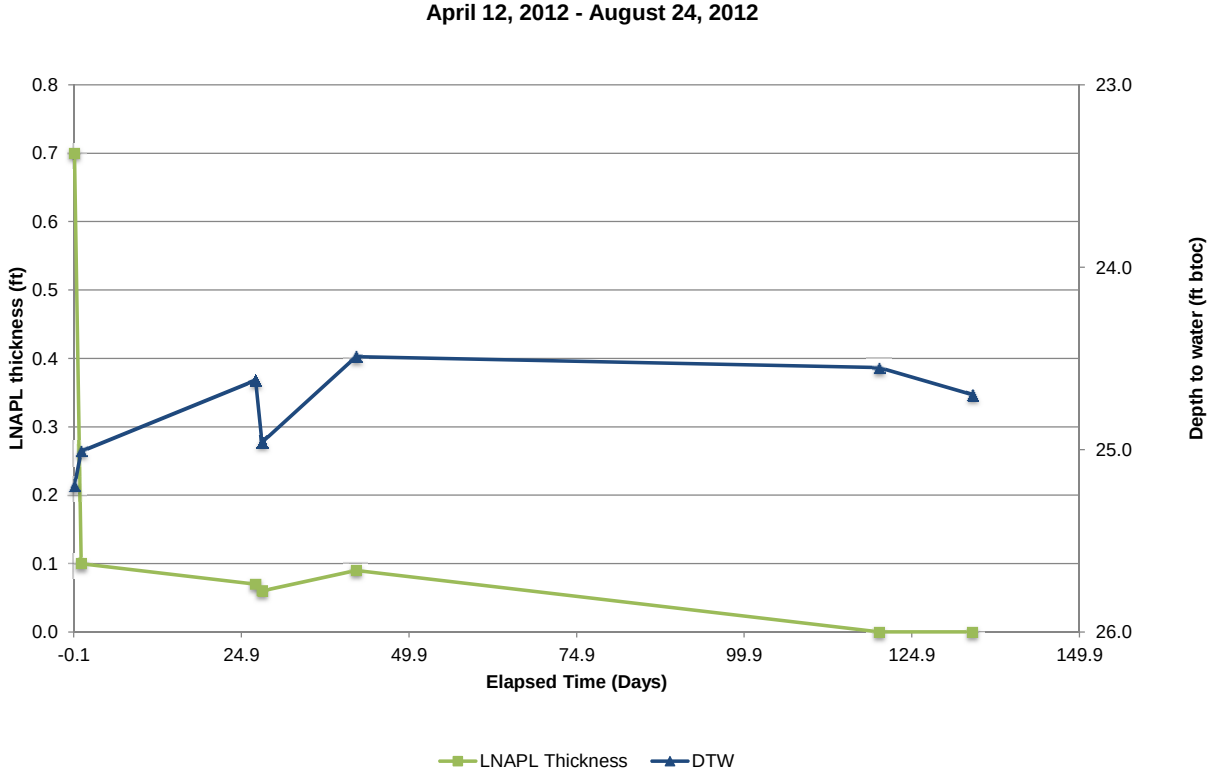
GRAPH
3





EXPLANATION
ft = feet
btoc = below top of casing
DTP = depth to product
DTW = depth to water
LNAPL = light non-aqueous phase liquid

Groundwater Elevation and LNAPL Thickness - MW-4

WA-11060
4580 Fauntleroy Way Southwest
Seattle, Washington 98126

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GRAPH
4

ARCADIS

Appendix **A**

Boring Logs

Date Start/Finish: 1/25/2012-1/26/2012
Drilling Company: Cascade Drilling Inc.
Driller's Name: James
Drilling Method: Hollow Stem Auger
Auger Size: 12"
Rig Type: Hollow Stem Auger
Sampling Method: Sleeve

Northing: NM
Easting: NM
Casing Elevation: NM

Borehole Depth: 31.5 ft.
Surface Elevation: NM

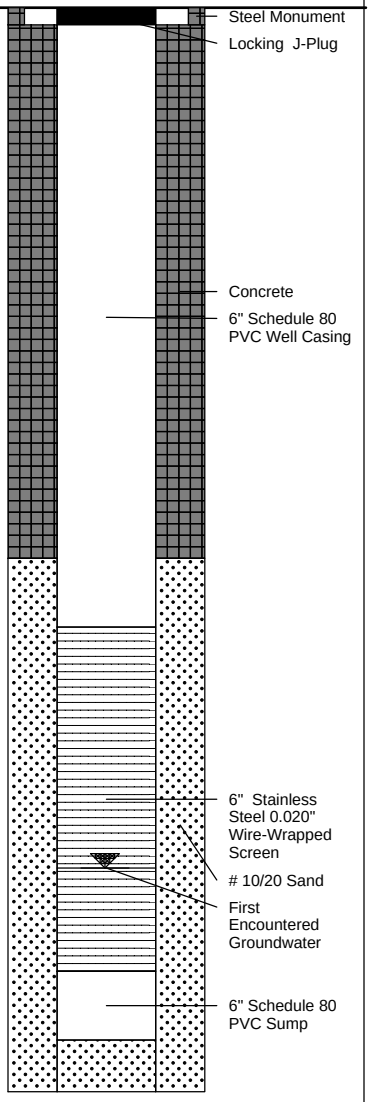
Descriptions By: Samuel Miles

Well/Boring ID: **EW-1**

Client: BP West Coast Products LLC

Location: 4580 Fauntleroy Way SW
Seattle, WA

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description
0	0								Concrete
									Silty sand, fine to medium sand, low plasticity, brown, no HCLO.
5	-5		5.0-6.0	5.0-6.0	AK	D	8.7		
10	-10		10.0-11.5	10.0-11.5	8 6 8	D	8.1		Sandy silt, fine to medium sand, medium plasticity, grey/brown, no HCLO.
15	-15		15.0-16.5	15.0-16.5	20 20 26	D	>800		Fine to medium sand with trace gravel and silt, low plasticity, grey, HCLO.
20	-20		20.0-21.5	20.0-21.5	20/6 50/6	M	>800		
25	-25		25.0-26.5	25.0-26.5	21/20	W	>500		Silty sand, fine to medium sand, non plastic,grey/brown, HCLO.
30	-30		30.0-31.5	30.0-31.5	21 16 18	W	>400		Silty sand, fine to medium sand, non plastic,grey/brown, HCLO.
									End of boring @ 31.5'



Well/Boring Construction

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Remarks:
D = Dry
HCLO = Hydrocarbon-like Odor
M = Moist
NM = Not Measured
OD = Outer Diameter
Analytical Samples:
EW-1-15'
EW-1-30'
ft. = feet
LNAPL= Light Non-Aqueous Phase Liquid
NA = Not Applicable/Avalible
NR = No Recovery
W = Wet
EW-1-25'

Project: GP09BPNAWA48 K0000
Data File:
Template:
Date: 12/19/2012 SWM

Date Start/Finish: 1/23/2012-1/24/2012
Drilling Company: Cascade Drilling Inc.
Driller's Name: James
Drilling Method: Hollow Stem Auger
Auger Size: 12"
Rig Type: Hollow Stem Auger
Sampling Method: Sleeve

Northing: NM
Easting: NM
Casing Elevation: NM

Borehole Depth: 31.5 ft.
Surface Elevation: NM

Descriptions By: Samuel Miles

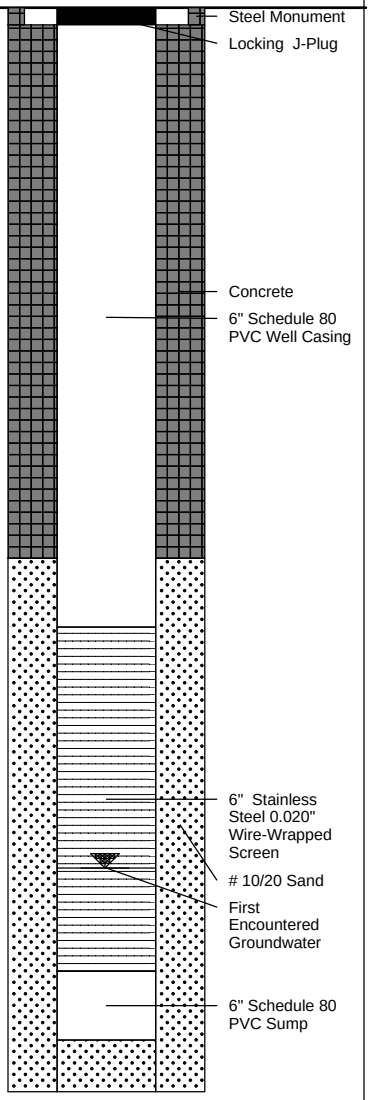
Well/Boring ID: **EW-2**

Client: BP West Coast Products LLC

Location: 4580 Fauntleroy Way SW
Seattle, WA

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description
0	0								Concrete
									Silty sand, fine to medium sand, low plasticity, brown, no HCLO.
5	-5		5.0-6.0	5.0-6.0	AK	D	3.7		
10	-10		10.0-11.5	10.0-11.0	3 4 5	D	7.4		Silty sand, fine to medium sand, low plasticity, brown, no HCLO.
15	-15		15.0-16.5	15.0-16.5	8 10 11	D	>500		Silty sand, fine to medium sand, low plasticity, brown, strong HCLO.
20	-20		20.0-21.5	20.0-21.5	18 26 22	M	>500		Medium sand with trace silt, low plasticity, some cobbles, brown, HCLO.
25	-25		25.0-26.5	25.0-26.5	16 19 25	W	164.1		Sandy silt, medium plasticity, brown/grey, HCLO.
30	-30		30.0-31.5	30.0-31.5	19 22 22	W	20.4		Silty sand, fine sand, low plasticity, brown, no HCLO.
									End of boring @ 31.5'

Well/Boring Construction



ARCADIS
Infrastructure · Water · Environment · Buildings

Remarks:
D = Dry
HCLO = Hydrocarbon-like Odor
M = Moist
NM = Not Measured
OD = Outer Diameter
Analytical Samples:
EW-2-10'
EW-2-30'

ft. = feet
LNAPL= Light Non-Aqueous Phase Liquid
NA = Not Applicable/Available
NR = No Recovery
W = Wet

EW-2-15'

Project: GP09BPNAWA48 K0000
Data File:

Template:
Date: 12/19/2012 SWM

Date Start/Finish: 1/24/2012-1/25/2012
Drilling Company: Cascade Drilling Inc.
Driller's Name: James
Drilling Method: Hollow Stem Auger
Auger Size: 12"
Rig Type: Hollow Stem Auger
Sampling Method: Sleeve

Northing: NM
Easting: NM
Casing Elevation: NM

Borehole Depth: 31.5 ft.
Surface Elevation: NM

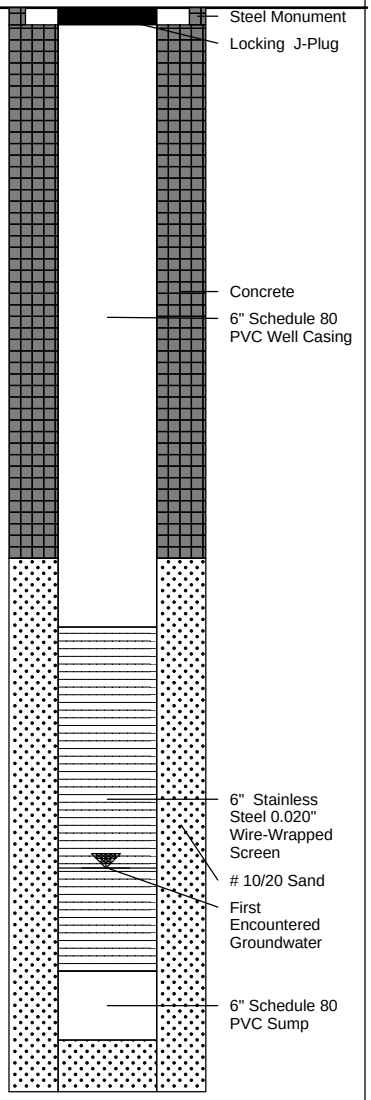
Descriptions By: Samuel Miles

Well/Boring ID: **EW-3**

Client: BP West Coast Products LLC

Location: 4580 Fauntleroy Way SW
Seattle, WA

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description
0	0								Concrete
									Silty sand, fine to medium sand, low plasticity, gray brown, no HCLO.
5	-5		5.0-6.0	5.0-6.0	AK	D	6.3		
10	-10		10.0-11.5	10.0-11.5	6 6 7	D	5.7		Silty sand, fine to medium sand, some gravel, low plasticity, grey/brown, no HCLO.
15	-15		15.0-16.5	15.0-16.5	10 12 10	D	10.1		Silty sand, fine sand, some gravel, medium plasticity, grey/brown.
20	-20		20.0-21.5	20.0-21.5	50/6	D	>800		Fine to medium sand with some gravel, low plasticity, grey/brown, HCLO.
25	-25		25.0-26.5	25.0-26.5	31 30 30	M/W	>150		Medium sand with trace silt, grey/brown, HCLO.
30	-30		30.0-31.5	30.0-31.5	36 50/6	W	51.4		Silty sand, fine sand, low plasticity, brown, HCLO.
									End of boring @ 31.5'



Well/Boring Construction

ARCADIS
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Remarks:
D = Dry
HCLO = Hydrocarbon-like Odor
M = Moist
NM = Not Measured
OD = Outer Diameter
Analytical Samples:
EW-3-15'
Dup-2
ft. = feet
LNAPL= Light Non-Aqueous Phase Liquid
NA = Not Applicable/Available
NR = No Recovery
W = Wet
EW-3-20'
EW-3-30'

Project: GP09BPNAWA48 K0000
Data File:
Template:
Date: 12/19/2012 SWM

Date Start/Finish: 1-23-12
Drilling Company: Cascade Drilling Inc.
Driller's Name: James
Drilling Method: Hollow Stem Auger
Auger Size: 8"
Rig Type: Hollow Stem Auger
Sampling Method: 16-Inch Split-Spoon

Northing: NM
Easting: NM
Casing Elevation: NM

Borehole Depth: 36.5 ft.
Surface Elevation: NM

Descriptions By: Samuel Miles

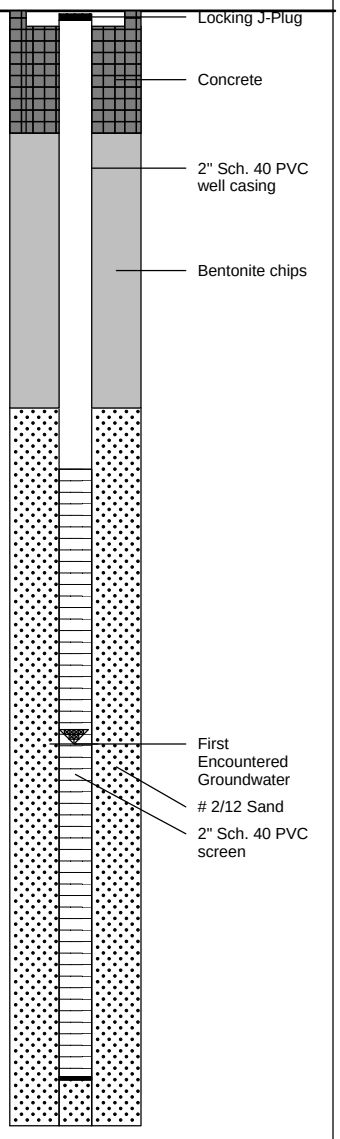
Well/Boring ID: **MW-10**

Client: BP West Coast Products LLC

Location: WA-11060
4580 Fauntleroy Way SW
Seattle, WA

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description
0	0								Concrete
									Crushed rock with silt.
5	-5		5.0-6.0	5.0-6.0	AK	M	NA		Silty sand, fine to medium sand, low plasticity.
10	-10		10.0-11.5	10.0-11.0	50/6	M	2.4		Woody debris.
									Fine to medium sand with silt, low plasticity, grey/brown.
15	-15		15.0-16.5	15.0-16.5	50/6	D	27		Silty sand, fine to medium sand, low plasticity, grey.
20	-20		20.0-21.5	20.0-21.5	50/6	M	3.6		Silty sand, fine sand, low plasticity, orange/grey.
25	-25		25.0-26.5	25.0-26.5	50/6	M	0.7		Silty sand, fine to medium sand, low plasticity, orange/grey.
30	-30		30.0-31.5	30.0-31.5	50/5	M	1.1		Silty sand, fine to medium sand, low plasticity, orange/grey.
35	-35		35.0-36.5	35.0-36.5	50/6	W	0.3		Sandy silt, fine sand, low plasticity, grey/brown.
									End of boring @ 36.5'

Well/Boring Construction



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Remarks:
D = Dry
HCLO = Hydrocarbon-like Odor
M = Moist
NM = Not Measured
OD = Outer Diameter
Analytical Samples:
MW-10-15'
MW-10-25'
ft. = feet
LNAPL= Light Non-Aqueous Phase Liquid
NA = Not Applicable/Available
NR = No Recovery
W = Wet
MW-10-20'
MW-10-35'

Project: GP09BPNAWA48 K0000
Data File:
Template:
Date: 12/19/2012 SWM

Date Start/Finish: 1-23-12
Drilling Company: Cascade Drilling Inc.
Driller's Name: James
Drilling Method: Hollow Stem Auger
Auger Size: 8"
Rig Type: Hollow Stem Auger
Sampling Method: Sleeve

Northing: NM
Easting: NM
Casing Elevation: NM

Borehole Depth: 41.5 ft
Surface Elevation: NM

Descriptions By: Samuel Miles

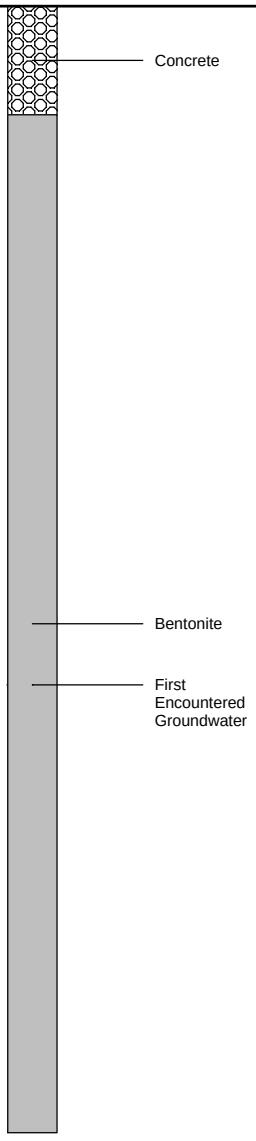
Well/Boring ID: **SB-1**

Client: BP West Coast Products LLC

Location: 4580 Fauntleroy Way SW
Seattle, WA

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description
0	0								Concrete
									Medium sand with trace silt, grey/brown, dry, low plasticity.
5	-5		5.0-6.0	5.0-6.0	AK	D	0.4		Silt with fine sand, medium plasticity, grey/brown.
10	-10		10.0-11.5	10.0-11.5	8 12 12	D	2.1		Sandy silt, fine sand, non plastic, brown.
15	-15		15.0-16.5	15.0-16.5	14 14 15	D	>400		Fine to medium sand with trace silt, grey/brown, non plastic, strong HCLO.
20	-20		20.0-21.5	20.0-21.5	14 16 17	D	>200		Fine to medium sand with trace silt, brown, non plastic, HCLO.
25	-25		25.0-26.5	25.0-26.5	15 14 15	M/W	8.1		Sandy silt, fine sand, non plastic, brown.
30	-30		30.0-31.5	30.0-31.5	50/5	W	14.4		Sandy silt, fine to medium sand, non plastic, brown, no HCLO.
35	-35		35.0-36.0	35.0-36.5	24 50/6	W	>50		Sandy silt, fine to medium sand, non plastic, brown, slight HCLO.
40	-40		40.0-41.5	40.0-41.5	37 50/6	W	4.9		Sandy silt, fine sand, grey/brown.
									End of boring @ 41.5'

Well/Boring Construction



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Remarks:
D = Dry
HCLO = Hydrocarbon-like Odor
M = Moist
NM = Not Measured
OD = Outer Diameter
Analytical Sample:
Dup-1
SB-1-35'

ft. = feet
LNAPL= Light Non-Aqueous Phase Liquid
NA = Not Applicable/Available
NR = No Recovery
W = Wet
SB-1-15'
SB-1-25'
SB-1-40'

Project: GP09BPNAWA48 K0000
Data File:

Template:
Date: 12/19/2012 SWM

Date Start/Finish: 1-23-12 & 1-24-12
Drilling Company: Cascade Drilling Inc.
Driller's Name: James
Drilling Method: Hollow Stem Auger
Auger Size: 8"
Rig Type: Hollow Stem Auger
Sampling Method: Sleeve

Northing: NM
Easting: NM
Casing Elevation: NM

Borehole Depth: 41.5 ft.
Surface Elevation: NM

Descriptions By: Samuel Miles

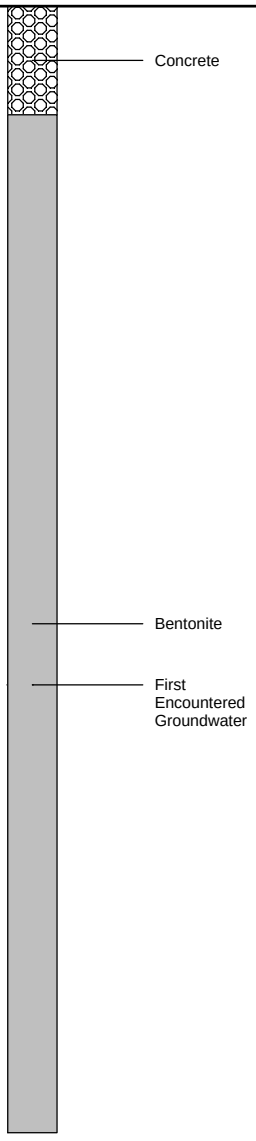
Well/Boring ID: **SB-2**

Client: BP West Coast Products LLC

Location: 4580 Fauntleroy Way SW
Seattle, WA

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description
0	0								Concrete
									Sandy silt, brown, medium plasticity, moist, no HCLO.
5	-5		5.0-6.0	5.0-6.0	AK	D/M	1.5		
10	-10		10.0-11.5	10.0-11.5	6 6 8	D/M	1.4		Some gravel from 10-11 feet. Medium sand with some silt, brown/grey, low plasticity.
15	-15		15.0-16.5	15.0-16.5	6 10 12	D	8.5		Sandy silt with some gravel, medium plasticity, grey, dry.
20	-20		20.0-21.5	20.0-21.5	17 20 20	D	>200		Fine to medium sand with some silt, non plasticity, grey/brown, dry, HCLO.
25	-25		25.0-26.5	-	17 18 18	-	NA		No recovery.
30	-30		30.0-31.5	-	50/5	-	NA		No recovery.
35	-35		35.0-36.0	35.0-36.5	46 50/6	W	14.4		Silty sand, fine to medium sand, medium plasticity, grey/brown, wet.
40	-40		40.0-41.5	40.0-41.5	40 56	W	8.7		Silty sand, fine to medium sand, medium plasticity, grey/brown, wet.
									End of boring @ 41.5'

Well/Boring Construction



ARCADIS
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Remarks:
D = Dry
HCLO = Hydrocarbon-like Odor
M = Moist
NM = Not Measured
OD = Outer Diameter
Analytical Samples:
SB-2-20'

ft. = feet
LNAPL= Light Non-Aqueous Phase Liquid
NA = Not Applicable/Available
NR = No Recovery
W = Wet

SB-2-35'

Project: GP09BPNAWA48 K0000
Data File:

Template:
Date: 12/19/2012 SWM

Date Start/Finish: 1-23-12 & 1-24-12
Drilling Company: Cascade Drilling Inc.
Driller's Name: James
Drilling Method: Hollow Stem Auger
Auger Size: 8"
Rig Type: Hollow Stem Auger
Sampling Method: Sleeve

Northing: NM
Easting: NM
Casing Elevation: NM

Borehole Depth: 51.5
Surface Elevation: NM

Descriptions By: Samuel Miles

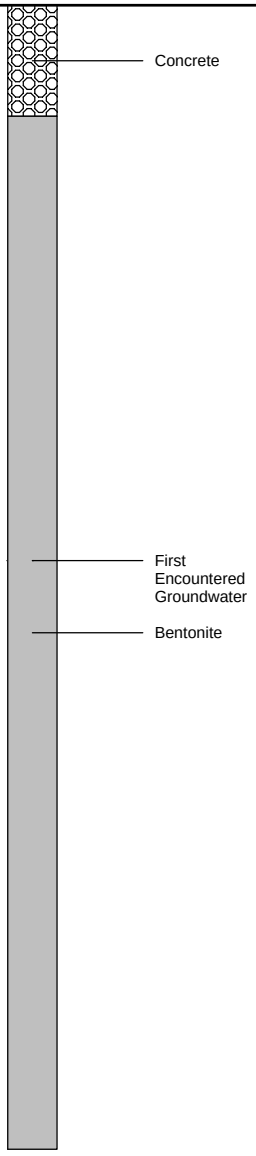
Well/Boring ID: **SB-3**

Client: BP West Coast Products LLC

Location: 4580 Fauntleroy Way SW
Seattle, WA

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description
0	0								Concrete
									Sandy silt, very fine sand, medium plasticity, grey with brown streaks, HCLO.
5	-5		5.0-6.0	5.0-6.0	AK	M	58.9		
10	-10		10.0-11.5	10.0-11.5	5 5 6	M	3.1		Silty sand, fine to medium sand, low plasticity, grey, woody debris.
15	-15		15.0-16.5	15.0-16.5	14 12 14	M	8.7		Silt with some fine sand, low plasticity, grey with brown streaks, some woody debris.
20	-20		20.0-21.5	20.0-21.5	16 19 20	M	>79.9		Medium sand, trace silt, grey, HCLO, no plasticity.
25	-25		25.0-26.5	25.0-26.5	27/56	M	>250		Medium sand, trace silt, grey, HCLO, no plasticity.
30	-30		30.0-31.5	30.0-31.5	24 29 30	W	>89.2		Silty sand, very fine, no plasticity, grey, HCLO.
35	-35		35.0-36.0	35.0-36.5	34	W	>50.0		Silty sand, very fine, no plasticity, grey/brown, HCLO.
40	-40		40.0-41.5	40.0-41.5	30 50	M	>87.0		Silt with trace sand, brown, chalky.
45	-45		45.0-46.5	45.0-46.5	31 30 30	W/M	70.9		Very fine sand with silt, low plasticity, grey.
50	-50		50.0-51.5	50.0-51.5	21 25 20	W/M	40.7		Very fine sand with silt, low plasticity, grey.
									End of boring @ 51.5'

Well/Boring Construction



ARCADIS
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Remarks:
D = Dry
HCLO = Hydrocarbon-like Odor
M = Moist
NM = Not Measured
OD = Outer Diameter
Analytical Sample:
SB-3-5'
SB-3-20'
ft. = feet
LNAPL= Light Non-Aqueous Phase Liquid
NA = Not Applicable/Available
NR = No Recovery
W = Wet
SB-3-10'
SB-3-50'

Project: GP09BPNAWA48 K0000
Data File:
Template:
Date: 12/19/2012 SWM

Date Start/Finish: 1-23-12 & 1-24-12
Drilling Company: Cascade Drilling Inc.
Driller's Name: James
Drilling Method: Hollow Stem Auger
Auger Size: 8"
Rig Type: Hollow Stem Auger
Sampling Method: Sleeve

Northing: NM
Easting: NM
Casing Elevation: NM

Borehole Depth: 36.5 ft.
Surface Elevation: NM

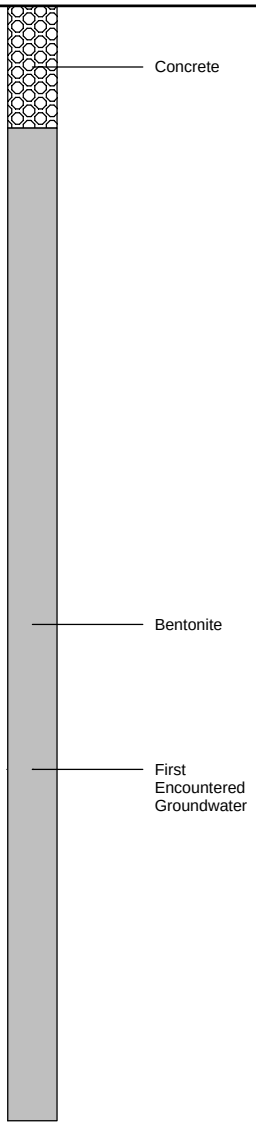
Descriptions By: Samuel Miles

Well/Boring ID: **SB-4**

Client: BP West Coast Products LLC

Location: 4580 Fauntleroy Way SW
Seattle, WA

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description
0	0								Concrete
									Medium sand with some silt, brown.
									Sandy silt, fine sand, some plasticity, brown, no HCLO.
5	-5		5.0-6.0	5.0-6.0	AK	D	0.7		
10	-10		10.0-11.5	10.0-11.5	4 5 4	D	0.2		Sandy silt, fine sand, some gravel, medium plasticity, brown/grey, no HCLO.
15	-15		15.0-16.5	15.0-16.5	16 21 20	D	>150		Fine to medium sand with trace silt, grey/brown, low plasticity, some HCLO.
20	-20		20.0-21.5	20.0-21.5	15 21 31	M	7.8		Fine to medium sand with trace silt, some gravel, grey/brown, low plasticity, some HCLO.
25	-25		25.0-26.5	25.0-26.5	17 26 22	W	4.5		Silty sand, fine to medium sand, low plasticity, brown/grey.
30	-30		30.0-31.5	30.0-31.5	27 30 30	W	0.5		Sandy silt, fine sand, low plasticity, brown, no HCLO.
35	-35		35.0-36.0	35.0-36.5	21 22 20	W	0.3		Fine sand with silt, low plasticity, brown.
									End of boring @ 36.5'



Well/Boring Construction

ARCADIS
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Remarks:
D = Dry
HCLO = Hydrocarbon-like Odor
M = Moist
NM = Not Measured
OD = Outer Diameter
Analytical Sample:
SB-4-15'
SB-4-35'
ft. = feet
LNAPL= Light Non-Aqueous Phase Liquid
NA = Not Applicable/Available
NR = No Recovery
W = Wet
SB-4-20'

Project: GP09BPNAWA48 K0000
Data File:
Template:
Date: 12/19/2012 SWM

ARCADIS

Appendix **B**

Laboratory Analytical Reports and
Chain of Custody Documentation

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

February 03, 2012

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

RE: Project: WA 11060
Pace Project No.: 2510617

Dear Scott Zorn:
Enclosed are the analytical results for sample(s) received by the laboratory on January 23, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

Sample SB-3-5 re-logged for PAH per client request on 2/2/12.

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

Sincerely,

Andy Brownfield

andy.brownfield@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: WA 11060
Pace Project No.: 2510617

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: WA 11060
Pace Project No.: 2510617

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2510617001	**MW-10-15**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LPM	9	PASI-S
		ASTM D2974-87	CMM	1	PASI-S
2510617002	**MW-10-20**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LPM	9	PASI-S
		ASTM D2974-87	CMM	1	PASI-S
2510617003	**MW-10-25**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LPM	9	PASI-S
		ASTM D2974-87	CMM	1	PASI-S
2510617004	**MW-10-35**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LPM	9	PASI-S
		ASTM D2974-87	CMM	1	PASI-S
2510617005	**SB-1-15**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LNH	5	PASI-S
		EPA 8260	LPM	8	PASI-S
		ASTM D2974-87	CMM	1	PASI-S
2510617006	**SB-1-25**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LPM	9	PASI-S
		ASTM D2974-87	CMM	1	PASI-S
2510617007	**SB-1-35**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LPM	9	PASI-S
		ASTM D2974-87	CMM	1	PASI-S
2510617008	**SB-1-40**	NWTPH-Dx	AY1	4	PASI-S

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

SAMPLE ANALYTE COUNT

Project: WA 11060
Pace Project No.: 2510617

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LPM	9	PASI-S
		ASTM D2974-87	CMM	1	PASI-S
2510617009	**SB-3-5**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8270 by SIM	KJ1	20	PASI-S
		EPA 8260	LPM	9	PASI-S
		ASTM D2974-87	CMM	1	PASI-S
2510617010	**DUP-1**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LNH	5	PASI-S
		EPA 8260	LPM	8	PASI-S
		ASTM D2974-87	CMM	1	PASI-S
2510617015	**Trip Blank**	NWTPH-Gx	LPM	3	PASI-S
		EPA 8260	LPM	9	PASI-S

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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510617

Method: **NWTPH-Dx**
Description: NWTPH-Dx GCS
Client: Arcadis U.S., Inc.
Date: February 03, 2012

General Information:
10 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 3546 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:

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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510617

Method: **NWTPH-Gx**
Description: NWTPH-Gx GCV
Client: Arcadis U.S., Inc.
Date: February 03, 2012

General Information:
11 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.

Sample Preparation:
The samples were prepared in accordance with NWTPH-Gx 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: GCV/2649

S5: Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

- DUP-1 (Lab ID: 2510617010)
  - 4-Bromofluorobenzene (S)
- SB-1-15 (Lab ID: 2510617005)
  - 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:

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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510617

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Arcadis U.S., Inc.
Date: February 03, 2012

General Information:
10 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 3050 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:

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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510617

Method: **EPA 8270 by SIM**
Description: 8270 MSSV PAH by SIM
Client: Arcadis U.S., Inc.
Date: February 03, 2012

General Information:
1 sample was analyzed for EPA 8270 by SIM. 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 3546 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:

Analyte Comments:

QC Batch: OEXT/5008

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- SB-3-5 (Lab ID: 2510617009)
  - Terphenyl-d14 (S)

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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510617

Method: **EPA 8260**
Description: 8260 MSV 5035A Med Level VOA
Client: Arcadis U.S., Inc.
Date: February 03, 2012

General Information:
2 samples were analyzed for EPA 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.

Sample Preparation:
The samples were prepared in accordance with EPA 5035A/5030B 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:

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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510617

Method: **EPA 8260**
Description: 8260/5035A Volatile Organics
Client: Arcadis U.S., Inc.
Date: February 03, 2012

General Information:
11 samples were analyzed for EPA 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/6241

S5: Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

- DUP-1 (Lab ID: 2510617010)
  - 4-Bromofluorobenzene (S)
  - Toluene-d8 (S)

QC Batch: MSV/6253

S0: Surrogate recovery outside laboratory control limits.

