

**Chevron Environmental
Management Company**

**Semi-Annual Groundwater
Monitoring Report 2014**

Former Chevron Bulk Plant No. 100-1327
Facilities North / King County (Metro)
Seattle, Washington

November 7, 2014

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Monitoring Report 2014**

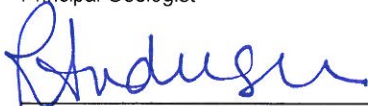
Former Chevron Bulk Plant
No. 100-1327
Facilities North / King County
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Seattle, Washington



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1. Introduction

On behalf of Chevron Environmental Management Company (Chevron) and King County Department of Transit (KCDT) Metro Transit (Metro), ARCADIS US, Inc. (ARCADIS), has prepared this report to document the first semi-annual 2014 groundwater sampling events for former Chevron Bulk Plant No. 100-1327 (the site). The site is located at 1602 North Northlake Way along the north shore of Lake Union in a mixed-use residential and commercial neighborhood. This property is divided into two operable areas: the North Yard located on the north side of North Northlake Way and the South Yard located adjacent to the north shore of Lake Union and south of North Northlake Way (Figure 1). This report summarizes the groundwater gauging and sampling events conducted by ARCADIS in the first half of 2014.

1.1 North Yard

The portion of the site that is located between North 34th Street (to the north) and North Northlake Place (to the south), and between Woodlawn Avenue North (to the west) and Densmore Avenue North (to the East) is the North Yard. Touchstone NLU LLC Corporation (Touchstone) purchased this property in 2009 and is currently redeveloping the property.

1.1.1 Touchstone PPCD

Touchstone is remediating the North Yard portion of the site as part of its redevelopment, called NorthEdge. In 2007, Touchstone entered into a Prospective Purchaser Consent Decree (PPCD) with the State of Washington, Department of Ecology (Ecology) that requires Touchstone to remediate the North Yard to Model Toxics Control Act (MTCA) Method A soil cleanup levels for unrestricted use. According to the terms of PPCD, Touchstone is required to excavate and remove petroleum contaminated soil with the Touchstone property line for treatment and/or offsite disposal. Soil outside the Touchstone property line and groundwater are part of the Metro Lake Union/former Chevron Bulk Terminal Site Consent Decree.

1.2 South Yard

The South Yard is bounded by Lake Union on the southeast, private property on the northwest, North Northlake Place on the northeast, and a property occupied by the Seattle Harbor Patrol on the southeast.

1.3 Public Right of Way between North and South Yard

The onsite area between the North Yard and South Yard is referred to as the public right of way (ROW) in this report. This area is shown on **Figure 1**.

2. Groundwater Monitoring Methodology

Groundwater monitoring has been conducted intermittently (one, two or more times per year) since 1999 and quarterly in 2012 and 2013. Ecology has approved semi-annual compliance monitoring for 2014 and beyond.

During this reporting period, groundwater samples were collected at accessible site network monitoring wells by subcontractor Blaine Tech Services, Inc. (Blaine Tech), with direction from ARCADIS, on June 10 and 11, 2014. The June compliance sampling event also represents a baseline prior to the Touchstone NorthEdge development activities. Blaine Tech also conducted gauging activities on March 27, 2014 (First Quarter) and June 10, 2014 (Second Quarter). ARCADIS conducted additional gauging activities on July 22, 2014 at the request of Ecology. The purpose of the July 22, 2014 gauging event was to evaluate groundwater elevations in the area of newly replaced groundwater monitoring well MW-9R and newly installed monitoring wells MW-29, MW-30 and EW-1. Monitoring well installation activities are described in a report currently being drafted under separate cover.

2.1 Groundwater Gauging Methods

Depth to water was measured using a static oil/water level indicator from the top of the monitoring well casing and recorded on field data sheets. The oil/water level indicators were decontaminated with an Alconox[®] and water scrub and rinsed between each measurement to prevent cross contamination. Additionally, the wells were gauged in order from lowest historical concentrations of petroleum constituents to highest in order to prevent cross contamination. Non-disposable groundwater gauging equipment was decontaminated prior to and after each use with a detergent solution and rinsed in potable water. Field notes taken during gauging activities are included in **Appendix A**.

2.2 LNAPL Recovery Methods

Manual removal of LNAPL has been completed at the site quarterly from 1997 to 2007, periodically from 2007 to 2013 and quarterly in 2014. LNAPL removal is conducted periodically based on field LNAPL observations collected during depth to water measurements. In general, LNAPL removal is conducted if measureable LNAPL (more than approximately 0.01 ft) is detected in a monitoring well during the current quarterly gauging event. LNAPL removal from monitoring wells is performed using manual bailing methods. Removed LNAPL is stored onsite in properly labeled sealed drums for disposal. Field notes taken during LNAPL removal activities are included in **Appendix A**.

2.3 Groundwater Sampling Methods

In total, 16 monitoring wells were sampled from the site monitoring well network during this reporting period. The specific site network monitoring wells sampled during this reporting period include the following: MW-4, MW-7, MW-8A, MW-11, MW-14, MW-15, MW-19, MW-20, MW-21, MW-22, MW-24, MW-25, MW-26, AGI-2, MLU-1, and MLU-3. MW-9 was scheduled to be sampled during this event but was not due to the presence of LNAPL. Field notes taken during the groundwater sampling activities are included in **Appendix A**.

Sampling was conducted in accordance with low flow purge methodology, using a peristaltic pump and disposable tubing. Flow rates used during sampling ranged from approximately 200 to 500 milliliters per minute (mL/min) thereby minimizing water level drawdown in the well. During low flow purging, water quality parameters including pH, specific conductivity and temperature were monitored using a yellow springs instruments (YSI) 556 multi-parameter meter with a flow-through measurement cell. Groundwater was considered stabilized when pH readings remained within 0.1 unit, and specific conductivity and temperature readings remained within 3%. The flow-through measurement cell was then disconnected from the disposable tubing and sample containers were filled directly from the tubing.

After the samples were collected in appropriate laboratory bottles they were labeled, stored in a cooler packed with ice, and submitted under proper chain-of-custody procedures to Lancaster Laboratories (Lancaster) in Lancaster, Pennsylvania. Groundwater samples were submitted to the analytical laboratory for the following analyses for site specific compounds of concern (COCs):

- Benzene, toluene, ethylbenzene and naphthalene by EPA method 8021B
- carcinogenic polyaromatic hydrocarbons (cPAHs) (including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene and indeno(1,2,3-cd)pyrene) by EPA 8270C SIM
- Dissolved lead and arsenic by EPA method 6020

During the June 2014 monitoring event cPAHs, lead and arsenic samples were field filtered with a disposable 0.45 micron filter. A duplicate groundwater sample (DUP) was collected from MW-8A during the sampling event and submitted blind to the laboratory for the above analyses.

3. Groundwater Monitoring Results

3.1 Groundwater Gauging Results

Groundwater monitoring wells were gauged at the site on March 27, June 10 and July 22 in 2014. Groundwater elevations were adjusted for LNAPL solubility if present within a monitoring well. A solubility of 0.8 was used to adjust groundwater elevation for LNAPL if observed within onsite monitoring wells during the respective gauging events.

On March 27, 2014, groundwater monitoring wells MW-3, MW-4, MW-7, MW-8A, MW-9, MW-10, MW-11, MW-19, MW-20, MW-21, MW-24, MW-25, MW-26, MW-27, MLU-1, MLU-3, SMPN-1, SMPN-2, SMPN-3 and AGI-2 were gauged to determine groundwater elevations by Blaine Tech. Groundwater monitoring wells MW-14, MW-15 and MW-22 were unable to be located during the gauging event. Depth to groundwater ranged between 7.10 feet below top of casing (btoc) in monitoring well MW-27 to 23.06 feet btoc in monitoring well MW-24. Groundwater elevations ranged from 18.10 feet above mean sea level (msl) to 46.71 feet above msl in monitoring wells MW-8A and MW-24, respectively.

On June 10, 2014, groundwater monitoring wells MW-3, MW-4, MW-7, MW-8A, MW-9, MW-10, MW-11, MW-12, MW-14, MW-15, MW-19, MW-20, MW-21, MW-22, MW-24, MW-25, MW-26, MW-27, MLU-1, MLU-3, SMPN-1, SMPN-2, SMPN-3 and AGI-2 were gauged to determine groundwater elevations by Blaine Tech. Depth to groundwater ranged between 3.74 feet btoc in monitoring well SMPN-2 to 22.85 feet btoc in monitoring well MW-24. Groundwater elevations ranged from 18.82 feet above msl to 46.92 feet above msl in monitoring wells MW-8A and MW-24, respectively.