- MS (Lab ID: 101364)
  - 1,2-Dichloroethane-d4 (S)
  - 4-Bromofluorobenzene (S)
  - Toluene-d8 (S)
- MSD (Lab ID: 101365)
  - Toluene-d8 (S)

S2: Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

- SB-1-15 (Lab ID: 2510617005)
  - 4-Bromofluorobenzene (S)
  - Toluene-d8 (S)
- SB-3-5 (Lab ID: 2510617009)
  - 4-Bromofluorobenzene (S)
  - Toluene-d8 (S)

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

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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510617

Method: **EPA 8260**
Description: 8260/5035A Volatile Organics
Client: Arcadis U.S., Inc.
Date: February 03, 2012

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/6253

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2510708001

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

- MS (Lab ID: 101364)
  - Benzene
  - Ethylbenzene
  - Xylene (Total)
- MSD (Lab ID: 101365)
  - Benzene
  - Ethylbenzene
  - Toluene
  - Xylene (Total)

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

Additional Comments:

Analyte Comments:

QC Batch: MSV/6253

1n: Low recovery of internal standard in this sample due to a matrix effect. This matrix effect was confirmed by a second analysis. Results may be biased high.

- SB-3-5 (Lab ID: 2510617009)
  - Benzene
  - Ethylbenzene

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- MS (Lab ID: 101364)
  - Benzene
  - Ethylbenzene
  - Xylene (Total)
- MSD (Lab ID: 101365)
  - Ethylbenzene

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

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510617

Sample: MW-10-15 **Lab ID: 2510617001** Collected: 01/23/12 11:25 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	17.9	1	01/24/12 14:15	01/24/12 18:11		
Motor Oil Range	ND	mg/kg	71.6	1	01/24/12 14:15	01/24/12 18:11	64742-65-0	
Surrogates								
n-Octacosane (S)	92	%	50-150	1	01/24/12 14:15	01/24/12 18:11	630-02-4	
o-Terphenyl (S)	93	%	50-150	1	01/24/12 14:15	01/24/12 18:11	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	ND	mg/kg	6.3	1	01/24/12 13:31	01/24/12 19:00		
Surrogates								
a,a,a-Trifluorotoluene (S)	95	%	50-150	1	01/24/12 13:31	01/24/12 19:00	98-08-8	
4-Bromofluorobenzene (S)	94	%	50-150	1	01/24/12 13:31	01/24/12 19:00	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**1.9**	mg/kg	1.0	1	01/25/12 07:42	01/25/12 16:43	7439-92-1	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	3.4	1		01/26/12 11:55	71-43-2	
Ethylbenzene	ND	ug/kg	3.4	1		01/26/12 11:55	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	3.4	1		01/26/12 11:55	1634-04-4	
Toluene	ND	ug/kg	3.4	1		01/26/12 11:55	108-88-3	
Xylene (Total)	ND	ug/kg	10.3	1		01/26/12 11:55	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%	72-129	1		01/26/12 11:55	1868-53-7	
Toluene-d8 (S)	101	%	69-133	1		01/26/12 11:55	2037-26-5	
4-Bromofluorobenzene (S)	99	%	67-142	1		01/26/12 11:55	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	67-136	1		01/26/12 11:55	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**13.2**	%	0.10	1		01/24/12 14:54		

Sample: MW-10-20 **Lab ID: 2510617002** Collected: 01/23/12 11:30 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	19.3	1	01/24/12 14:15	01/24/12 18:46		
Motor Oil Range	ND	mg/kg	77.1	1	01/24/12 14:15	01/24/12 18:46	64742-65-0	
Surrogates								
n-Octacosane (S)	103	%	50-150	1	01/24/12 14:15	01/24/12 18:46	630-02-4	
o-Terphenyl (S)	101	%	50-150	1	01/24/12 14:15	01/24/12 18:46	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	ND	mg/kg	6.7	1	01/24/12 13:31	01/24/12 19:48		

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510617

Sample: MW-10-20 **Lab ID: 2510617002** Collected: 01/23/12 11:30 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Surrogates								
a,a,a-Trifluorotoluene (S)	94	%	50-150	1	01/24/12 13:31	01/24/12 19:48	98-08-8	
4-Bromofluorobenzene (S)	90	%	50-150	1	01/24/12 13:31	01/24/12 19:48	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**2.4**	mg/kg	1.2	1	01/25/12 07:42	01/25/12 17:01	7439-92-1	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	4.4	1		01/26/12 12:15	71-43-2	
Ethylbenzene	ND	ug/kg	4.4	1		01/26/12 12:15	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	4.4	1		01/26/12 12:15	1634-04-4	
Toluene	ND	ug/kg	4.4	1		01/26/12 12:15	108-88-3	
Xylene (Total)	ND	ug/kg	13.3	1		01/26/12 12:15	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	96	%	72-129	1		01/26/12 12:15	1868-53-7	
Toluene-d8 (S)	100	%	69-133	1		01/26/12 12:15	2037-26-5	
4-Bromofluorobenzene (S)	103	%	67-142	1		01/26/12 12:15	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	67-136	1		01/26/12 12:15	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**18.7**	%	0.10	1		01/24/12 14:54		

Sample: MW-10-25 **Lab ID: 2510617003** Collected: 01/23/12 11:40 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	19.2	1	01/24/12 14:15	01/24/12 19:03		
Motor Oil Range	ND	mg/kg	76.8	1	01/24/12 14:15	01/24/12 19:03	64742-65-0	
Surrogates								
n-Octacosane (S)	90	%	50-150	1	01/24/12 14:15	01/24/12 19:03	630-02-4	
o-Terphenyl (S)	90	%	50-150	1	01/24/12 14:15	01/24/12 19:03	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	ND	mg/kg	6.7	1	01/24/12 13:31	01/24/12 20:13		
Surrogates								
a,a,a-Trifluorotoluene (S)	96	%	50-150	1	01/24/12 13:31	01/24/12 20:13	98-08-8	
4-Bromofluorobenzene (S)	93	%	50-150	1	01/24/12 13:31	01/24/12 20:13	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**1.9**	mg/kg	1.2	1	01/25/12 07:42	01/25/12 17:05	7439-92-1	

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510617

Sample: MW-10-25 **Lab ID: 2510617003** Collected: 01/23/12 11:40 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	3.4	1		01/26/12 12:36	71-43-2	
Ethylbenzene	ND	ug/kg	3.4	1		01/26/12 12:36	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	3.4	1		01/26/12 12:36	1634-04-4	
Toluene	ND	ug/kg	3.4	1		01/26/12 12:36	108-88-3	
Xylene (Total)	ND	ug/kg	10.3	1		01/26/12 12:36	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	99	%	72-129	1		01/26/12 12:36	1868-53-7	
Toluene-d8 (S)	98	%	69-133	1		01/26/12 12:36	2037-26-5	
4-Bromofluorobenzene (S)	101	%	67-142	1		01/26/12 12:36	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	67-136	1		01/26/12 12:36	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**18.4**	%	0.10	1		01/24/12 14:56		

Sample: MW-10-35 **Lab ID: 2510617004** Collected: 01/23/12 11:55 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	19.0	1	01/24/12 14:15	01/24/12 19:54		
Motor Oil Range	ND	mg/kg	75.8	1	01/24/12 14:15	01/24/12 19:54	64742-65-0	
Surrogates								
n-Octacosane (S)	102	%	50-150	1	01/24/12 14:15	01/24/12 19:54	630-02-4	
o-Terphenyl (S)	101	%	50-150	1	01/24/12 14:15	01/24/12 19:54	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	ND	mg/kg	6.1	1	01/24/12 13:31	01/24/12 20:37		
Surrogates								
a,a,a-Trifluorotoluene (S)	102	%	50-150	1	01/24/12 13:31	01/24/12 20:37	98-08-8	
4-Bromofluorobenzene (S)	100	%	50-150	1	01/24/12 13:31	01/24/12 20:37	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**2.7**	mg/kg	1.1	1	01/25/12 07:42	01/25/12 17:09	7439-92-1	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	3.0	1		01/26/12 12:56	71-43-2	
Ethylbenzene	ND	ug/kg	3.0	1		01/26/12 12:56	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	3.0	1		01/26/12 12:56	1634-04-4	
Toluene	ND	ug/kg	3.0	1		01/26/12 12:56	108-88-3	
Xylene (Total)	ND	ug/kg	8.9	1		01/26/12 12:56	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	99	%	72-129	1		01/26/12 12:56	1868-53-7	
Toluene-d8 (S)	102	%	69-133	1		01/26/12 12:56	2037-26-5	
4-Bromofluorobenzene (S)	109	%	67-142	1		01/26/12 12:56	460-00-4	

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510617

Sample: MW-10-35 **Lab ID: 2510617004** Collected: 01/23/12 11:55 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Surrogates								
1,2-Dichloroethane-d4 (S)	103	%	67-136	1		01/26/12 12:56	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**19.5**	%	0.10	1		01/24/12 14:56		

Sample: SB-1-15 **Lab ID: 2510617005** Collected: 01/23/12 14:10 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	17.3	1	01/24/12 14:15	01/24/12 20:11		
Motor Oil Range	ND	mg/kg	69.2	1	01/24/12 14:15	01/24/12 20:11	64742-65-0	
Surrogates								
n-Octacosane (S)	93	%	50-150	1	01/24/12 14:15	01/24/12 20:11	630-02-4	
o-Terphenyl (S)	91	%	50-150	1	01/24/12 14:15	01/24/12 20:11	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	**555**	mg/kg	48.2	10	01/24/12 13:31	01/25/12 16:22		
Surrogates								
a,a,a-Trifluorotoluene (S)	113	%	50-150	10	01/24/12 13:31	01/25/12 16:22	98-08-8	
4-Bromofluorobenzene (S)	176	%	50-150	10	01/24/12 13:31	01/25/12 16:22	460-00-4	S5
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**5.3**	mg/kg	0.96	1	01/25/12 07:42	01/25/12 17:13	7439-92-1	
8260 MSV 5035A Med Level VOA	Analytical Method: EPA 8260 Preparation Method: EPA 5035A/5030B							
Ethylbenzene	**488**	ug/kg	48.2	1	02/01/12 00:00	02/02/12 01:02	100-41-4	
Surrogates								
Dibromofluoromethane (S)	97	%	75-116	1	02/01/12 00:00	02/02/12 01:02	1868-53-7	
Toluene-d8 (S)	101	%	74-124	1	02/01/12 00:00	02/02/12 01:02	2037-26-5	
4-Bromofluorobenzene (S)	112	%	73-128	1	02/01/12 00:00	02/02/12 01:02	460-00-4	
1,2-Dichloroethane-d4 (S)	88	%	70-125	1	02/01/12 00:00	02/02/12 01:02	17060-07-0	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	**5.7**	ug/kg	2.7	1		01/27/12 20:51	71-43-2	
Methyl-tert-butyl ether	ND	ug/kg	2.7	1		01/27/12 20:51	1634-04-4	
Toluene	**9.2**	ug/kg	2.7	1		01/27/12 20:51	108-88-3	
Xylene (Total)	**135**	ug/kg	8.1	1		01/27/12 20:51	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%	72-129	1		01/27/12 20:51	1868-53-7	
Toluene-d8 (S)	1180	%	69-133	1		01/27/12 20:51	2037-26-5	S2
4-Bromofluorobenzene (S)	726	%	67-142	1		01/27/12 20:51	460-00-4	S2
1,2-Dichloroethane-d4 (S)	122	%	67-136	1		01/27/12 20:51	17060-07-0	

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510617

Sample: SB-1-15 **Lab ID: 2510617005** Collected: 01/23/12 14:10 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**9.9**	%	0.10	1		01/24/12 14:57		

Sample: SB-1-25 **Lab ID: 2510617006** Collected: 01/23/12 14:15 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	19.3	1	01/24/12 14:15	01/24/12 20:29		
Motor Oil Range	ND	mg/kg	77.1	1	01/24/12 14:15	01/24/12 20:29	64742-65-0	
Surrogates								
n-Octacosane (S)	107	%	50-150	1	01/24/12 14:15	01/24/12 20:29	630-02-4	
o-Terphenyl (S)	106	%	50-150	1	01/24/12 14:15	01/24/12 20:29	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	ND	mg/kg	6.4	1	01/24/12 13:31	01/25/12 11:05		
Surrogates								
a,a,a-Trifluorotoluene (S)	110	%	50-150	1	01/24/12 13:31	01/25/12 11:05	98-08-8	
4-Bromofluorobenzene (S)	102	%	50-150	1	01/24/12 13:31	01/25/12 11:05	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**1.6**	mg/kg	1.1	1	01/25/12 07:42	01/25/12 17:16	7439-92-1	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	3.1	1		01/26/12 13:16	71-43-2	
Ethylbenzene	ND	ug/kg	3.1	1		01/26/12 13:16	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	3.1	1		01/26/12 13:16	1634-04-4	
Toluene	ND	ug/kg	3.1	1		01/26/12 13:16	108-88-3	
Xylene (Total)	ND	ug/kg	9.3	1		01/26/12 13:16	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	96	%	72-129	1		01/26/12 13:16	1868-53-7	
Toluene-d8 (S)	104	%	69-133	1		01/26/12 13:16	2037-26-5	
4-Bromofluorobenzene (S)	101	%	67-142	1		01/26/12 13:16	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	67-136	1		01/26/12 13:16	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**19.1**	%	0.10	1		01/24/12 14:57		

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510617

Sample: SB-1-35 **Lab ID: 2510617007** Collected: 01/23/12 14:25 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	19.6	1	01/24/12 14:15	01/24/12 20:46		
Motor Oil Range	ND	mg/kg	78.2	1	01/24/12 14:15	01/24/12 20:46	64742-65-0	
Surrogates								
n-Octacosane (S)	93	%	50-150	1	01/24/12 14:15	01/24/12 20:46	630-02-4	
o-Terphenyl (S)	93	%	50-150	1	01/24/12 14:15	01/24/12 20:46	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	ND	mg/kg	6.7	1	01/24/12 13:31	01/24/12 22:15		
Surrogates								
a,a,a-Trifluorotoluene (S)	103	%	50-150	1	01/24/12 13:31	01/24/12 22:15	98-08-8	
4-Bromofluorobenzene (S)	105	%	50-150	1	01/24/12 13:31	01/24/12 22:15	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**2.2**	mg/kg	1.0	1	01/25/12 07:42	01/25/12 17:20	7439-92-1	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	3.3	1		01/26/12 13:37	71-43-2	
Ethylbenzene	ND	ug/kg	3.3	1		01/26/12 13:37	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	3.3	1		01/26/12 13:37	1634-04-4	
Toluene	ND	ug/kg	3.3	1		01/26/12 13:37	108-88-3	
Xylene (Total)	ND	ug/kg	9.8	1		01/26/12 13:37	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%	72-129	1		01/26/12 13:37	1868-53-7	
Toluene-d8 (S)	101	%	69-133	1		01/26/12 13:37	2037-26-5	
4-Bromofluorobenzene (S)	105	%	67-142	1		01/26/12 13:37	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	67-136	1		01/26/12 13:37	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**18.8**	%	0.10	1		01/24/12 14:58		

Sample: SB-1-40 **Lab ID: 2510617008** Collected: 01/23/12 14:30 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	19.4	1	01/24/12 14:15	01/24/12 21:03		
Motor Oil Range	ND	mg/kg	77.7	1	01/24/12 14:15	01/24/12 21:03	64742-65-0	
Surrogates								
n-Octacosane (S)	90	%	50-150	1	01/24/12 14:15	01/24/12 21:03	630-02-4	
o-Terphenyl (S)	91	%	50-150	1	01/24/12 14:15	01/24/12 21:03	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	ND	mg/kg	6.4	1	01/24/12 13:31	01/24/12 22:40		

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510617

Sample: SB-1-40 **Lab ID: 2510617008** Collected: 01/23/12 14:30 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Surrogates								
a,a,a-Trifluorotoluene (S)	100	%	50-150	1	01/24/12 13:31	01/24/12 22:40	98-08-8	
4-Bromofluorobenzene (S)	102	%	50-150	1	01/24/12 13:31	01/24/12 22:40	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**2.2**	mg/kg	1.1	1	01/25/12 07:42	01/25/12 17:24	7439-92-1	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	3.1	1		01/26/12 18:24	71-43-2	
Ethylbenzene	ND	ug/kg	3.1	1		01/26/12 18:24	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	3.1	1		01/26/12 18:24	1634-04-4	
Toluene	ND	ug/kg	3.1	1		01/26/12 18:24	108-88-3	
Xylene (Total)	ND	ug/kg	9.4	1		01/26/12 18:24	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	101	%	72-129	1		01/26/12 18:24	1868-53-7	
Toluene-d8 (S)	103	%	69-133	1		01/26/12 18:24	2037-26-5	
4-Bromofluorobenzene (S)	115	%	67-142	1		01/26/12 18:24	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	67-136	1		01/26/12 18:24	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**20.1**	%	0.10	1		01/24/12 14:58		

Sample: SB-3-5 **Lab ID: 2510617009** Collected: 01/23/12 15:35 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	**2710**	mg/kg	20.9	1	01/24/12 14:15	01/24/12 21:38		
Motor Oil Range	**9400**	mg/kg	837	10	01/24/12 14:15	01/25/12 20:27	64742-65-0	
Surrogates								
n-Octacosane (S)	110	%	50-150	10	01/24/12 14:15	01/25/12 20:27	630-02-4	
o-Terphenyl (S)	91	%	50-150	1	01/24/12 14:15	01/24/12 21:38	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	**392**	mg/kg	36.7	5	01/24/12 13:31	01/25/12 11:29		
Surrogates								
a,a,a-Trifluorotoluene (S)	109	%	50-150	5	01/24/12 13:31	01/25/12 11:29	98-08-8	
4-Bromofluorobenzene (S)	143	%	50-150	5	01/24/12 13:31	01/25/12 11:29	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**11.4**	mg/kg	1.1	1	01/25/12 07:42	01/25/12 17:28	7439-92-1	

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510617

Sample: SB-3-5 **Lab ID: 2510617009** Collected: 01/23/12 15:35 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546							
Acenaphthene	ND	ug/kg	8.9	1	01/24/12 14:15	01/25/12 14:23	83-32-9	
Acenaphthylene	ND	ug/kg	8.9	1	01/24/12 14:15	01/25/12 14:23	208-96-8	
Anthracene	**9.9**	ug/kg	8.9	1	01/24/12 14:15	01/25/12 14:23	120-12-7	
Benzo(a)anthracene	ND	ug/kg	88.9	10	01/24/12 14:15	01/25/12 15:07	56-55-3	
Benzo(a)pyrene	ND	ug/kg	88.9	10	01/24/12 14:15	01/25/12 15:07	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	88.9	10	01/24/12 14:15	01/25/12 15:07	205-99-2	
Benzo(g,h,i)perylene	**113**	ug/kg	88.9	10	01/24/12 14:15	01/25/12 15:07	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	88.9	10	01/24/12 14:15	01/25/12 15:07	207-08-9	
Chrysene	ND	ug/kg	88.9	10	01/24/12 14:15	01/25/12 15:07	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	88.9	10	01/24/12 14:15	01/25/12 15:07	53-70-3	
Fluoranthene	ND	ug/kg	88.9	10	01/24/12 14:15	01/25/12 15:07	206-44-0	
Fluorene	ND	ug/kg	8.9	1	01/24/12 14:15	01/25/12 14:23	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	88.9	10	01/24/12 14:15	01/25/12 15:07	193-39-5	
1-Methylnaphthalene	**15.6**	ug/kg	8.9	1	01/24/12 14:15	01/25/12 14:23	90-12-0	
2-Methylnaphthalene	**37.6**	ug/kg	8.9	1	01/24/12 14:15	01/25/12 14:23	91-57-6	
Naphthalene	**40.4**	ug/kg	8.9	1	01/24/12 14:15	01/25/12 14:23	91-20-3	
Phenanthrene	**20.8**	ug/kg	8.9	1	01/24/12 14:15	01/25/12 14:23	85-01-8	
Pyrene	**106**	ug/kg	88.9	10	01/24/12 14:15	01/25/12 15:07	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	59	%	27-118	1	01/24/12 14:15	01/25/12 14:23	321-60-8	
Terphenyl-d14 (S)	81	%	28-125	10	01/24/12 14:15	01/25/12 15:07	1718-51-0	D3
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	**8.8**	ug/kg	3.5	1		01/27/12 21:31	71-43-2	1n
Ethylbenzene	**7.1**	ug/kg	3.5	1		01/27/12 21:31	100-41-4	1n
Methyl-tert-butyl ether	ND	ug/kg	3.5	1		01/27/12 21:31	1634-04-4	
Toluene	ND	ug/kg	3.5	1		01/27/12 21:31	108-88-3	
Xylene (Total)	ND	ug/kg	10.6	1		01/27/12 21:31	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	108	%	72-129	1		01/27/12 21:31	1868-53-7	
Toluene-d8 (S)	137	%	69-133	1		01/27/12 21:31	2037-26-5	S2
4-Bromofluorobenzene (S)	673	%	67-142	1		01/27/12 21:31	460-00-4	S2
1,2-Dichloroethane-d4 (S)	115	%	67-136	1		01/27/12 21:31	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**25.1**	%	0.10	1		01/24/12 14:59		

Sample: DUP-1 **Lab ID: 2510617010** Collected: 01/23/12 00:00 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	17.4	1	01/24/12 14:15	01/24/12 21:20		
Motor Oil Range	ND	mg/kg	69.5	1	01/24/12 14:15	01/24/12 21:20	64742-65-0	

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510617

Sample: DUP-1 **Lab ID: 2510617010** Collected: 01/23/12 00:00 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Surrogates								
n-Octacosane (S)	102	%	50-150	1	01/24/12 14:15	01/24/12 21:20	630-02-4	
o-Terphenyl (S)	103	%	50-150	1	01/24/12 14:15	01/24/12 21:20	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	**1220**	mg/kg	51.2	10	01/25/12 13:32	01/25/12 14:20		
Surrogates								
a,a,a-Trifluorotoluene (S)	108	%	50-150	10	01/25/12 13:32	01/25/12 14:20	98-08-8	
4-Bromofluorobenzene (S)	259	%	50-150	10	01/25/12 13:32	01/25/12 14:20	460-00-4	S5
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**2.4**	mg/kg	1.1	1	01/25/12 07:42	01/25/12 17:32	7439-92-1	
8260 MSV 5035A Med Level VOA	Analytical Method: EPA 8260 Preparation Method: EPA 5035A/5030B							
Ethylbenzene	**887**	ug/kg	51.2	1	02/01/12 00:00	02/02/12 01:20	100-41-4	
Surrogates								
Dibromofluoromethane (S)	100	%	75-116	1	02/01/12 00:00	02/02/12 01:20	1868-53-7	
Toluene-d8 (S)	103	%	74-124	1	02/01/12 00:00	02/02/12 01:20	2037-26-5	
4-Bromofluorobenzene (S)	109	%	73-128	1	02/01/12 00:00	02/02/12 01:20	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-125	1	02/01/12 00:00	02/02/12 01:20	17060-07-0	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	2.4	1		01/26/12 13:57	71-43-2	
Methyl-tert-butyl ether	ND	ug/kg	2.4	1		01/26/12 13:57	1634-04-4	
Toluene	ND	ug/kg	2.4	1		01/26/12 13:57	108-88-3	
Xylene (Total)	**43.2**	ug/kg	7.2	1		01/26/12 13:57	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	94	%	72-129	1		01/26/12 13:57	1868-53-7	
Toluene-d8 (S)	451	%	69-133	1		01/26/12 13:57	2037-26-5	S5
4-Bromofluorobenzene (S)	340	%	67-142	1		01/26/12 13:57	460-00-4	S5
1,2-Dichloroethane-d4 (S)	104	%	67-136	1		01/26/12 13:57	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**11.5**	%	0.10	1		01/24/12 14:59		

Sample: Trip Blank **Lab ID: 2510617015** Collected: 01/23/12 00:00 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	ND	mg/kg	5.0	1	01/25/12 13:32	01/25/12 13:55		
Surrogates								
a,a,a-Trifluorotoluene (S)	113	%	50-150	1	01/25/12 13:32	01/25/12 13:55	98-08-8	
4-Bromofluorobenzene (S)	109	%	50-150	1	01/25/12 13:32	01/25/12 13:55	460-00-4	

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510617

Sample: Trip Blank **Lab ID: 2510617015** Collected: 01/23/12 00:00 Received: 01/23/12 17:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	3.0	1		01/26/12 11:34	71-43-2	
Ethylbenzene	ND	ug/kg	3.0	1		01/26/12 11:34	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	3.0	1		01/26/12 11:34	1634-04-4	
Toluene	ND	ug/kg	3.0	1		01/26/12 11:34	108-88-3	
Xylene (Total)	ND	ug/kg	9.0	1		01/26/12 11:34	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%	72-129	1		01/26/12 11:34	1868-53-7	
Toluene-d8 (S)	97	%	69-133	1		01/26/12 11:34	2037-26-5	
4-Bromofluorobenzene (S)	101	%	67-142	1		01/26/12 11:34	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	67-136	1		01/26/12 11:34	17060-07-0	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510617

QC Batch: GCV/2647 Analysis Method: NWTPH-Gx
QC Batch Method: NWTPH-Gx Analysis Description: NWTPH-Gx Solid GCV
Associated Lab Samples: 2510617001, 2510617002, 2510617003, 2510617004, 2510617007, 2510617008

METHOD BLANK: 100515 Matrix: Solid
Associated Lab Samples: 2510617001, 2510617002, 2510617003, 2510617004, 2510617007, 2510617008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	5.0	01/24/12 13:31	
4-Bromofluorobenzene (S)	%	106	50-150	01/24/12 13:31	
a,a,a-Trifluorotoluene (S)	%	105	50-150	01/24/12 13:31	

LABORATORY CONTROL SAMPLE: 100516

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	12.5	14.0	112	63-140	
4-Bromofluorobenzene (S)	%			103	50-150	
a,a,a-Trifluorotoluene (S)	%			105	50-150	

SAMPLE DUPLICATE: 100556

Parameter	Units	2510557001 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	mg/kg	ND	ND		
4-Bromofluorobenzene (S)	%	97	88	9	
a,a,a-Trifluorotoluene (S)	%	96	90	7	

SAMPLE DUPLICATE: 100557

Parameter	Units	2510617001 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	mg/kg	ND	ND		
4-Bromofluorobenzene (S)	%	94	94	.04	
a,a,a-Trifluorotoluene (S)	%	95	96	.6	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510617

QC Batch: GCV/2649 Analysis Method: NWTPH-Gx
QC Batch Method: NWTPH-Gx Analysis Description: NWTPH-Gx Solid GCV
Associated Lab Samples: 2510617005, 2510617006, 2510617009, 2510617010, 2510617015

METHOD BLANK: 100653 Matrix: Solid
Associated Lab Samples: 2510617005, 2510617006, 2510617009, 2510617010, 2510617015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	5.0	01/25/12 08:36	
4-Bromofluorobenzene (S)	%	106	50-150	01/25/12 08:36	
a,a,a-Trifluorotoluene (S)	%	109	50-150	01/25/12 08:36	

LABORATORY CONTROL SAMPLE: 100654

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	12.5	13.7	110	63-140	
4-Bromofluorobenzene (S)	%			111	50-150	
a,a,a-Trifluorotoluene (S)	%			114	50-150	

SAMPLE DUPLICATE: 100717

Parameter	Units	2510622005 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	mg/kg	ND	6.4J		
4-Bromofluorobenzene (S)	%	112	109	3	
a,a,a-Trifluorotoluene (S)	%	117	115	2	

SAMPLE DUPLICATE: 100718

Parameter	Units	2510601010 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	mg/kg	2130	2280	7	
4-Bromofluorobenzene (S)	%	115	117	1	
a,a,a-Trifluorotoluene (S)	%	109	110	.8	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510617

QC Batch: MPRP/2762 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 2510617001, 2510617002, 2510617003, 2510617004, 2510617005, 2510617006, 2510617007, 2510617008, 2510617009, 2510617010

METHOD BLANK: 100582 Matrix: Solid
Associated Lab Samples: 2510617001, 2510617002, 2510617003, 2510617004, 2510617005, 2510617006, 2510617007, 2510617008, 2510617009, 2510617010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	ND	1.0	01/25/12 16:35	

LABORATORY CONTROL SAMPLE: 100583

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	25	23.5	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 100584 100585

Parameter	Units	2510617001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Lead	mg/kg	1.9	28.2	28.2	26.4	26.3	87	87	75-125	.2	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510617

QC Batch: MSV/6274 Analysis Method: EPA 8260
QC Batch Method: EPA 5035A/5030B Analysis Description: 8260 MSV 5035A Medium Soil
Associated Lab Samples: 2510617005, 2510617010

METHOD BLANK: 101433 Matrix: Solid
Associated Lab Samples: 2510617005, 2510617010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/kg	ND	50.0	02/01/12 18:40	
1,2-Dichloroethane-d4 (S)	%	92	70-125	02/01/12 18:40	
4-Bromofluorobenzene (S)	%	102	73-128	02/01/12 18:40	
Dibromofluoromethane (S)	%	98	75-116	02/01/12 18:40	
Toluene-d8 (S)	%	96	74-124	02/01/12 18:40	

LABORATORY CONTROL SAMPLE: 101434

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/kg	1000	936	94	71-123	
1,2-Dichloroethane-d4 (S)	%			90	70-125	
4-Bromofluorobenzene (S)	%			94	73-128	
Dibromofluoromethane (S)	%			99	75-116	
Toluene-d8 (S)	%			99	74-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101476 101477

Parameter	Units	2510617005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Ethylbenzene	ug/kg	488	964	964	1620	1560	117	112	64-136	3	
1,2-Dichloroethane-d4 (S)	%						90	95	70-125		
4-Bromofluorobenzene (S)	%						103	107	73-128		
Dibromofluoromethane (S)	%						99	98	75-116		
Toluene-d8 (S)	%						97	100	74-124		

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510617

QC Batch: MSV/6241 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 2510617001, 2510617002, 2510617003, 2510617004, 2510617006, 2510617007, 2510617008, 2510617010, 2510617015

METHOD BLANK: 100748 Matrix: Solid
Associated Lab Samples: 2510617001, 2510617002, 2510617003, 2510617004, 2510617006, 2510617007, 2510617008, 2510617010, 2510617015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	ND	3.0	01/26/12 10:01	
Ethylbenzene	ug/kg	ND	3.0	01/26/12 10:01	
Methyl-tert-butyl ether	ug/kg	ND	3.0	01/26/12 10:01	
Toluene	ug/kg	ND	3.0	01/26/12 10:01	
Xylene (Total)	ug/kg	ND	9.0	01/26/12 10:01	
1,2-Dichloroethane-d4 (S)	%	107	67-136	01/26/12 10:01	
4-Bromofluorobenzene (S)	%	104	67-142	01/26/12 10:01	
Dibromofluoromethane (S)	%	102	72-129	01/26/12 10:01	
Toluene-d8 (S)	%	99	69-133	01/26/12 10:01	

LABORATORY CONTROL SAMPLE: 100749

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	20	20.6	103	69-133	
Ethylbenzene	ug/kg	20	22.4	112	68-126	
Methyl-tert-butyl ether	ug/kg	20	22.8	114	67-134	
Toluene	ug/kg	20	20.6	103	68-130	
Xylene (Total)	ug/kg	60	69.1	115	68-126	
1,2-Dichloroethane-d4 (S)	%			98	67-136	
4-Bromofluorobenzene (S)	%			98	67-142	
Dibromofluoromethane (S)	%			101	72-129	
Toluene-d8 (S)	%			100	69-133	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101336 101337

Parameter	Units	2510617002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzene	ug/kg	ND	23.2	22	21.6	20.1	93	91	40-129	7	
Ethylbenzene	ug/kg	ND	23.2	22	25.6	22.5	110	102	40-134	13	
Methyl-tert-butyl ether	ug/kg	ND	23.2	22	18.4	18.6	79	84	40-149	.8	
Toluene	ug/kg	ND	23.2	22	22.4	19.8	94	87	40-134	13	
Xylene (Total)	ug/kg	ND	69.8	66.1	74.0	65.2	106	99	40-129	13	
1,2-Dichloroethane-d4 (S)	%						77	88	67-136		
4-Bromofluorobenzene (S)	%						103	107	67-142		
Dibromofluoromethane (S)	%						89	97	72-129		
Toluene-d8 (S)	%						104	103	69-133		

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510617

QC Batch: MSV/6253 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 2510617005, 2510617009

METHOD BLANK: 100937 Matrix: Solid
Associated Lab Samples: 2510617005, 2510617009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	ND	3.0	01/27/12 17:45	
Ethylbenzene	ug/kg	ND	3.0	01/27/12 17:45	
Methyl-tert-butyl ether	ug/kg	ND	3.0	01/27/12 17:45	
Toluene	ug/kg	ND	3.0	01/27/12 17:45	
Xylene (Total)	ug/kg	ND	9.0	01/27/12 17:45	
1,2-Dichloroethane-d4 (S)	%	93	67-136	01/27/12 17:45	
4-Bromofluorobenzene (S)	%	106	67-142	01/27/12 17:45	
Dibromofluoromethane (S)	%	100	72-129	01/27/12 17:45	
Toluene-d8 (S)	%	94	69-133	01/27/12 17:45	

LABORATORY CONTROL SAMPLE: 100938

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	20	15.4	77	69-133	
Ethylbenzene	ug/kg	20	16.8	84	68-126	
Methyl-tert-butyl ether	ug/kg	20	16.4	82	67-134	
Toluene	ug/kg	20	14.9	74	68-130	
Xylene (Total)	ug/kg	60	49.8	83	68-126	
1,2-Dichloroethane-d4 (S)	%			94	67-136	
4-Bromofluorobenzene (S)	%			99	67-142	
Dibromofluoromethane (S)	%			95	72-129	
Toluene-d8 (S)	%			99	69-133	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101364 101365