On July 22, 2014, groundwater monitoring wells MW-3, MW-9R, MW-10, MW-11, MW-12, MW-19, MW-20, MW-21, MW-22, MW-27, MW-28, MW-29, MW-30 and EW-1 were gauged to determine groundwater elevations by ARCADIS. Depth to groundwater ranged between 7.24 feet below top of casing btoc in monitoring well MW-28 to 14.34 feet btoc in monitoring well MW-22. Groundwater elevations ranged from 18.14 feet above msl to 25.89 feet above msl in monitoring wells MW-19/MW-20 and MW-28, respectively.

Groundwater elevation data at the site during the June 10, 2014, event indicate groundwater flow direction is toward the southwest. The groundwater flow direction has historically been to the southwest.

The horizontal hydraulic gradient for the North Yard was calculated to be 0.025 feet per foot (ft/ft) based on the groundwater elevations calculated at monitoring wells MW-9, MW-11 and MW-27 with a flow direction to the southwest. The horizontal hydraulic gradient for the South Yard was calculated to be 0.00029 ft/ft based on the groundwater elevations calculated at monitoring wells MLU-1, MW-15 and MW-26 with a flow direction to the southwest. A potentiometric groundwater elevation figure for June 10, 2014 monitoring well gauging data is included on **Figure 2**. Hydraulic Gradient Three Point Solution Worksheet is included as **Appendix B**.

3.2 LNAPL Monitoring and Recovery Results

During the March 27, 2014 monitoring event, measureable LNAPL was detected within monitoring wells MW-9 and MW-27 with a thickness of 0.17 foot and 0.02 foot respectively. The LNAPL was not removed from the wells during this event. Absorbent socks were removed and replaced from groundwater monitoring wells MW-9, MW-10, MW-27, SMPN-1 and SMPN-2.

During the June 10, 2014 monitoring event, measureable LNAPL was detected within monitoring wells MW-3, MW-9 and MW-12 at thicknesses of 4.91 feet, 0.03 foot and 0.06 foot respectively. Sheen was observed in the water at monitoring well MW-27. LNAPL was recovered from groundwater monitoring wells MW-3, MW-9 and MW-12 with total estimated quantities of 5.00, 0.05 and 0.05 gallons, respectively. Absorbent socks were removed and replaced from groundwater monitoring wells MW-3, MW-9, MW-10, MW-12, MW-27, SMPN-1, SMPN-2, and SMPN-3.

During the July 22, 2014 monitoring event, measureable LNAPL was detected within monitoring wells MW-3, MW-12 and MW-27 at thicknesses of 0.69 foot, 0.04 foot and

0.005 foot, respectively. The LNAPL was not removed from the well during this event. Absorbent socks were not removed from groundwater monitoring wells during this event.

The total recovered quantity of LNAPL during this reporting period is estimated at 5.10 gallons LNAPL-water mixture removed. Measureable LNAPL thicknesses and recovered quantities are summarized in **Table 1**.

3.3 Groundwater Analytical Results

Groundwater cleanup levels at the site were based on MTCA Method B surface water cleanup levels (CULs) established in the Ecology approved cleanup action plan (CAP) (Foster Wheeler, 1998). The MTCA Method B surface water CULs for specific COCs at the site include:

Constituents of Concern	Groundwater CUL	Units
Benzene	43	µg/L
Toluene	48,500	µg/L
Ethylbenzene	6,910	µg/L
Naphthalene	9,880	µg/L
Benzo(a)anthracene	0.0296	µg/L
Benzo(a)pyrene	0.0296	µg/L
Benzo(b)fluoranthene	0.0296	µg/L
Benzo(k)fluoranthene	0.0296	µg/L
Chrysene	0.0296	µg/L
Dibenz(a,h)anthracene	0.0296	µg/L
Indeno(1,2,3-cd)pyrene	0.0296	µg/L
Arsenic	0.0982	µg/L
Lead	5	µg/L

During the semi-annual sampling event conducted on June 10 and 11, 2014, groundwater was sampled for benzene, toluene, ethylbenzene, naphthalene and filtered cPAHs, arsenic and lead, from monitoring wells MW-4, MW-7, MW-8A, MW-11, MW-14, MW-15, MW-19, MW-20, MW-21, MW-22, MW-24, MW-25, MW-26, AGI-2, MLU-1, and MLU-3. Dissolved arsenic was detected above the MTCA Method B surface water CUL of 0.0982 µg/L in groundwater samples from monitoring wells MW-7, MW-11, MW-15, MW-20, MW-21, MW-22, MW-25 and AGI-2 at concentrations

ranging from 0.96 µg/L (MW-25) to 13.6 µg/L (MW-21). The laboratory detection limit (DL) for dissolved arsenic exceeded the MTCA Method B surface water CUL in samples collected from wells MW-4, MW-8A, MW-14, MW-19, MW-24, MLU-1 and MLU-3. Chrysene was detected at a concentration greater than the MTCA Method B surface water CUL of 0.029 µg/L in MW-11 at 0.033 µg/L and benzene was detected at a concentration greater than the MTCA Method B surface water CUL of 43 µg/L in MW-22 at 780 µg/L, however both MW-11 and MW-22 are not point of compliance (POC) wells for either the North Yard or South Yard. No other COCs were detected at concentrations greater than the respective CULs. Laboratory data from point of compliance wells will be reported in the Ecology EIM database. Consecutive sampling events under the MTCA Method B surface water CUL in POC wells are presented in **Table 3**. The laboratory analytical report is included in **Appendix C** and the laboratory analytical results are presented on **Figure 2** and **Figure 3** and in **Table 2**.

4. Conclusions

There were no exceedances of toluene, ethylbenzene, xylenes, naphthalene, dissolved cPAHs (with the exception of chrysene) and dissolved lead in samples from the June 2014 sampling event, however there were multiple dissolved arsenic exceedances, one benzene exceedance from well MW-22 and one chrysene exceedance from well MW-11. MW-11 and MW-22 have had concentrations at or near CUL concentrations during previous sampling events. Concentrations of the COCs in the groundwater samples collected during the 2014 event are generally consistent with historical data, and the only COC detected in POC wells above the Site specific CULs was arsenic. Analytical results are summarized in **Table 2**, **Figure 2** and **Figure 3**.

Since 2010, POC wells for the upper yard have had seven consecutive sampling events without hydrocarbon and cPAHs exceedances except for MW-10, which has not been sampled since 2010. POC wells in the lower yard have had three to eight consecutive clean sampling events except for MLU-3, which has only been sampled once since 2010 but had no exceedances. Consecutive sampling events under the MTCA Method B surface water CUL in POC wells are presented in **Table 3**.

During the March 27, 2014 monitoring event, measureable LNAPL was detected within monitoring wells MW-9 and MW-27 with a thickness of 0.17 foot and 0.02 foot respectively. During the June 10, 2014 monitoring event, measureable LNAPL was detected within monitoring wells MW-3, MW-9 and MW-12 at thicknesses of 4.91 feet, 0.03 foot and 0.06 foot respectively.

The groundwater elevation data collected during the June 2014 monitoring event indicates groundwater flow direction and horizontal hydraulic gradient to be generally consistent with historical data.

The second semi-annual 2014 groundwater sampling event is scheduled to be conducted by ARCADIS in the fourth quarter of 2014.

5. References

Foster Wheeler Environmental Corporation. 1998. *Draft Cleanup Action Plan Former Chevron Bulk Plant 100-1327 Facilities North/King County Metro Transit Lake Union Site*. November, 24.



Tables

Table 1
Groundwater Elevation and Light Non Aqueous Phase Liquid Monitoring and Removal Data
Former Chevron Bulk Plant #1001327
1602 North Northlake Place
Seattle, Washington

Well Number ¹ (Well Casing Elevation)	Date Measured	Depth to Groundwater ² (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	LNAPL Removed (gallons)	Absorbant Sock in Well (Yes / No)	Groundwater Elevation ³ (feet)
MW-3 (104.07)	08/11/99	--	--	--	--	No	--
	10/22/99	--	--	--	--	No	--
	05/24/01	10.25	9.99	0.26	--	No	94.03
	06/27/01	--	--	--	--	No	--
	03/18/02	9.28	8.59	0.69	--	No	95.34
	12/31/02	--	--	--	--	No	--
	03/26/03	7.02	--	0.00	--	No	97.05
	06/26/03	11.49	10.49	1.00	2.75	No	93.38
	07/21/03	--	--	--	2.50	No	--
	08/28/03	--	--	--	3.00	No	--
	10/16/03	13.89	11.55	2.34	1.75	No	92.05
	11/21/03	--	--	--	3.50	No	--
	12/17/03	11.02	10.27	0.75	2.00	No	93.65
	01/29/04	10.59	9.82	0.77	1.75	No	94.10
	02/18/04	10.32	9.77	0.55	0.75	No	94.19
	03/30/04	9.93	9.28	0.65	0.75	No	94.66
	09/22/04	11.35	10.61	0.74	1.50	No	93.31
	03/15/05	12.98	10.82	2.16	3.00	No	92.82
	9/28/05*	11.25	--	<3.0	3.50	No	--
	03/29/06	12.40	8.76	3.64	6.50	No	94.58
	03/21/07	10.67	9.13	1.54	2.00	No	94.63
	03/25/08	10.38	9.73	0.65	1.00	No	94.21
	09/08-09/08	11.02	10.55	0.47	1.50	Yes	93.43
	12/11/08	12.10	10.79	1.31	2.50	Yes	93.02
	03/30-31/09	9.70	--	0.00	0.00	Yes	94.37
	06/15/09	10.97	9.79	1.18	2.50 ⁴	Yes	94.04
	09/10-11/09	12.21	10.94	1.27	1.66 ⁴	Yes	92.88
	02/23/10	11.25	8.75	2.50	1.75 ⁴	Yes	94.82
	03/15/10	11.25	8.60	2.65	2.50 ⁵	Yes	94.94
	03/23/12	12.00	11.90	0.10	0.50	Yes	92.15
06/01/12	--	--	--	--	Yes	--	
04/22/13	--	--	--	--	Yes	--	
06/26/13	--	--	--	--	Yes	--	
09/18/13	--	--	--	--	Yes	--	
10/14/13	--	--	--	--	Yes	--	
03/27/14		22.78	--	0.00	--	Yes	81.29
06/10/14		11.88	6.97	4.91	5.00	Yes	96.12
07/22/14		10.52	9.83	0.69	--	Yes	94.10
MW-4	08/10/99	--	--	--	--	--	--
	10/20/99	--	--	--	--	--	--
	07/26/01	15.46	--	0.00	--	--	--
	10/11/02	--	--	--	--	--	--
	12/31/02	16.88	--	0.00	--	--	--
	02/27/03	16.22	--	0.00	--	--	--
	03/26/03	15.38	--	0.00	--	--	--

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Seattle, Washington

Well Number ¹ (Well Casing Elevation)	Date Measured	Depth to Groundwater ² (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	LNAPL Removed (gallons)	Absorbant Sock in Well (Yes / No)	Groundwater Elevation ³ (feet)	
MW-4 (continued)	04/28/03	15.12	--	0.00	--	--	--	
	05/30/03	15.02	--	0.00	--	--	--	
	06/25/03	15.39	--	0.00	--	--	--	
	09/16/03	16.76	--	0.00	--	--	--	
	12/15/03	16.80	--	0.00	--	--	--	
	03/25/04	15.85	--	0.00	--	--	--	
	09/22/04	15.94	--	0.00	--	--	--	
	03/14/05	16.26	--	0.00	--	--	--	
	03/29/06	15.71	--	0.00	--	--	--	
	03/21/07	15.77	--	0.00	--	--	--	
	03/25/08	15.78	--	0.00	--	--	--	
	09/08-09/08	15.91	--	0.00	--	--	--	
	12/11/08	--	--	--	--	--	--	
	03/30-31/09	15.54	--	0.00	--	--	--	
	09/10-11/09	16.39	--	0.00	--	--	--	
	03/15/10	12.67	--	0.00	--	--	--	
	09/15/10	16.25	--	0.00	--	--	--	
	03/14/11	15.55	--	0.00	--	--	--	
	(33.92)	09/25/11	16.55	--	0.00	--	--	17.37
		10/10/11	16.20	--	0.00	--	--	17.72
		06/21/12	14.49	--	0.00	--	--	19.43
		09/20/12	16.60	--	0.00	--	--	17.32
		09/21/12	16.59	--	0.00	--	--	17.33
		12/26/12	16.62	--	0.00	--	--	17.30
		04/22/13	15.18	--	0.00	--	--	18.74
		06/26/13	15.15	--	0.00	--	--	18.77
		09/18/13	15.98	--	0.00	--	--	17.94
	10/14/13	16.26	--	0.00	--	--	17.66	
	03/27/14	15.69	--	0.00	--	--	18.23	
	06/10/14	15.05	--	0.00	--	--	18.87	
MW-7 (98.39)	08/10/99	--	--	--	--	--	--	
	10/20/99	--	--	--	--	--	--	
	07/26/01	12.61	--	0.00	--	--	85.78	
	04/03/02	13.03	--	0.00	--	--	85.36	
	07/02/02	12.13	--	0.00	--	--	86.26	
	09/03/02	13.76	--	0.00	--	--	84.63	
	10/11/02	14.87	--	0.00	--	--	83.52	
	03/26/03	13.12	--	0.00	--	--	85.27	
	04/28/03	12.33	--	0.00	--	--	86.06	
	05/30/03	11.76	--	0.00	--	--	86.63	
	06/25/03	13.14	--	0.00	--	--	85.25	
	09/16/03	13.93	--	0.00	--	--	84.46	
	12/15/03	13.96	--	0.00	--	--	84.43	
	03/21/07	--	--	--	--	--	--	
	03/25/08	--	--	--	--	--	--	

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Seattle, Washington

Well Number ¹ (Well Casing Elevation)	Date Measured	Depth to Groundwater ² (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	LNAPL Removed (gallons)	Absorbant Sock in Well (Yes / No)	Groundwater Elevation ³ (feet)
MW-7 (continued) (31.13)	09/08-09/08	--	--	--	--	--	--
	12/11/08	--	--	--	--	--	--
	03/30-31/09	--	--	--	--	--	--
	09/10-11/09	--	--	--	--	--	--
	03/15/10	13.07	--	0.00	--	--	85.32
	09/15/10	13.40	--	0.00	--	--	84.99
	03/14/11	12.85	--	0.00	--	--	85.54
	06/21/12	12.19	--	0.00	--	--	18.94
	09/20/12	13.74	--	0.00	--	--	17.39
	12/26/12	15.67	--	0.00	--	--	15.46
	04/22/13	12.40	--	0.00	--	--	18.73
	06/26/13	12.30	--	0.00	--	--	18.83
	09/18/13	13.15	--	0.00	--	--	17.98
	10/14/13	13.37	--	0.00	--	--	17.76
	03/27/14 06/10/14	12.82 12.21	-- --	0.00 0.00	-- --	-- --	18.31 18.92
	MW-8 (97.87)	08/09/99	--	--	--	--	--
10/20/99		13.06	--	0.00	--	--	84.81
01/06/00		--	--	--	--	--	--
04/12/00		12.57	--	0.00	--	--	85.30
06/27/00		12.61	--	0.00	--	--	85.26
09/28/00		12.88	--	0.00	--	--	84.99
01/15/01		13.70	--	0.00	--	--	84.17
06/21/01		11.77	--	0.00	--	--	86.10
07/26/01		12.18	--	0.00	--	--	85.69
03/19/02		12.84	--	0.00	--	--	85.03
04/03/02		12.48	--	0.00	--	--	85.39
05/07/02		11.86	--	0.00	--	--	86.01
06/06/02		12.39	--	0.00	--	--	85.48
07/02/02		11.79	--	0.00	--	--	86.08
09/03/02		13.24	--	0.00	--	--	84.63
10/11/02		14.04	--	0.00	--	--	83.83
12/31/02		13.69	--	0.00	--	--	84.18
03/26/03	12.23	--	0.00	--	--	85.64	
04/28/03	12.87	--	0.00	--	--	85.00	
05/30/03	11.80	--	0.00	--	--	86.07	
06/25/03	12.20	--	0.00	--	--	85.67	
09/15/03	13.45	--	0.00	--	--	84.42	
MW-8A (97.60)	12/15/03	13.32	--	0.00	--	--	84.28
	03/25/04	12.24	--	0.00	--	--	85.36
	09/23/04	12.30	--	0.00	--	--	85.30
	03/14/05	12.68	--	0.00	--	--	84.92
	03/29/06	12.14	--	0.00	--	--	85.46
	03/21/07	12.21	--	0.00	--	--	85.39
	03/25/08	12.13	--	0.00	--	--	85.47