Parameter	Units	2510708001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzene	ug/kg	110	14	13.7	131	62.3	147	-349	40-129	71	D6,E,M1
Ethylbenzene	ug/kg	144	14	13.7	331	106	1340	-276	40-134	103	D6,E,M1
Methyl-tert-butyl ether	ug/kg	ND	14	13.7	10.2	10.8	72	79	40-149	6	
Toluene	ug/kg	11.2	14	13.7	26.2	13.1	107	14	40-134	67	D6,M1
Xylene (Total)	ug/kg	80.0	42.1	41.2	246	68.9	394	-27	40-129	112	D6,E,M1
1,2-Dichloroethane-d4 (S)	%						148	97	67-136		S0
4-Bromofluorobenzene (S)	%						196	133	67-142		S0
Dibromofluoromethane (S)	%						103	96	72-129		
Toluene-d8 (S)	%						670	214	69-133		S0

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510617

QC Batch: OEXT/5008
QC Batch Method: EPA 3546
Analysis Method: EPA 8270 by SIM
Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 2510617009

METHOD BLANK: 100517 Matrix: Solid
Associated Lab Samples: 2510617009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	ND	6.7	01/25/12 11:00	
2-Methylnaphthalene	ug/kg	ND	6.7	01/25/12 11:00	
Acenaphthene	ug/kg	ND	6.7	01/25/12 11:00	
Acenaphthylene	ug/kg	ND	6.7	01/25/12 11:00	
Anthracene	ug/kg	ND	6.7	01/25/12 11:00	
Benzo(a)anthracene	ug/kg	ND	6.7	01/25/12 11:00	
Benzo(a)pyrene	ug/kg	ND	6.7	01/25/12 11:00	
Benzo(b)fluoranthene	ug/kg	ND	6.7	01/25/12 11:00	
Benzo(g,h,i)perylene	ug/kg	ND	6.7	01/25/12 11:00	
Benzo(k)fluoranthene	ug/kg	ND	6.7	01/25/12 11:00	
Chrysene	ug/kg	ND	6.7	01/25/12 11:00	
Dibenz(a,h)anthracene	ug/kg	ND	6.7	01/25/12 11:00	
Fluoranthene	ug/kg	ND	6.7	01/25/12 11:00	
Fluorene	ug/kg	ND	6.7	01/25/12 11:00	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	6.7	01/25/12 11:00	
Naphthalene	ug/kg	ND	6.7	01/25/12 11:00	
Phenanthrene	ug/kg	ND	6.7	01/25/12 11:00	
Pyrene	ug/kg	ND	6.7	01/25/12 11:00	
2-Fluorobiphenyl (S)	%	83	27-118	01/25/12 11:00	
Terphenyl-d14 (S)	%	89	28-125	01/25/12 11:00	

LABORATORY CONTROL SAMPLE: 100518

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	133	111	83	39-110	
2-Methylnaphthalene	ug/kg	133	113	85	39-110	
Acenaphthene	ug/kg	133	119	89	39-111	
Acenaphthylene	ug/kg	133	109	82	37-110	
Anthracene	ug/kg	133	109	82	40-113	
Benzo(a)anthracene	ug/kg	133	120	90	42-122	
Benzo(a)pyrene	ug/kg	133	133	99	44-132	
Benzo(b)fluoranthene	ug/kg	133	123	92	40-124	
Benzo(g,h,i)perylene	ug/kg	133	125	94	39-122	
Benzo(k)fluoranthene	ug/kg	133	127	95	44-123	
Chrysene	ug/kg	133	123	92	42-120	
Dibenz(a,h)anthracene	ug/kg	133	128	96	40-122	
Fluoranthene	ug/kg	133	117	88	42-116	
Fluorene	ug/kg	133	108	81	41-112	
Indeno(1,2,3-cd)pyrene	ug/kg	133	123	93	39-124	
Naphthalene	ug/kg	133	103	77	36-110	
Phenanthrene	ug/kg	133	116	87	42-115	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510617

LABORATORY CONTROL SAMPLE: 100518

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/kg	133	124	93	44-121	
2-Fluorobiphenyl (S)	%			84	27-118	
Terphenyl-d14 (S)	%			96	28-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 100519 100520

Parameter	Units	2510607001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1-Methylnaphthalene	ug/kg	ND	161	161	128	124	79	77	28-120	3	
2-Methylnaphthalene	ug/kg	ND	161	161	130	124	80	76	26-121	5	
Acenaphthene	ug/kg	ND	161	161	128	132	79	82	27-122	3	
Acenaphthylene	ug/kg	ND	161	161	126	122	78	76	24-120	3	
Anthracene	ug/kg	ND	161	161	124	124	77	76	20-130	.4	
Benzo(a)anthracene	ug/kg	ND	161	161	121	114	74	70	20-136	6	
Benzo(a)pyrene	ug/kg	ND	161	161	147	142	91	88	20-141	3	
Benzo(b)fluoranthene	ug/kg	ND	161	161	117	135	71	83	12-136	14	
Benzo(g,h,i)perylene	ug/kg	ND	161	161	132	132	81	81	10-132	.04	
Benzo(k)fluoranthene	ug/kg	ND	161	161	161	134	99	83	22-131	18	
Chrysene	ug/kg	ND	161	161	129	141	79	86	16-132	8	
Dibenz(a,h)anthracene	ug/kg	ND	161	161	132	131	81	81	22-121	.8	
Fluoranthene	ug/kg	ND	161	161	129	128	78	77	21-129	.5	
Fluorene	ug/kg	ND	161	161	122	122	75	75	26-130	.4	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	161	161	134	131	82	81	14-131	2	
Naphthalene	ug/kg	ND	161	161	117	114	72	70	19-123	3	
Phenanthrene	ug/kg	ND	161	161	141	136	84	81	19-135	3	
Pyrene	ug/kg	ND	161	161	135	140	82	85	18-136	4	
2-Fluorobiphenyl (S)	%						74	74	27-118		
Terphenyl-d14 (S)	%						82	81	28-125		

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510617

QC Batch: OEXT/5009 Analysis Method: NWTPH-Dx
QC Batch Method: EPA 3546 Analysis Description: NWTPH-Dx GCS
Associated Lab Samples: 2510617001, 2510617002, 2510617003, 2510617004, 2510617005, 2510617006, 2510617007, 2510617008, 2510617009, 2510617010

METHOD BLANK: 100521 Matrix: Solid
Associated Lab Samples: 2510617001, 2510617002, 2510617003, 2510617004, 2510617005, 2510617006, 2510617007, 2510617008, 2510617009, 2510617010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range	mg/kg	ND	16.0	01/24/12 17:02	
Motor Oil Range	mg/kg	ND	64.0	01/24/12 17:02	
n-Octacosane (S)	%	86	50-150	01/24/12 17:02	
o-Terphenyl (S)	%	88	50-150	01/24/12 17:02	

LABORATORY CONTROL SAMPLE: 100522

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Range	mg/kg	400	356	89	70-111	
Motor Oil Range	mg/kg	400	379	95	73-118	
n-Octacosane (S)	%			91	50-150	
o-Terphenyl (S)	%			90	50-150	

SAMPLE DUPLICATE: 100523

Parameter	Units	2510617001 Result	Dup Result	RPD	Qualifiers
Diesel Range	mg/kg	ND	ND		
Motor Oil Range	mg/kg	ND	ND		
n-Octacosane (S)	%	92	93	1	
o-Terphenyl (S)	%	93	90	3	

SAMPLE DUPLICATE: 100524

Parameter	Units	2510617009 Result	Dup Result	RPD	Qualifiers
Diesel Range	mg/kg	2710	2230	19	
Motor Oil Range	mg/kg	9400	8700	8	
n-Octacosane (S)	%	110	92	18	
o-Terphenyl (S)	%	91	94	3	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510617

QC Batch: PMST/1945
Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 2510617001, 2510617002, 2510617003, 2510617004, 2510617005, 2510617006, 2510617007, 2510617008, 2510617009, 2510617010

SAMPLE DUPLICATE: 100528

Parameter	Units	2510617002 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	18.7	18.9	1	

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QUALIFIERS

Project: WA 11060
Pace Project No.: 2510617

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

1n	Low recovery of internal standard in this sample due to a matrix effect. This matrix effect was confirmed by a second analysis. Results may be biased high.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
D6	The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S0	Surrogate recovery outside laboratory control limits.
S2	Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).
S5	Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WA 11060
Pace Project No.: 2510617

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2510617001	**MW-10-15**	EPA 3546	OEXT/5009	NWTPH-Dx	GCSV/3266
2510617002	**MW-10-20**	EPA 3546	OEXT/5009	NWTPH-Dx	GCSV/3266
2510617003	**MW-10-25**	EPA 3546	OEXT/5009	NWTPH-Dx	GCSV/3266
2510617004	**MW-10-35**	EPA 3546	OEXT/5009	NWTPH-Dx	GCSV/3266
2510617005	**SB-1-15**	EPA 3546	OEXT/5009	NWTPH-Dx	GCSV/3266
2510617006	**SB-1-25**	EPA 3546	OEXT/5009	NWTPH-Dx	GCSV/3266
2510617007	**SB-1-35**	EPA 3546	OEXT/5009	NWTPH-Dx	GCSV/3266
2510617008	**SB-1-40**	EPA 3546	OEXT/5009	NWTPH-Dx	GCSV/3266
2510617009	**SB-3-5**	EPA 3546	OEXT/5009	NWTPH-Dx	GCSV/3266
2510617010	**DUP-1**	EPA 3546	OEXT/5009	NWTPH-Dx	GCSV/3266
2510617001	**MW-10-15**	NWTPH-Gx	GCV/2647	NWTPH-Gx	GCV/2648
2510617002	**MW-10-20**	NWTPH-Gx	GCV/2647	NWTPH-Gx	GCV/2648
2510617003	**MW-10-25**	NWTPH-Gx	GCV/2647	NWTPH-Gx	GCV/2648
2510617004	**MW-10-35**	NWTPH-Gx	GCV/2647	NWTPH-Gx	GCV/2648
2510617005	**SB-1-15**	NWTPH-Gx	GCV/2649	NWTPH-Gx	GCV/2650
2510617006	**SB-1-25**	NWTPH-Gx	GCV/2649	NWTPH-Gx	GCV/2650
2510617007	**SB-1-35**	NWTPH-Gx	GCV/2647	NWTPH-Gx	GCV/2648
2510617008	**SB-1-40**	NWTPH-Gx	GCV/2647	NWTPH-Gx	GCV/2648
2510617009	**SB-3-5**	NWTPH-Gx	GCV/2649	NWTPH-Gx	GCV/2650
2510617010	**DUP-1**	NWTPH-Gx	GCV/2649	NWTPH-Gx	GCV/2650
2510617015	**Trip Blank**	NWTPH-Gx	GCV/2649	NWTPH-Gx	GCV/2650
2510617001	**MW-10-15**	EPA 3050	MPRP/2762	EPA 6010	ICP/2599
2510617002	**MW-10-20**	EPA 3050	MPRP/2762	EPA 6010	ICP/2599
2510617003	**MW-10-25**	EPA 3050	MPRP/2762	EPA 6010	ICP/2599
2510617004	**MW-10-35**	EPA 3050	MPRP/2762	EPA 6010	ICP/2599
2510617005	**SB-1-15**	EPA 3050	MPRP/2762	EPA 6010	ICP/2599
2510617006	**SB-1-25**	EPA 3050	MPRP/2762	EPA 6010	ICP/2599
2510617007	**SB-1-35**	EPA 3050	MPRP/2762	EPA 6010	ICP/2599
2510617008	**SB-1-40**	EPA 3050	MPRP/2762	EPA 6010	ICP/2599
2510617009	**SB-3-5**	EPA 3050	MPRP/2762	EPA 6010	ICP/2599
2510617010	**DUP-1**	EPA 3050	MPRP/2762	EPA 6010	ICP/2599
2510617009	**SB-3-5**	EPA 3546	OEXT/5008	EPA 8270 by SIM	MSSV/1921
2510617005	**SB-1-15**	EPA 5035A/5030B	MSV/6274	EPA 8260	MSV/6279
2510617010	**DUP-1**	EPA 5035A/5030B	MSV/6274	EPA 8260	MSV/6279
2510617001	**MW-10-15**	EPA 8260	MSV/6241		
2510617002	**MW-10-20**	EPA 8260	MSV/6241		
2510617003	**MW-10-25**	EPA 8260	MSV/6241		
2510617004	**MW-10-35**	EPA 8260	MSV/6241		
2510617005	**SB-1-15**	EPA 8260	MSV/6253		
2510617006	**SB-1-25**	EPA 8260	MSV/6241		
2510617007	**SB-1-35**	EPA 8260	MSV/6241		
2510617008	**SB-1-40**	EPA 8260	MSV/6241		
2510617009	**SB-3-5**	EPA 8260	MSV/6253		

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WA 11060
Pace Project No.: 2510617

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2510617010	**DUP-1**	EPA 8260	MSV/6241		
2510617015	**Trip Blank**	EPA 8260	MSV/6241		
2510617001	**MW-10-15**	ASTM D2974-87	PMST/1945		
2510617002	**MW-10-20**	ASTM D2974-87	PMST/1945		
2510617003	**MW-10-25**	ASTM D2974-87	PMST/1945		
2510617004	**MW-10-35**	ASTM D2974-87	PMST/1945		
2510617005	**SB-1-15**	ASTM D2974-87	PMST/1945		
2510617006	**SB-1-25**	ASTM D2974-87	PMST/1945		
2510617007	**SB-1-35**	ASTM D2974-87	PMST/1945		
2510617008	**SB-1-40**	ASTM D2974-87	PMST/1945		
2510617009	**SB-3-5**	ASTM D2974-87	PMST/1945		
2510617010	**DUP-1**	ASTM D2974-87	PMST/1945		

Pace Analytical
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CHAIN-OF-CUSTODY / Analytical Request Document 2510617

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

1491647

Section A Required Client Information:

Company:	Arcadis
Address:	2300 Eastlake Ave Seattle WA 98102
Email To:	Scott.Zorn@arcadis.com
Phone:	2067264704 Fax:
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Scott Zorn
Copy To:	Sam Miles, Al Kahal
Purchase Order No.:	
Project Name:	WA 11060
Project Number:	

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	22095 L7

REGULATORY AGENCY

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

Site Location STATE: _____

Section D Required Client Information

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

Matrix Codes MATRIX / CODE

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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	GRO	DRO/HO	BTEX/MTBE	PAH	Total Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-10-15	S	G	~~1-23-12~~	~~1125~~	1-23-12	1125												X	X	X	X	X		
2	MW-10-20						1130																		
3	MW-10-25						1140																		
4	MW-10-35						1155																		
5	SB-1-15						1410																		
6	SB-1-25						1415																		
7	SB-1-35						1425																		
8	SB-1-40						1430																		
9	SB-3-5						1535																		
10	DUP-1																								
11																									
12																									

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
★ Hold PAH Pending Px Results ★	Sam Miles.	1-23-12	1700	Colette Weaver/PACE	012312	1700	Cat	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

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.

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CHAIN-OF-CUSTODY / Analytical Request Document

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

2510617

Page: 2 of 2

1491646

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Arcadis	Report To: Scott Zorn	Attention:
Address: 2300 Eastlake Ave Seattle WA 98102	Copy To: Sam Miles Al Kahal	Company Name:
Email To: Scott.Zorn@Arcadis-US.com	Purchase Order No.:	Address:
Phone: 206.726.4704 Fax:	Project Name: WA-11060	Pace Quote Reference:
Requested Due Date/TAT:	Project Number:	Pace Project Manager:
		Pace Profile #:

REGULATORY AGENCY

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

Site Location STATE: _____

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Soil Grain Analysis	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SB-1-5'					1-23-12	1355												X		
2	SB-1-10'					1-23-12	1405														
3	SB-1-30					↓	1420														
4	SB-1-40					↓	1430														
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Sam Miles	1-23-12	~~1900~~ 1700	Colette Weaver/PACE	012312	1700	6.4	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

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.

Sample Container Count

2510617

CLIENT: Arcadis

COC PAGE 2 of 2
COC ID# 1491644

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										1									
2										1									
3										1									
4										1									
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

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

Sample Container Count

2510617

CLIENT: Arcadis

COC PAGE 1 of 2
COC ID# 1491647

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										1	1	1	2	2					
2										↓	↓	↓	↓	↓					
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10										↓	↓								
11												↓	↓	↓					
12																			

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

Sample Condition Upon Receipt

2510617

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 6.4c Biological Tissue is Frozen: Yes No

Temp should be above freezing ≤ 6°C

Date and Initials of person examining contents: 012312 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. TB not on COC
-Includes date/time/ID/Analysis Matrix: SL				
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. Rcvd TB not on COC
Trip Blank Custody Seals Present	☐Yes	☑No	☐N/A	
Pace Trip Blank Creation Date:				

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

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: ARB **Date:** 1/24/12

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)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

February 1, 2012

Andy Brownfield
Pace Analytical
940 S. Harney Street
Seattle, WA 98108

RE: Client Project: WA 11060, 2510617
ARI Job No.: UF23

Dear Andy:

Please find enclosed the original Chain of Custody (COC) record, sample receipt documentation, and final analytical results for samples from the project referenced above. Analytical Resources Inc. (ARI) accepted four solid samples on January 25, 2012. For further details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for Grain Size, as requested. Details regarding this analysis can be found in the Geotechnical Case Narrative.

An electronic copy of this report as well as all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
206-695-6214
cheronneo@arilabs.com
www.arilabs.com

Enclosures

cc: eFile UF23

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

UF23

Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: 2510617 **Workorder Name:** WA 11060 **Results Requested** 2/6/2012

Report / Invoice To	Subcontract To
Andy Brownfield Pace Analytical Seattle 940 South Harney Seattle, WA 98108 Phone (206)767-5060 Email: andy.brownfield@pacelabs.com	ARI P.O._____

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	Requested Analysis: Soil Grain Analysis	LAB USE ONLY
1	SB-1-5'	1/23/2012 13:55	2510617011	Solid	1	1	
2	SB-1-10'	1/23/2012 14:05	2510617012	Solid	1	1	
3	SB-1-30	1/23/2012 14:20	2510617013	Solid	1	1	
4	SB-1-40	1/23/2012 14:30	2510617014	Solid	1	1	
5							

Transfers	Released By	Date/Time	Received By	Date/Time
1	Jyothi Swamy	1/25/12 0927	Taylor Streeter	1-25-12 1020
2				
3				
4				
5				

Comments

UF23 : 00002

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Pace Project Name: WA 11060

COC No(s): _____ NA Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: UF23 Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry): 5.9

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: GQ 9411 619

Cooler Accepted by: TS Date: 1-25-12 Time: 1620

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used?	Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?	TS	(YES)	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	(NA)	YES	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Was Sample Split by ARI: (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: TS Date: 1-25-12 Time: 1405

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm	Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: UF23
Client: Pace Analytical
Project Event: 2510617
Project Name: WA 11060

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	SB-1-5'	UF23A	12-923	Soil	01/23/12 13:55	01/25/12 10:20
2.	SB-1-10'	UF23B	12-924	Soil	01/23/12 14:05	01/25/12 10:20
3.	SB-1-30	UF23C	12-925	Soil	01/23/12 14:20	01/25/12 10:20
4.	SB-1-40	UF23D	12-926	Soil	01/23/12 14:30	01/25/12 10:20

Printed 01/25/12

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: Pace Analytical	**ARI Job No.:** UF23
Client Project: WA 11060	**Client Project No.:** 2510617

Case Narrative

1. Four samples were submitted for analysis on January 25, 2012, and were in good condition.
2. The samples were submitted for grain size distribution according to ASTM D422. The samples were prepared according to ASTM D421.
3. An assumed specific gravity of 2.65 was used in the hydrometer calculations.
4. A standard milkshake mixer type device was used to disperse the fine fraction sample.
5. One sample from another job was chosen for triplicate analysis. The triplicate data can be found on the QA summary table.
6. One sample contained organic material which may have broken down during the sieving process.
7. The data is provided in summary tables and plots.
8. There were no further anomalies in the samples or test method.

Released by: _____ Date: 2/1/12
Title: *Geotechnical Division Manager*

Reviewed by: _____ Date: 2-1-2012
Title: *Lead Technician*

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • 206-695-6201 (fax)

Pace Analytical
2510617
WA 11060

Percent Finer (Passing) Than the Indicated Size

Sieve Size (microns)	3"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	#4 (4750)	#10 (2000)	#20 (850)	#40 (425)	#60 (250)	#100 (150)	#200 (75)	32	22	13	9	7	3.2	1.3
TW26 A	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.2	96.5	86.9	76.2	63.0	45.2	36.4	28.9	23.9	17.6	10.0	5.6
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	99.1	96.2	86.8	76.8	64.3	44.5	35.7	28.8	23.2	17.5	10.0	5.6
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.3	96.4	85.8	75.5	62.3	43.2	35.7	28.2	23.8	17.5	10.6	6.3
SB-1-5'	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.6	99.4	99.1	98.6	97.7	97.0	96.4	89.6	89.6	83.7	76.5	67.0	48.8	29.1
SB-1-10'	100.0	100.0	100.0	100.0	100.0	96.3	93.7	92.6	90.5	88.5	83.9	74.1	66.1	60.5	54.6	50.9	44.8	41.1	36.8	26.4	16.0
SB-1-30	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	99.7	99.5	99.2	98.4	97.4	59.7	18.9	14.1	10.2	9.2	7.8	6.3	3.9
SB-1-40	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	99.6	99.6	99.5	99.4	99.2	92.4	38.2	24.6	14.5	11.1	9.7	6.8	3.9

Testing performed according to ASTM D421/D422

Pace Analytical
2510617
WA 11060

Percent Retained in Each Size Fraction

Description	%Coarse Gravel				% Gravel			% Coarse Sand	% Medium Sand		% Fine Sand			% Very Coarse Silt	% Coarse Silt	% Medium Silt	% Fine Silt	% Fine Silt	% Very Fine Silt	% Clay	
Particle Size (microns)	3-2"	2-1 1/2"	1 1/2"-1"	1-3/4"	3/4-1/2"	1/2-3/8"	3/8"-4750	4750-2000	2000-850	850-425	425-250	250-150	150-75	75-32	32-22	22-13	13-9	9-7	7-3.2	3.2-1.3	<1.3
TW26 A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	2.7	9.6	10.8	13.2	17.8	8.8	7.5	5.0	6.3	7.5	4.4	5.6
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7	2.9	9.4	10.1	12.5	19.8	8.8	6.9	5.6	5.6	7.5	4.4	5.6
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	2.9	10.6	10.3	13.2	19.1	7.5	7.5	4.4	6.3	6.9	4.4	6.3
SB-1-5'	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.3	0.5	0.9	0.8	0.6	6.8	0.0	5.8	7.3	9.5	18.2	19.7	29.1
SB-1-10'	0.0	0.0	0.0	0.0	3.7	2.5	1.1	2.1	2.0	4.6	9.8	7.9	5.6	5.9	3.7	6.1	3.7	4.3	10.4	10.4	16.0
SB-1-30	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.2	0.4	0.8	1.0	37.7	40.7	4.9	3.9	1.0	1.5	1.5	2.4	3.9
SB-1-40	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.1	0.1	0.2	6.8	54.3	13.5	10.1	3.4	1.4	2.9	2.9	3.9

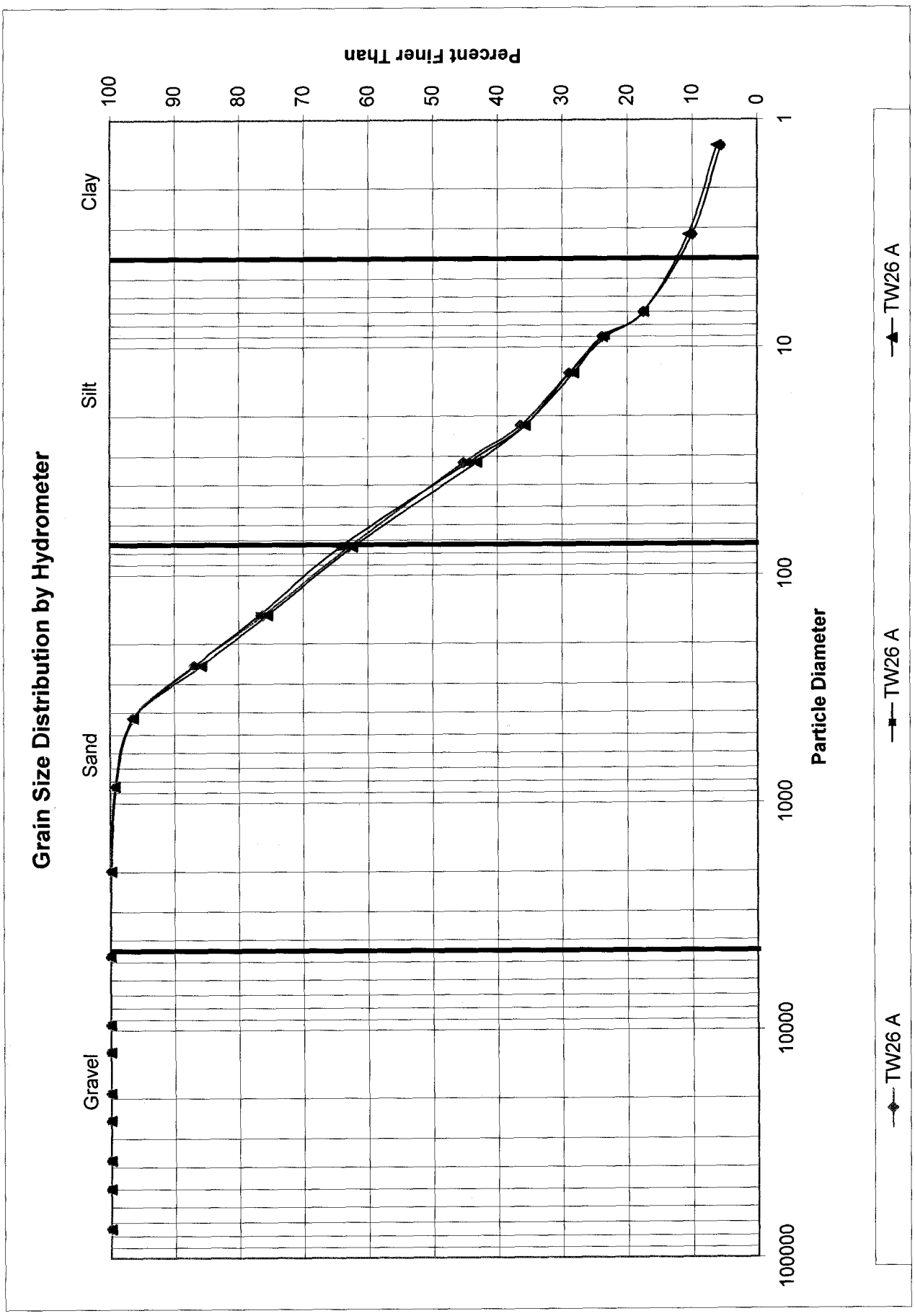
Client:	Pace Analytical	Project No.:	2510617
		Project:	WA11060
ARI *Triplicate Sample* ID:	TW26 A	Batch No.:	UF23-01
		Page:	1 of 1

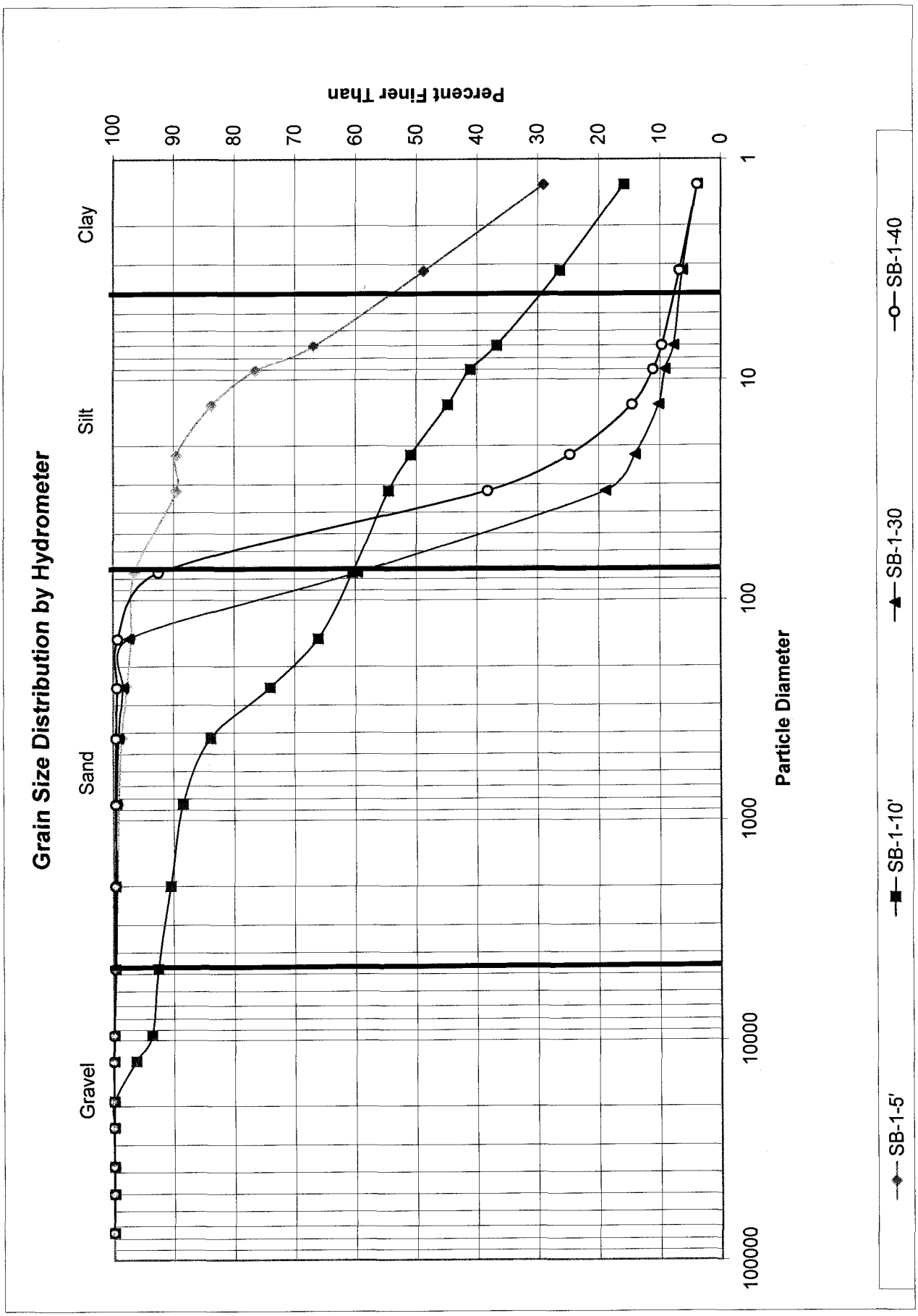
Relative Standard Deviation, By Size

Sample ID	75000	50000	37500	25000	19000	12500	9500	4750	2000	850	425	250	150	75	32	22	13	9	7	3.2	1.3
TW26 A	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.2	96.5	86.9	76.2	63.0	45.2	36.4	28.9	23.9	17.6	10.0	5.6
TW26 A	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	99.1	96.2	86.8	76.8	64.3	44.5	35.7	28.8	23.2	17.5	10.0	5.6
TW26 A	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.3	96.4	85.8	75.5	62.3	43.2	35.7	28.2	23.8	17.5	10.6	6.3
AVE	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.87	99.19	96.36	86.50	76.15	63.20	44.30	35.94	28.63	23.61	17.55	10.24	5.85
STDEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.08	0.12	0.64	0.63	0.99	1.01	0.40	0.39	0.37	0.02	0.35	0.36
%RSD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.08	0.12	0.74	0.83	1.56	2.27	1.12	1.35	1.57	0.12	3.45	6.10

This Triplicate applies to the Batch Containing the Following Samples

Sample ID	Date Sampled	Date Set up	Date Started	Date Complete	Data Qualifiers
TW26 A	10/31/2011	11/16/2011	11/17/2011	11/22/2011	
	10/31/2011	11/16/2011	11/17/2011	11/22/2011	
	10/31/2011	11/16/2011	11/17/2011	11/22/2011	
SB-1-5'	1/23/2012	1/26/2012	1/30/2012	1/31/2012	
SB-1-10'	1/23/2012	1/26/2012	1/30/2012	1/31/2012	
SB-1-30	1/23/2012	1/26/2012	1/30/2012	1/31/2012	
SB-1-40	1/23/2012	1/26/2012	1/30/2012	1/31/2012	


Grain Size Distribution by Hydrometer
Percent Finer Than
100
90
80
70
60
50
40
30
20
10
0
Clay
Silt
Sand
Gravel
1
10
100
1000
10000
100000
Particle Diameter
TW26 A
TW26 A
TW26 A


Grain Size Distribution by Hydrometer
Percent Finer Than
100
90
80
70
60
50
40
30
20
10
0
Clay
Silt
Sand
Gravel
1
10
100
1000
10000
100000
Particle Diameter
SB-1-5'
SB-1-10'
SB-1-30
SB-1-40

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

February 07, 2012

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

RE: Project: WA 11060
Pace Project No.: 2510622

Dear Scott Zorn:
Enclosed are the analytical results for sample(s) received by the laboratory on January 24, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

Sample SB-3-10 re-logged for PAH per client request on 2/2/12.

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

Sincerely,

Andy Brownfield

andy.brownfield@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.
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Seattle, WA 98108
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CERTIFICATIONS

Project: WA 11060
Pace Project No.: 2510622

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

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SAMPLE ANALYTE COUNT

Project: WA 11060
Pace Project No.: 2510622

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2510622004	**SB-2-20**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LNH	5	PASI-S
		EPA 8260	LPM	8	PASI-S
		ASTM D2974-87	EED	1	PASI-S
2510622005	**SB-2-35**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LPM	9	PASI-S
		ASTM D2974-87	EED	1	PASI-S
2510622006	**SB-3-10**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8270 by SIM	KJ1	20	PASI-S
		EPA 8260	LPM	9	PASI-S
		ASTM D2974-87	EED	1	PASI-S
2510622007	**SB-3-20**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LNH	9	PASI-S
		ASTM D2974-87	EED	1	PASI-S
2510622008	**SB-3-50**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LNH	5	PASI-S
		EPA 8260	LPM	8	PASI-S
		ASTM D2974-87	EED	1	PASI-S

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510622

Method: **NWTPH-Dx**
Description: NWTPH-Dx GCS
Client: Arcadis U.S., Inc.
Date: February 07, 2012

General Information:
5 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 3546 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.
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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510622

Method: **NWTPH-Gx**
Description: NWTPH-Gx GCV
Client: Arcadis U.S., Inc.
Date: February 07, 2012

General Information:
5 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.