Table 1
Groundwater Elevation and Light Non Aqueous Phase Liquid Monitoring and Removal Data
 Former Chevron Bulk Plant #1001327
 1602 North Northlake Place
 Seattle, Washington

Well Number¹ (Well Casing Elevation)	Date Measured	Depth to Groundwater² (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	LNAPL Removed (gallons)	Absorbant Sock in Well (Yes / No)	Groundwater Elevation³ (feet)
MW-8A (continued)	09/08-09/08	12.32	--	0.00	--	--	85.28
	12/11/08	--	--	--	--	--	--
	03/30-31/09	12.04	--	0.00	--	--	85.56
	09/10-11/09	12.80	--	0.00	--	--	84.80
	03/15/10	12.23	--	0.00	--	--	85.37
	09/15/10	12.66	--	0.00	--	--	84.94
	03/14/11	12.19	--	0.00	--	--	85.41
(30.31)	11/16/11	13.14	--	0.00	--	--	17.17
	06/21/12	11.45	--	0.00	--	--	18.86
	09/20/12	12.97	--	0.00	--	--	17.34
	09/21/12	12.97	--	0.00	--	--	17.34
	12/26/12	13.07	--	0.00	--	--	17.24
	04/23/13	11.70	--	0.00	--	--	18.61
	06/26/13	11.50	--	0.00	--	--	18.81
	09/18/13	12.37	--	0.00	--	--	17.94
	10/14/13	12.65	--	0.00	--	--	17.66
	03/27/14	12.21	--	0.00	--	--	18.10
	06/10/14	11.49	--	0.00	--	--	18.82
MW-9 (103.67)	08/11/99	--	--	--	--	No	--
	10/21/99	--	--	--	--	No	--
	05/24/01	14.07	14.02	0.05	--	No	89.64
	06/21/01	13.78	13.74	0.04	--	No	89.92
	06/27/01	13.79	--	0.00	--	No	89.88
	03/18/02	13.51	12.82	0.69	--	No	90.71
	10/16/02	--	--	0.54	--	No	--
	11/11/02	--	--	0.90	--	No	--
	12/31/02	--	--	0.91	--	No	--
	02/27/03	--	--	0.02	--	No	--
	03/26/03	--	--	0.09	--	No	--
	04/28/03	13.25	13.18	0.07	--	No	90.48
	05/30/03	13.52	13.43	0.09	--	No	90.22
	06/26/03	13.90	13.86	0.04	0.10	No	89.80
	07/21/03	--	--	0.21	2.00	No	--
	08/28/03	--	--	0.23	0.75	No	--
	10/16/03	15.98	15.41	0.57	2.00	No	88.15
	11/21/03	--	--	0.01	0.25	No	--
	12/17/03	--	--	0.00	0.00	No	--
	01/29/04	14.16	14.13	0.03	0.10	No	89.53
	02/18/04	11.11	10.94	0.17	0.25	No	92.70
	03/25/04	13.66	--	0.00	--	No	90.01
	03/30/04	13.80	13.69	0.11	0.25	No	89.96
	09/22/04	9.52	9.49	0.03	0.25	No	94.17
	03/15/05	14.81	14.52	0.29	0.25	No	89.09
	09/28/05	15.31	15.06	0.25	<0.01	No	88.56
	03/29/06	13.26	13.00	0.26	<0.5	No	90.62

Table 1
Groundwater Elevation and Light Non Aqueous Phase Liquid Monitoring and Removal Data
Former Chevron Bulk Plant #1001327
1602 North Northlake Place
Seattle, Washington

Well Number ¹ (Well Casing Elevation)	Date Measured	Depth to Groundwater ² (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	LNAPL Removed (gallons)	Absorbant Sock in Well (Yes / No)	Groundwater Elevation ³ (feet)
MW-10 (continued)	10/16/03	11.56	10.54	1.02	18.50	No	89.56
	11/21/03	--	--	1.33	7.00	No	--
	12/17/03	--	--	0.15	0.75	No	--
	01/29/04	8.61	8.61	0.00	--	No	91.69
	02/18/04	8.72	8.58	0.14	0.25	No	91.69
	03/30/04	8.47	8.41	0.06	0.25	No	91.88
	09/22/04	9.64	9.56	0.08	0.50	No	90.72
	03/15/05	10.20	9.83	0.37	0.25	No	90.40
	10/04/05	11.20	10.39	0.81	1.75	No	89.75
	03/29/06	8.35	7.63	0.72	2.00	No	92.53
	03/21/07	7.95	7.49	0.46	0.44	No	92.72
	03/25/08	8.68	8.68	0.00	0.00	No	91.62
	09/08-09/08	9.39	9.34	0.05	0.20	Yes	90.95
	12/11/08	9.90	9.59	0.31	1.00	Yes	90.65
	03/30-31/09	8.44	8.20	0.24	1.11 ⁴	Yes	92.05
	06/15/09	8.31	8.10	0.21	0.34 ⁴	Yes	92.16
	09/10-11/09	10.14	10.12	0.02	0.00	Yes	90.18
	02/23/10	7.14	7.13	0.01	0.00	Yes	93.17
	03/15/10	7.24	--	0.00	--	Yes	93.06
	09/15/10	9.48	Sheen	Sheen	--	Yes	90.82
12/04/10	--	--	--	--	Yes	--	
(33.09)	03/27/14	8.28	--	0.00	--	Yes	24.81
	06/10/14	7.42	--	0.00	--	Yes	25.67
	07/22/14	8.81	--	0.00	--	Yes	24.28
MW-11 (100.59)	08/11/99	--	--	--	--	--	--
	10/22/99	--	--	--	--	--	--
	06/21/01	11.30	--	0.00	--	--	89.29
	03/18/02	10.96	--	0.00	--	--	89.63
	09/16/03	13.03	--	0.00	--	--	87.56
	12/15/03	13.92	--	0.00	--	--	86.67
	03/25/04	11.17	--	0.00	--	--	89.42
	09/22/04	12.05	--	0.00	--	--	88.54
	03/14/05	11.90	--	0.00	--	--	88.69
	03/29/06	10.32	--	0.00	--	--	90.27
	03/21/07	8.36	--	0.00	--	--	92.23
	03/25/08	9.38	--	0.00	--	--	91.21
	09/08-09/08	10.35	--	0.00	--	--	90.24
	12/11/08	10.63	--	0.00	--	--	89.96
	03/30-31/09	9.60	--	0.00	--	--	90.99
	06/15/09	--	--	--	--	--	--
	(100.61)	09/10-11/09	8.07	--	0.00	--	--
	02/23/10	8.60	--	0.00	--	--	92.01
	03/15/10	8.75	--	0.00	--	--	91.86
	09/15/10	10.27	--	0.00	--	--	90.34
	12/04/10	10.37	--	0.00	--	--	90.24

Table 1
Groundwater Elevation and Light Non Aqueous Phase Liquid Monitoring and Removal Data
Former Chevron Bulk Plant #1001327
1602 North Northlake Place
Seattle, Washington

Well Number ¹ (Well Casing Elevation)	Date Measured	Depth to Groundwater ² (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	LNAPL Removed (gallons)	Absorbant Sock in Well (Yes / No)	Groundwater Elevation ³ (feet)
MW-14 (continued) (31.61)	09/08-09/08	13.50	--	0.00	--	--	85.37
	12/11/08	--	--	--	--	--	--
	03/30-31/09	13.10	--	0.00	--	--	85.77
	09/10-11/09	14.00	--	0.00	--	--	84.87
	03/15/10	13.49	--	0.00	--	--	85.38
	09/15/10	--	--	--	--	--	--
	03/27/14	--	--	--	--	--	--
	06/10/14	12.61	--	0.00	--	--	19.00
MW-15 (98.83) (31.60)	08/10/99	--	--	--	--	--	--
	10/20/99	13.96	--	0.00	--	--	84.87
	07/26/01	13.04	--	0.00	--	--	85.79
	03/18/02	13.62	--	0.00	--	--	85.21
	06/26/03	13.05	--	0.00	--	--	85.78
	09/16/03	14.35	--	0.00	--	--	84.48
	03/29/06	13.00	--	0.00	--	--	85.83
	03/21/07	13.33	--	0.00	--	--	85.50
	03/25/08	13.36	--	0.00	--	--	85.47
	09/08-09/08	13.46	--	0.00	--	--	85.37
	12/11/08	--	--	--	--	--	--
	03/30-31/09	13.12	--	0.00	--	--	85.71
	09/10-11/09	13.97	--	0.00	--	--	84.86
	03/15/10	15.50	--	0.00	--	--	83.33
	09/15/10	15.87	--	0.00	--	--	82.96
	03/14/11	14.99	--	0.00	--	--	83.84
03/27/14	--	--	--	--	--	--	
06/10/14	12.66	--	0.00	--	--	18.94	
MW-16	03/21/07	14.49	--	0.00	--	--	--
	03/25/08	15.25	--	0.00	--	--	--
	09/08-09/08	18.51	--	0.00	--	--	--
	12/11/08	--	--	--	--	--	--
	03/30-31/09	16.11	--	0.00	--	--	--
MW-19 (98.10)	08/11/99	--	--	--	--	--	--
	10/20/99	--	--	--	--	--	--
	06/21/01	11.99	--	0.00	--	--	86.11
	06/26/03	12.02	--	0.00	--	--	86.08
	09/16/03	13.67	--	0.00	--	--	84.43
	12/15/03	13.60	--	0.00	--	--	84.50
	03/26/04	12.74	--	0.00	--	--	85.36
	09/23/04	12.82	--	0.00	--	--	85.28
	03/14/05	13.16	--	0.00	--	--	84.94
	03/29/06	12.63	--	0.00	--	--	85.47
	03/21/07	12.71	--	0.00	--	--	85.39
	03/25/08	12.70	--	0.00	--	--	85.40
	09/08-09/08	12.81	--	0.00	--	--	85.29
12/11/08	--	--	--	--	--	--	