Sample Preparation:
The samples were prepared in accordance with NWTPH-Gx 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: GCV/2649

S5: Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

- SB-2-20 (Lab ID: 2510622004)
  - 4-Bromofluorobenzene (S)
- SB-3-20 (Lab ID: 2510622007)
  - 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.
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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510622

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Arcadis U.S., Inc.
Date: February 07, 2012

General Information:
5 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 3050 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.
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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510622

Method: **EPA 8270 by SIM**
Description: 8270 MSSV PAH by SIM
Client: Arcadis U.S., Inc.
Date: February 07, 2012

General Information:
1 sample was analyzed for EPA 8270 by SIM. 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 3546 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:

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940 South Harney
Seattle, WA 98108
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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510622

Method: **EPA 8260**
Description: 8260 MSV 5035A Med Level VOA
Client: Arcadis U.S., Inc.
Date: February 07, 2012

General Information:
3 samples were analyzed for EPA 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.

Sample Preparation:
The samples were prepared in accordance with EPA 5035A/5030B 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/6262

S5: Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

- SB-3-20 (Lab ID: 2510622007)
  - 4-Bromofluorobenzene (S)
  - Toluene-d8 (S)

QC Batch: MSV/6299

S5: Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

- SB-2-20 (Lab ID: 2510622004)
  - Toluene-d8 (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.

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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510622

Method: **EPA 8260**
Description: 8260 MSV 5035A Med Level VOA
Client: Arcadis U.S., Inc.
Date: February 07, 2012

QC Batch: MSV/6262

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2510718001

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

- MS (Lab ID: 101427)
  - Benzene
  - Ethylbenzene
  - Methyl-tert-butyl ether
  - Toluene
  - Xylene (Total)
- MSD (Lab ID: 101428)
  - Benzene
  - Ethylbenzene
  - Methyl-tert-butyl ether
  - Toluene
  - Xylene (Total)

QC Batch: MSV/6299

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2510691003

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

- MS (Lab ID: 101985)
  - Ethylbenzene
- MSD (Lab ID: 101986)
  - Ethylbenzene

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

Additional Comments:

Pace Analytical Services, Inc.
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Seattle, WA 98108
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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510622

Method: **EPA 8260**
Description: 8260/5035A Volatile Organics
Client: Arcadis U.S., Inc.
Date: February 07, 2012

General Information:
4 samples were analyzed for EPA 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/6253

S0: Surrogate recovery outside laboratory control limits.

- MS (Lab ID: 101364)
  - 1,2-Dichloroethane-d4 (S)
  - 4-Bromofluorobenzene (S)
  - Toluene-d8 (S)
- MSD (Lab ID: 101365)
  - Toluene-d8 (S)

S2: Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

- SB-2-20 (Lab ID: 2510622004)
  - 1,2-Dichloroethane-d4 (S)
  - 4-Bromofluorobenzene (S)
  - Toluene-d8 (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.

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

PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510622

Method: **EPA 8260**
Description: 8260/5035A Volatile Organics
Client: Arcadis U.S., Inc.
Date: February 07, 2012

QC Batch: MSV/6253

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2510708001

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

- MS (Lab ID: 101364)
  - Benzene
  - Ethylbenzene
  - Xylene (Total)
- MSD (Lab ID: 101365)
  - Benzene
  - Ethylbenzene
  - Toluene
  - Xylene (Total)

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

Additional Comments:

Analyte Comments:

QC Batch: MSV/6253

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- MS (Lab ID: 101364)
  - Benzene
  - Ethylbenzene
  - Xylene (Total)
- MSD (Lab ID: 101365)
  - Ethylbenzene

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: WA 11060
Pace Project No.: 2510622

Sample: SB-2-20 **Lab ID: 2510622004** Collected: 01/24/12 10:28 Received: 01/24/12 15:21 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	18.1	1	01/25/12 13:45	01/25/12 18:10		
Motor Oil Range	ND	mg/kg	72.2	1	01/25/12 13:45	01/25/12 18:10	64742-65-0	
Surrogates								
n-Octacosane (S)	86	%	50-150	1	01/25/12 13:45	01/25/12 18:10	630-02-4	
o-Terphenyl (S)	91	%	50-150	1	01/25/12 13:45	01/25/12 18:10	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	**1500**	mg/kg	111	20	01/25/12 13:32	01/25/12 14:44		
Surrogates								
a,a,a-Trifluorotoluene (S)	111	%	50-150	20	01/25/12 13:32	01/25/12 14:44	98-08-8	
4-Bromofluorobenzene (S)	154	%	50-150	20	01/25/12 13:32	01/25/12 14:44	460-00-4	S5
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**2.9**	mg/kg	1.0	1	01/27/12 07:58	01/30/12 17:13	7439-92-1	
8260 MSV 5035A Med Level VOA	Analytical Method: EPA 8260 Preparation Method: EPA 5035A/5030B							
Ethylbenzene	**848**	ug/kg	55.4	1	02/04/12 00:00	02/05/12 07:48	100-41-4	
Surrogates								
Dibromofluoromethane (S)	96	%	75-116	1	02/04/12 00:00	02/05/12 07:48	1868-53-7	
Toluene-d8 (S)	126	%	74-124	1	02/04/12 00:00	02/05/12 07:48	2037-26-5	S5
4-Bromofluorobenzene (S)	117	%	73-128	1	02/04/12 00:00	02/05/12 07:48	460-00-4	
1,2-Dichloroethane-d4 (S)	85	%	70-125	1	02/04/12 00:00	02/05/12 07:48	17060-07-0	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	3.4	1		01/27/12 21:11	71-43-2	
Methyl-tert-butyl ether	ND	ug/kg	3.4	1		01/27/12 21:11	1634-04-4	
Toluene	ND	ug/kg	3.4	1		01/27/12 21:11	108-88-3	
Xylene (Total)	**17.8**	ug/kg	10.3	1		01/27/12 21:11	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	111	%	72-129	1		01/27/12 21:11	1868-53-7	
Toluene-d8 (S)	542	%	69-133	1		01/27/12 21:11	2037-26-5	S2
4-Bromofluorobenzene (S)	173	%	67-142	1		01/27/12 21:11	460-00-4	S2
1,2-Dichloroethane-d4 (S)	160	%	67-136	1		01/27/12 21:11	17060-07-0	S2
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**15.4**	%	0.10	1		01/25/12 16:47		

Sample: SB-2-35 **Lab ID: 2510622005** Collected: 01/24/12 10:45 Received: 01/24/12 15:21 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	19.0	1	01/25/12 13:45	01/25/12 18:27		
Motor Oil Range	ND	mg/kg	75.8	1	01/25/12 13:45	01/25/12 18:27	64742-65-0	

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510622

Sample: SB-2-35 **Lab ID: 2510622005** Collected: 01/24/12 10:45 Received: 01/24/12 15:21 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx		Preparation Method: EPA 3546					
Surrogates								
n-Octacosane (S)	85	%	50-150	1	01/25/12 13:45	01/25/12 18:27	630-02-4	
o-Terphenyl (S)	91	%	50-150	1	01/25/12 13:45	01/25/12 18:27	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx		Preparation Method: NWTPH-Gx					
Gasoline Range Organics	ND	mg/kg	6.5	1	01/25/12 13:32	01/25/12 17:35		
Surrogates								
a,a,a-Trifluorotoluene (S)	117	%	50-150	1	01/25/12 13:32	01/25/12 17:35	98-08-8	
4-Bromofluorobenzene (S)	112	%	50-150	1	01/25/12 13:32	01/25/12 17:35	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010		Preparation Method: EPA 3050					
Lead	**2.7**	mg/kg	1.2	1	01/27/12 07:58	01/30/12 17:24	7439-92-1	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	3.0	1		01/26/12 14:18	71-43-2	
Ethylbenzene	ND	ug/kg	3.0	1		01/26/12 14:18	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	3.0	1		01/26/12 14:18	1634-04-4	
Toluene	ND	ug/kg	3.0	1		01/26/12 14:18	108-88-3	
Xylene (Total)	ND	ug/kg	9.0	1		01/26/12 14:18	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%	72-129	1		01/26/12 14:18	1868-53-7	
Toluene-d8 (S)	104	%	69-133	1		01/26/12 14:18	2037-26-5	
4-Bromofluorobenzene (S)	103	%	67-142	1		01/26/12 14:18	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	67-136	1		01/26/12 14:18	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**17.7**	%	0.10	1		01/25/12 16:47		

Sample: SB-3-10 **Lab ID: 2510622006** Collected: 01/24/12 12:00 Received: 01/24/12 15:21 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx		Preparation Method: EPA 3546					
Diesel Range	**68.4**	mg/kg	19.8	1	01/25/12 13:45	01/26/12 21:49		
Motor Oil Range	**330**	mg/kg	79.3	1	01/25/12 13:45	01/26/12 21:49	64742-65-0	
Surrogates								
n-Octacosane (S)	93	%	50-150	1	01/25/12 13:45	01/26/12 21:49	630-02-4	
o-Terphenyl (S)	86	%	50-150	1	01/25/12 13:45	01/26/12 21:49	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx		Preparation Method: NWTPH-Gx					
Gasoline Range Organics	**111**	mg/kg	6.3	1	01/25/12 13:32	01/25/12 16:46		
Surrogates								
a,a,a-Trifluorotoluene (S)	110	%	50-150	1	01/25/12 13:32	01/25/12 16:46	98-08-8	
4-Bromofluorobenzene (S)	147	%	50-150	1	01/25/12 13:32	01/25/12 16:46	460-00-4	

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510622

Sample: SB-3-10 **Lab ID: 2510622006** Collected: 01/24/12 12:00 Received: 01/24/12 15:21 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**11.4**	mg/kg	1.2	1	01/27/12 07:58	01/31/12 20:56	7439-92-1	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546							
Acenaphthene	**618**	ug/kg	8.6	1	01/25/12 15:40	01/26/12 20:32	83-32-9	
Acenaphthylene	**51.4**	ug/kg	8.6	1	01/25/12 15:40	01/26/12 20:32	208-96-8	
Anthracene	**1290**	ug/kg	171	20	01/25/12 15:40	01/27/12 09:52	120-12-7	
Benzo(a)anthracene	**4590**	ug/kg	171	20	01/25/12 15:40	01/27/12 09:52	56-55-3	
Benzo(a)pyrene	**7160**	ug/kg	171	20	01/25/12 15:40	01/27/12 09:52	50-32-8	
Benzo(b)fluoranthene	**5990**	ug/kg	171	20	01/25/12 15:40	01/27/12 09:52	205-99-2	
Benzo(g,h,i)perylene	**4820**	ug/kg	171	20	01/25/12 15:40	01/27/12 09:52	191-24-2	
Benzo(k)fluoranthene	**3340**	ug/kg	171	20	01/25/12 15:40	01/27/12 09:52	207-08-9	
Chrysene	**5210**	ug/kg	171	20	01/25/12 15:40	01/27/12 09:52	218-01-9	
Dibenz(a,h)anthracene	**978**	ug/kg	171	20	01/25/12 15:40	01/27/12 09:52	53-70-3	
Fluoranthene	**6080**	ug/kg	171	20	01/25/12 15:40	01/27/12 09:52	206-44-0	
Fluorene	**690**	ug/kg	8.6	1	01/25/12 15:40	01/26/12 20:32	86-73-7	
Indeno(1,2,3-cd)pyrene	**4630**	ug/kg	171	20	01/25/12 15:40	01/27/12 09:52	193-39-5	
1-Methylnaphthalene	**121**	ug/kg	8.6	1	01/25/12 15:40	01/26/12 20:32	90-12-0	
2-Methylnaphthalene	**147**	ug/kg	8.6	1	01/25/12 15:40	01/26/12 20:32	91-57-6	
Naphthalene	**188**	ug/kg	8.6	1	01/25/12 15:40	01/26/12 20:32	91-20-3	
Phenanthrene	**5730**	ug/kg	171	20	01/25/12 15:40	01/27/12 09:52	85-01-8	
Pyrene	**7770**	ug/kg	171	20	01/25/12 15:40	01/27/12 09:52	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	76	%	27-118	1	01/25/12 15:40	01/26/12 20:32	321-60-8	
Terphenyl-d14 (S)	96	%	28-125	20	01/25/12 15:40	01/27/12 09:52	1718-51-0	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	3.1	1		01/27/12 18:05	71-43-2	
Ethylbenzene	ND	ug/kg	3.1	1		01/27/12 18:05	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	3.1	1		01/27/12 18:05	1634-04-4	
Toluene	ND	ug/kg	3.1	1		01/27/12 18:05	108-88-3	
Xylene (Total)	ND	ug/kg	9.3	1		01/27/12 18:05	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	99	%	72-129	1		01/27/12 18:05	1868-53-7	
Toluene-d8 (S)	98	%	69-133	1		01/27/12 18:05	2037-26-5	
4-Bromofluorobenzene (S)	106	%	67-142	1		01/27/12 18:05	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	67-136	1		01/27/12 18:05	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**22.3**	%	0.10	1		01/25/12 16:49		

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510622

Sample: SB-3-20 **Lab ID: 2510622007** Collected: 01/24/12 12:45 Received: 01/24/12 15:21 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	**102**	mg/kg	17.1	1	01/25/12 13:45	01/25/12 19:01		
Motor Oil Range	ND	mg/kg	68.4	1	01/25/12 13:45	01/25/12 19:01	64742-65-0	
Surrogates								
n-Octacosane (S)	91	%	50-150	1	01/25/12 13:45	01/25/12 19:01	630-02-4	
o-Terphenyl (S)	96	%	50-150	1	01/25/12 13:45	01/25/12 19:01	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	**4390**	mg/kg	112	20	01/25/12 13:32	01/25/12 15:09		
Surrogates								
a,a,a-Trifluorotoluene (S)	118	%	50-150	20	01/25/12 13:32	01/25/12 15:09	98-08-8	
4-Bromofluorobenzene (S)	250	%	50-150	20	01/25/12 13:32	01/25/12 15:09	460-00-4	S5
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**4.4**	mg/kg	0.87	1	01/27/12 07:58	01/31/12 21:00	7439-92-1	
8260 MSV 5035A Med Level VOA	Analytical Method: EPA 8260 Preparation Method: EPA 5035A/5030B							
Benzene	**95.6**	ug/kg	27.9	1	01/31/12 00:00	01/31/12 20:13	71-43-2	
Ethylbenzene	**13200**	ug/kg	55.8	1	01/31/12 00:00	01/31/12 20:13	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	55.8	1	01/31/12 00:00	01/31/12 20:13	1634-04-4	
Toluene	**5140**	ug/kg	55.8	1	01/31/12 00:00	01/31/12 20:13	108-88-3	
Xylene (Total)	**50800**	ug/kg	167	1	01/31/12 00:00	01/31/12 20:13	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	86	%	75-116	1	01/31/12 00:00	01/31/12 20:13	1868-53-7	
Toluene-d8 (S)	159	%	74-124	1	01/31/12 00:00	01/31/12 20:13	2037-26-5	S5
4-Bromofluorobenzene (S)	173	%	73-128	1	01/31/12 00:00	01/31/12 20:13	460-00-4	S5
1,2-Dichloroethane-d4 (S)	79	%	70-125	1	01/31/12 00:00	01/31/12 20:13	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**10.8**	%	0.10	1		01/25/12 16:50		

Sample: SB-3-50 **Lab ID: 2510622008** Collected: 01/24/12 13:30 Received: 01/24/12 15:21 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	19.5	1	01/25/12 13:45	01/25/12 19:18		
Motor Oil Range	ND	mg/kg	77.8	1	01/25/12 13:45	01/25/12 19:18	64742-65-0	
Surrogates								
n-Octacosane (S)	80	%	50-150	1	01/25/12 13:45	01/25/12 19:18	630-02-4	
o-Terphenyl (S)	87	%	50-150	1	01/25/12 13:45	01/25/12 19:18	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	ND	mg/kg	6.6	1	01/25/12 13:32	01/25/12 17:11		

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510622

Sample: SB-3-50 **Lab ID: 2510622008** Collected: 01/24/12 13:30 Received: 01/24/12 15:21 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Surrogates								
a,a,a-Trifluorotoluene (S)	117	%	50-150	1	01/25/12 13:32	01/25/12 17:11	98-08-8	
4-Bromofluorobenzene (S)	108	%	50-150	1	01/25/12 13:32	01/25/12 17:11	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**4.4**	mg/kg	1.2	1	01/27/12 07:58	01/31/12 21:03	7439-92-1	
8260 MSV 5035A Med Level VOA	Analytical Method: EPA 8260 Preparation Method: EPA 5035A/5030B							
Benzene	**589**	ug/kg	33.1	1	01/31/12 00:00	01/31/12 20:31	71-43-2	
Surrogates								
Dibromofluoromethane (S)	100	%	75-116	1	01/31/12 00:00	01/31/12 20:31	1868-53-7	
Toluene-d8 (S)	99	%	74-124	1	01/31/12 00:00	01/31/12 20:31	2037-26-5	
4-Bromofluorobenzene (S)	103	%	73-128	1	01/31/12 00:00	01/31/12 20:31	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-125	1	01/31/12 00:00	01/31/12 20:31	17060-07-0	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Ethylbenzene	**36.8**	ug/kg	3.5	1		01/26/12 14:59	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	3.5	1		01/26/12 14:59	1634-04-4	
Toluene	ND	ug/kg	3.5	1		01/26/12 14:59	108-88-3	
Xylene (Total)	ND	ug/kg	10.5	1		01/26/12 14:59	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%	72-129	1		01/26/12 14:59	1868-53-7	
Toluene-d8 (S)	100	%	69-133	1		01/26/12 14:59	2037-26-5	
4-Bromofluorobenzene (S)	99	%	67-142	1		01/26/12 14:59	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	67-136	1		01/26/12 14:59	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**20.7**	%	0.10	1		01/25/12 16:51		

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510622

QC Batch: GCV/2649 Analysis Method: NWTPH-Gx
QC Batch Method: NWTPH-Gx Analysis Description: NWTPH-Gx Solid GCV
Associated Lab Samples: 2510622004, 2510622005, 2510622006, 2510622007, 2510622008

METHOD BLANK: 100653 Matrix: Solid
Associated Lab Samples: 2510622004, 2510622005, 2510622006, 2510622007, 2510622008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	5.0	01/25/12 08:36	
4-Bromofluorobenzene (S)	%	106	50-150	01/25/12 08:36	
a,a,a-Trifluorotoluene (S)	%	109	50-150	01/25/12 08:36	

LABORATORY CONTROL SAMPLE: 100654

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	12.5	13.7	110	63-140	
4-Bromofluorobenzene (S)	%			111	50-150	
a,a,a-Trifluorotoluene (S)	%			114	50-150	

SAMPLE DUPLICATE: 100717

Parameter	Units	2510622005 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	mg/kg	ND	6.4J		
4-Bromofluorobenzene (S)	%	112	109	3	
a,a,a-Trifluorotoluene (S)	%	117	115	2	

SAMPLE DUPLICATE: 100718

Parameter	Units	2510601010 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	mg/kg	2130	2280	7	
4-Bromofluorobenzene (S)	%	115	117	1	
a,a,a-Trifluorotoluene (S)	%	109	110	.8	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510622

QC Batch: MPRP/2768 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 2510622004, 2510622005, 2510622006, 2510622007, 2510622008

METHOD BLANK: 100859 Matrix: Solid
Associated Lab Samples: 2510622004, 2510622005, 2510622006, 2510622007, 2510622008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	ND	1.0	01/30/12 17:05	

LABORATORY CONTROL SAMPLE: 100860

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	25	23.5	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 100861 100862

Parameter	Units	2510622004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Lead	mg/kg	2.9	25.3	25.3	24.5	27.6	86	98	75-125	12	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510622

QC Batch: MSV/6262 Analysis Method: EPA 8260
QC Batch Method: EPA 5035A/5030B Analysis Description: 8260 MSV 5035A Medium Soil
Associated Lab Samples: 2510622007, 2510622008

METHOD BLANK: 101281 Matrix: Solid
Associated Lab Samples: 2510622007, 2510622008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	ND	25.0	01/31/12 15:50	
Ethylbenzene	ug/kg	ND	50.0	01/31/12 15:50	
Methyl-tert-butyl ether	ug/kg	ND	50.0	01/31/12 15:50	
Toluene	ug/kg	ND	50.0	01/31/12 15:50	
Xylene (Total)	ug/kg	ND	150	01/31/12 15:50	
1,2-Dichloroethane-d4 (S)	%	92	70-125	01/31/12 15:50	
4-Bromofluorobenzene (S)	%	99	73-128	01/31/12 15:50	
Dibromofluoromethane (S)	%	98	75-116	01/31/12 15:50	
Toluene-d8 (S)	%	98	74-124	01/31/12 15:50	

LABORATORY CONTROL SAMPLE: 101282

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	1000	955	96	71-123	
Ethylbenzene	ug/kg	1000	955	96	71-123	
Methyl-tert-butyl ether	ug/kg	1000	797	80	68-133	
Toluene	ug/kg	1000	894	89	69-118	
Xylene (Total)	ug/kg	3000	2880	96	71-122	
1,2-Dichloroethane-d4 (S)	%			90	70-125	
4-Bromofluorobenzene (S)	%			92	73-128	
Dibromofluoromethane (S)	%			102	75-116	
Toluene-d8 (S)	%			93	74-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101427 101428

Parameter	Units	2510718001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzene	ug/kg	ND	889	889	2340	2440	263	274	68-137	4	M1
Ethylbenzene	ug/kg	ND	889	889	2440	2470	274	278	64-136	1	M1
Methyl-tert-butyl ether	ug/kg	ND	889	889	1960	2010	220	226	62-146	3	M1
Toluene	ug/kg	ND	889	889	2290	2240	257	251	65-130	2	M1
Xylene (Total)	ug/kg	ND	2670	2670	7270	7450	272	279	63-134	2	M1
1,2-Dichloroethane-d4 (S)	%						91	92	70-125		
4-Bromofluorobenzene (S)	%						92	93	73-128		
Dibromofluoromethane (S)	%						101	102	75-116		
Toluene-d8 (S)	%						97	91	74-124		

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510622

QC Batch: MSV/6299
QC Batch Method: EPA 5035A/5030B
Analysis Method: EPA 8260
Analysis Description: 8260 MSV 5035A Medium Soil
Associated Lab Samples: 2510622004

METHOD BLANK: 101837
Matrix: Solid
Associated Lab Samples: 2510622004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/kg	ND	50.0	02/05/12 05:41	
1,2-Dichloroethane-d4 (S)	%	92	70-125	02/05/12 05:41	
4-Bromofluorobenzene (S)	%	110	73-128	02/05/12 05:41	
Dibromofluoromethane (S)	%	101	75-116	02/05/12 05:41	
Toluene-d8 (S)	%	95	74-124	02/05/12 05:41	

LABORATORY CONTROL SAMPLE: 101838

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/kg	1000	1010	101	71-123	
1,2-Dichloroethane-d4 (S)	%			88	70-125	
4-Bromofluorobenzene (S)	%			93	73-128	
Dibromofluoromethane (S)	%			98	75-116	
Toluene-d8 (S)	%			99	74-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101985 101986

Parameter	Units	2510691003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Ethylbenzene	ug/kg	91.5	1150	1150	2120	1970	176	163	64-136	8	M1
1,2-Dichloroethane-d4 (S)	%						84	85	70-125		
4-Bromofluorobenzene (S)	%						95	92	73-128		
Dibromofluoromethane (S)	%						96	95	75-116		
Toluene-d8 (S)	%						98	98	74-124		

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510622

QC Batch: MSV/6241 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 2510622005, 2510622008

METHOD BLANK: 100748 Matrix: Solid
Associated Lab Samples: 2510622005, 2510622008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	ND	3.0	01/26/12 10:01	
Ethylbenzene	ug/kg	ND	3.0	01/26/12 10:01	
Methyl-tert-butyl ether	ug/kg	ND	3.0	01/26/12 10:01	
Toluene	ug/kg	ND	3.0	01/26/12 10:01	
Xylene (Total)	ug/kg	ND	9.0	01/26/12 10:01	
1,2-Dichloroethane-d4 (S)	%	107	67-136	01/26/12 10:01	
4-Bromofluorobenzene (S)	%	104	67-142	01/26/12 10:01	
Dibromofluoromethane (S)	%	102	72-129	01/26/12 10:01	
Toluene-d8 (S)	%	99	69-133	01/26/12 10:01	

LABORATORY CONTROL SAMPLE: 100749

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	20	20.6	103	69-133	
Ethylbenzene	ug/kg	20	22.4	112	68-126	
Methyl-tert-butyl ether	ug/kg	20	22.8	114	67-134	
Toluene	ug/kg	20	20.6	103	68-130	
Xylene (Total)	ug/kg	60	69.1	115	68-126	
1,2-Dichloroethane-d4 (S)	%			98	67-136	
4-Bromofluorobenzene (S)	%			98	67-142	
Dibromofluoromethane (S)	%			101	72-129	
Toluene-d8 (S)	%			100	69-133	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101336 101337

Parameter	Units	2510617002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzene	ug/kg	ND	23.2	22	21.6	20.1	93	91	40-129	7	
Ethylbenzene	ug/kg	ND	23.2	22	25.6	22.5	110	102	40-134	13	
Methyl-tert-butyl ether	ug/kg	ND	23.2	22	18.4	18.6	79	84	40-149	.8	
Toluene	ug/kg	ND	23.2	22	22.4	19.8	94	87	40-134	13	
Xylene (Total)	ug/kg	ND	69.8	66.1	74.0	65.2	106	99	40-129	13	
1,2-Dichloroethane-d4 (S)	%						77	88	67-136		
4-Bromofluorobenzene (S)	%						103	107	67-142		
Dibromofluoromethane (S)	%						89	97	72-129		
Toluene-d8 (S)	%						104	103	69-133		

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510622

QC Batch: MSV/6253 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 2510622004, 2510622006

METHOD BLANK: 100937 Matrix: Solid
Associated Lab Samples: 2510622004, 2510622006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	ND	3.0	01/27/12 17:45	
Ethylbenzene	ug/kg	ND	3.0	01/27/12 17:45	
Methyl-tert-butyl ether	ug/kg	ND	3.0	01/27/12 17:45	
Toluene	ug/kg	ND	3.0	01/27/12 17:45	
Xylene (Total)	ug/kg	ND	9.0	01/27/12 17:45	
1,2-Dichloroethane-d4 (S)	%	93	67-136	01/27/12 17:45	
4-Bromofluorobenzene (S)	%	106	67-142	01/27/12 17:45	
Dibromofluoromethane (S)	%	100	72-129	01/27/12 17:45	
Toluene-d8 (S)	%	94	69-133	01/27/12 17:45	

LABORATORY CONTROL SAMPLE: 100938

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	20	15.4	77	69-133	
Ethylbenzene	ug/kg	20	16.8	84	68-126	
Methyl-tert-butyl ether	ug/kg	20	16.4	82	67-134	
Toluene	ug/kg	20	14.9	74	68-130	
Xylene (Total)	ug/kg	60	49.8	83	68-126	
1,2-Dichloroethane-d4 (S)	%			94	67-136	
4-Bromofluorobenzene (S)	%			99	67-142	
Dibromofluoromethane (S)	%			95	72-129	
Toluene-d8 (S)	%			99	69-133	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101364 101365

Parameter	Units	2510708001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzene	ug/kg	110	14	13.7	131	62.3	147	-349	40-129	71	D6,E,M1
Ethylbenzene	ug/kg	144	14	13.7	331	106	1340	-276	40-134	103	D6,E,M1
Methyl-tert-butyl ether	ug/kg	ND	14	13.7	10.2	10.8	72	79	40-149	6	
Toluene	ug/kg	11.2	14	13.7	26.2	13.1	107	14	40-134	67	D6,M1
Xylene (Total)	ug/kg	80.0	42.1	41.2	246	68.9	394	-27	40-129	112	D6,E,M1
1,2-Dichloroethane-d4 (S)	%						148	97	67-136		S0
4-Bromofluorobenzene (S)	%						196	133	67-142		S0
Dibromofluoromethane (S)	%						103	96	72-129		
Toluene-d8 (S)	%						670	214	69-133		S0

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510622

QC Batch: OEXT/5015
QC Batch Method: EPA 3546
Analysis Method: EPA 8270 by SIM
Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 2510622006

METHOD BLANK: 100674 Matrix: Solid
Associated Lab Samples: 2510622006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	ND	6.7	01/26/12 18:36	
2-Methylnaphthalene	ug/kg	ND	6.7	01/26/12 18:36	
Acenaphthene	ug/kg	ND	6.7	01/26/12 18:36	
Acenaphthylene	ug/kg	ND	6.7	01/26/12 18:36	
Anthracene	ug/kg	ND	6.7	01/26/12 18:36	
Benzo(a)anthracene	ug/kg	ND	6.7	01/26/12 18:36	
Benzo(a)pyrene	ug/kg	ND	6.7	01/26/12 18:36	
Benzo(b)fluoranthene	ug/kg	ND	6.7	01/26/12 18:36	
Benzo(g,h,i)perylene	ug/kg	ND	6.7	01/26/12 18:36	
Benzo(k)fluoranthene	ug/kg	ND	6.7	01/26/12 18:36	
Chrysene	ug/kg	ND	6.7	01/26/12 18:36	
Dibenz(a,h)anthracene	ug/kg	ND	6.7	01/26/12 18:36	
Fluoranthene	ug/kg	ND	6.7	01/26/12 18:36	
Fluorene	ug/kg	ND	6.7	01/26/12 18:36	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	6.7	01/26/12 18:36	
Naphthalene	ug/kg	ND	6.7	01/26/12 18:36	
Phenanthrene	ug/kg	ND	6.7	01/26/12 18:36	
Pyrene	ug/kg	ND	6.7	01/26/12 18:36	
2-Fluorobiphenyl (S)	%	77	27-118	01/26/12 18:36	
Terphenyl-d14 (S)	%	83	28-125	01/26/12 18:36	

LABORATORY CONTROL SAMPLE: 100675

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	133	110	83	39-110	
2-Methylnaphthalene	ug/kg	133	112	84	39-110	
Acenaphthene	ug/kg	133	112	84	39-111	
Acenaphthylene	ug/kg	133	105	79	37-110	
Anthracene	ug/kg	133	109	82	40-113	
Benzo(a)anthracene	ug/kg	133	109	82	42-122	
Benzo(a)pyrene	ug/kg	133	127	95	44-132	
Benzo(b)fluoranthene	ug/kg	133	124	93	40-124	
Benzo(g,h,i)perylene	ug/kg	133	118	88	39-122	
Benzo(k)fluoranthene	ug/kg	133	113	85	44-123	
Chrysene	ug/kg	133	132	99	42-120	
Dibenz(a,h)anthracene	ug/kg	133	124	93	40-122	
Fluoranthene	ug/kg	133	114	86	42-116	
Fluorene	ug/kg	133	121	91	41-112	
Indeno(1,2,3-cd)pyrene	ug/kg	133	123	92	39-124	
Naphthalene	ug/kg	133	114	85	36-110	
Phenanthrene	ug/kg	133	117	88	42-115	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510622

LABORATORY CONTROL SAMPLE: 100675

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/kg	133	117	88	44-121	
2-Fluorobiphenyl (S)	%			75	27-118	
Terphenyl-d14 (S)	%			83	28-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 100676 100677

Parameter	Units	2510622008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1-Methylnaphthalene	ug/kg				135	131				3	
2-Methylnaphthalene	ug/kg				138	133				3	
Acenaphthene	ug/kg				131	128				2	
Acenaphthylene	ug/kg				122	117				4	
Anthracene	ug/kg				127	121				5	
Benzo(a)anthracene	ug/kg				118	118				.6	
Benzo(a)pyrene	ug/kg				131	136				4	
Benzo(b)fluoranthene	ug/kg				127	136				7	
Benzo(g,h,i)perylene	ug/kg				116	124				6	
Benzo(k)fluoranthene	ug/kg				115	120				4	
Chrysene	ug/kg				144	144				.5	
Dibenz(a,h)anthracene	ug/kg				119	128				7	
Fluoranthene	ug/kg				130	128				2	
Fluorene	ug/kg				139	132				5	
Indeno(1,2,3-cd)pyrene	ug/kg				117	126				7	
Naphthalene	ug/kg				151	146				3	
Phenanthrene	ug/kg				141	136				4	
Pyrene	ug/kg				137	135				2	
2-Fluorobiphenyl (S)	%						72	70	27-118		
Terphenyl-d14 (S)	%						72	73	28-125		

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510622

QC Batch: OEXT/5014 Analysis Method: NWTPH-Dx
QC Batch Method: EPA 3546 Analysis Description: NWTPH-Dx GCS
Associated Lab Samples: 2510622004, 2510622005, 2510622006, 2510622007, 2510622008

METHOD BLANK: 100650 Matrix: Solid
Associated Lab Samples: 2510622004, 2510622005, 2510622006, 2510622007, 2510622008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range	mg/kg	ND	16.0	01/25/12 17:36	
Motor Oil Range	mg/kg	ND	64.0	01/25/12 17:36	
n-Octacosane (S)	%	87	50-150	01/25/12 17:36	
o-Terphenyl (S)	%	92	50-150	01/25/12 17:36	

LABORATORY CONTROL SAMPLE: 100651

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Range	mg/kg	400	361	90	70-111	
Motor Oil Range	mg/kg	400	345	86	73-118	
n-Octacosane (S)	%			84	50-150	
o-Terphenyl (S)	%			92	50-150	

SAMPLE DUPLICATE: 100652

Parameter	Units	2510622005 Result	Dup Result	RPD	Qualifiers
Diesel Range	mg/kg	ND	ND		
Motor Oil Range	mg/kg	ND	ND		
n-Octacosane (S)	%	85	84	2	
o-Terphenyl (S)	%	91	91	1	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510622

QC Batch: PMST/1946 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 2510622004, 2510622005, 2510622006, 2510622007, 2510622008

SAMPLE DUPLICATE: 100694

Parameter	Units	2510622005 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	17.7	18.4	4	