Table 1
Groundwater Elevation and Light Non Aqueous Phase Liquid Monitoring and Removal Data
Former Chevron Bulk Plant #1001327
1602 North Northlake Place
Seattle, Washington

Well Number¹ (Well Casing Elevation)	Date Measured	Depth to Groundwater² (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	LNAPL Removed (gallons)	Absorbant Sock in Well (Yes / No)	Groundwater Elevation³ (feet)
MW-19 (continued) (30.87)	03/30-31/09	12.57	--	0.00	--	--	85.53
	09/10-11/09	13.30	--	0.00	--	--	84.80
	03/15/10	12.85	--	0.00	--	--	85.25
	09/15/10	13.18	--	0.00	--	--	84.92
	11/16/11	13.62	--	0.00	--	--	17.25
	06/21/12	11.93	--	0.00	--	--	18.94
	09/20/12	13.50	--	0.00	--	--	17.37
	12/26/12	13.55	--	0.00	--	--	17.32
	04/24/13	12.18	--	0.00	--	--	18.69
	06/26/13	12.08	--	0.00	--	--	18.79
	09/18/13	12.91	--	0.00	--	--	17.96
	10/14/13	13.10	--	0.00	--	--	17.77
	03/27/14	12.63	--	0.00	--	--	18.24
	06/10/14	11.95	--	0.00	--	--	18.92
07/22/14	12.73	--	0.00	--	--	18.14	
MW-20 (98.74) (31.49)	08/11/99	--	--	--	--	--	--
	10/20/99	13.99	--	0.00	--	--	84.75
	09/28/00	13.41	--	0.00	--	--	85.33
	06/21/01	12.61	--	0.00	--	--	86.13
	03/19/02	13.69	--	0.00	--	--	85.05
	06/26/03	12.92	--	0.00	--	--	85.82
	09/16/03	14.29	--	0.00	--	--	84.45
	12/15/03	14.34	--	0.00	--	--	84.40
	03/26/04	13.36	--	0.00	--	--	85.38
	03/14/05	13.80	--	0.00	--	--	84.94
	03/29/06	13.26	--	0.00	--	--	85.48
	03/21/07	13.33	--	0.00	--	--	85.41
	03/25/08	13.33	--	0.00	--	--	85.41
	09/08-09/08	13.42	--	0.00	--	--	85.32
	12/11/08	--	--	--	--	--	--
	03/30-31/09	--	--	--	--	--	--
	09/10-11/09	13.92	--	0.00	--	--	84.82
	03/15/10	13.46	--	0.00	--	--	85.28
	09/15/10	13.79	--	0.00	--	--	84.95
	11/16/11	14.22	--	0.00	--	--	17.27
	06/21/12	12.53	--	0.00	--	--	18.96
	09/20/12	14.11	--	0.00	--	--	17.38
	12/26/12	14.20	--	0.00	--	--	17.29
	04/23/13	12.80	--	0.00	--	--	18.69
	06/26/13	12.70	--	0.00	--	--	18.79
	09/18/13	13.52	--	0.00	--	--	17.97
	10/14/13	13.72	--	0.00	--	--	17.77
03/27/14	13.24	--	0.00	--	--	18.25	
06/10/14	12.51	--	0.00	--	--	18.98	
07/22/14	13.35	--	0.00	--	--	18.14	

Table 1
Groundwater Elevation and Light Non Aqueous Phase Liquid Monitoring and Removal Data
Former Chevron Bulk Plant #1001327
1602 North Northlake Place
Seattle, Washington

Well Number¹ (Well Casing Elevation)	Date Measured	Depth to Groundwater² (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	LNAPL Removed (gallons)	Absorbant Sock in Well (Yes / No)	Groundwater Elevation³ (feet)
MW-25 (continued)	03/25/04	12.80	--	0.00	--	--	85.37
	09/22/04	12.94	--	0.00	--	--	85.23
	03/14/05	13.25	--	0.00	--	--	84.92
	03/29/06	12.72	--	0.00	--	--	85.45
	03/21/07	12.51	--	0.00	--	--	85.66
	03/25/08	12.78	--	0.00	--	--	85.39
	09/08-09/08	12.89	--	0.00	--	--	85.28
	12/11/08	--	--	--	--	--	--
	03/30-31/09	12.60	--	0.00	--	--	85.57
	09/10-11/09	13.41	--	0.00	--	--	84.76
	03/15/10	12.95	--	0.00	--	--	85.22
	09/15/10	13.25	--	0.00	--	--	84.92
	03/14/11	12.88	--	0.00	--	--	85.29
(30.91)	09/25/11	13.50	--	0.00	--	--	17.41
	10/10/11	13.30	--	0.00	--	--	17.61
	06/21/12	12.01	--	0.00	--	--	18.90
	09/20/12	13.56	--	0.00	--	--	17.35
	12/26/12	13.76	--	0.00	--	--	17.15
	04/22/13	12.30	--	0.00	--	--	18.61
	06/26/13	12.26	--	0.00	--	--	18.65
	09/18/13	12.97	--	0.00	--	--	17.94
	10/14/13	13.22	--	0.00	--	--	17.69
	03/27/14	12.72	--	0.00	--	--	18.19
	06/10/14	12.05	--	0.00	--	--	18.86
MW-26 (97.87)	08/09/99	--	--	--	--	--	--
	10/19/99	--	--	--	--	--	--
	01/06/00	13.78	--	0.00	--	--	84.09
	04/12/00	12.12	--	0.00	--	--	85.75
	06/27/00	12.55	--	0.00	--	--	85.32
	07/26/01	12.15	--	0.00	--	--	85.72
	03/19/02	12.79	--	0.00	--	--	85.08
	12/31/02	13.97	--	0.00	--	--	83.90
	02/27/03	12.88	--	0.00	--	--	84.99
	03/26/03	13.12	--	0.00	--	--	84.75
	04/28/03	11.78	--	0.00	--	--	86.09
	05/30/03	11.73	--	0.00	--	--	86.14
	06/25/03	12.09	--	0.00	--	--	85.78
	09/15/03	13.49	--	0.00	--	--	84.38
	12/15/03	13.48	--	0.00	--	--	84.39
	09/22/04	12.55	--	0.00	--	--	85.32
	03/14/05	12.94	--	0.00	--	--	84.93
	03/29/06	12.37	--	0.00	--	--	85.50
	03/21/07	--	--	--	--	--	--
	03/25/08	12.46	--	0.00	--	--	85.41
	09/08-09/08	12.59	--	0.00	--	--	85.28

Table 1
Groundwater Elevation and Light Non Aqueous Phase Liquid Monitoring and Removal Data
Former Chevron Bulk Plant #1001327
1602 North Northlake Place
Seattle, Washington