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QUALIFIERS

Project: WA 11060
Pace Project No.: 2510622

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

D6	The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S0	Surrogate recovery outside laboratory control limits.
S2	Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).
S5	Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WA 11060
Pace Project No.: 2510622

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2510622004	**SB-2-20**	EPA 3546	OEXT/5014	NWTPH-Dx	GCSV/3268
2510622005	**SB-2-35**	EPA 3546	OEXT/5014	NWTPH-Dx	GCSV/3268
2510622006	**SB-3-10**	EPA 3546	OEXT/5014	NWTPH-Dx	GCSV/3268
2510622007	**SB-3-20**	EPA 3546	OEXT/5014	NWTPH-Dx	GCSV/3268
2510622008	**SB-3-50**	EPA 3546	OEXT/5014	NWTPH-Dx	GCSV/3268
2510622004	**SB-2-20**	NWTPH-Gx	GCV/2649	NWTPH-Gx	GCV/2650
2510622005	**SB-2-35**	NWTPH-Gx	GCV/2649	NWTPH-Gx	GCV/2650
2510622006	**SB-3-10**	NWTPH-Gx	GCV/2649	NWTPH-Gx	GCV/2650
2510622007	**SB-3-20**	NWTPH-Gx	GCV/2649	NWTPH-Gx	GCV/2650
2510622008	**SB-3-50**	NWTPH-Gx	GCV/2649	NWTPH-Gx	GCV/2650
2510622004	**SB-2-20**	EPA 3050	MPRP/2768	EPA 6010	ICP/2608
2510622005	**SB-2-35**	EPA 3050	MPRP/2768	EPA 6010	ICP/2608
2510622006	**SB-3-10**	EPA 3050	MPRP/2768	EPA 6010	ICP/2608
2510622007	**SB-3-20**	EPA 3050	MPRP/2768	EPA 6010	ICP/2608
2510622008	**SB-3-50**	EPA 3050	MPRP/2768	EPA 6010	ICP/2608
2510622006	**SB-3-10**	EPA 3546	OEXT/5015	EPA 8270 by SIM	MSSV/1923
2510622004	**SB-2-20**	EPA 5035A/5030B	MSV/6299	EPA 8260	MSV/6314
2510622007	**SB-3-20**	EPA 5035A/5030B	MSV/6262	EPA 8260	MSV/6283
2510622008	**SB-3-50**	EPA 5035A/5030B	MSV/6262	EPA 8260	MSV/6283
2510622004	**SB-2-20**	EPA 8260	MSV/6253		
2510622005	**SB-2-35**	EPA 8260	MSV/6241		
2510622006	**SB-3-10**	EPA 8260	MSV/6253		
2510622008	**SB-3-50**	EPA 8260	MSV/6241		
2510622004	**SB-2-20**	ASTM D2974-87	PMST/1946		
2510622005	**SB-2-35**	ASTM D2974-87	PMST/1946		
2510622006	**SB-3-10**	ASTM D2974-87	PMST/1946		
2510622007	**SB-3-20**	ASTM D2974-87	PMST/1946		
2510622008	**SB-3-50**	ASTM D2974-87	PMST/1946		

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CHAIN-OF-CUSTODY / Analytical Request Document

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

2510622

Page: 1 of 1

1491648

Section A Required Client Information:

Company: Arcadis
Address: 2300 Eastlake Ave Seattle WA 98102
Email To: Scott.Zorn@Arcadis-US.com
Phone: 2069267104 Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Scott Zorn
Copy To: Sam Miles, Al Kohal
Purchase Order No.:
Project Name: WA 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:

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	SAMPLE TYPE	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: GRO	DRO/40	BTEX/MTBE	PAH	Total Lead	Grain Size Analysis	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SB-2-10					1-24-12	1020																X		
2	SB-2-11						1020																X		
3	SB-2-15						1023																X		
4	SB-2-20						1028											X	X	X	X	X	X		
5	SB-2-35						1045											X	X	X	X	X	X		
6	SB-3-10						1200											X	X	X	X	X	X	DO NOT RUN GRAIN SIZE	
7	SB-3-20						1245											X	X	X	X	X	X	DO NOT RUN GRAIN SIZE	
8	SB-3-50						1330											X	X	X	X	X	X	DO NOT RUN GRAIN SIZE	
9																									
10																									
11																									
12																									

1/24/12

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Hold PAH Pending DRO Analysis	Sam Miles	1-24-12	1521	Jyothi Swamy/PACE	1/24/12	1521	5.3	4	4	4
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER:
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

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

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

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

2510622

Page: 1 of 1

1491648

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Arcadis	Report To: Scott Zorn	Attention:
Address: 2300 Eastlake Ave Seattle WA 98102	Copy To: Sam Miles Al Kohal	Company Name:
		Address:
Email To: Scott.Zorn@Arcadis-us.com	Purchase Order No.:	Pace Quote Reference:
Phone: 2069264704 Fax:	Project Name: WA 11060	Pace Project Manager:
Requested Due Date/TAT:	Project Number:	Pace Profile #:

REGULATORY AGENCY

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

Site Location STATE:

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE	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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	GRO	DRO/HO	BTEX/MTBE	PAH	Total Lead	Grain Size Analysis	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SB-2-10					1-24-12	1020																	X		
2	SB-2-11					↓	1020																	X		
3	SB-2-15					↓	1023																	X		
4	SB-2-20					↓	1028												X	X	X	X	X	X		
5	SB-2-35					↓	1045												X	X	X	X	X	X		
6	SB-3-10					↓	1200												X	X	X	X	X	X		
7	SB-3-20					↓	1245												X	X	X	X	X	X		
8	SB-3-30					↓	1330												X	X	X	X	X	X		
9																										
10																										
11																										
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Hold PAH Pending DRO Analysis.	Sam Miles	1-24-12	1521	Jyothi Swamy / PACE	1/24/12	1521	5.3	Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER:

DATE Signed (MM/DD/YY):

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

Sample Container Count

2510622

CLIENT: Arcadis

COC PAGE 1 of 1
COC ID# 1491648

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										1 ~~2~~	~~1~~	~~1~~	~~2~~	~~2~~ MS3 1/24					
2										1									
3										1									
4										2									
5										2	1	1	2	2					
6										1	1	1	2	2					
7										1	1	1	2	2					
8										1	1	1	2	2					
9																			
10																			
11																			
12																			

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

Pace Analytical

Sample Condition Upon Receipt

2510622

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 foam kits 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 5.3°C Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: NB 01/24/12

Temp should be above freezing ≤ 6°C

Comments:

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

1.
2.
3.
4.
5.
6.
7.
8. PAH are pending Dx analysis
9. Only 1 4oz jar received for SB3-10 to SB3-50.
10.
11.
12.
13.
14.

Initial when completed | Lot # of added preservative

15.
16.
17.

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

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: ARB **Date:** 1/25/12

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)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

February 1, 2012

Andy Brownfield
Pace Analytical
940 S. Harney Street
Seattle, WA 98108

RE: Client Project: WA 11060, 2510622
ARI Job No.: UF24

Dear Andy:

Please find enclosed the original Chain of Custody (COC) record, sample receipt documentation, and final analytical results for samples from the project referenced above. Analytical Resources Inc. (ARI) accepted five solid samples on January 25, 2012. For further details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for Grain Size, as requested. Details regarding this analysis can be found in the Geotechnical Case Narrative.

An electronic copy of this report as well as all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
206-695-6214
cheronneo@arilabs.com
www.arilabs.com

Enclosures

cc: eFile UF24

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody

UF 24

Pace Analytical®
www.pacelabs.com

Workorder: 2510622 **Workorder Name:** WA 11060 **Results Requested** 2/7/2012

Report / Invoice To	Subcontract To
Andy Brownfield Pace Analytical Seattle 940 South Harney Seattle, WA 98108 Phone (206)767-5060 Email: andy.brownfield@pacelabs.com	P.O._____ AR1

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	Requested Analysis: Grain Size Analysis	LAB USE ONLY
1	SB-2-10	1/24/2012 10:20	2510622001	Solid	1	X	
2	SB-2-11	1/24/2012 10:20	2510622002	Solid	1	X	
3	SB-2-15	1/24/2012 10:23	2510622003	Solid	1	X	
4	SB-2-20	1/24/2012 10:28	2510622004	Solid	1	X	
5	SB-2-35	1/24/2012 10:45	2510622005	Solid	1	X	

Comments

Transfers	Released By	Date/Time	Received By	Date/Time
1	Sjoerd Swaay	1/25/12 0927	Taylor Streeter	1-25-12 1026
2				
3				
4				
5				

UF24:0002

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Pace Project Name: WA 11060

COC No(s): _____ NA Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: UF24 Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 5.9 ___ ___ ___ ___

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90911619

Cooler Accepted by: TS Date: 1-25-12 Time: 1620

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ...	Bubble Wrap (Wet) Ice Gel Packs Baggies Foam Block Paper Other: _____		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		(YES)	NO
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	(NA)	YES	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)	_____	

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: TS Date: 1-25-12 Time: 1409

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: UF24
Client: Pace Analytical
Project Event: 2510622
Project Name: WA 11060

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	SB-2-10	UF24A	12-927	Soil	01/24/12 10:20	01/25/12 10:20
2.	SB-2-11	UF24B	12-928	Soil	01/24/12 10:20	01/25/12 10:20
3.	SB-2-15	UF24C	12-929	Soil	01/24/12 10:23	01/25/12 10:20
4.	SB-2-20	UF24D	12-930	Soil	01/24/12 10:28	01/25/12 10:20
5.	SB-2-35	UF24E	12-931	Soil	01/24/12 10:45	01/25/12 10:20

Printed 01/25/12

Client: Pace Analytical	**ARI Job No.**: UF24
Client Project: WA 11060	**Client Project No.**: 2510622

Case Narrative

1. Five samples were submitted for analysis on January 25, 2012, and were in good condition.
2. The samples were submitted for grain size distribution according to ASTM D422. The samples were prepared according to ASTM D421.
3. An assumed specific gravity of 2.65 was used in the hydrometer calculations.
4. A standard milkshake mixer type device was used to disperse the fine fraction sample.
5. One sample from another job was chosen for triplicate analysis. The triplicate data can be found on the QA summary table.
6. The data is provided in summary tables and plots.
7. There were no further anomalies in the samples or test method.

Released by: _____ Date: 2/1/12
Title: *Geotechnical Division Manager*

Reviewed by: _____ Date: 2.1.2012
Title: *Lead Technician*

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** (fax)

Pace Analytical
2510622
WA 11060

Percent Finer (Passing) Than the Indicated Size

Sieve Size (microns)	3"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	#4 (4750)	#10 (2000)	#20 (850)	#40 (425)	#60 (250)	#100 (150)	#200 (75)	32	22	13	9	7	3.2	1.3
TW26 A	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.2	96.5	86.9	76.2	63.0	45.2	36.4	28.9	23.9	17.6	10.0	5.6
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	99.1	96.2	86.8	76.8	64.3	44.5	35.7	28.8	23.2	17.5	10.0	5.6
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.3	96.4	85.8	75.5	62.3	43.2	35.7	28.2	23.8	17.5	10.6	6.3
SB-2-10	100.0	100.0	100.0	100.0	100.0	100.0	100.0	94.4	86.3	79.8	72.0	63.3	57.1	53.1	48.6	46.2	41.4	36.6	33.6	24.6	14.4
SB-2-11	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.7	95.7	88.8	75.5	54.1	41.5	35.7	32.2	28.6	23.7	21.3	18.2	14.0	7.3
SB-2-15	100.0	100.0	100.0	100.0	100.0	97.1	97.1	93.7	90.8	87.1	82.0	75.2	67.5	57.3	42.4	37.4	31.2	27.3	24.0	17.8	10.0
SB-2-20	100.0	100.0	100.0	100.0	100.0	100.0	98.0	97.1	95.6	93.5	85.4	65.6	48.9	37.0	24.9	20.2	13.6	10.8	8.0	5.2	2.3
SB-2-35	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	99.7	98.3	56.7	36.5	24.1	18.2	14.3	10.4	5.2

Testing performed according to ASTM D421/D422

Pace Analytical
2510622
WA 11060

Percent Retained in Each Size Fraction

Description	%Coarse Gravel				% Gravel			% Coarse Sand	% Medium Sand		% Fine Sand			% Very Coarse Silt	% Coarse Silt	% Medium Silt	% Fine Silt	% Fine Silt	% Very Fine Silt	% Clay	
Particle Size (microns)	3-2"	2-1 1/2"	1 1/2"-1"	1-3/4"	3/4-1/2"	1/2-3/8"	3/8"-4750	4750-2000	2000-850	850-425	425-250	250-150	150-75	75-32	32-22	22-13	13-9	9-7	7-3.2	3.2-1.3	<1.3
TW26 A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	2.7	9.6	10.8	13.2	17.8	8.8	7.5	5.0	6.3	7.5	4.4	5.6
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7	2.9	9.4	10.1	12.5	19.8	8.8	6.9	5.6	5.6	7.5	4.4	5.6
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	2.9	10.6	10.3	13.2	19.1	7.5	7.5	4.4	6.3	6.9	4.4	6.3
SB-2-10	0.0	0.0	0.0	0.0	0.0	0.0	5.6	8.0	6.5	7.8	8.7	6.1	4.1	4.4	2.4	4.8	4.8	3.0	9.0	10.2	14.4
SB-2-11	0.0	0.0	0.0	0.0	0.0	0.0	1.3	3.0	6.8	13.3	21.4	12.7	5.8	3.5	3.6	4.9	2.4	3.0	4.3	6.7	7.3
SB-2-15	0.0	0.0	0.0	0.0	2.9	0.0	3.4	2.9	3.7	5.1	6.8	7.7	10.2	15.0	5.0	6.1	3.9	3.3	6.1	7.8	10.0
SB-2-20	0.0	0.0	0.0	0.0	0.0	2.0	1.0	1.5	2.2	8.0	19.8	16.7	12.0	12.1	4.7	6.6	2.8	2.8	2.8	2.8	2.3
SB-2-35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.4	41.6	20.2	12.4	5.9	3.9	3.9	5.2	5.2

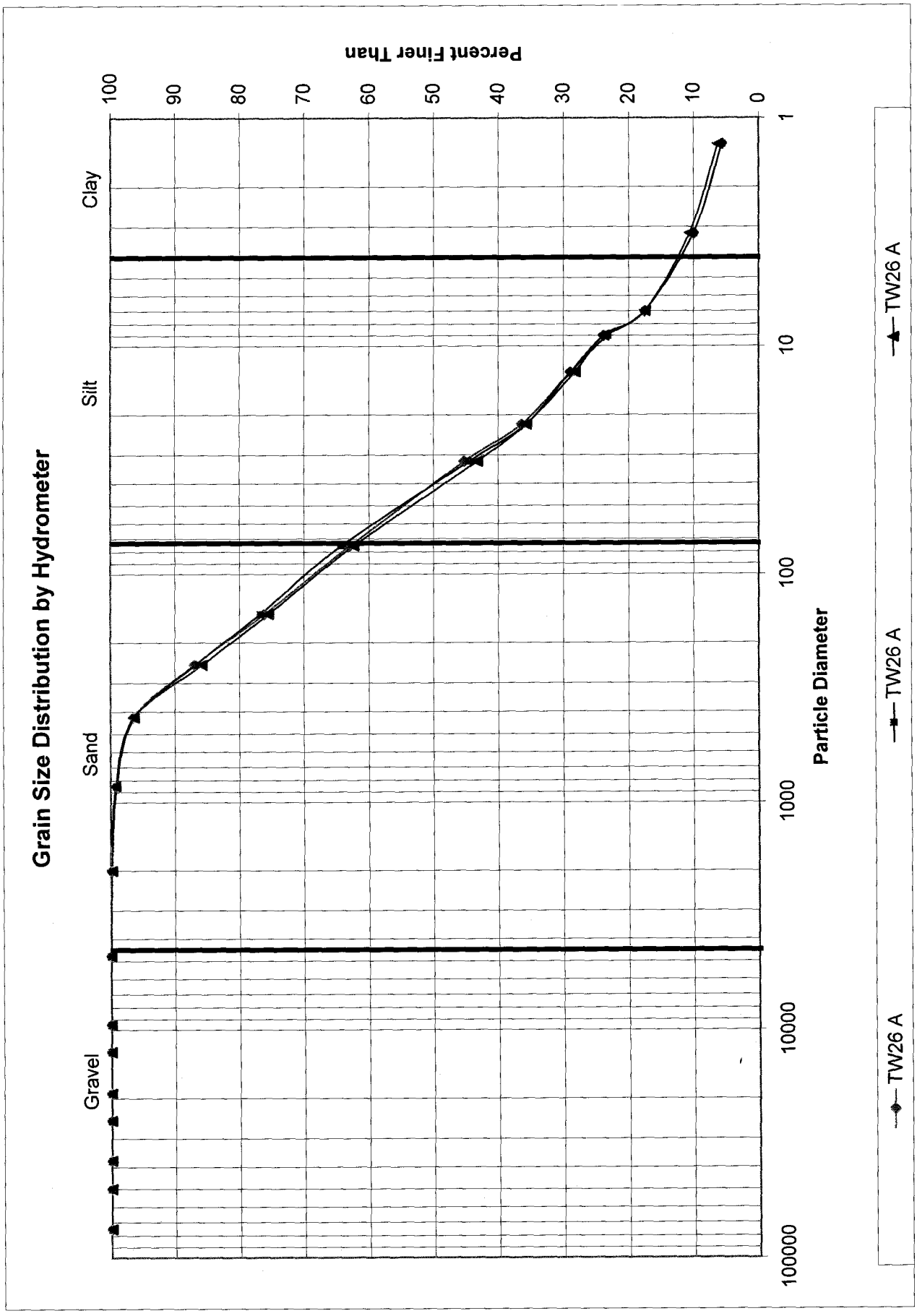
Client:	Pace Analytical	Project No.:	2510622
		Project:	WA 11060
ARI Triplicate Sample ID:	TW26 A	Batch No.:	UF24-01
		Page:	1 of 1

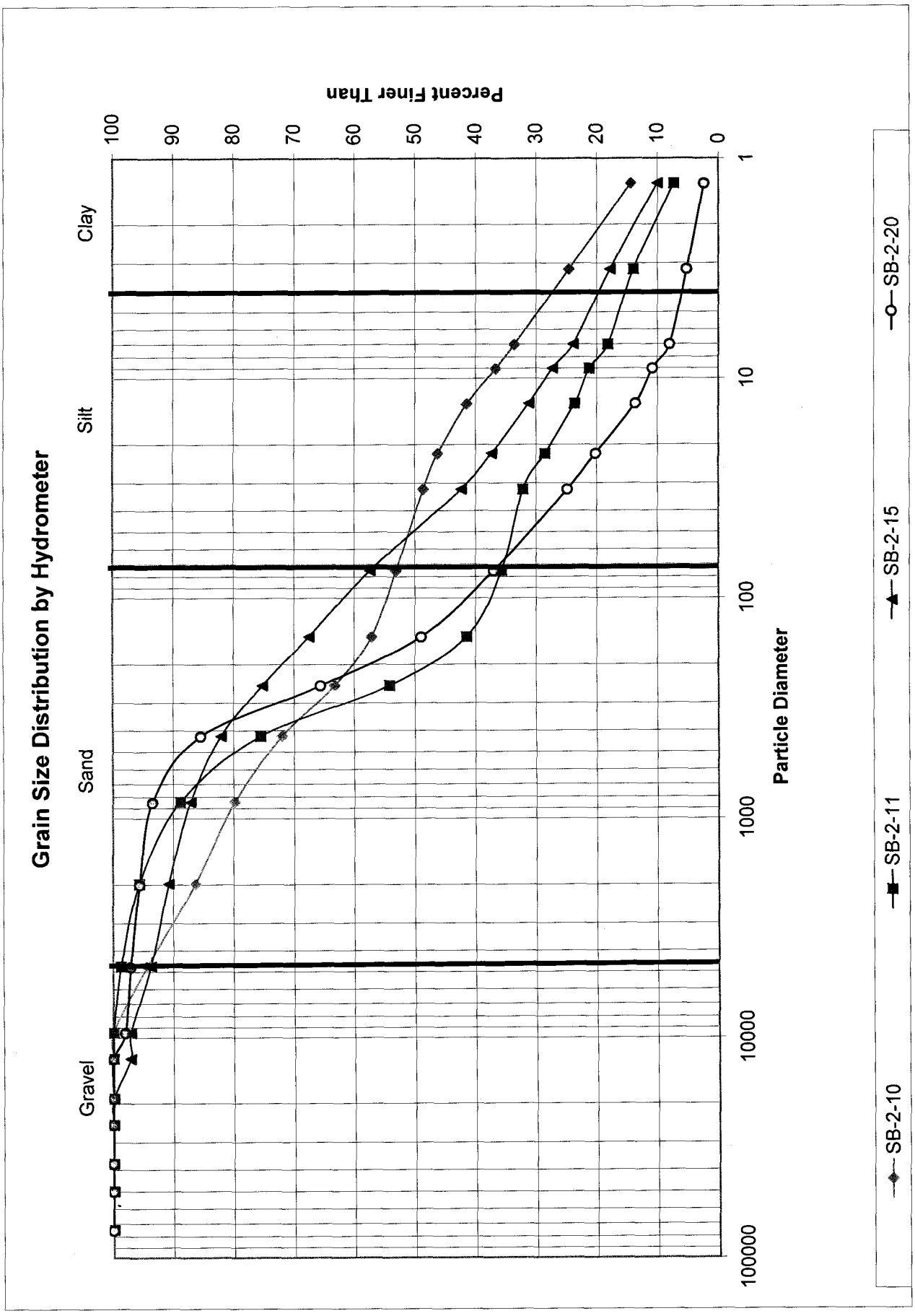
Relative Standard Deviation, By Size

Sample ID	75000	50000	37500	25000	19000	12500	9500	4750	2000	850	425	250	150	75	32	22	13	9	7	3.2	1.3
TW26 A	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.2	96.5	86.9	76.2	63.0	45.2	36.4	28.9	23.9	17.6	10.0	5.6
TW26 A	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	99.1	96.2	86.8	76.8	64.3	44.5	35.7	28.8	23.2	17.5	10.0	5.6
TW26 A	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.3	96.4	85.8	75.5	62.3	43.2	35.7	28.2	23.8	17.5	10.6	6.3
AVE	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.87	99.19	96.36	86.50	76.15	63.20	44.30	35.94	28.63	23.61	17.55	10.24	5.85
STDEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.08	0.12	0.64	0.63	0.99	1.01	0.40	0.39	0.37	0.02	0.35	0.36
%RSD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.08	0.12	0.74	0.83	1.56	2.27	1.12	1.35	1.57	0.12	3.45	6.10

This Triplicate applies to the Batch Containing the Following Samples

Sample ID	Date Sampled	Date Set up	Date Started	Date Complete	Data Qualifiers
TW26 A	10/31/2011	11/16/2011	11/17/2011	11/22/2011	
	10/31/2011	11/16/2011	11/17/2011	11/22/2011	
	10/31/2011	11/16/2011	11/17/2011	11/22/2011	
SB-2-10	1/24/2012	1/26/2012	1/30/2012	1/31/2012	
SB-2-11	1/24/2012	1/26/2012	1/30/2012	1/31/2012	
SB-2-15	1/24/2012	1/26/2012	1/30/2012	1/31/2012	
SB-2-20	1/24/2012	1/26/2012	1/30/2012	1/31/2012	
SB-2-35	1/24/2012	1/26/2012	1/30/2012	1/31/2012	


Grain Size Distribution by Hydrometer
Percent Finer Than
100
90
80
70
60
50
40
30
20
10
0
Clay
Silt
Sand
Gravel
1
10
100
1000
10000
100000
Particle Diameter
TW26 A
TW26 A
TW26 A


Grain Size Distribution by Hydrometer
Percent Finer Than
100
90
80
70
60
50
40
30
20
10
0
Clay
Silt
Sand
Gravel
1
10
100
1000
10000
100000
Particle Diameter
SB-2-10
SB-2-11
SB-2-15
SB-2-20

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

February 09, 2012

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

RE: Project: WA 11060
Pace Project No.: 2510642

Dear Scott Zorn:
Enclosed are the analytical results for sample(s) received by the laboratory on January 25, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

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

Sincerely,

Andy Brownfield

andy.brownfield@pacelabs.com
Project Manager

Enclosures

cc: Alan Kahal, Arcadis U.S., Inc.
David Rasar, Arcadis U.S., Inc.
Rick Rodriguez, Arcadis U.S., Inc.

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CERTIFICATIONS

Project: WA 11060
Pace Project No.: 2510642

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

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SAMPLE ANALYTE COUNT

Project: WA 11060
Pace Project No.: 2510642

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2510642001	**SB-4-15'**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	CC	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LPM	9	PASI-S
		ASTM D2974-87	EED	1	PASI-S
2510642002	**SB-4-20'**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	CC	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LPM	9	PASI-S
		ASTM D2974-87	EED	1	PASI-S
2510642003	**SB-4-35'**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	CC	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LPM	9	PASI-S
		ASTM D2974-87	EED	1	PASI-S
2510642004	**EW-3-15'**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	CC	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LPM	9	PASI-S
		ASTM D2974-87	EED	1	PASI-S
2510642005	**EW-3-20'**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	CC	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LNH	7	PASI-S
		EPA 8260	LPM	6	PASI-S
		ASTM D2974-87	EED	1	PASI-S
2510642006	**EW-3-30'**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	CC	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LPM	9	PASI-S
		ASTM D2974-87	EED	1	PASI-S
2510642008	**DUP-2**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	CC	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LNH	7	PASI-S
		EPA 8260	LPM	6	PASI-S
		ASTM D2974-87	EED	1	PASI-S

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SAMPLE ANALYTE COUNT

Project: WA 11060
Pace Project No.: 2510642

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2510642009	**EW-1-15'**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	CC	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LNH	9	PASI-S
		ASTM D2974-87	EED	1	PASI-S
2510642010	**Trip Blank**	NWTPH-Gx	CC	3	PASI-S
		EPA 8260	LPM	9	PASI-S

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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510642

Method: **NWTPH-Dx**
Description: NWTPH-Dx GCS
Client: Arcadis U.S., Inc.
Date: February 09, 2012

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 3546 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:

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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510642

Method: **NWTPH-Gx**
Description: NWTPH-Gx GCV
Client: Arcadis U.S., Inc.
Date: February 09, 2012

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.

Sample Preparation:
The samples were prepared in accordance with NWTPH-Gx 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: GCV/2651

S2: Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

- DUP-2 (Lab ID: 2510642008)
  - 4-Bromofluorobenzene (S)
- EW-1-15' (Lab ID: 2510642009)
  - 4-Bromofluorobenzene (S)
- SB-4-15' (Lab ID: 2510642001)
  - 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:

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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510642

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Arcadis U.S., Inc.
Date: February 09, 2012

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 3050 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:

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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510642

Method: **EPA 8260**
Description: 8260 MSV 5035A Med Level VOA
Client: Arcadis U.S., Inc.
Date: February 09, 2012

General Information:
3 samples were analyzed for EPA 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.

Sample Preparation:
The samples were prepared in accordance with EPA 5035A/5030B 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/6299

S5: Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

- EW-1-15' (Lab ID: 2510642009)
  - Toluene-d8 (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.

QC Batch: MSV/6262

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2510718001

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

- MS (Lab ID: 101427)
  - Ethylbenzene
  - Toluene
  - Xylene (Total)
- MSD (Lab ID: 101428)
  - Ethylbenzene

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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510642

Method: **EPA 8260**
Description: 8260 MSV 5035A Med Level VOA
Client: Arcadis U.S., Inc.
Date: February 09, 2012

QC Batch: MSV/6262

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2510718001

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

- Toluene
- Xylene (Total)

QC Batch: MSV/6299

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2510691003

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

- MS (Lab ID: 101985)
  - Benzene
  - Ethylbenzene
  - Toluene
  - Xylene (Total)
- MSD (Lab ID: 101986)
  - Benzene
  - Ethylbenzene
  - Toluene
  - Xylene (Total)

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

Additional Comments:

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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510642

Method: **EPA 8260**
Description: 8260/5035A Volatile Organics
Client: Arcadis U.S., Inc.
Date: February 09, 2012

General Information:
8 samples were analyzed for EPA 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/6241

S5: Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

- DUP-2 (Lab ID: 2510642008)
  - 4-Bromofluorobenzene (S)
  - Toluene-d8 (S)
- EW-3-20' (Lab ID: 2510642005)
  - 4-Bromofluorobenzene (S)
  - Toluene-d8 (S)

QC Batch: MSV/6253

S0: Surrogate recovery outside laboratory control limits.

- MS (Lab ID: 101364)
  - 1,2-Dichloroethane-d4 (S)
  - 4-Bromofluorobenzene (S)
  - Toluene-d8 (S)
- MSD (Lab ID: 101365)
  - Toluene-d8 (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.

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PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510642

Method: **EPA 8260**
Description: 8260/5035A Volatile Organics
Client: Arcadis U.S., Inc.
Date: February 09, 2012

QC Batch: MSV/6253

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2510708001

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

- MS (Lab ID: 101364)
  - Benzene
  - Ethylbenzene
  - Xylene (Total)
- MSD (Lab ID: 101365)
  - Benzene
  - Ethylbenzene
  - Toluene
  - Xylene (Total)

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

Additional Comments:

Analyte Comments:

QC Batch: MSV/6253

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- MS (Lab ID: 101364)
  - Benzene
  - Ethylbenzene
  - Xylene (Total)
- MSD (Lab ID: 101365)
  - Ethylbenzene

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

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510642

Sample: SB-4-15' **Lab ID: 2510642001** Collected: 01/25/12 08:25 Received: 01/25/12 16:06 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	17.0	1	01/26/12 12:30	01/26/12 18:59		
Motor Oil Range	ND	mg/kg	68.2	1	01/26/12 12:30	01/26/12 18:59	64742-65-0	
Surrogates								
n-Octacosane (S)	93	%	50-150	1	01/26/12 12:30	01/26/12 18:59	630-02-4	
o-Terphenyl (S)	93	%	50-150	1	01/26/12 12:30	01/26/12 18:59	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	**109**	mg/kg	5.6	1	01/26/12 14:49	01/27/12 16:05		
Surrogates								
a,a,a-Trifluorotoluene (S)	107	%	50-150	1	01/26/12 14:49	01/27/12 16:05	98-08-8	
4-Bromofluorobenzene (S)	227	%	50-150	1	01/26/12 14:49	01/27/12 16:05	460-00-4	S2
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**3.0**	mg/kg	0.74	1	01/27/12 07:58	01/31/12 21:11	7439-92-1	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	3.1	1		01/27/12 18:26	71-43-2	
Ethylbenzene	ND	ug/kg	3.1	1		01/27/12 18:26	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	3.1	1		01/27/12 18:26	1634-04-4	
Toluene	ND	ug/kg	3.1	1		01/27/12 18:26	108-88-3	
Xylene (Total)	ND	ug/kg	9.2	1		01/27/12 18:26	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%	72-129	1		01/27/12 18:26	1868-53-7	
Toluene-d8 (S)	96	%	69-133	1		01/27/12 18:26	2037-26-5	
4-Bromofluorobenzene (S)	104	%	67-142	1		01/27/12 18:26	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	67-136	1		01/27/12 18:26	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**9.0**	%	0.10	1		01/26/12 16:18		

Sample: SB-4-20' **Lab ID: 2510642002** Collected: 01/25/12 08:40 Received: 01/25/12 16:06 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	16.8	1	01/26/12 12:30	01/26/12 19:16		
Motor Oil Range	ND	mg/kg	67.1	1	01/26/12 12:30	01/26/12 19:16	64742-65-0	
Surrogates								
n-Octacosane (S)	93	%	50-150	1	01/26/12 12:30	01/26/12 19:16	630-02-4	
o-Terphenyl (S)	94	%	50-150	1	01/26/12 12:30	01/26/12 19:16	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	**5.7**	mg/kg	5.2	1	01/26/12 14:49	01/31/12 15:52		

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510642

Sample: SB-4-20' **Lab ID: 2510642002** Collected: 01/25/12 08:40 Received: 01/25/12 16:06 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Surrogates								
a,a,a-Trifluorotoluene (S)	114	%	50-150	1	01/26/12 14:49	01/31/12 15:52	98-08-8	
4-Bromofluorobenzene (S)	107	%	50-150	1	01/26/12 14:49	01/31/12 15:52	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**2.5**	mg/kg	0.92	1	01/27/12 07:58	01/31/12 21:14	7439-92-1	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	2.9	1		01/27/12 18:47	71-43-2	
Ethylbenzene	ND	ug/kg	2.9	1		01/27/12 18:47	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	2.9	1		01/27/12 18:47	1634-04-4	
Toluene	ND	ug/kg	2.9	1		01/27/12 18:47	108-88-3	
Xylene (Total)	ND	ug/kg	8.6	1		01/27/12 18:47	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	86	%	72-129	1		01/27/12 18:47	1868-53-7	
Toluene-d8 (S)	93	%	69-133	1		01/27/12 18:47	2037-26-5	
4-Bromofluorobenzene (S)	121	%	67-142	1		01/27/12 18:47	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	67-136	1		01/27/12 18:47	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**11.1**	%	0.10	1		01/26/12 16:19		

Sample: SB-4-35' **Lab ID: 2510642003** Collected: 01/25/12 08:50 Received: 01/25/12 16:06 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	19.6	1	01/26/12 12:30	01/26/12 20:24		
Motor Oil Range	ND	mg/kg	78.4	1	01/26/12 12:30	01/26/12 20:24	64742-65-0	
Surrogates								
n-Octacosane (S)	92	%	50-150	1	01/26/12 12:30	01/26/12 20:24	630-02-4	
o-Terphenyl (S)	92	%	50-150	1	01/26/12 12:30	01/26/12 20:24	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	ND	mg/kg	6.5	1	01/26/12 14:49	01/31/12 16:16		
Surrogates								
a,a,a-Trifluorotoluene (S)	115	%	50-150	1	01/26/12 14:49	01/31/12 16:16	98-08-8	
4-Bromofluorobenzene (S)	104	%	50-150	1	01/26/12 14:49	01/31/12 16:16	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**4.5**	mg/kg	1.2	1	01/27/12 07:58	01/31/12 21:18	7439-92-1	