Well Number ¹ (Well Casing Elevation)	Date Measured	Depth to Groundwater ² (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	LNAPL Removed (gallons)	Absorbant Sock in Well (Yes / No)	Groundwater Elevation ³ (feet)
MW-26 (continued)	12/11/08	--	--	--	--	--	--
	03/30-31/09	12.25	--	0.00	--	--	85.62
	09/10-11/09	13.01	--	0.00	--	--	84.86
	03/15/10	12.60	--	0.00	--	--	85.27
	09/15/10	12.94	--	0.00	--	--	84.93
(30.62)	03/14/11	12.25	--	0.00	--	--	85.62
	09/24/11	13.20	--	0.00	--	--	17.42
	10/10/11	13.00	--	0.00	--	--	17.62
	06/21/12	11.68	--	0.00	--	--	18.94
	09/20/12	13.25	--	0.00	--	--	17.37
	09/21/12	13.28	--	0.00	--	--	17.34
	12/26/12	13.24	--	0.00	--	--	17.38
	04/22/13	11.90	--	0.00	--	--	18.72
	06/26/13	11.85	--	0.00	--	--	18.77
	09/18/13	12.68	--	0.00	--	--	17.94
	10/14/13	12.89	--	0.00	--	--	17.73
	03/27/14	12.45	--	0.00	--	--	18.17
	06/10/14	11.71	--	0.00	--	--	18.91
MW-27 (101.17)	09/13/99	--	--	--	--	No	--
	10/22/99	--	--	--	--	No	--
	01/06/00	--	--	--	--	No	--
	05/24/01	11.11	10.38	0.73	--	No	90.64
	06/27/01	10.07	9.29	0.78	--	No	91.72
	03/18/02	9.07	9.00	0.07	--	No	92.16
	10/16/02	--	--	0.05	--	No	--
	12/31/02	--	--	0.02	--	No	--
	06/26/03	11.08	10.83	0.25	0.25	No	90.29
	07/21/03	--	--	0.46	4.00	No	--
	08/28/03	--	--	0.21	8.00	No	--
	10/16/03	5.97	--	0.00	0.00	No	95.20
	11/21/03	--	--	--	0.00	No	--
	12/17/03	--	--	--	0.00	No	--
	01/29/04	10.23	9.71	0.52	2.00	No	91.36
	02/18/04	10.59	9.97	0.62	1.75	No	91.08
	03/30/04	10.54	9.77	0.77	3.00	No	91.25
	09/22/04	9.98	9.91	0.07	0.70	No	91.25
	03/15/05	11.76	11.21	0.55	0.50	No	89.85
	03/29/06	9.14	--	0.00	0.00	No	92.03
	03/21/07	7.91	7.90	0.01	<0.01	No	93.27
	03/25/08	10.57	--	0.00	0.00	No	90.60
	09/08-09/08	10.83	10.66	0.17	0.28	Yes	90.48
	12/11/08	11.19	11.18	0.01	0.00	Yes	89.99
	03/30-31/09	9.92	9.91	0.01	0.00	Yes	91.26
	06/15/09	9.67	9.66	0.01	0.00	Yes	91.51
	09/10-11/09	11.27	11.10	0.17	0.33 ⁴	Yes	90.04

Table 1
Groundwater Elevation and Light Non Aqueous Phase Liquid Monitoring and Removal Data
Former Chevron Bulk Plant #1001327
1602 North Northlake Place
Seattle, Washington

Well Number¹ (Well Casing Elevation)	Date Measured	Depth to Groundwater² (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	LNAPL Removed (gallons)	Absorbant Sock in Well (Yes / No)	Groundwater Elevation³ (feet)
MW-27 (continued)	02/23/10	9.37	--	0.00	--	Yes	91.80
	03/15/10	9.48	9.47	0.01	0.00	Yes	91.70
(34.01)	3/14/2011 ¹	27.77	27.70	0.07	0.05 ⁴	Yes	73.46
	11/16/11	11.27	--	0.00	--	Yes	22.74
	12/08/11	9.78	9.69	0.09	0.05 ⁴	Yes	24.30
	03/23/12	8.18	8.15	0.03	1.00	Yes	25.85
	06/01/12	8.45	8.25	0.20	1.00	Yes	25.72
	04/22/13	7.34	7.33	0.01	0.00	Yes	26.68
	06/26/13	6.67	--	0.00	--	Yes	27.34
	09/18/13	10.76	--	0.00	--	Yes	23.25
	10/14/13	10.16	--	0.00	--	Yes	23.85
	03/27/14	7.10	7.08	0.02	--	Yes	26.93
	06/10/14	9.25	Sheen	Sheen	--	Yes	24.76
	07/22/14	10.02	10.015	0.005	--	Yes	23.99
MW-28 (100.35)	08/11/99	--	--	0.00	--	No	--
	10/21/99	--	--	0.00	--	No	--
	10/21/99	--	--	0.00	--	No	--
	01/06/00	6.93	--	0.00	--	No	93.42
	07/27/00	7.45	--	0.00	--	No	92.90
	09/29/00	8.50	--	0.00	--	No	91.85
	01/15/01	8.59	--	0.00	--	No	91.76
	06/21/01	7.66	--	0.00	--	No	92.69
	03/18/02	6.02	--	0.00	--	No	94.33
	06/26/03	7.57	--	0.00	--	No	92.78
	09/15/03	8.96	--	0.00	--	No	91.39
	12/15/03	7.56	--	0.00	--	No	92.79
	03/25/04	7.07	--	0.00	--	No	93.28
	09/22/04	8.16	--	0.00	--	No	92.19
	03/14/05	8.45	--	0.00	--	No	91.90
	03/29/06	6.64	--	0.00	--	No	93.71
	03/21/07	6.86	6.48	0.38	0.25	No	93.79
	03/25/08	7.25	7.08	0.17	0.25	No	93.24
	09/08-09/08	8.04	8.00	0.04	0.16	Yes	92.34
	12/11/08	8.15	8.14	0.01	0.00	Yes	92.21
	03/30-31/09	6.84	6.83	0.01	0.00	Yes	93.52
	06/15/09	7.21	7.20	0.01	0.00	Yes	93.15
	09/10-11/09	8.16	8.13	0.03	0.00	Yes	92.21
	02/23/10	6.39	6.38	0.01	0.00	Yes	93.97
	03/15/10	6.05	--	0.00	--	Yes	94.30
	9/15/10	7.76	7.75	0.01	--	Yes	92.60
	12/04/10	--	--	--	--	Yes	--
	03/14/11	5.30	--	0.00	--	Yes	95.05
(33.13)	07/22/14	7.24	--	0.00	--	No	25.89
MW-29	07/22/14	13.80	--	0.00	--	--	--
MW-30	07/22/14	12.37	--	0.00	--	--	--

Table 1
Groundwater Elevation and Light Non Aqueous Phase Liquid Monitoring and Removal Data
Former Chevron Bulk Plant #1001327
1602 North Northlake Place
Seattle, Washington

Well Number ¹ (Well Casing Elevation)	Date Measured	Depth to Groundwater ² (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	LNAPL Removed (gallons)	Absorbant Sock in Well (Yes / No)	Groundwater Elevation ³ (feet)	
AGI-2 (97.95)	08/10/99	--	--	--	--	--	--	
	10/20/99	--	--	--	--	--	--	
	01/15/01	13.61	--	0.00	--	--	84.34	
	06/21/01	11.83	--	0.00	--	--	86.12	
	07/26/01	12.19	--	0.00	--	--	85.76	
	03/18/02	12.91	--	0.00	--	--	85.04	
	03/18/02	12.91	--	0.00	--	--	85.04	
	05/07/02	11.95	--	0.00	--	--	86.00	
	06/06/02	12.51	--	0.00	--	--	85.44	
	07/02/02	11.90	--	0.00	--	--	86.05	
	09/03/02	13.65	--	0.00	--	--	84.30	
	12/31/02	13.75	--	0.00	--	--	84.20	
	03/26/03	12.62	--	0.00	--	--	85.33	
	04/28/03	12.98	--	0.00	--	--	84.97	
	05/30/03	12.19	--	0.00	--	--	85.76	
	06/25/03	12.66	--	0.00	--	--	85.29	
	09/15/03	13.51	--	0.00	--	--	84.44	
	12/15/03	13.59	--	0.00	--	--	84.36	
	03/26/04	12.33	--	0.00	--	--	85.62	
	09/22/04	12.67	--	0.00	--	--	85.28	
	03/14/05	12.99	--	0.00	--	--	84.96	
	03/29/06	12.45	--	0.00	--	--	85.50	
	03/21/07	12.30	--	0.00	--	--	85.65	
	03/25/08	12.53	--	0.00	--	--	85.42	
	09/08-09/08	12.63	--	0.00	--	--	85.32	
	12/11/08	--	--	--	--	--	--	
	03/30-31/09	12.33	--	0.00	--	--	85.62	
	09/10-11/09	13.11	--	0.00	--	--	84.84	
	03/15/10	15.92	--	0.00	--	--	82.03	
	09/15/10	12.99	--	0.00	--	--	84.96	
	03/14/11	12.58	--	0.00	--	--	85.37	
	(30.86)	06/21/12	11.69	--	0.00	--	--	18.99
		09/20/12	13.31	--	0.00	--	--	17.37
	12/26/12	13.41	--	0.00	--	--	17.27	
	04/23/13	11.96	--	0.00	--	--	18.72	
	06/26/13	11.90	--	0.00	--	--	18.78	
	09/18/13	12.72	--	0.00	--	--	17.96	
	10/14/13	12.94	--	0.00	--	--	17.74	
	03/27/14	12.41	--	0.00	--	--	18.27	
	06/10/14	11.85	--	0.00	--	--	18.83	
MLU-1 (100.18)	08/10/99	--	--	--	--	--	--	
	10/20/99	15.33	--	0.00	--	--	84.85	
	01/06/00	15.75	--	0.00	--	--	84.43	
	04/12/00	14.35	--	0.00	--	--	85.83	
	06/27/00	14.24	--	0.00	--	--	85.94	

Table 2
Groundwater Analytical Results
Former Chevron Bulk Plant #1001327
1602 North Northlake Place
Seattle, Washington

Monitoring Well ¹	Date Sampled	LNAPL ²	VOCs (EPA Method 8020 or 8021B) (µg/L)					cPAHs (EPA Method 8270) (µg/L)						Metals (EPA Method 6020) (µg/L)		
			Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Indeno (1,2,3-cd) pyrene	Arsenic	Lead
Groundwater Cleanup Level		No visible sheen	43	48,500	6,910	--	9,880	0.0296	0.0296	0.0296	0.0296	0.0296	0.0296	0.0296	0.0982	5
Trip Blank (continued)	03/29/06	--	<0.500	<0.500	<0.500	--	<1.00	--	--	--	--	--	--	--	--	--
	03/21/07	--	<0.500	<0.500	<0.500	--	<5.00	--	--	--	--	--	--	--	--	--
	03/25/08	--	<0.5	<0.5	<0.5	--	<1.0	--	--	--	--	--	--	--	--	--
Field Blank	08/20/99	--	<1.00	<1.00	<1.00	--	<1.00	--	--	--	--	--	--	--	--	--
	10/20/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/20/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/20/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/99	--	--	--	1.1	--	--	--	--	--	--	--	--	--	--	--
	10/22/99	--	<0.500	<0.500	<0.500	--	--	--	--	--	--	--	--	--	--	--
	10/25/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/26/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/26/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/21/01	--	<1.00	<1.00	2.49	--	1.88	--	--	--	--	--	--	--	--	--
	06/27/01	--	<1.00	<1.00	1.79	--	<1.00	--	--	--	--	--	--	--	--	--
	07/26/01	--	1.22	<1.00	4.26	--	<1.00	--	--	--	--	--	--	--	--	--
	03/19/02	--	<1.00	<1.00	<1.00	--	<1.00	--	--	--	--	--	--	--	--	--
	09/03/02	--	0.857	<0.500	3.84	--	--	--	--	--	--	--	--	--	--	--
	12/31/02	--	<0.500	<0.500	<0.500	--	--	--	--	--	--	--	--	--	--	--
	09/17/03	--	<0.500	<0.500	<0.500	--	<1.00	--	--	--	--	--	--	--	--	--
	12/17/03	--	<0.500	<0.500	<0.500	--	<1.00	--	--	--	--	--	--	--	--	--
	03/26/04	--	<0.500	<0.500	<0.500	--	<1.00	--	--	--	--	--	--	--	--	--
	09/23/04	--	<0.500	<0.500	<0.500	--	<1.00	--	--	--	--	--	--	--	--	--
	03/14/05	--	<0.500	<0.500	<0.500	--	<1.00	--	--	--	--	--	--	--	--	--
	03/29/06	--	<0.500	<0.500	<0.500	--	<1.00	--	--	--	--	--	--	--	--	--
	03/21/07	--	<0.500	<0.500	<0.500	--	<5.00	--	--	--	--	--	--	--	--	--
	03/25/08	--	<0.5	<0.5	<0.5	--	<1.0	--	--	--	--	--	--	--	--	--
	09/08-09/08	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	--	--	--	--	--
QA	03/30-31/09	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	--	--	--	--	--
	09/10-11/09	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	--	--	--	--	--
	03/15/10	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	--	--	--	--	--
	09/15/10	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	--	--	--	--	--
	09/24/11	--	<0.2	<0.2	<0.2	<0.6	--	--	--	--	--	--	--	--	--	--
	11/16/11	--	<0.2	<0.2	<0.2	<0.6	--	--	--	--	--	--	--	--	--	--
	06/10/14	--	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	--

Notes:

- ¹Monitoring well locations are shown in Figure 2.
 - ²LNAPL = light nonaqueous phase liquid.
 - ³Laboratory report indicates concentration exceeds the instrument calibration range.
 - ⁴Laboratory report indicates estimated value.
 - ⁵Laboratory report indicates the reporting limits were raised because sample dilution was necessary to bring internal standard within QC limits.
 - ⁶Laboratory report indicates the surrogate data is outside the QC limits due to irresolvable matrix problems evident in the sample chromatogram.
 - ⁷Laboratory report indicates due to the presence of an interferent near its retention time, the normal reporting limit was not attained for toluene. The presence or concentration of this compound cannot be determined due to the presence of this interferent.
 - ⁸Laboratory report indicates due to the sample matrix an initial dilution was necessary to perform the analysis. Therefore, the reporting limits for the GC/MS semivolatiles compounds were raised.
 - ⁹Laboratory report indicates due to the presence of interferents near their retention time, normal reporting limits were not attained for benzene and toluene. The presence or of these compounds cannot be determined below the reporting limits due to the presence of these interferents.
 - ¹⁰Laboratory report indicates Benzo (b) fluoranthene and benzo (k) fluoranthene were not resolved under the sample analysis conditions. The result reported for benzo (b) fluoranthene represents the combined total of both isomers.
 - ¹¹cPAHs, arsenic and lead samples were filtered in the field using a disposable 0.45 micron filter
- µg/L = micrograms per liter
mg/L = milligrams per liter ND = not detected
Shaded concentrations are greater than corresponding Remedial Action Levels. Bolded data are for the current reporting period.
Sheen = sheen observed in water

Table 3
Point of Compliance Consecutive Clean Sampling Events as of First Semi-Annual 2014

Former Chevron Bulk Plant #1001327
 1602 North Northlake Place
 Seattle, Washington

Monitoring Well	Petroleum Constituents: Benzene, Toluene, Ethylbenzene, Naphthalenes		cPAHs		Lead	
	Current Sampling Interval	Consecutive Sampling Events in Compliance ^{1,2}	Current Sampling Interval	Consecutive Sampling Events in Compliance ^{1,2}	Current Sampling Interval	Consecutive Sampling Events in Compliance ^{1,2}
Upper Yard						
³ MW-10	semi-annually	0	semi-annually	0	semi-annually	0
MW-20	semi-annually	7 ⁴	semi-annually	7 ⁴	semi-annually	6 ⁴
MW-21	semi-annually	7 ⁴	semi-annually	7	semi-annually	6 ⁴
Lower Yard						
MW-4	semi-annually	7 ⁴	semi-annually	4	semi-annually	6 ⁴
MW-7	semi-annually	3	semi-annually	4	semi-annually	5 ⁴
MW-8A	semi-annually	7 ⁴	semi-annually	6	semi-annually	6 ⁴
AGI-2	semi-annually	3	semi-annually	4	semi-annually	5 ⁴
MLU-1	semi-annually	6 ⁴	semi-annually	5	semi-annually	5 ⁴
⁵ MLU-3	semi-annually	1	semi-annually	1	semi-annually	1
MW-25	semi-annually	7 ⁴	semi-annually	8 ⁴	semi-annually	6 ⁴
MW-26	semi-annually	7 ⁴	semi-annually	7	semi-annually	7

Notes:

¹ "Consecutive events" are number of consecutive sampling events prior to and including the current reporting period that are in compliance with the groundwater remediation action levels. Events prior to 2010 are not counted. Refer to progress reports for results.

² consecutive clean sampling events excludes arsenic values because laboratory reporting limits are above the cleanup level.