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510642

Sample: SB-4-35' **Lab ID: 2510642003** Collected: 01/25/12 08:50 Received: 01/25/12 16:06 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	2.9	1		01/26/12 16:00	71-43-2	
Ethylbenzene	ND	ug/kg	2.9	1		01/26/12 16:00	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	2.9	1		01/26/12 16:00	1634-04-4	
Toluene	ND	ug/kg	2.9	1		01/26/12 16:00	108-88-3	
Xylene (Total)	ND	ug/kg	8.7	1		01/26/12 16:00	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	92	%	72-129	1		01/26/12 16:00	1868-53-7	
Toluene-d8 (S)	95	%	69-133	1		01/26/12 16:00	2037-26-5	
4-Bromofluorobenzene (S)	105	%	67-142	1		01/26/12 16:00	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	67-136	1		01/26/12 16:00	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**20.6**	%	0.10	1		01/26/12 16:19		

Sample: EW-3-15' **Lab ID: 2510642004** Collected: 01/25/12 10:30 Received: 01/25/12 16:06 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	19.0	1	01/26/12 12:30	01/26/12 20:41		
Motor Oil Range	ND	mg/kg	75.9	1	01/26/12 12:30	01/26/12 20:41	64742-65-0	
Surrogates								
n-Octacosane (S)	92	%	50-150	1	01/26/12 12:30	01/26/12 20:41	630-02-4	
o-Terphenyl (S)	92	%	50-150	1	01/26/12 12:30	01/26/12 20:41	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	**30.1**	mg/kg	5.7	1	01/26/12 14:49	01/27/12 15:03		
Surrogates								
a,a,a-Trifluorotoluene (S)	114	%	50-150	1	01/26/12 14:49	01/27/12 15:03	98-08-8	
4-Bromofluorobenzene (S)	137	%	50-150	1	01/26/12 14:49	01/27/12 15:03	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**6.6**	mg/kg	1.2	1	01/27/12 07:58	01/31/12 21:21	7439-92-1	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	3.5	1		01/26/12 16:21	71-43-2	
Ethylbenzene	ND	ug/kg	3.5	1		01/26/12 16:21	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	3.5	1		01/26/12 16:21	1634-04-4	
Toluene	ND	ug/kg	3.5	1		01/26/12 16:21	108-88-3	
Xylene (Total)	ND	ug/kg	10.5	1		01/26/12 16:21	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%	72-129	1		01/26/12 16:21	1868-53-7	
Toluene-d8 (S)	100	%	69-133	1		01/26/12 16:21	2037-26-5	
4-Bromofluorobenzene (S)	107	%	67-142	1		01/26/12 16:21	460-00-4	

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510642

Sample: EW-3-15' **Lab ID: 2510642004** Collected: 01/25/12 10:30 Received: 01/25/12 16:06 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Surrogates								
1,2-Dichloroethane-d4 (S)	102	%	67-136	1		01/26/12 16:21	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**17.3**	%	0.10	1		01/26/12 16:20		

Sample: EW-3-20' **Lab ID: 2510642005** Collected: 01/25/12 10:35 Received: 01/25/12 16:06 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	**29.7**	mg/kg	16.1	1	01/26/12 12:30	01/26/12 20:58		
Motor Oil Range	ND	mg/kg	64.5	1	01/26/12 12:30	01/26/12 20:58	64742-65-0	
Surrogates								
n-Octacosane (S)	94	%	50-150	1	01/26/12 12:30	01/26/12 20:58	630-02-4	
o-Terphenyl (S)	93	%	50-150	1	01/26/12 12:30	01/26/12 20:58	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	**621**	mg/kg	267	50	01/26/12 14:49	01/27/12 16:30		
Surrogates								
a,a,a-Trifluorotoluene (S)	110	%	50-150	50	01/26/12 14:49	01/27/12 16:30	98-08-8	
4-Bromofluorobenzene (S)	124	%	50-150	50	01/26/12 14:49	01/27/12 16:30	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**2.9**	mg/kg	0.79	1	01/27/12 07:58	01/31/12 21:33	7439-92-1	
8260 MSV 5035A Med Level VOA	Analytical Method: EPA 8260 Preparation Method: EPA 5035A/5030B							
Ethylbenzene	**232**	ug/kg	53.5	1	01/31/12 00:00	01/31/12 20:50	100-41-4	
Toluene	**92.3**	ug/kg	53.5	1	01/31/12 00:00	01/31/12 20:50	108-88-3	
Xylene (Total)	**699**	ug/kg	160	1	01/31/12 00:00	01/31/12 20:50	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%	75-116	1	01/31/12 00:00	01/31/12 20:50	1868-53-7	
Toluene-d8 (S)	101	%	74-124	1	01/31/12 00:00	01/31/12 20:50	2037-26-5	
4-Bromofluorobenzene (S)	102	%	73-128	1	01/31/12 00:00	01/31/12 20:50	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-125	1	01/31/12 00:00	01/31/12 20:50	17060-07-0	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	**69.0**	ug/kg	3.1	1		01/26/12 17:02	71-43-2	
Methyl-tert-butyl ether	ND	ug/kg	3.1	1		01/26/12 17:02	1634-04-4	
Surrogates								
Dibromofluoromethane (S)	101	%	72-129	1		01/26/12 17:02	1868-53-7	
Toluene-d8 (S)	545	%	69-133	1		01/26/12 17:02	2037-26-5	S5
4-Bromofluorobenzene (S)	191	%	67-142	1		01/26/12 17:02	460-00-4	S5
1,2-Dichloroethane-d4 (S)	118	%	67-136	1		01/26/12 17:02	17060-07-0	

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510642

Sample: EW-3-20' **Lab ID: 2510642005** Collected: 01/25/12 10:35 Received: 01/25/12 16:06 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**8.2**	%	0.10	1		01/26/12 16:20		

Sample: EW-3-30' **Lab ID: 2510642006** Collected: 01/25/12 10:45 Received: 01/25/12 16:06 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	18.7	1	01/26/12 12:30	01/26/12 21:15		
Motor Oil Range	ND	mg/kg	74.8	1	01/26/12 12:30	01/26/12 21:15	64742-65-0	
Surrogates								
n-Octacosane (S)	106	%	50-150	1	01/26/12 12:30	01/26/12 21:15	630-02-4	
o-Terphenyl (S)	106	%	50-150	1	01/26/12 12:30	01/26/12 21:15	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	ND	mg/kg	6.8	1	01/26/12 14:49	01/31/12 16:41		
Surrogates								
a,a,a-Trifluorotoluene (S)	114	%	50-150	1	01/26/12 14:49	01/31/12 16:41	98-08-8	
4-Bromofluorobenzene (S)	106	%	50-150	1	01/26/12 14:49	01/31/12 16:41	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**3.2**	mg/kg	1.2	1	01/27/12 07:58	01/31/12 21:36	7439-92-1	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	**20.1**	ug/kg	3.1	1		01/26/12 17:22	71-43-2	
Ethylbenzene	**11.3**	ug/kg	3.1	1		01/26/12 17:22	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	3.1	1		01/26/12 17:22	1634-04-4	
Toluene	**10.1**	ug/kg	3.1	1		01/26/12 17:22	108-88-3	
Xylene (Total)	**36.0**	ug/kg	9.3	1		01/26/12 17:22	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%	72-129	1		01/26/12 17:22	1868-53-7	
Toluene-d8 (S)	112	%	69-133	1		01/26/12 17:22	2037-26-5	
4-Bromofluorobenzene (S)	111	%	67-142	1		01/26/12 17:22	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	67-136	1		01/26/12 17:22	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**19.0**	%	0.10	1		01/26/12 16:22		

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510642

Sample: DUP-2 **Lab ID: 2510642008** Collected: 01/25/12 00:00 Received: 01/25/12 16:06 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	**30.5**	mg/kg	16.5	1	01/26/12 12:30	01/26/12 21:32		
Motor Oil Range	ND	mg/kg	65.9	1	01/26/12 12:30	01/26/12 21:32	64742-65-0	
Surrogates								
n-Octacosane (S)	111	%	50-150	1	01/26/12 12:30	01/26/12 21:32	630-02-4	
o-Terphenyl (S)	111	%	50-150	1	01/26/12 12:30	01/26/12 21:32	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	**443**	mg/kg	4.9	1	01/26/12 14:49	01/27/12 15:28		
Surrogates								
a,a,a-Trifluorotoluene (S)	113	%	50-150	1	01/26/12 14:49	01/27/12 15:28	98-08-8	
4-Bromofluorobenzene (S)	416	%	50-150	1	01/26/12 14:49	01/27/12 15:28	460-00-4	S2
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**2.7**	mg/kg	0.84	1	01/27/12 07:58	01/31/12 21:40	7439-92-1	
8260 MSV 5035A Med Level VOA	Analytical Method: EPA 8260 Preparation Method: EPA 5035A/5030B							
Ethylbenzene	**215**	ug/kg	48.6	1	01/31/12 00:00	01/31/12 21:08	100-41-4	
Toluene	**65.8**	ug/kg	48.6	1	01/31/12 00:00	01/31/12 21:08	108-88-3	
Xylene (Total)	**682**	ug/kg	146	1	01/31/12 00:00	01/31/12 21:08	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	89	%	75-116	1	01/31/12 00:00	01/31/12 21:08	1868-53-7	
Toluene-d8 (S)	86	%	74-124	1	01/31/12 00:00	01/31/12 21:08	2037-26-5	
4-Bromofluorobenzene (S)	93	%	73-128	1	01/31/12 00:00	01/31/12 21:08	460-00-4	
1,2-Dichloroethane-d4 (S)	80	%	70-125	1	01/31/12 00:00	01/31/12 21:08	17060-07-0	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	**31.7**	ug/kg	2.8	1		01/26/12 17:43	71-43-2	
Methyl-tert-butyl ether	ND	ug/kg	2.8	1		01/26/12 17:43	1634-04-4	
Surrogates								
Dibromofluoromethane (S)	98	%	72-129	1		01/26/12 17:43	1868-53-7	
Toluene-d8 (S)	348	%	69-133	1		01/26/12 17:43	2037-26-5	S5
4-Bromofluorobenzene (S)	261	%	67-142	1		01/26/12 17:43	460-00-4	S5
1,2-Dichloroethane-d4 (S)	102	%	67-136	1		01/26/12 17:43	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**7.8**	%	0.10	1		01/26/12 16:23		

Sample: EW-1-15' **Lab ID: 2510642009** Collected: 01/25/12 14:55 Received: 01/25/12 16:06 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	**59.9**	mg/kg	17.7	1	01/26/12 12:30	01/26/12 22:06		
Motor Oil Range	ND	mg/kg	70.8	1	01/26/12 12:30	01/26/12 22:06	64742-65-0	

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510642

Sample: EW-1-15' **Lab ID: 2510642009** Collected: 01/25/12 14:55 Received: 01/25/12 16:06 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx		Preparation Method: EPA 3546					
Surrogates								
n-Octacosane (S)	100	%	50-150	1	01/26/12 12:30	01/26/12 22:06	630-02-4	
o-Terphenyl (S)	100	%	50-150	1	01/26/12 12:30	01/26/12 22:06	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx		Preparation Method: NWTPH-Gx					
Gasoline Range Organics	**2160**	mg/kg	299	50	01/26/12 14:49	01/27/12 16:55		
Surrogates								
a,a,a-Trifluorotoluene (S)	110	%	50-150	50	01/26/12 14:49	01/27/12 16:55	98-08-8	
4-Bromofluorobenzene (S)	156	%	50-150	50	01/26/12 14:49	01/27/12 16:55	460-00-4	S2
6010 MET ICP	Analytical Method: EPA 6010		Preparation Method: EPA 3050					
Lead	**3.9**	mg/kg	1.0	1	01/27/12 07:58	01/31/12 21:44	7439-92-1	
8260 MSV 5035A Med Level VOA	Analytical Method: EPA 8260		Preparation Method: EPA 5035A/5030B					
Benzene	**177**	ug/kg	29.9	1	02/04/12 00:00	02/05/12 12:49	71-43-2	
Ethylbenzene	**9150**	ug/kg	59.8	1	02/04/12 00:00	02/05/12 12:49	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	59.8	1	02/04/12 00:00	02/05/12 12:49	1634-04-4	
Toluene	**530**	ug/kg	59.8	1	02/04/12 00:00	02/05/12 12:49	108-88-3	
Xylene (Total)	**11500**	ug/kg	180	1	02/04/12 00:00	02/05/12 12:49	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%	75-116	1	02/04/12 00:00	02/05/12 12:49	1868-53-7	
Toluene-d8 (S)	140	%	74-124	1	02/04/12 00:00	02/05/12 12:49	2037-26-5	S5
4-Bromofluorobenzene (S)	111	%	73-128	1	02/04/12 00:00	02/05/12 12:49	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-125	1	02/04/12 00:00	02/05/12 12:49	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**11.2**	%	0.10	1		01/26/12 16:24		

Sample: Trip Blank **Lab ID: 2510642010** Collected: 01/25/12 00:00 Received: 01/25/12 16:06 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx		Preparation Method: NWTPH-Gx					
Gasoline Range Organics	ND	mg/kg	5.0	1	01/26/12 14:49	01/27/12 14:35		
Surrogates								
a,a,a-Trifluorotoluene (S)	96	%	50-150	1	01/26/12 14:49	01/27/12 14:35	98-08-8	
4-Bromofluorobenzene (S)	95	%	50-150	1	01/26/12 14:49	01/27/12 14:35	460-00-4	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	3.0	1		01/26/12 18:03	71-43-2	
Ethylbenzene	ND	ug/kg	3.0	1		01/26/12 18:03	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	3.0	1		01/26/12 18:03	1634-04-4	
Toluene	ND	ug/kg	3.0	1		01/26/12 18:03	108-88-3	
Xylene (Total)	ND	ug/kg	9.0	1		01/26/12 18:03	1330-20-7	

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510642

Sample: Trip Blank **Lab ID: 2510642010** Collected: 01/25/12 00:00 Received: 01/25/12 16:06 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Surrogates								
Dibromofluoromethane (S)	93	%	72-129	1		01/26/12 18:03	1868-53-7	
Toluene-d8 (S)	101	%	69-133	1		01/26/12 18:03	2037-26-5	
4-Bromofluorobenzene (S)	102	%	67-142	1		01/26/12 18:03	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	67-136	1		01/26/12 18:03	17060-07-0	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510642

QC Batch: GCV/2651 Analysis Method: NWTPH-Gx
QC Batch Method: NWTPH-Gx Analysis Description: NWTPH-Gx Solid GCV
Associated Lab Samples: 2510642001, 2510642004, 2510642005, 2510642008, 2510642009, 2510642010

METHOD BLANK: 100792 Matrix: Solid
Associated Lab Samples: 2510642001, 2510642004, 2510642005, 2510642008, 2510642009, 2510642010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	5.0	01/27/12 14:05	
4-Bromofluorobenzene (S)	%	97	50-150	01/27/12 14:05	
a,a,a-Trifluorotoluene (S)	%	98	50-150	01/27/12 14:05	

LABORATORY CONTROL SAMPLE: 100793

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	12.5	12.8	103	63-140	
4-Bromofluorobenzene (S)	%			113	50-150	
a,a,a-Trifluorotoluene (S)	%			112	50-150	

SAMPLE DUPLICATE: 101316

Parameter	Units	2510634002 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	mg/kg	ND	ND		
4-Bromofluorobenzene (S)	%	101	102	2	
a,a,a-Trifluorotoluene (S)	%	105	105	.4	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510642

QC Batch: GCV/2654 Analysis Method: NWTPH-Gx
QC Batch Method: NWTPH-Gx Analysis Description: NWTPH-Gx Solid GCV
Associated Lab Samples: 2510642002, 2510642003, 2510642006

METHOD BLANK: 101277 Matrix: Solid
Associated Lab Samples: 2510642002, 2510642003, 2510642006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	5.0	01/31/12 15:03	
4-Bromofluorobenzene (S)	%	70	50-150	01/31/12 15:03	
a,a,a-Trifluorotoluene (S)	%	76	50-150	01/31/12 15:03	

LABORATORY CONTROL SAMPLE: 101278

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	12.5	12.4	99	63-140	
4-Bromofluorobenzene (S)	%			82	50-150	
a,a,a-Trifluorotoluene (S)	%			86	50-150	

SAMPLE DUPLICATE: 101416

Parameter	Units	2510679003 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	mg/kg	ND	ND		
4-Bromofluorobenzene (S)	%	97	98	.9	
a,a,a-Trifluorotoluene (S)	%	102	103	1	

SAMPLE DUPLICATE: 101417

Parameter	Units	2510679007 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	mg/kg	ND	ND		
4-Bromofluorobenzene (S)	%	100	100	.008	
a,a,a-Trifluorotoluene (S)	%	104	104	.3	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510642

QC Batch: MPRP/2768 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 2510642001, 2510642002, 2510642003, 2510642004, 2510642005, 2510642006, 2510642008, 2510642009

METHOD BLANK: 100859 Matrix: Solid
Associated Lab Samples: 2510642001, 2510642002, 2510642003, 2510642004, 2510642005, 2510642006, 2510642008, 2510642009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	ND	1.0	01/30/12 17:05	

LABORATORY CONTROL SAMPLE: 100860

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	25	23.5	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 100861 100862

Parameter	Units	2510622004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Lead	mg/kg	2.9	25.3	25.3	24.5	27.6	86	98	75-125	12	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510642

QC Batch: MSV/6262 Analysis Method: EPA 8260
QC Batch Method: EPA 5035A/5030B Analysis Description: 8260 MSV 5035A Medium Soil
Associated Lab Samples: 2510642005, 2510642008

METHOD BLANK: 101281 Matrix: Solid
Associated Lab Samples: 2510642005, 2510642008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/kg	ND	50.0	01/31/12 15:50	
Toluene	ug/kg	ND	50.0	01/31/12 15:50	
Xylene (Total)	ug/kg	ND	150	01/31/12 15:50	
1,2-Dichloroethane-d4 (S)	%	92	70-125	01/31/12 15:50	
4-Bromofluorobenzene (S)	%	99	73-128	01/31/12 15:50	
Dibromofluoromethane (S)	%	98	75-116	01/31/12 15:50	
Toluene-d8 (S)	%	98	74-124	01/31/12 15:50	

LABORATORY CONTROL SAMPLE: 101282

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/kg	1000	955	96	71-123	
Toluene	ug/kg	1000	894	89	69-118	
Xylene (Total)	ug/kg	3000	2880	96	71-122	
1,2-Dichloroethane-d4 (S)	%			90	70-125	
4-Bromofluorobenzene (S)	%			92	73-128	
Dibromofluoromethane (S)	%			102	75-116	
Toluene-d8 (S)	%			93	74-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101427 101428

Parameter	Units	2510718001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Ethylbenzene	ug/kg	ND	889	889	2440	2470	274	278	64-136	1	M1
Toluene	ug/kg	ND	889	889	2290	2240	257	251	65-130	2	M1
Xylene (Total)	ug/kg	ND	2670	2670	7270	7450	272	279	63-134	2	M1
1,2-Dichloroethane-d4 (S)	%						91	92	70-125		
4-Bromofluorobenzene (S)	%						92	93	73-128		
Dibromofluoromethane (S)	%						101	102	75-116		
Toluene-d8 (S)	%						97	91	74-124		

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510642

QC Batch: MSV/6299
QC Batch Method: EPA 5035A/5030B
Analysis Method: EPA 8260
Analysis Description: 8260 MSV 5035A Medium Soil
Associated Lab Samples: 2510642009

METHOD BLANK: 101837 Matrix: Solid
Associated Lab Samples: 2510642009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	ND	25.0	02/05/12 05:41	
Ethylbenzene	ug/kg	ND	50.0	02/05/12 05:41	
Methyl-tert-butyl ether	ug/kg	ND	50.0	02/05/12 05:41	
Toluene	ug/kg	ND	50.0	02/05/12 05:41	
Xylene (Total)	ug/kg	ND	150	02/05/12 05:41	
1,2-Dichloroethane-d4 (S)	%	92	70-125	02/05/12 05:41	
4-Bromofluorobenzene (S)	%	110	73-128	02/05/12 05:41	
Dibromofluoromethane (S)	%	101	75-116	02/05/12 05:41	
Toluene-d8 (S)	%	95	74-124	02/05/12 05:41	

LABORATORY CONTROL SAMPLE: 101838

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	1000	1010	101	71-123	
Ethylbenzene	ug/kg	1000	1010	101	71-123	
Methyl-tert-butyl ether	ug/kg	1000	797	80	68-133	
Toluene	ug/kg	1000	986	99	69-118	
Xylene (Total)	ug/kg	3000	2950	98	71-122	
1,2-Dichloroethane-d4 (S)	%			88	70-125	
4-Bromofluorobenzene (S)	%			93	73-128	
Dibromofluoromethane (S)	%			98	75-116	
Toluene-d8 (S)	%			99	74-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101985 101986

Parameter	Units	2510691003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzene	ug/kg	208	1150	1150	2740	2530	219	201	68-137	8	M1
Ethylbenzene	ug/kg	91.5	1150	1150	2120	1970	176	163	64-136	8	M1
Methyl-tert-butyl ether	ug/kg	ND	1150	1150	928	860	80	75	62-146	8	
Toluene	ug/kg	511	1150	1150	5180	4850	405	376	65-130	7	M1
Xylene (Total)	ug/kg	477	3460	3460	8770	8140	239	221	63-134	7	M1
1,2-Dichloroethane-d4 (S)	%						84	85	70-125		
4-Bromofluorobenzene (S)	%						95	92	73-128		
Dibromofluoromethane (S)	%						96	95	75-116		
Toluene-d8 (S)	%						98	98	74-124		

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510642

QC Batch: MSV/6241 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 2510642003, 2510642004, 2510642005, 2510642006, 2510642008, 2510642010

METHOD BLANK: 100748 Matrix: Solid
Associated Lab Samples: 2510642003, 2510642004, 2510642005, 2510642006, 2510642008, 2510642010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	ND	3.0	01/26/12 10:01	
Ethylbenzene	ug/kg	ND	3.0	01/26/12 10:01	
Methyl-tert-butyl ether	ug/kg	ND	3.0	01/26/12 10:01	
Toluene	ug/kg	ND	3.0	01/26/12 10:01	
Xylene (Total)	ug/kg	ND	9.0	01/26/12 10:01	
1,2-Dichloroethane-d4 (S)	%	107	67-136	01/26/12 10:01	
4-Bromofluorobenzene (S)	%	104	67-142	01/26/12 10:01	
Dibromofluoromethane (S)	%	102	72-129	01/26/12 10:01	
Toluene-d8 (S)	%	99	69-133	01/26/12 10:01	

LABORATORY CONTROL SAMPLE: 100749

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	20	20.6	103	69-133	
Ethylbenzene	ug/kg	20	22.4	112	68-126	
Methyl-tert-butyl ether	ug/kg	20	22.8	114	67-134	
Toluene	ug/kg	20	20.6	103	68-130	
Xylene (Total)	ug/kg	60	69.1	115	68-126	
1,2-Dichloroethane-d4 (S)	%			98	67-136	
4-Bromofluorobenzene (S)	%			98	67-142	
Dibromofluoromethane (S)	%			101	72-129	
Toluene-d8 (S)	%			100	69-133	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101336 101337

Parameter	Units	2510617002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzene	ug/kg	ND	23.2	22	21.6	20.1	93	91	40-129	7	
Ethylbenzene	ug/kg	ND	23.2	22	25.6	22.5	110	102	40-134	13	
Methyl-tert-butyl ether	ug/kg	ND	23.2	22	18.4	18.6	79	84	40-149	.8	
Toluene	ug/kg	ND	23.2	22	22.4	19.8	94	87	40-134	13	
Xylene (Total)	ug/kg	ND	69.8	66.1	74.0	65.2	106	99	40-129	13	
1,2-Dichloroethane-d4 (S)	%						77	88	67-136		
4-Bromofluorobenzene (S)	%						103	107	67-142		
Dibromofluoromethane (S)	%						89	97	72-129		
Toluene-d8 (S)	%						104	103	69-133		

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510642

QC Batch: MSV/6253
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 2510642001, 2510642002

METHOD BLANK: 100937 Matrix: Solid
Associated Lab Samples: 2510642001, 2510642002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	ND	3.0	01/27/12 17:45	
Ethylbenzene	ug/kg	ND	3.0	01/27/12 17:45	
Methyl-tert-butyl ether	ug/kg	ND	3.0	01/27/12 17:45	
Toluene	ug/kg	ND	3.0	01/27/12 17:45	
Xylene (Total)	ug/kg	ND	9.0	01/27/12 17:45	
1,2-Dichloroethane-d4 (S)	%	93	67-136	01/27/12 17:45	
4-Bromofluorobenzene (S)	%	106	67-142	01/27/12 17:45	
Dibromofluoromethane (S)	%	100	72-129	01/27/12 17:45	
Toluene-d8 (S)	%	94	69-133	01/27/12 17:45	

LABORATORY CONTROL SAMPLE: 100938

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	20	15.4	77	69-133	
Ethylbenzene	ug/kg	20	16.8	84	68-126	
Methyl-tert-butyl ether	ug/kg	20	16.4	82	67-134	
Toluene	ug/kg	20	14.9	74	68-130	
Xylene (Total)	ug/kg	60	49.8	83	68-126	
1,2-Dichloroethane-d4 (S)	%			94	67-136	
4-Bromofluorobenzene (S)	%			99	67-142	
Dibromofluoromethane (S)	%			95	72-129	
Toluene-d8 (S)	%			99	69-133	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101364 101365

Parameter	Units	2510708001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzene	ug/kg	110	14	13.7	131	62.3	147	-349	40-129	71	D6,E,M1
Ethylbenzene	ug/kg	144	14	13.7	331	106	1340	-276	40-134	103	D6,E,M1
Methyl-tert-butyl ether	ug/kg	ND	14	13.7	10.2	10.8	72	79	40-149	6	
Toluene	ug/kg	11.2	14	13.7	26.2	13.1	107	14	40-134	67	D6,M1
Xylene (Total)	ug/kg	80.0	42.1	41.2	246	68.9	394	-27	40-129	112	D6,E,M1
1,2-Dichloroethane-d4 (S)	%						148	97	67-136		S0
4-Bromofluorobenzene (S)	%						196	133	67-142		S0
Dibromofluoromethane (S)	%						103	96	72-129		
Toluene-d8 (S)	%						670	214	69-133		S0

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510642

QC Batch: OEXT/5020 Analysis Method: NWTPH-Dx
QC Batch Method: EPA 3546 Analysis Description: NWTPH-Dx GCS
Associated Lab Samples: 2510642001, 2510642002, 2510642003, 2510642004, 2510642005, 2510642006, 2510642008, 2510642009

METHOD BLANK: 100779 Matrix: Solid
Associated Lab Samples: 2510642001, 2510642002, 2510642003, 2510642004, 2510642005, 2510642006, 2510642008, 2510642009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range	mg/kg	ND	16.0	01/26/12 17:17	
Motor Oil Range	mg/kg	ND	64.0	01/26/12 17:17	
n-Octacosane (S)	%	89	50-150	01/26/12 17:17	
o-Terphenyl (S)	%	90	50-150	01/26/12 17:17	

LABORATORY CONTROL SAMPLE: 100780

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Range	mg/kg	400	356	89	70-111	
Motor Oil Range	mg/kg	400	388	97	73-118	
n-Octacosane (S)	%			94	50-150	
o-Terphenyl (S)	%			93	50-150	

SAMPLE DUPLICATE: 100781

Parameter	Units	2510642002 Result	Dup Result	RPD	Qualifiers
Diesel Range	mg/kg	ND	ND		
Motor Oil Range	mg/kg	ND	ND		
n-Octacosane (S)	%	93	90	3	
o-Terphenyl (S)	%	94	91	3	

SAMPLE DUPLICATE: 100782

Parameter	Units	2510642008 Result	Dup Result	RPD	Qualifiers
Diesel Range	mg/kg	30.5	30.2	.8	
Motor Oil Range	mg/kg	ND	ND		
n-Octacosane (S)	%	111	94	16	
o-Terphenyl (S)	%	111	94	16	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510642

QC Batch: PMST/1947 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 2510642001, 2510642002, 2510642003, 2510642004, 2510642005, 2510642006, 2510642008, 2510642009

SAMPLE DUPLICATE: 100838

Parameter	Units	2510645001 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	23.7	23.8	.3	

SAMPLE DUPLICATE: 100839

Parameter	Units	2510642005 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	8.2	7.8	4	

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(206)767-5060

QUALIFIERS

Project: WA 11060
Pace Project No.: 2510642

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

D6	The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S0	Surrogate recovery outside laboratory control limits.
S2	Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).
S5	Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WA 11060
Pace Project No.: 2510642

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2510642001	**SB-4-15'**	EPA 3546	OEXT/5020	NWTPH-Dx	GCSV/3270
2510642002	**SB-4-20'**	EPA 3546	OEXT/5020	NWTPH-Dx	GCSV/3270
2510642003	**SB-4-35'**	EPA 3546	OEXT/5020	NWTPH-Dx	GCSV/3270
2510642004	**EW-3-15'**	EPA 3546	OEXT/5020	NWTPH-Dx	GCSV/3270
2510642005	**EW-3-20'**	EPA 3546	OEXT/5020	NWTPH-Dx	GCSV/3270
2510642006	**EW-3-30'**	EPA 3546	OEXT/5020	NWTPH-Dx	GCSV/3270
2510642008	**DUP-2**	EPA 3546	OEXT/5020	NWTPH-Dx	GCSV/3270
2510642009	**EW-1-15'**	EPA 3546	OEXT/5020	NWTPH-Dx	GCSV/3270
2510642001	**SB-4-15'**	NWTPH-Gx	GCV/2651	NWTPH-Gx	GCV/2655
2510642002	**SB-4-20'**	NWTPH-Gx	GCV/2654	NWTPH-Gx	GCV/2658
2510642003	**SB-4-35'**	NWTPH-Gx	GCV/2654	NWTPH-Gx	GCV/2658
2510642004	**EW-3-15'**	NWTPH-Gx	GCV/2651	NWTPH-Gx	GCV/2655
2510642005	**EW-3-20'**	NWTPH-Gx	GCV/2651	NWTPH-Gx	GCV/2655
2510642006	**EW-3-30'**	NWTPH-Gx	GCV/2654	NWTPH-Gx	GCV/2658
2510642008	**DUP-2**	NWTPH-Gx	GCV/2651	NWTPH-Gx	GCV/2655
2510642009	**EW-1-15'**	NWTPH-Gx	GCV/2651	NWTPH-Gx	GCV/2655
2510642010	**Trip Blank**	NWTPH-Gx	GCV/2651	NWTPH-Gx	GCV/2655
2510642001	**SB-4-15'**	EPA 3050	MPRP/2768	EPA 6010	ICP/2608
2510642002	**SB-4-20'**	EPA 3050	MPRP/2768	EPA 6010	ICP/2608
2510642003	**SB-4-35'**	EPA 3050	MPRP/2768	EPA 6010	ICP/2608
2510642004	**EW-3-15'**	EPA 3050	MPRP/2768	EPA 6010	ICP/2608
2510642005	**EW-3-20'**	EPA 3050	MPRP/2768	EPA 6010	ICP/2608
2510642006	**EW-3-30'**	EPA 3050	MPRP/2768	EPA 6010	ICP/2608
2510642008	**DUP-2**	EPA 3050	MPRP/2768	EPA 6010	ICP/2608
2510642009	**EW-1-15'**	EPA 3050	MPRP/2768	EPA 6010	ICP/2608
2510642005	**EW-3-20'**	EPA 5035A/5030B	MSV/6262	EPA 8260	MSV/6283
2510642008	**DUP-2**	EPA 5035A/5030B	MSV/6262	EPA 8260	MSV/6283
2510642009	**EW-1-15'**	EPA 5035A/5030B	MSV/6299	EPA 8260	MSV/6314
2510642001	**SB-4-15'**	EPA 8260	MSV/6253		
2510642002	**SB-4-20'**	EPA 8260	MSV/6253		
2510642003	**SB-4-35'**	EPA 8260	MSV/6241		
2510642004	**EW-3-15'**	EPA 8260	MSV/6241		
2510642005	**EW-3-20'**	EPA 8260	MSV/6241		
2510642006	**EW-3-30'**	EPA 8260	MSV/6241		
2510642008	**DUP-2**	EPA 8260	MSV/6241		
2510642010	**Trip Blank**	EPA 8260	MSV/6241		
2510642001	**SB-4-15'**	ASTM D2974-87	PMST/1947		
2510642002	**SB-4-20'**	ASTM D2974-87	PMST/1947		
2510642003	**SB-4-35'**	ASTM D2974-87	PMST/1947		
2510642004	**EW-3-15'**	ASTM D2974-87	PMST/1947		
2510642005	**EW-3-20'**	ASTM D2974-87	PMST/1947		
2510642006	**EW-3-30'**	ASTM D2974-87	PMST/1947		
2510642008	**DUP-2**	ASTM D2974-87	PMST/1947		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WA 11060
Pace Project No.: 2510642

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2510642009	**EW-1-15'**	ASTM D2974-87	PMST/1947		

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CHAIN-OF-CUSTODY / Analytical Request Document

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

2510642

Page: 1 of 1

1491645

Section A Required Client Information:

Company: ARCADIS
Address: 2300 EastLake Ave
Seattle, WA 98102
Email To: Scott.Zorn@arcadis-us.com
Phone: 2067264709 Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Scott Zorn
Copy To: Sam Miles
Alan Kahal
Purchase Order No.:
Project Name:
Project Number: WA 11060

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:

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	Y/N	Analysis Test: GRO	DRO/HO	BTEX/MTBE	PAH	Total Lead	EPH	VPH	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SB-4-15'	SL		1/25/12	825				7										X	X	X	X	X				
2	SB-4-20'	SL		1/25/12	840				7										X	X	X	X	X				
3	SB-4-35'	SL		1/25/12	850				7										X	X	X	X	X				
4	EW-3-15'	SL		1/25/12	1030				7										X	X	X	X	X				
5	EW-3-20'	SL		1/25/12	1035				7										X	X	X	X	X				
6	EW-3-30'	SL		1/25/12	1045				7										X	X	X	X	X				
7	EW-3-25'	SL		1/25/12	1050				3															X	X		
8	Dup-2	SL		1/25/12					7										X	X	X	X	X				
9	EW-1-15'	SL		1/25/12	1455				7										X	X	X	X	X				
10																											
11																											
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Hold PAH pending DRO results	Sam Miles / Arcadis	1-25-12	1606	Jyothi Sivaraj / PACE	1/25/12	1606	1.8	Y	N	Y
Call 954 296-3731 with any Questions							0.8	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Sam Miles

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

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.

Sample Container Count

2510642

CLIENT: Arcadis

COC PAGE 1 of 1
COC ID# 1491645

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										1	1	1	2	2					
2										↓	↓	↓	↓	↓					
3										↓	↓	↓	↓	↓					
4										↓	↓	↓	↓	↓					
5										↓	↓	↓	↓	↓					
6										↓	↓	↓	↓	↓					
7									1			2							
8										1	1	1	2	2					
9										1	1	1	2	2					
10																			
11																			
12																			

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

Sample Condition Upon Receipt

Pace Analytical

Client Name: Arcadis Project # 2510642

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 foam kits 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: 0.8, 1.8 Biological Tissue is Frozen: Yes No

Temp should be above freezing ≤ 6°C

Comments:

Date and Initials of person examining contents: NJB 01/25/12

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: -Includes date/time/ID/Analysis Matrix: Soil	☑Yes ☐No ☐N/A	13. Soil trip blank received, not on COC.
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:		

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

Person Contacted: Sam Miles Date/Time: 1/25/12 -

Comments/ Resolution: Trip blank not on COC - called client regarding analyzing or putting on hold. Client returned call; please run volatiles.

Project Manager Review: ARB **Date:** 1/26/12

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)

1311 N. 35th St.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Pace Analytical Seattle
Andy Brownfield
940 South Harney
Seattle, Washington 98108

RE: WA 11060
Lab ID: 1201128

February 09, 2012

Attention Andy Brownfield:

Fremont Analytical, Inc. received 1 sample(s) on 1/26/2012 for the analyses presented in the following report.

Extractable Petroleum Hydrocarbons by NWEPH
Volatile Petroleum Hydrocarbons by NWVPH

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Michael Dee
Sr. Chemist / Principal

Date: *02/09/2012*

CLIENT: Pace Analytical Seattle
Project: WA 11060
Lab Order: 1201128

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1201128-001	EW-3-25'	01/25/2012 10:50 AM	01/26/2012 3:00 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1201128**
Date: **2/9/2012**

CLIENT: Pace Analytical Seattle
Project: WA 11060

I. SAMPLE RECEIPT:
All samples were received intact. The internal ice chest temperatures were measured on receipt and are recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Analytical Report

WO#: **1201128**
Date Reported: **2/9/2012**

Client: Pace Analytical Seattle
Collection Date: 1/25/2012 10:50:00 AM
Project: WA 11060
Lab ID: 1201128-001
Matrix: Solid
Client Sample ID: EW-3-25'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 1831		Analyst: SG
Aliphatic Hydrocarbon (C8-C10)	ND	4.85		mg/Kg-dry	1	2/8/2012 3:14:00 PM
Aliphatic Hydrocarbon (C10-C12)	ND	4.85		mg/Kg-dry	1	2/8/2012 3:14:00 PM
Aliphatic Hydrocarbon (C12-C16)	ND	4.85		mg/Kg-dry	1	2/8/2012 3:14:00 PM
Aliphatic Hydrocarbon (C16-C21)	ND	4.85		mg/Kg-dry	1	2/8/2012 3:14:00 PM
Aliphatic Hydrocarbon (C21-C34)	ND	4.85		mg/Kg-dry	1	2/8/2012 3:14:00 PM
Aromatic Hydrocarbon (C8-C10)	ND	4.85		mg/Kg-dry	1	2/8/2012 5:34:00 PM
Aromatic Hydrocarbon (C10-C12)	ND	4.85		mg/Kg-dry	1	2/8/2012 5:34:00 PM
Aromatic Hydrocarbon (C12-C16)	ND	4.85		mg/Kg-dry	1	2/8/2012 5:34:00 PM
Aromatic Hydrocarbon (C16-C21)	ND	4.85		mg/Kg-dry	1	2/8/2012 5:34:00 PM
Aromatic Hydrocarbon (C21-C34)	ND	4.85		mg/Kg-dry	1	2/8/2012 5:34:00 PM
Surr: 1-Chlorooctadecane	121	65-140		%REC	1	2/8/2012 3:14:00 PM
Surr: o-Terphenyl	103	65-140		%REC	1	2/8/2012 5:34:00 PM
Volatile Petroleum Hydrocarbons by NWVPH				Batch ID: 1867		Analyst: PH
Aliphatic Hydrocarbon (C5-C6)	ND	0.342		mg/Kg-dry	1	2/6/2012 9:16:00 PM
Aliphatic Hydrocarbon (C6-C8)	0.962	0.342		mg/Kg-dry	1	2/6/2012 9:16:00 PM
Aliphatic Hydrocarbon (C8-C10)	10.2	0.342		mg/Kg-dry	1	2/6/2012 9:16:00 PM
Aliphatic Hydrocarbon (C10-C12)	8.13	0.342		mg/Kg-dry	1	2/6/2012 9:16:00 PM
Aromatic Hydrocarbon (C8-C10)	10.1	0.342		mg/Kg-dry	1	2/6/2012 9:16:00 PM
Aromatic Hydrocarbon (C10-C12)	17.4	0.342		mg/Kg-dry	1	2/6/2012 9:16:00 PM
Aromatic Hydrocarbon (C12-C13)	3.33	0.342		mg/Kg-dry	1	2/6/2012 9:16:00 PM
Benzene	ND	0.342		mg/Kg-dry	1	2/6/2012 9:16:00 PM
Toluene	ND	0.342		mg/Kg-dry	1	2/6/2012 9:16:00 PM
Ethylbenzene	ND	0.342		mg/Kg-dry	1	2/6/2012 9:16:00 PM
m,p-Xylene	1.02	0.342		mg/Kg-dry	1	2/6/2012 9:16:00 PM
o-Xylene	ND	0.342		mg/Kg-dry	1	2/6/2012 9:16:00 PM
Naphthalene	0.558	0.342		mg/Kg-dry	1	2/6/2012 9:16:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.342		mg/Kg-dry	1	2/6/2012 9:16:00 PM
Surr: Bromoflourobeneze	132	65-140		%REC	1	2/6/2012 9:16:00 PM
Surr: Trifluorotoluene	94.9	65-140		%REC	1	2/6/2012 9:16:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1201128
CLIENT: Pace Analytical Seattle
Project: WA 11060

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **1201128-001ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **2/1/2012**		RunNo: **3315**			
Client ID: **EW-3-25'**	Batch ID: **1831**					Analysis Date: **2/8/2012**		SeqNo: **59080**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	5.24						0	0	30	
Aliphatic Hydrocarbon (C10-C12)	ND	5.24						0	0	30	R
Aliphatic Hydrocarbon (C12-C16)	ND	5.24						0	0	30	
Aliphatic Hydrocarbon (C16-C21)	ND	5.24						0	0	30	
Aliphatic Hydrocarbon (C21-C34)	ND	5.24						0	0	30	
Surr: 1-Chlorooctadecane	5.26		4.195		125	65	140		0		

Sample ID: **1201128-001ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **2/1/2012**		RunNo: **3315**			
Client ID: **EW-3-25'**	Batch ID: **1831**					Analysis Date: **2/8/2012**		SeqNo: **59081**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	5.24						0	0	30	R
Aromatic Hydrocarbon (C10-C12)	ND	5.24						0	0	30	
Aromatic Hydrocarbon (C12-C16)	ND	5.24						0	0	30	
Aromatic Hydrocarbon (C16-C21)	ND	5.24						0	0	30	
Aromatic Hydrocarbon (C21-C34)	ND	5.24						0	0	30	
Surr: o-Terphenyl	4.39		4.195		105	65	140		0		

Sample ID: **LCS-1831**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **2/1/2012**		RunNo: **3315**			
Client ID: **LCSS**	Batch ID: **1831**					Analysis Date: **2/8/2012**		SeqNo: **59083**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	43.5	5.00	40.00	0	109	70	130				
Aliphatic Hydrocarbon (C10-C12)	20.6	5.00	20.00	0	103	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1201128
CLIENT: Pace Analytical Seattle
Project: WA 11060

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **LCS-1831** SampType: **LCS** Units: **mg/Kg** Prep Date: **2/1/2012** RunNo: **3315**
Client ID: **LCSS** Batch ID: **1831** Analysis Date: **2/8/2012** SeqNo: **59083**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C12-C16)	18.1	5.00	20.00	0	90.3	70	130				
Aliphatic Hydrocarbon (C16-C21)	20.0	5.00	20.00	0	99.9	70	130				
Aliphatic Hydrocarbon (C21-C34)	22.5	5.00	20.00	0	113	70	130				
Surr: 1-Chlorooctadecane	46.0		40.00		115	65	140				

Sample ID: **MB-1831** SampType: **MBLK** Units: **mg/Kg** Prep Date: **2/1/2012** RunNo: **3315**
Client ID: **MBLKS** Batch ID: **1831** Analysis Date: **2/8/2012** SeqNo: **59084**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	5.00									
Aliphatic Hydrocarbon (C10-C12)	ND	5.00									
Aliphatic Hydrocarbon (C12-C16)	ND	5.00									
Aliphatic Hydrocarbon (C16-C21)	ND	5.00									
Aliphatic Hydrocarbon (C21-C34)	ND	5.00									
Surr: 1-Chlorooctadecane	45.1		40.00		113	65	140				

Sample ID: **LCS-1831** SampType: **LCS** Units: **mg/Kg** Prep Date: **2/1/2012** RunNo: **3315**
Client ID: **LCSS** Batch ID: **1831** Analysis Date: **2/8/2012** SeqNo: **59086**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	39.7	5.00	40.00	0	99.2	70	130				
Aromatic Hydrocarbon (C10-C12)	21.5	5.00	20.00	0	108	70	130				
Aromatic Hydrocarbon (C12-C16)	18.6	5.00	20.00	0	92.8	70	130				
Aromatic Hydrocarbon (C16-C21)	18.7	5.00	20.00	0	93.3	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1201128
CLIENT: Pace Analytical Seattle
Project: WA 11060

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **LCS-1831**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **2/1/2012**		RunNo: **3315**			
Client ID: **LCSS**	Batch ID: **1831**					Analysis Date: **2/8/2012**		SeqNo: **59086**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C21-C34)	17.7	5.00	20.00	0	88.4	70	130				
Surr: o-Terphenyl	42.3		40.00		106	65	140				

Sample ID: **MB-1831**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **2/1/2012**		RunNo: **3315**			
Client ID: **MBLKS**	Batch ID: **1831**					Analysis Date: **2/8/2012**		SeqNo: **59087**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	5.00									
Aromatic Hydrocarbon (C10-C12)	ND	5.00									
Aromatic Hydrocarbon (C12-C16)	ND	5.00									
Aromatic Hydrocarbon (C16-C21)	ND	5.00									
Aromatic Hydrocarbon (C21-C34)	ND	5.00									
Surr: o-Terphenyl	42.1		40.00		105	65	140				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1201128
CLIENT: Pace Analytical Seattle
Project: WA 11060

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: **MB-1867** SampType: **MBLK** Units: **mg/Kg** Prep Date: **2/6/2012** RunNo: **3300**
Client ID: **MBLKS** Batch ID: **1867** Analysis Date: **2/6/2012** SeqNo: **58934**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	0.500		0	0						
Aliphatic Hydrocarbon (C6-C8)	ND	0.500		0	0						
Aliphatic Hydrocarbon (C8-C10)	ND	0.500		0	0						
Aliphatic Hydrocarbon (C10-C12)	ND	0.500		0	0						
Aromatic Hydrocarbon (C8-C10)	ND	0.500		0	0						
Aromatic Hydrocarbon (C10-C12)	ND	0.500		0	0						
Aromatic Hydrocarbon (C12-C13)	ND	0.500		0	0						
Benzene	ND	0.500		0	0						
Toluene	ND	0.500		0	0						
Ethylbenzene	ND	0.500		0	0						
m,p-Xylene	ND	0.500		0	0						
o-Xylene	ND	0.500		0	0						
Naphthalene	ND	0.500		0	0						
Methyl tert-butyl ether (MTBE)	ND	0.500		0	0						
Surr: Bromoflourobeneze	0.621		0.5000		124	65	140				
Surr: Trifluorotoluene	0.618		0.5000		124	65	140				

Sample ID: **1201128-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **2/6/2012** RunNo: **3300**
Client ID: **EW-3-25'** Batch ID: **1867** Analysis Date: **2/6/2012** SeqNo: **58936**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	0.342		0	0			0	0	25	
Aliphatic Hydrocarbon (C6-C8)	0.927	0.342		0	0			0.9625	3.81	25	
Aliphatic Hydrocarbon (C8-C10)	9.69	0.342		0	0			10.15	4.66	25	
Aliphatic Hydrocarbon (C10-C12)	7.96	0.342		0	0			8.129	2.05	25	

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1201128
CLIENT: Pace Analytical Seattle
Project: WA 11060

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: **1201128-001BDUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **2/6/2012**	RunNo: **3300**
Client ID: **EW-3-25'**	Batch ID: **1867**		Analysis Date: **2/6/2012**	SeqNo: **58936**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	9.48	0.342		0	0			10.09	6.17	25	
Aromatic Hydrocarbon (C10-C12)	16.9	0.342		0	0			17.42	3.23	25	
Aromatic Hydrocarbon (C12-C13)	2.55	0.342		0	0			3.329	26.7	25	R
Benzene	ND	0.342		0	0			0	0	25	
Toluene	ND	0.342		0	0			0	0	25	
Ethylbenzene	ND	0.342		0	0			0	0	25	
m,p-Xylene	0.957	0.342		0	0			1.020	6.45	25	
o-Xylene	ND	0.342		0	0			0	0	25	
Naphthalene	0.526	0.342		0	0			0.5585	5.97	25	
Methyl tert-butyl ether (MTBE)	ND	0.342		0	0			0	0	25	
Surr: Bromoflourobeneze	0.445		0.3424		130	65	140		0		
Surr: Trifluorotoluene	0.364		0.3424		106	65	140		0		

Sample ID: **LCS-1867**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **2/6/2012**	RunNo: **3300**
Client ID: **LCSS**	Batch ID: **1867**		Analysis Date: **2/7/2012**	SeqNo: **58939**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	46.9	0.500	50.00	0	93.7	70	130				
Aliphatic Hydrocarbon (C6-C8)	21.7	0.500	25.00	0	86.8	70	130				
Aliphatic Hydrocarbon (C8-C10)	24.4	0.500	25.00	0	97.5	70	130				
Aliphatic Hydrocarbon (C10-C12)	28.8	0.500	25.00	0	115	70	130				
Aromatic Hydrocarbon (C8-C10)	117	0.500	100.0	0	117	70	130				
Aromatic Hydrocarbon (C10-C12)	24.4	0.500	25.00	0	97.6	70	130				
Aromatic Hydrocarbon (C12-C13)	29.3	0.500	25.00	0	117	70	130				
Benzene	24.5	0.500	25.00	0	98.0	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1201128
CLIENT: Pace Analytical Seattle
Project: WA 11060

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: **LCS-1867** SampType: **LCS** Units: **mg/Kg** Prep Date: **2/6/2012** RunNo: **3300**
Client ID: **LCSS** Batch ID: **1867** Analysis Date: **2/7/2012** SeqNo: **58939**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	24.0	0.500	25.00	0	95.9	70	130				
Ethylbenzene	23.9	0.500	25.00	0	95.6	70	130				
m,p-Xylene	46.6	0.500	50.00	0	93.3	70	130				
o-Xylene	24.2	0.500	25.00	0	96.6	70	130				
Naphthalene	24.2	0.500	25.00	0	96.8	70	130				
Methyl tert-butyl ether (MTBE)	26.1	0.500	25.00	0	104	70	130				
Surr: Bromoflourobeneze	0.573		0.5000		115	65	140				
Surr: Trifluorotoluene	0.647		0.5000		129	65	140				

Sample ID: **1202006-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **2/6/2012** RunNo: **3300**
Client ID: **BATCH** Batch ID: **1867** Analysis Date: **2/7/2012** SeqNo: **58940**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	49.2	0.565	56.48	0	87.1	70	130				
Aliphatic Hydrocarbon (C6-C8)	23.5	0.565	28.24	0	83.1	70	130				
Aliphatic Hydrocarbon (C8-C10)	24.7	0.565	28.24	0.4356	85.9	70	130				
Aliphatic Hydrocarbon (C10-C12)	25.9	0.565	28.24	0.3951	90.2	70	130				
Aromatic Hydrocarbon (C8-C10)	121	0.565	113.0	3.846	104	70	130				
Aromatic Hydrocarbon (C10-C12)	25.9	0.565	28.24	2.580	82.8	70	130				
Aromatic Hydrocarbon (C12-C13)	23.3	0.565	28.24	0	82.5	70	130				
Benzene	26.5	0.565	28.24	0.8539	90.8	70	130				
Toluene	25.5	0.565	28.24	0.7053	87.8	70	130				
Ethylbenzene	24.6	0.565	28.24	0.4570	85.5	70	130				
m,p-Xylene	48.5	0.565	56.48	1.677	82.9	70	130				
o-Xylene	24.4	0.565	28.24	0.4025	85.1	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1201128
CLIENT: Pace Analytical Seattle
Project: WA 11060

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: **1202006-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **2/6/2012** RunNo: **3300**
Client ID: **BATCH** Batch ID: **1867** Analysis Date: **2/7/2012** SeqNo: **58940**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	22.8	0.565	28.24	0	80.8	70	130				
Methyl tert-butyl ether (MTBE)	26.8	0.565	28.24	0	94.8	70	130				
Surr: Bromoflourobeneze	0.619		0.5648		110	65	140				
Surr: Trifluorotoluene	0.698		0.5648		124	65	140				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Sample Log-In Check List

Client Name: **PACE**	Work Order Number: **1201128**
Logged by: **Troy Zehr**	Date Received: **1/26/2012 3:00:00 PM**

Chain of Custody

1.	Were custodial seals intact?	Yes	☑	No	☐	Not Present	☐
2.	Is Chain of Custody complete?	Yes	☑	No	☐	Not Present	☐
3.	How was the sample delivered?	Client					

Log In

4.	Coolers are present?	Yes	☑	No	☐	NA	☐
5.	Was an attempt made to cool the samples?	Yes	☑	No	☐	NA	☐
6.	Were all coolers received at a temperature of >0° C to 10.0°C	Yes	☑	No	☐	NA	☐
7.	Sample(s) in proper container(s)?	Yes	☑	No	☐		
8.	Sufficient sample volume for indicated test(s)?	Yes	☑	No	☐		
9.	Are samples properly preserved?	Yes	☑	No	☐		
10.	Was preservative added to bottles?	Yes	☐	No	☑	NA	☐
11.	Is there headspace present in VOA vials?	Yes	☐	No	☑	NA	☐
12.	Did all sample containers arrive in good condition?(unbroken)	Yes	☑	No	☐		
13.	Does paperwork match bottle labels?	Yes	☑	No	☐		
14.	Are matrices correctly identified on Chain of Custody?	Yes	☑	No	☐		
15.	Is it clear what analyses were requested?	Yes	☑	No	☐		
16.	Were all holding times able to be met?	Yes	☑	No	☐		

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes	☐	No	☐	NA	☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

18. Additional remarks/Disrepancies

Item Information

Item #	Temp °C	Condition
Cooler	2.1	Good

1201128

Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: 2510842 **Workorder Name:** WA 11060 **Results Requested** 2/8/2012

Report / Invoice To	Subcontract To
Andy Brownfield Pace Analytical Seattle 940 South Harney Seattle, WA 98108 Phone (206)767-5060 Email: andy.brownfield@pacelabs.com	P.O._____ Fremont

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: MeOH	Preserved Containers: NaHSO4	Preserved Containers	Preserved Containers	Preserved Containers	Preserved Containers	Requested Analysis: NWTPH-HCID	Requested Analysis	Requested Analysis	Requested Analysis	Requested Analysis	Requested Analysis	Requested Analysis	Requested Analysis	Requested Analysis	Requested Analysis	Requested Analysis	LAB USE ONLY
1	EW-3-25'	1/25/2012 10:50	2510642007	Solid	2	1					X											
2																						
3																						
4																						
5																						

Transfers	Released By	Date/Time	Received By	Date/Time
1	Tyotlin Swan	1/26/12 1350		1/26/12
2				
3				
4				
5				

Comments

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

February 09, 2012

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

RE: Project: WA 11060
Pace Project No.: 2510663

Dear Scott Zorn:
Enclosed are the analytical results for sample(s) received by the laboratory on January 26, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Sample EW-1-25 re-logged for PAH per client request on 2/2/12.

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

Sincerely,

Andy Brownfield

andy.brownfield@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: WA 11060
Pace Project No.: 2510663

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: WA 11060
Pace Project No.: 2510663

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2510663001	**EW-1-25'**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	CC	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8270 by SIM	KJ1	20	PASI-S
		EPA 8260	ERB	9	PASI-S
		ASTM D2974-87	EED	1	PASI-S
2510663002	**EW-1-30'**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	ERB	6	PASI-S
		EPA 8260	LPM	7	PASI-S
		ASTM D2974-87	EED	1	PASI-S
2510663003	**EW-2-10'**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LPM	9	PASI-S
		ASTM D2974-87	EED	1	PASI-S
2510663004	**EW-2-15'**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LNH	5	PASI-S
		EPA 8260	LPM	8	PASI-S
		ASTM D2974-87	EED	1	PASI-S
2510663005	**EW-2-30'**	NWTPH-Dx	AY1	4	PASI-S
		NWTPH-Gx	LPM	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LPM	9	PASI-S
		ASTM D2974-87	EED	1	PASI-S

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

PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510663

Method: **NWTPH-Dx**
Description: NWTPH-Dx GCS
Client: Arcadis U.S., Inc.
Date: February 09, 2012

General Information:
5 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 3546 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: WA 11060
Pace Project No.: 2510663

Method: **NWTPH-Gx**
Description: NWTPH-Gx GCV
Client: Arcadis U.S., Inc.
Date: February 09, 2012

General Information:
5 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.

Sample Preparation:
The samples were prepared in accordance with NWTPH-Gx 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: GCV/2656

S5: Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

- EW-2-15' (Lab ID: 2510663004)
  - 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: WA 11060
Pace Project No.: 2510663

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Arcadis U.S., Inc.
Date: February 09, 2012

General Information:
5 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 3050 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: WA 11060
Pace Project No.: 2510663

Method: **EPA 8270 by SIM**
Description: 8270 MSSV PAH by SIM
Client: Arcadis U.S., Inc.
Date: February 09, 2012

General Information:
1 sample was analyzed for EPA 8270 by SIM. 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 3546 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: OEXT/5053

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2510663001

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

- MS (Lab ID: 101680)
  - Naphthalene
- MSD (Lab ID: 101681)
  - 1-Methylnaphthalene
  - 2-Methylnaphthalene
  - Naphthalene

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

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

PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510663

Method: **EPA 8270 by SIM**
Description: 8270 MSSV PAH by SIM
Client: Arcadis U.S., Inc.
Date: February 09, 2012

Additional Comments:

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

PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510663

Method: **EPA 8260**
Description: 8260 MSV 5035A Med Level VOA
Client: Arcadis U.S., Inc.
Date: February 09, 2012

General Information:
3 samples were analyzed for EPA 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.

Sample Preparation:
The samples were prepared in accordance with EPA 5035A/5030B 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/6299

S5: Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

- EW-2-15' (Lab ID: 2510663004)
  - 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.

QC Batch: MSV/6295

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2510761001

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

- MS (Lab ID: 101967)
  - Benzene
  - Ethylbenzene
  - Methyl-tert-butyl ether
  - Toluene
  - Xylene (Total)

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

PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510663

Method: **EPA 8260**
Description: 8260 MSV 5035A Med Level VOA
Client: Arcadis U.S., Inc.
Date: February 09, 2012

QC Batch: MSV/6299

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2510691003

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

- MS (Lab ID: 101985)
  - Ethylbenzene
- MSD (Lab ID: 101986)
  - Ethylbenzene

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: WA 11060
Pace Project No.: 2510663

Method: **EPA 8260**
Description: 8260/5035A Volatile Organics
Client: Arcadis U.S., Inc.
Date: February 09, 2012

General Information:
4 samples were analyzed for EPA 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/6270

S2: Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

- EW-2-15' (Lab ID: 2510663004)
  - 1,2-Dichloroethane-d4 (S)
  - Toluene-d8 (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.

QC Batch: MSV/6270

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2510663005

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

- MS (Lab ID: 101594)
  - Benzene
- MSD (Lab ID: 101595)
  - Benzene

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

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

PROJECT NARRATIVE

Project: WA 11060
Pace Project No.: 2510663

Method: **EPA 8260**
Description: 8260/5035A Volatile Organics
Client: Arcadis U.S., Inc.
Date: February 09, 2012

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: WA 11060
Pace Project No.: 2510663

Sample: EW-1-25' **Lab ID: 2510663001** Collected: 01/26/12 08:25 Received: 01/26/12 16:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	**123**	mg/kg	17.9	1	01/30/12 09:30	01/30/12 14:52		
Motor Oil Range	ND	mg/kg	71.7	1	01/30/12 09:30	01/30/12 14:52	64742-65-0	
Surrogates								
n-Octacosane (S)	91	%	50-150	1	01/30/12 09:30	01/30/12 14:52	630-02-4	
o-Terphenyl (S)	93	%	50-150	1	01/30/12 09:30	01/30/12 14:52	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	**3270**	mg/kg	266	50	01/31/12 12:29	02/01/12 11:12		
Surrogates								
a,a,a-Trifluorotoluene (S)	101	%	50-150	50	01/31/12 12:29	02/01/12 11:12	98-08-8	
4-Bromofluorobenzene (S)	147	%	50-150	50	01/31/12 12:29	02/01/12 11:12	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**6.7**	mg/kg	1.1	1	02/02/12 08:50	02/03/12 14:43	7439-92-1	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546							
Acenaphthene	ND	ug/kg	7.9	1	02/02/12 14:55	02/03/12 00:16	83-32-9	
Acenaphthylene	ND	ug/kg	7.9	1	02/02/12 14:55	02/03/12 00:16	208-96-8	
Anthracene	ND	ug/kg	7.9	1	02/02/12 14:55	02/03/12 00:16	120-12-7	
Benzo(a)anthracene	ND	ug/kg	7.9	1	02/02/12 14:55	02/03/12 00:16	56-55-3	
Benzo(a)pyrene	ND	ug/kg	7.9	1	02/02/12 14:55	02/03/12 00:16	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	7.9	1	02/02/12 14:55	02/03/12 00:16	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	7.9	1	02/02/12 14:55	02/03/12 00:16	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	7.9	1	02/02/12 14:55	02/03/12 00:16	207-08-9	
Chrysene	ND	ug/kg	7.9	1	02/02/12 14:55	02/03/12 00:16	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	7.9	1	02/02/12 14:55	02/03/12 00:16	53-70-3	
Fluoranthene	ND	ug/kg	7.9	1	02/02/12 14:55	02/03/12 00:16	206-44-0	
Fluorene	ND	ug/kg	7.9	1	02/02/12 14:55	02/03/12 00:16	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	7.9	1	02/02/12 14:55	02/03/12 00:16	193-39-5	
1-Methylnaphthalene	**878**	ug/kg	78.9	10	02/02/12 14:55	02/03/12 01:04	90-12-0	
2-Methylnaphthalene	**2020**	ug/kg	78.9	10	02/02/12 14:55	02/03/12 01:04	91-57-6	
Naphthalene	**4920**	ug/kg	78.9	10	02/02/12 14:55	02/03/12 01:04	91-20-3	
Phenanthrene	ND	ug/kg	7.9	1	02/02/12 14:55	02/03/12 00:16	85-01-8	
Pyrene	ND	ug/kg	7.9	1	02/02/12 14:55	02/03/12 00:16	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	71	%	27-118	1	02/02/12 14:55	02/03/12 00:16	321-60-8	
Terphenyl-d14 (S)	79	%	28-125	1	02/02/12 14:55	02/03/12 00:16	1718-51-0	
8260 MSV 5035A Med Level VOA	Analytical Method: EPA 8260 Preparation Method: EPA 5035A/5030B							
Benzene	**2540**	ug/kg	1330	50	02/02/12 13:57	02/04/12 03:08	71-43-2	
Ethylbenzene	**10500**	ug/kg	2660	50	02/02/12 13:57	02/04/12 03:08	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	2660	50	02/02/12 13:57	02/04/12 03:08	1634-04-4	
Toluene	**12700**	ug/kg	2660	50	02/02/12 13:57	02/04/12 03:08	108-88-3	
Xylene (Total)	**51800**	ug/kg	7980	50	02/02/12 13:57	02/04/12 03:08	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%	75-116	50	02/02/12 13:57	02/04/12 03:08	1868-53-7	

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510663

Sample: EW-1-25' **Lab ID: 2510663001** Collected: 01/26/12 08:25 Received: 01/26/12 16:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A Med Level VOA	Analytical Method: EPA 8260 Preparation Method: EPA 5035A/5030B							
Surrogates								
Toluene-d8 (S)	100	%	74-124	50	02/02/12 13:57	02/04/12 03:08	2037-26-5	
4-Bromofluorobenzene (S)	104	%	73-128	50	02/02/12 13:57	02/04/12 03:08	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-125	50	02/02/12 13:57	02/04/12 03:08	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**15.3**	%	0.10	1		01/27/12 15:46		

Sample: EW-1-30' **Lab ID: 2510663002** Collected: 01/26/12 08:45 Received: 01/26/12 16:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	18.8	1	01/30/12 09:30	01/30/12 15:10		
Motor Oil Range	ND	mg/kg	75.4	1	01/30/12 09:30	01/30/12 15:10	64742-65-0	
Surrogates								
n-Octacosane (S)	90	%	50-150	1	01/30/12 09:30	01/30/12 15:10	630-02-4	
o-Terphenyl (S)	93	%	50-150	1	01/30/12 09:30	01/30/12 15:10	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	**97.6**	mg/kg	6.4	1	02/01/12 13:16	02/01/12 16:00		
Surrogates								
a,a,a-Trifluorotoluene (S)	115	%	50-150	1	02/01/12 13:16	02/01/12 16:00	98-08-8	
4-Bromofluorobenzene (S)	149	%	50-150	1	02/01/12 13:16	02/01/12 16:00	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**3.2**	mg/kg	1.2	1	02/02/12 08:50	02/03/12 14:54	7439-92-1	
8260 MSV 5035A Med Level VOA	Analytical Method: EPA 8260 Preparation Method: EPA 5035A/5030B							
Benzene	**259**	ug/kg	32.0	1	02/02/12 13:57	02/03/12 21:54	71-43-2	
Xylene (Total)	**1850**	ug/kg	192	1	02/02/12 13:57	02/03/12 21:54	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	99	%	75-116	1	02/02/12 13:57	02/03/12 21:54	1868-53-7	
Toluene-d8 (S)	96	%	74-124	1	02/02/12 13:57	02/03/12 21:54	2037-26-5	
4-Bromofluorobenzene (S)	93	%	73-128	1	02/02/12 13:57	02/03/12 21:54	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-125	1	02/02/12 13:57	02/03/12 21:54	17060-07-0	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Ethylbenzene	**84.9**	ug/kg	3.1	1		02/01/12 20:57	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	3.1	1		02/01/12 20:57	1634-04-4	
Toluene	**94.2**	ug/kg	3.1	1		02/01/12 20:57	108-88-3	
Surrogates								
Dibromofluoromethane (S)	98	%	72-129	1		02/01/12 20:57	1868-53-7	
Toluene-d8 (S)	113	%	69-133	1		02/01/12 20:57	2037-26-5	

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510663

Sample: EW-1-30' **Lab ID: 2510663002** Collected: 01/26/12 08:45 Received: 01/26/12 16:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Surrogates								
4-Bromofluorobenzene (S)	110	%	67-142	1		02/01/12 20:57	460-00-4	
1,2-Dichloroethane-d4 (S)	114	%	67-136	1		02/01/12 20:57	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**19.3**	%	0.10	1		01/27/12 15:47		

Sample: EW-2-10' **Lab ID: 2510663003** Collected: 01/26/12 11:05 Received: 01/26/12 16:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	19.6	1	01/30/12 09:30	01/30/12 15:27		
Motor Oil Range	ND	mg/kg	78.4	1	01/30/12 09:30	01/30/12 15:27	64742-65-0	
Surrogates								
n-Octacosane (S)	82	%	50-150	1	01/30/12 09:30	01/30/12 15:27	630-02-4	
o-Terphenyl (S)	85	%	50-150	1	01/30/12 09:30	01/30/12 15:27	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	**38.1**	mg/kg	7.0	1	02/01/12 13:16	02/01/12 15:36		
Surrogates								
a,a,a-Trifluorotoluene (S)	115	%	50-150	1	02/01/12 13:16	02/01/12 15:36	98-08-8	
4-Bromofluorobenzene (S)	147	%	50-150	1	02/01/12 13:16	02/01/12 15:36	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**8.3**	mg/kg	1.2	1	02/02/12 08:50	02/03/12 14:58	7439-92-1	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	**4.2**	ug/kg	3.0	1		02/01/12 20:37	71-43-2	
Ethylbenzene	**5.5**	ug/kg	3.0	1		02/01/12 20:37	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	3.0	1		02/01/12 20:37	1634-04-4	
Toluene	**5.4**	ug/kg	3.0	1		02/01/12 20:37	108-88-3	
Xylene (Total)	**31.0**	ug/kg	8.9	1		02/01/12 20:37	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	106	%	72-129	1		02/01/12 20:37	1868-53-7	
Toluene-d8 (S)	120	%	69-133	1		02/01/12 20:37	2037-26-5	
4-Bromofluorobenzene (S)	142	%	67-142	1		02/01/12 20:37	460-00-4	
1,2-Dichloroethane-d4 (S)	117	%	67-136	1		02/01/12 20:37	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**21.3**	%	0.10	1		01/27/12 15:48		

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510663

Sample: EW-2-15' **Lab ID: 2510663004** Collected: 01/26/12 11:15 Received: 01/26/12 16:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	**25.5**	mg/kg	18.5	1	01/30/12 09:30	01/30/12 15:44		
Motor Oil Range	ND	mg/kg	73.9	1	01/30/12 09:30	01/30/12 15:44	64742-65-0	
Surrogates								
n-Octacosane (S)	88	%	50-150	1	01/30/12 09:30	01/30/12 15:44	630-02-4	
o-Terphenyl (S)	90	%	50-150	1	01/30/12 09:30	01/30/12 15:44	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	**2270**	mg/kg	106	20	02/01/12 13:16	02/01/12 16:25		
Surrogates								
a,a,a-Trifluorotoluene (S)	110	%	50-150	20	02/01/12 13:16	02/01/12 16:25	98-08-8	
4-Bromofluorobenzene (S)	222	%	50-150	20	02/01/12 13:16	02/01/12 16:25	460-00-4	S5
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**5.1**	mg/kg	1.1	1	02/02/12 08:50	02/03/12 15:02	7439-92-1	
8260 MSV 5035A Med Level VOA	Analytical Method: EPA 8260 Preparation Method: EPA 5035A/5030B							
Ethylbenzene	**2010**	ug/kg	52.8	1	02/04/12 00:00	02/05/12 08:06	100-41-4	
Surrogates								
Dibromofluoromethane (S)	97	%	75-116	1	02/04/12 00:00	02/05/12 08:06	1868-53-7	
Toluene-d8 (S)	107	%	74-124	1	02/04/12 00:00	02/05/12 08:06	2037-26-5	
4-Bromofluorobenzene (S)	141	%	73-128	1	02/04/12 00:00	02/05/12 08:06	460-00-4	S5
1,2-Dichloroethane-d4 (S)	86	%	70-125	1	02/04/12 00:00	02/05/12 08:06	17060-07-0	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	**129**	ug/kg	2.7	1		02/01/12 19:56	71-43-2	
Methyl-tert-butyl ether	ND	ug/kg	2.7	1		02/01/12 19:56	1634-04-4	
Toluene	**14.2**	ug/kg	2.7	1		02/01/12 19:56	108-88-3	
Xylene (Total)	**103**	ug/kg	8.2	1		02/01/12 19:56	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	101	%	72-129	1		02/01/12 19:56	1868-53-7	
Toluene-d8 (S)	304	%	69-133	1		02/01/12 19:56	2037-26-5	S2
4-Bromofluorobenzene (S)	133	%	67-142	1		02/01/12 19:56	460-00-4	
1,2-Dichloroethane-d4 (S)	138	%	67-136	1		02/01/12 19:56	17060-07-0	S2
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**14.3**	%	0.10	1		01/27/12 15:49		

Sample: EW-2-30' **Lab ID: 2510663005** Collected: 01/26/12 12:25 Received: 01/26/12 16:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Diesel Range	ND	mg/kg	19.0	1	01/30/12 09:30	01/30/12 16:01		
Motor Oil Range	ND	mg/kg	76.0	1	01/30/12 09:30	01/30/12 16:01	64742-65-0	

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ANALYTICAL RESULTS

Project: WA 11060
Pace Project No.: 2510663

Sample: EW-2-30' **Lab ID: 2510663005** Collected: 01/26/12 12:25 Received: 01/26/12 16:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3546							
Surrogates								
n-Octacosane (S)	96	%	50-150	1	01/30/12 09:30	01/30/12 16:01	630-02-4	
o-Terphenyl (S)	99	%	50-150	1	01/30/12 09:30	01/30/12 16:01	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx							
Gasoline Range Organics	**9.8**	mg/kg	6.7	1	02/01/12 13:16	02/01/12 17:14		
Surrogates								
a,a,a-Trifluorotoluene (S)	110	%	50-150	1	02/01/12 13:16	02/01/12 17:14	98-08-8	
4-Bromofluorobenzene (S)	110	%	50-150	1	02/01/12 13:16	02/01/12 17:14	460-00-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Lead	**3.3**	mg/kg	1.2	1	02/02/12 08:50	02/03/12 15:05	7439-92-1	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Benzene	**5.0**	ug/kg	2.7	1		02/01/12 20:16	71-43-2	M1
Ethylbenzene	ND	ug/kg	2.7	1		02/01/12 20:16	100-41-4	
Methyl-tert-butyl ether	ND	ug/kg	2.7	1		02/01/12 20:16	1634-04-4	
Toluene	ND	ug/kg	2.7	1		02/01/12 20:16	108-88-3	
Xylene (Total)	ND	ug/kg	8.1	1		02/01/12 20:16	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	105	%	72-129	1		02/01/12 20:16	1868-53-7	
Toluene-d8 (S)	99	%	69-133	1		02/01/12 20:16	2037-26-5	
4-Bromofluorobenzene (S)	110	%	67-142	1		02/01/12 20:16	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	67-136	1		02/01/12 20:16	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**20.1**	%	0.10	1		01/27/12 15:50		

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510663

QC Batch: GCV/2654
QC Batch Method: NWTPH-Gx
Analysis Method: NWTPH-Gx
Analysis Description: NWTPH-Gx Solid GCV
Associated Lab Samples: 2510663001

METHOD BLANK: 101277 Matrix: Solid
Associated Lab Samples: 2510663001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	5.0	01/31/12 15:03	
4-Bromofluorobenzene (S)	%	70	50-150	01/31/12 15:03	
a,a,a-Trifluorotoluene (S)	%	76	50-150	01/31/12 15:03	

LABORATORY CONTROL SAMPLE: 101278

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	12.5	12.4	99	63-140	
4-Bromofluorobenzene (S)	%			82	50-150	
a,a,a-Trifluorotoluene (S)	%			86	50-150	

SAMPLE DUPLICATE: 101416

Parameter	Units	2510679003 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	mg/kg	ND	ND		
4-Bromofluorobenzene (S)	%	97	98	.9	
a,a,a-Trifluorotoluene (S)	%	102	103	1	

SAMPLE DUPLICATE: 101417

Parameter	Units	2510679007 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	mg/kg	ND	ND		
4-Bromofluorobenzene (S)	%	100	100	.008	
a,a,a-Trifluorotoluene (S)	%	104	104	.3	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510663

QC Batch: GCV/2656 Analysis Method: NWTPH-Gx
QC Batch Method: NWTPH-Gx Analysis Description: NWTPH-Gx Solid GCV
Associated Lab Samples: 2510663002, 2510663003, 2510663004, 2510663005

METHOD BLANK: 101382 Matrix: Solid
Associated Lab Samples: 2510663002, 2510663003, 2510663004, 2510663005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	5.0	02/01/12 14:21	
4-Bromofluorobenzene (S)	%	108	50-150	02/01/12 14:21	
a,a,a-Trifluorotoluene (S)	%	106	50-150	02/01/12 14:21	

LABORATORY CONTROL SAMPLE: 101383

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	12.5	12.2	97	63-140	
4-Bromofluorobenzene (S)	%			107	50-150	
a,a,a-Trifluorotoluene (S)	%			102	50-150	

SAMPLE DUPLICATE: 101456

Parameter	Units	2510663005 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	mg/kg	9.8	9.7	1	
4-Bromofluorobenzene (S)	%	110	104	6	
a,a,a-Trifluorotoluene (S)	%	110	105	4	

SAMPLE DUPLICATE: 101457

Parameter	Units	2510691001 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	mg/kg	13.9	13.0	7	
4-Bromofluorobenzene (S)	%	98	90	8	
a,a,a-Trifluorotoluene (S)	%	103	99	4	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510663

QC Batch: MPRP/2779 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 2510663001, 2510663002, 2510663003, 2510663004, 2510663005

METHOD BLANK: 101366 Matrix: Solid
Associated Lab Samples: 2510663001, 2510663002, 2510663003, 2510663004, 2510663005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	ND	1.0	02/03/12 14:36	

LABORATORY CONTROL SAMPLE: 101367

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	25	26.9	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101368 101369

Parameter	Units	2510663001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Lead	mg/kg	6.7	21.7	21.7	27.3	25.4	95	86	75-125	7	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510663

QC Batch: MSV/6295 Analysis Method: EPA 8260
QC Batch Method: EPA 5035A/5030B Analysis Description: 8260 MSV 5035A Medium Soil
Associated Lab Samples: 2510663001, 2510663002

METHOD BLANK: 101718 Matrix: Solid
Associated Lab Samples: 2510663001, 2510663002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	ND	25.0	02/03/12 20:41	
Ethylbenzene	ug/kg	ND	50.0	02/03/12 20:41	
Methyl-tert-butyl ether	ug/kg	ND	50.0	02/03/12 20:41	
Toluene	ug/kg	ND	50.0	02/03/12 20:41	
Xylene (Total)	ug/kg	ND	150	02/03/12 20:41	
1,2-Dichloroethane-d4 (S)	%	90	70-125	02/03/12 20:41	
4-Bromofluorobenzene (S)	%	98	73-128	02/03/12 20:41	
Dibromofluoromethane (S)	%	98	75-116	02/03/12 20:41	
Toluene-d8 (S)	%	98	74-124	02/03/12 20:41	

LABORATORY CONTROL SAMPLE: 101719

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	1000	983	98	71-123	
Ethylbenzene	ug/kg	1000	966	97	71-123	
Methyl-tert-butyl ether	ug/kg	1000	814	81	68-133	
Toluene	ug/kg	1000	947	95	69-118	
Xylene (Total)	ug/kg	3000	2840	95	71-122	
1,2-Dichloroethane-d4 (S)	%			96	70-125	
4-Bromofluorobenzene (S)	%			91	73-128	
Dibromofluoromethane (S)	%			97	75-116	
Toluene-d8 (S)	%			97	74-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101967 101968

Parameter	Units	2510761001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzene	ug/kg	ND	1000	1000	329	1030	33	103	68-137	103	D6,M1
Ethylbenzene	ug/kg	ND	1000	1000	506	1160	46	111	64-136	78	D6,M1
Methyl-tert-butyl ether	ug/kg	ND	1000	1000	245	821	24	82	62-146	108	D6,M1
Toluene	ug/kg	ND	1000	1000	314	951	31	95	65-130	101	D6,M1
Xylene (Total)	ug/kg	ND	3000	3000	1560	3540	47	113	63-134	78	D6,M1
1,2-Dichloroethane-d4 (S)	%						92	90	70-125		
4-Bromofluorobenzene (S)	%						94	90	73-128		
Dibromofluoromethane (S)	%						96	99	75-116		
Toluene-d8 (S)	%						97	93	74-124		

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510663

QC Batch: MSV/6299
QC Batch Method: EPA 5035A/5030B
Associated Lab Samples: 2510663004

Analysis Method: EPA 8260
Analysis Description: 8260 MSV 5035A Medium Soil

METHOD BLANK: 101837 Matrix: Solid
Associated Lab Samples: 2510663004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/kg	ND	50.0	02/05/12 05:41	
1,2-Dichloroethane-d4 (S)	%	92	70-125	02/05/12 05:41	
4-Bromofluorobenzene (S)	%	110	73-128	02/05/12 05:41	
Dibromofluoromethane (S)	%	101	75-116	02/05/12 05:41	
Toluene-d8 (S)	%	95	74-124	02/05/12 05:41	

LABORATORY CONTROL SAMPLE: 101838

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/kg	1000	1010	101	71-123	
1,2-Dichloroethane-d4 (S)	%			88	70-125	
4-Bromofluorobenzene (S)	%			93	73-128	
Dibromofluoromethane (S)	%			98	75-116	
Toluene-d8 (S)	%			99	74-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101985 101986

Parameter	Units	2510691003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Ethylbenzene	ug/kg	91.5	1150	1150	2120	1970	176	163	64-136	8	M1
1,2-Dichloroethane-d4 (S)	%						84	85	70-125		
4-Bromofluorobenzene (S)	%						95	92	73-128		
Dibromofluoromethane (S)	%						96	95	75-116		
Toluene-d8 (S)	%						98	98	74-124		

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510663

QC Batch: MSV/6270 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 2510663002, 2510663003, 2510663004, 2510663005

METHOD BLANK: 101380 Matrix: Solid
Associated Lab Samples: 2510663002, 2510663003, 2510663004, 2510663005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	ND	3.0	02/01/12 19:14	
Ethylbenzene	ug/kg	ND	3.0	02/01/12 19:14	
Methyl-tert-butyl ether	ug/kg	ND	3.0	02/01/12 19:14	
Toluene	ug/kg	ND	3.0	02/01/12 19:14	
Xylene (Total)	ug/kg	ND	9.0	02/01/12 19:14	
1,2-Dichloroethane-d4 (S)	%	109	67-136	02/01/12 19:14	
4-Bromofluorobenzene (S)	%	105	67-142	02/01/12 19:14	
Dibromofluoromethane (S)	%	98	72-129	02/01/12 19:14	
Toluene-d8 (S)	%	103	69-133	02/01/12 19:14	

LABORATORY CONTROL SAMPLE: 101381

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	20	21.9	110	69-133	
Ethylbenzene	ug/kg	20	21.4	107	68-126	
Methyl-tert-butyl ether	ug/kg	20	23.7	118	67-134	
Toluene	ug/kg	20	20.5	103	68-130	
Xylene (Total)	ug/kg	60	63.7	106	68-126	
1,2-Dichloroethane-d4 (S)	%			102	67-136	
4-Bromofluorobenzene (S)	%			101	67-142	
Dibromofluoromethane (S)	%			101	72-129	
Toluene-d8 (S)	%			99	69-133	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101594 101595

Parameter	Units	2510663005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzene	ug/kg	5.0	22.2	19.4	38.2	34.8	149	154	40-129	9	M1
Ethylbenzene	ug/kg	ND	22.2	19.4	31.2	26.2	134	127	40-134	18	
Methyl-tert-butyl ether	ug/kg	ND	22.2	19.4	29.8	23.8	134	122	40-149	23	
Toluene	ug/kg	ND	22.2	19.4	30.2	26.9	129	130	40-134	12	
Xylene (Total)	ug/kg	ND	66.6	58.2	89.1	73.6	128	120	40-129	19	
1,2-Dichloroethane-d4 (S)	%						107	103	67-136		
4-Bromofluorobenzene (S)	%						111	110	67-142		
Dibromofluoromethane (S)	%						104	106	72-129		
Toluene-d8 (S)	%						102	108	69-133		

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510663

QC Batch: OEXT/5053
QC Batch Method: EPA 3546
Analysis Method: EPA 8270 by SIM
Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 2510663001

METHOD BLANK: 101678 Matrix: Solid
Associated Lab Samples: 2510663001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	ND	6.7	02/02/12 23:10	
2-Methylnaphthalene	ug/kg	ND	6.7	02/02/12 23:10	
Acenaphthene	ug/kg	ND	6.7	02/02/12 23:10	
Acenaphthylene	ug/kg	ND	6.7	02/02/12 23:10	
Anthracene	ug/kg	ND	6.7	02/02/12 23:10	
Benzo(a)anthracene	ug/kg	ND	6.7	02/02/12 23:10	
Benzo(a)pyrene	ug/kg	ND	6.7	02/02/12 23:10	
Benzo(b)fluoranthene	ug/kg	ND	6.7	02/02/12 23:10	
Benzo(g,h,i)perylene	ug/kg	ND	6.7	02/02/12 23:10	
Benzo(k)fluoranthene	ug/kg	ND	6.7	02/02/12 23:10	
Chrysene	ug/kg	ND	6.7	02/02/12 23:10	
Dibenz(a,h)anthracene	ug/kg	ND	6.7	02/02/12 23:10	
Fluoranthene	ug/kg	ND	6.7	02/02/12 23:10	
Fluorene	ug/kg	ND	6.7	02/02/12 23:10	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	6.7	02/02/12 23:10	
Naphthalene	ug/kg	ND	6.7	02/02/12 23:10	
Phenanthrene	ug/kg	ND	6.7	02/02/12 23:10	
Pyrene	ug/kg	ND	6.7	02/02/12 23:10	
2-Fluorobiphenyl (S)	%	77	27-118	02/02/12 23:10	
Terphenyl-d14 (S)	%	85	28-125	02/02/12 23:10	

LABORATORY CONTROL SAMPLE: 101679

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	133	114	85	39-110	
2-Methylnaphthalene	ug/kg	133	117	88	39-110	
Acenaphthene	ug/kg	133	110	82	39-111	
Acenaphthylene	ug/kg	133	109	82	37-110	
Anthracene	ug/kg	133	107	81	40-113	
Benzo(a)anthracene	ug/kg	133	121	91	42-122	
Benzo(a)pyrene	ug/kg	133	123	92	44-132	
Benzo(b)fluoranthene	ug/kg	133	117	88	40-124	
Benzo(g,h,i)perylene	ug/kg	133	113	85	39-122	
Benzo(k)fluoranthene	ug/kg	133	112	84	44-123	
Chrysene	ug/kg	133	105	79	42-120	
Dibenz(a,h)anthracene	ug/kg	133	119	89	40-122	
Fluoranthene	ug/kg	133	112	84	42-116	
Fluorene	ug/kg	133	106	80	41-112	
Indeno(1,2,3-cd)pyrene	ug/kg	133	127	95	39-124	
Naphthalene	ug/kg	133	110	83	36-110	
Phenanthrene	ug/kg	133	110	82	42-115	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510663

LABORATORY CONTROL SAMPLE: 101679

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/kg	133	106	79	44-121	
2-Fluorobiphenyl (S)	%			83	27-118	
Terphenyl-d14 (S)	%			91	28-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 101680 101681

Parameter	Units	2510663001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1-Methylnaphthalene	ug/kg	878	156	156	997	1090	76	136	28-120	9	M1
2-Methylnaphthalene	ug/kg	2020	156	156	2110	2320	56	192	26-121	10	M1
Acenaphthene	ug/kg	ND	156	156	133	132	82	82	27-122	.5	
Acenaphthylene	ug/kg	ND	156	156	129	130	81	82	24-120	.6	
Anthracene	ug/kg	ND	156	156	135	132	86	84	20-130	3	
Benzo(a)anthracene	ug/kg	ND	156	156	151	150	96	95	20-136	1	
Benzo(a)pyrene	ug/kg	ND	156	156	151	146	96	93	20-141	3	
Benzo(b)fluoranthene	ug/kg	ND	156	156	145	144	92	92	12-136	.1	
Benzo(g,h,i)perylene	ug/kg	ND	156	156	133	129	85	83	10-132	3	
Benzo(k)fluoranthene	ug/kg	ND	156	156	134	126	85	81	22-131	6	
Chrysene	ug/kg	ND	156	156	125	121	80	77	16-132	3	
Dibenz(a,h)anthracene	ug/kg	ND	156	156	138	136	88	87	22-121	2	
Fluoranthene	ug/kg	ND	156	156	135	131	85	83	21-129	3	
Fluorene	ug/kg	ND	156	156	135	133	83	82	26-130	2	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	156	156	149	146	95	93	14-131	2	
Naphthalene	ug/kg	4920	156	156	4940	5360	9	279	19-123	8	M1
Phenanthrene	ug/kg	ND	156	156	139	138	84	84	19-135	.6	
Pyrene	ug/kg	ND	156	156	132	131	84	83	18-136	1	
2-Fluorobiphenyl (S)	%						74	73	27-118		
Terphenyl-d14 (S)	%						83	83	28-125		

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510663

QC Batch: OEXT/5030 Analysis Method: NWTPH-Dx
QC Batch Method: EPA 3546 Analysis Description: NWTPH-Dx GCS
Associated Lab Samples: 2510663001, 2510663002, 2510663003, 2510663004, 2510663005

METHOD BLANK: 101082 Matrix: Solid
Associated Lab Samples: 2510663001, 2510663002, 2510663003, 2510663004, 2510663005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range	mg/kg	ND	16.0	01/30/12 14:18	
Motor Oil Range	mg/kg	ND	64.0	01/30/12 14:18	
n-Octacosane (S)	%	84	50-150	01/30/12 14:18	
o-Terphenyl (S)	%	88	50-150	01/30/12 14:18	

LABORATORY CONTROL SAMPLE: 101083

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Range	mg/kg	400	359	90	70-111	
Motor Oil Range	mg/kg	400	386	97	73-118	
n-Octacosane (S)	%			91	50-150	
o-Terphenyl (S)	%			91	50-150	

SAMPLE DUPLICATE: 101084

Parameter	Units	2510659002 Result	Dup Result	RPD	Qualifiers
Diesel Range	mg/kg	2020	1830	10	
Motor Oil Range	mg/kg	2250	2020	11	
n-Octacosane (S)	%	109	103	5	
o-Terphenyl (S)	%	96	93	3	

SAMPLE DUPLICATE: 101157

Parameter	Units	2510683001 Result	Dup Result	RPD	Qualifiers
Diesel Range	mg/kg	2090	1610	26	
Motor Oil Range	mg/kg	ND	50.1J		
n-Octacosane (S)	%	118	98	19	
o-Terphenyl (S)	%	116	97	18	

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QUALITY CONTROL DATA

Project: WA 11060
Pace Project No.: 2510663

QC Batch: PMST/1948 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 2510663001, 2510663002, 2510663003, 2510663004, 2510663005

SAMPLE DUPLICATE: 100923

Parameter	Units	2510659001 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	16.1	15.9	1	

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QUALIFIERS

Project: WA 11060
Pace Project No.: 2510663

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

D6	The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S2	Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).
S5	Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WA 11060
Pace Project No.: 2510663

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2510663001	**EW-1-25'**	EPA 3546	OEXT/5030	NWTPH-Dx	GCSV/3274
2510663002	**EW-1-30'**	EPA 3546	OEXT/5030	NWTPH-Dx	GCSV/3274
2510663003	**EW-2-10'**	EPA 3546	OEXT/5030	NWTPH-Dx	GCSV/3274
2510663004	**EW-2-15'**	EPA 3546	OEXT/5030	NWTPH-Dx	GCSV/3274
2510663005	**EW-2-30'**	EPA 3546	OEXT/5030	NWTPH-Dx	GCSV/3274
2510663001	**EW-1-25'**	NWTPH-Gx	GCV/2654	NWTPH-Gx	GCV/2658
2510663002	**EW-1-30'**	NWTPH-Gx	GCV/2656	NWTPH-Gx	GCV/2661
2510663003	**EW-2-10'**	NWTPH-Gx	GCV/2656	NWTPH-Gx	GCV/2661
2510663004	**EW-2-15'**	NWTPH-Gx	GCV/2656	NWTPH-Gx	GCV/2661
2510663005	**EW-2-30'**	NWTPH-Gx	GCV/2656	NWTPH-Gx	GCV/2661
2510663001	**EW-1-25'**	EPA 3050	MPRP/2779	EPA 6010	ICP/2620
2510663002	**EW-1-30'**	EPA 3050	MPRP/2779	EPA 6010	ICP/2620
2510663003	**EW-2-10'**	EPA 3050	MPRP/2779	EPA 6010	ICP/2620
2510663004	**EW-2-15'**	EPA 3050	MPRP/2779	EPA 6010	ICP/2620
2510663005	**EW-2-30'**	EPA 3050	MPRP/2779	EPA 6010	ICP/2620
2510663001	**EW-1-25'**	EPA 3546	OEXT/5053	EPA 8270 by SIM	MSSV/1933
2510663001	**EW-1-25'**	EPA 5035A/5030B	MSV/6295	EPA 8260	MSV/6309
2510663002	**EW-1-30'**	EPA 5035A/5030B	MSV/6295	EPA 8260	MSV/6309
2510663004	**EW-2-15'**	EPA 5035A/5030B	MSV/6299	EPA 8260	MSV/6314
2510663002	**EW-1-30'**	EPA 8260	MSV/6270		
2510663003	**EW-2-10'**	EPA 8260	MSV/6270		
2510663004	**EW-2-15'**	EPA 8260	MSV/6270		
2510663005	**EW-2-30'**	EPA 8260	MSV/6270		
2510663001	**EW-1-25'**	ASTM D2974-87	PMST/1948		
2510663002	**EW-1-30'**	ASTM D2974-87	PMST/1948		
2510663003	**EW-2-10'**	ASTM D2974-87	PMST/1948		
2510663004	**EW-2-15'**	ASTM D2974-87	PMST/1948		
2510663005	**EW-2-30'**	ASTM D2974-87	PMST/1948		

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CHAIN-OF-CUSTODY / Analytical Request Document

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

2510663

Page: 1 of 1

1532771

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Arcadis	Report To: Scott Zorn	Attention:
Address: 2300 Eastlake Ave Seattle 98102	Copy To: Al Kakwi, Sam Miles	Company Name:
Email To: Scott.Zorn@Arcadis-US.com	Purchase Order No.:	Address:
Phone: 206.726.4709 Fax:	Project Name: WA-11060	Pace Quote Reference:
Requested Due Date/TAT: Standard	Project Number:	Pace Project Manager:
		Pace Profile #:

REGULATORY AGENCY

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

Site Location STATE: _____

Section D Required Client Information

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

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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	GRO	DRO/HO	BTEX/MTBE	PAH	Total Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	EW-1-25'					1-26-12	0825												X	X	X	X	X			
2	EW-1-30'						0845																			
3	EW-2-10'						1105																			
4	EW-2-15'						1115																			
5	EW-2-30'						1225																			
6																										
7																										
8																										
9																										
10																										
11																										
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Hold PAH Pending DRO Results. call Sam Miles at 954.296.3131 with any questions	Sam Miles Arcadis	1-26-12	1630	Jyothi Sway / PACE	1/26/12	1630	2.6	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Sam Miles
SIGNATURE of SAMPLER: _____ DATE Signed (MM/DD/YY): 1-26-12

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.

Sample Container Count

CLIENT: Arcadis

2510663

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COC PAGE 1 of 1
COC ID# 1532771

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										1	1	1	2	2					
2										1	1	1	2	2					
3										1	1	1	2	2					
4										1	1	1	2	2					
5										1	1	1	2	2					
6																			
7																			
8																			
9																			
10																			
11																			
12																			

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

Sample Condition Upon Receipt

Pace Analytical

Client Name: Arcadis Project # 2510663

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 foam kits 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 2.6°C **Biological Tissue is Frozen:** Yes No

Temp should be above freezing ≤ 6°C

Date and Initials of person examining contents: NB 01/26/12

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: Soil				
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: _____				

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: ARB **Date:** 1/27/12

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)

ARCADIS

Appendix **C**

Bills of Lading

EMERALD SERVICES INC
www.emeraldnw.com

7343 E. MARGINAL WAY SOUTH
SEATTLE, WASHINGTON 98108
PH. (206) 832-3000
FAX (206) 832-3030
24 HOUR EMERGENCY PHONE: 1-888-832-3008

61493

BILL OF LADING AND GALLONAGE TICKET

SHIPPER/GENERATOR	Arcadis.	CONTACT	JOB # 30-67361
ADDRESS	4580 Fauntleroy Way S.W	PHONE#	LOAD # 1
CITY, STATE, ZIP	Seattle, WA		DATE 04/12/12
CARRIER	Emerald Services.	PHONE#	DOCUMENT #
CONSIGNEE	E.P.S.	CONTACT	TRUCK # 745
ADDRESS	1500 Airport Way S.	PHONE#	PRODUCT TYPE Liq
CITY, STATE, ZIP	Seattle WA.		EST. GALLONS 10"

HM	ITEM #	U.S. DOT DESCRIPTION	#	TYPE	QTY.
	A	Non Hazardous Liquid	1	TT	330
	B				
	C				
	D				

A. WPQ # _____ DISP. CODE: G02906 C. WPQ # _____ DISP. CODE: _____

B. WPQ # _____ DISP. CODE: _____ D. WPQ # _____ DISP. CODE: _____

DISPOSAL

DUMP DELAY TIME _____

WASH OUT: YES ( ) NO ( ) TIME IN _____ TIME OUT _____

E. WATER _____ GALLONS LOCATION _____ TEST _____ DISP. CODE _____

F. SOLIDS _____ GALLONS LOCATION _____ TEST _____ DISP. CODE _____

_____ % SUSPENDED SOLIDS BY CENTRIFUGE + _____ GALS SEDIMENT

G. OIL/DIESEL/GAS _____ GALLONS LOCATION _____ TEST _____ DISP. CODE _____

HOC'S _____ PCB'S _____ B.S.&W. _____ API _____ LAB: Y / N

Shipper's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway, vessel and rail according to applicable international and national government regulations and this material is not regulated as a hazardous waste in accordance with WAC 173-303, 40 CFR. Part 261 or 40 CFR Part 761.

X Scott Zorn for BT West Coast Products LLC — SHIPPER (PRINT NAME)
X S. Thorn — SIGNATURE
DATE: 4/12/12

X Sothorn — CARRIER - DRIVER 1 (PRINT NAME)
X Sothorn — SIGNATURE
DATE: 04/12/12

X _____ CARRIER - DRIVER 2 (PRINT NAME)
X _____ SIGNATURE
DATE: _____

X _____ CONSIGNEE (PRINT NAME)
X _____ SIGNATURE
DATE: _____

G-2

CUSTOMER

EMERALD SERVICES INC
www.emeraldnw.com

7343 E. MARGINAL WAY SOUTH
SEATTLE, WASHINGTON 98108
PH. (206) 832-3000
FAX (206) 832-3030
24 HOUR EMERGENCY PHONE: 1-888-832-3008

59949

BILL OF LADING AND GALLONAGE TICKET

SHIPPER/GENERATOR BP West Coast (Arcadis)	CONTACT Roger P	JOB # 30-67485
ADDRESS 4578 Fauntleroy Way S.W.	PHONE# (206)	LOAD # 1
CITY, STATE, ZIP Seattle, wa	713-5748	DATE 5/9/12
CARRIER Emerald Services Inc. Seattle, WA	PHONE# BP	DOCUMENT # 59949
CONSIGNEE Emerald Recycling Services	CONTACT Sam	TRUCK # 788
ADDRESS 1566 Airport Way	PHONE# (954)	PRODUCT TYPE Liquid
CITY, STATE, ZIP Seattle, WA	296-3131	EST. GALLONS 17 "

HM	ITEM #	U.S. DOT DESCRIPTION	#	TYPE	QTY.
	A	3, UN1203, Gasoline, PGII, ERG#128	1	T	598 (LAH
	B				
	C				
	D				

Water Well S=13" 408 GALLONS | Gasoline? = 4" 190 GALLONS

A. WPQ # L-02906 DISP. CODE: _____ C. WPQ # _____ DISP. CODE: _____

B. WPQ # _____ DISP. CODE: _____ D. WPQ # _____ DISP. CODE: _____

DISPOSAL

DUMP DELAY TIME _____

WASH OUT: YES (✓) NO ( ) TIME IN _____ TIME OUT _____

E. WATER _____ GALLONS LOCATION _____ TEST _____ DISP. CODE _____

F. SOLIDS _____ GALLONS LOCATION _____ TEST _____ DISP. CODE _____

_____ % SUSPENDED SOLIDS BY CENTRIFUGE + _____ GALS SEDIMENT

G. OIL/DIESEL/GAS _____ GALLONS LOCATION _____ TEST _____ DISP. CODE _____

HOC'S _____ PCB'S _____ B.S.&W. _____ API _____ LAB: Y / N

Shipper's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway, vessel and rail according to applicable international and national government regulations and this material is not regulated as a hazardous waste in accordance with WAC 173-303, 40 CFR. Part 261 or 40 CFR Part 761.

Scott Zorn for BP

X BP West Coast Products LLC — SHIPPER (PRINT NAME) — X _____ SIGNATURE — DATE: 5/9/12

X Charles Stumpf — CARRIER - DRIVER 1 (PRINT NAME) — X _____ SIGNATURE — DATE: 5/9/12

X _____ — CARRIER - DRIVER 2 (PRINT NAME) — X _____ SIGNATURE — DATE: _____

X _____ — CONSIGNEE (PRINT NAME) — X _____ SIGNATURE — DATE: _____

G-2

CUSTOMER

EMERALD SERVICES INC
www.emeraldnw.com

7343 E. MARGINAL WAY SOUTH
SEATTLE, WASHINGTON 98108
PH. (206) 832-3000
FAX (206) 832-3030
24 HOUR EMERGENCY PHONE: 1-888-832-3008

60680

BILL OF LADING AND GALLONAGE TICKET

SHIPPER/GENERATOR Arcadis		CONTACT	JOB # 30-67822
ADDRESS 4580 Fauntleroy Way S.W.		PHONE#	LOAD # 1
CITY, STATE, ZIP Seattle WA.			DATE 08/10-12
CARRIER Emerald Services.		PHONE#	DOCUMENT #
CONSIGNEE E P S.		CONTACT	TRUCK # 7011
ADDRESS 1500 Airport way S.		PHONE#	PRODUCT TYPE LIQ
CITY, STATE, ZIP Seattle WA.			EST. GALLONS 3"

HM	ITEM #	U.S. DOT DESCRIPTION	#	TYPE	QTY.
	A	Non Hazardous Liquid.	1	TT	55
	B	oily water			
	C				
	D				

A. WPQ # _____ DISP. CODE: G02906

B. WPQ # _____ DISP. CODE: _____

C. WPQ # _____ DISP. CODE: _____

D. WPQ # _____ DISP. CODE: _____

DISPOSAL

DUMP DELAY TIME _____

WASH OUT: YES ( ) NO ( )

TIME IN _____ TIME OUT _____

E. WATER _____ GALLONS LOCATION _____ TEST _____ DISP. CODE _____

F. SOLIDS _____ GALLONS LOCATION _____ TEST _____ DISP. CODE _____

_____ % SUSPENDED SOLIDS BY CENTRIFUGE + _____ GALS SEDIMENT

G. OIL/DIESEL/GAS _____ GALLONS LOCATION _____ TEST _____ DISP. CODE _____

HOC'S _____ PCB'S _____ B.S.&W. _____ API _____ LAB: Y / N

Shipper's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway, vessel and rail according to applicable international and national government regulations and this material is not regulated as a hazardous waste in accordance with WAC 173-303, 40 CFR. Part 261 or 40 CFR Part 761.

X Scott ZANN FOR BP WEST COAST PRODUCTS LLC — SHIPPER (PRINT NAME)
X Scott Zann — SIGNATURE
DATE: Aug 10-12

X Sothorn — CARRIER - DRIVER 1 (PRINT NAME)
X _____ — SIGNATURE
DATE: Aug 10-12

X _____ — CARRIER - DRIVER 2 (PRINT NAME)
X _____ — SIGNATURE
DATE: _____

X _____ — CONSIGNEE (PRINT NAME)
X _____ — SIGNATURE
DATE: _____

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CUSTOMER