³ MW-10 not sampled since 2010

⁴ No exceedences, but constituent not analyzed consecutively every sampling event

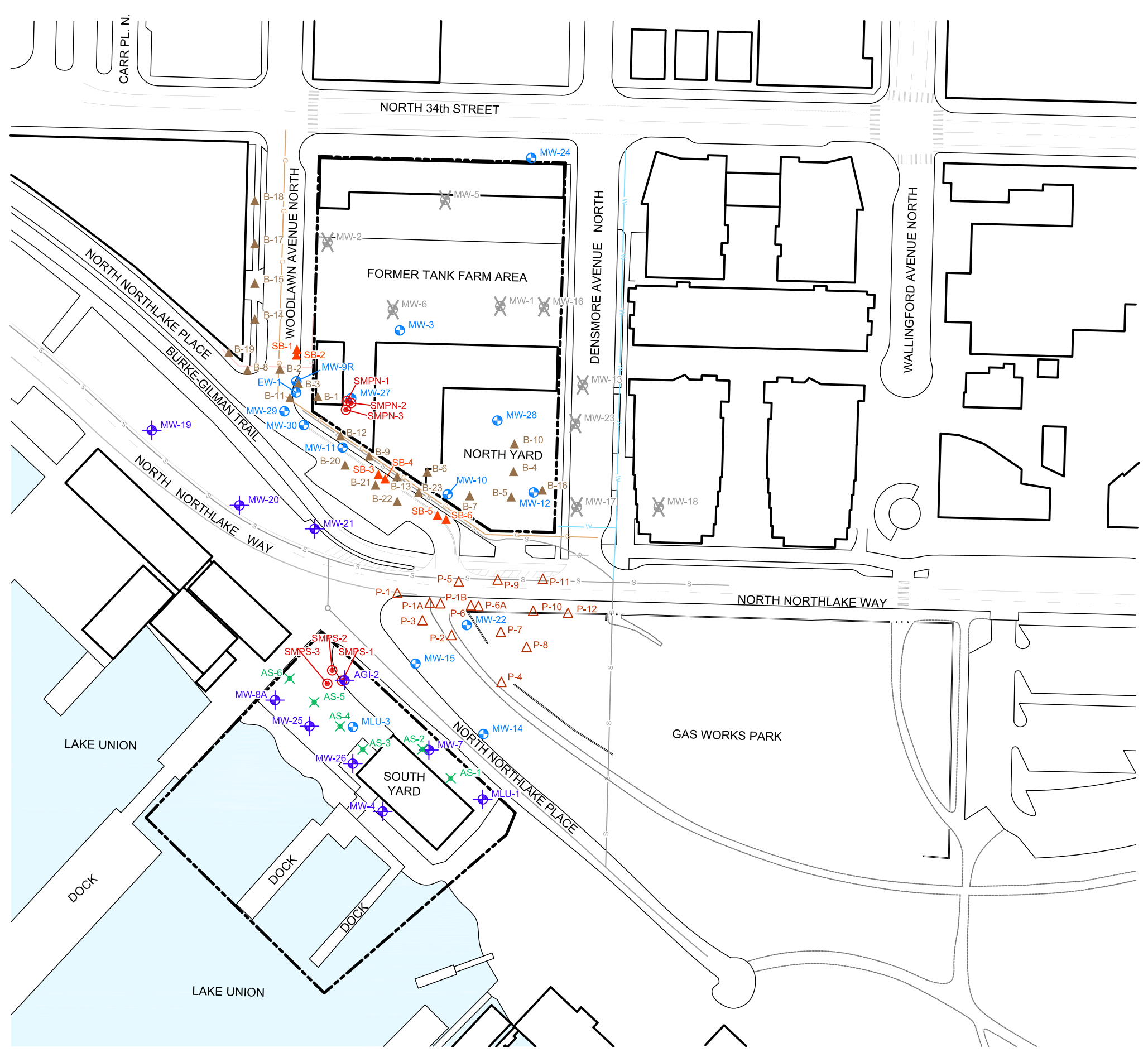
⁵ MLU-3 only sampled once since 2010

cPAHs = carcinogenic polycyclic aromatic hydrocarbons



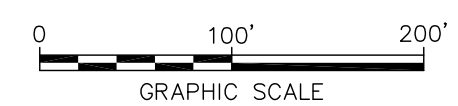
Figures

CITY: SYRACUSE NY DW:GROUP: ERWCAD DB: E. KRAHMER PIC: M. FLEISCHNER PM/TW: S. ZORN TR: R. LAGRANDEUR LYR: ONE="OFF"=REF
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 IMAGES: PROJECTNAME: --
 PLOTSTYLETABLE: PLT\FULL.CTB PLOTTED: 11/6/2014 9:26 AM BY: KRAHMER, ERIC



- LEGEND:**
- ▲ SOIL BORING LOCATION
 - ▲ 2007 BORING LOCATION
 - GROUNDWATER MONITORING WELL
 - ⊗ ABANDONED MONITORING WELL
 - ✕ BIOSPARGE INJECTION WELL
 - ⊕ COMPLIANCE MONITORING WELL
 - ⊙ SEPARATE-PHASE MONITORING POINT LOCATION
 - CATCH BASIN
 - ▲ ADDITIONAL SOIL BORING LOCATION
 - NATURAL GAS LINE (APPROX.)
 - E— UNDERGROUND ELECTRIC LINE (APPROX.)
 - W— WATER LINE (APPROX.)
 - S— SEWER LINE (APPROX.)

- NOTES:**
1. BASE MAP FROM A DRAWING BY SAIC TITLED "SITE MAP", DATED 09-14-07, @ A SCALE OF 1" = 60'. REVISED IN ACCORDANCE WITH A SURVEY DRAWING BY OTAK CONDUCTED IN APRIL & MAY, 2011 AND OCTOBER 2014.
 2. 2007 SOIL BORING, ADDITIONAL SOIL BORING, ABANDONED MONITORING WELL, BIOSPARGE INJECTION WELL, SMPS, MW-3, AND MW-24 LOCATIONS ARE APPROXIMATE.



FORMER CHEVRON BULK PLANT No. 100-1327
 FACILITIES NORTH / KING COUNTY (METRO)
 SEATTLE, WASHINGTON
TECHNICAL REVIEW OF GAS WORKS PARK

SITE PLAN

FIGURE
1

CITY: SYRACUSE NY DIV/GROUP: EWCAD DB: E. KRAHMER PIC: M. FLEISCHNER PM/TW: S. ZORN TR: R. LAGRANDEUR LYR: ONE*OFF=REF
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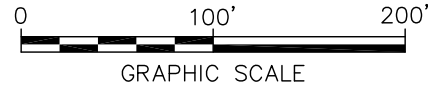
LEGEND:

- GROUNDWATER MONITORING WELL
- BIOSPARGE INJECTION WELL
- COMPLIANCE MONITORING WELL
- SEPARATE-PHASE MONITORING POINT LOCATION
- CATCH BASIN
- (25.67) GROUNDWATER ELEVATION IN FEET ABOVE MSL
- 19.00 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MSL (DASHED WHERE INFERRED)
- DIRECTION OF GROUNDWATER FLOW
- ND NOT DETECTED, VALUE SHOWN IS DETECTION LIMIT
- MSL MEAN SEA LEVEL
- LNAPL LIGHT NON-AQUEOUS PHASE LIQUID
- * NOT SAMPLED DUE TO THE PRESENCE OF LNAPL
- ** SURVEY DATA FROM PREVIOUS SURVEY AND INCONSISTENT WITH OTHER SITE SURVEY DATA

SAMPLE ID		
DATE	6/11/2014	CLEANUP LEVELS
B	BENZENE (µg/L)	43 (µg/L)
T	TOLUENE (µg/L)	48,500 (µg/L)
E	ETHYLBENZENE (µg/L)	6,910 (µg/L)
N	NAPHTHALENE (µg/L)	9,880 (µg/L)
D-As	DISSOLVED ARSENIC (µg/L)	0.0982 (µg/L)
D-Pb	DISSOLVED LEAD (µg/L)	5 (µg/L)

NOTES:

1. BASE MAP FROM A DRAWING BY SAIC TITLED "SITE MAP", DATED 09-14-07, @ A SCALE OF 1" = 60'. REVISED IN ACCORDANCE WITH A SURVEY DRAWING BY OTAK CONDUCTED IN APRIL & MAY, 2011 AND OCTOBER 2014.
2. BIOSPARGE INJECTION WELL, SMPS, MW-3, AND MW-24 LOCATIONS ARE APPROXIMATE.
3. ALL GROUNDWATER ELEVATIONS ARE FROM JUNE 10, 2014.
4. **BOLD** = CONCENTRATION EXCEEDS THE REMEDIAL CLEANUP LEVEL.
5. CLEANUP LEVELS REPORTED ARE SITE MTCA METHOD 8 SURFACE WATER CUL.

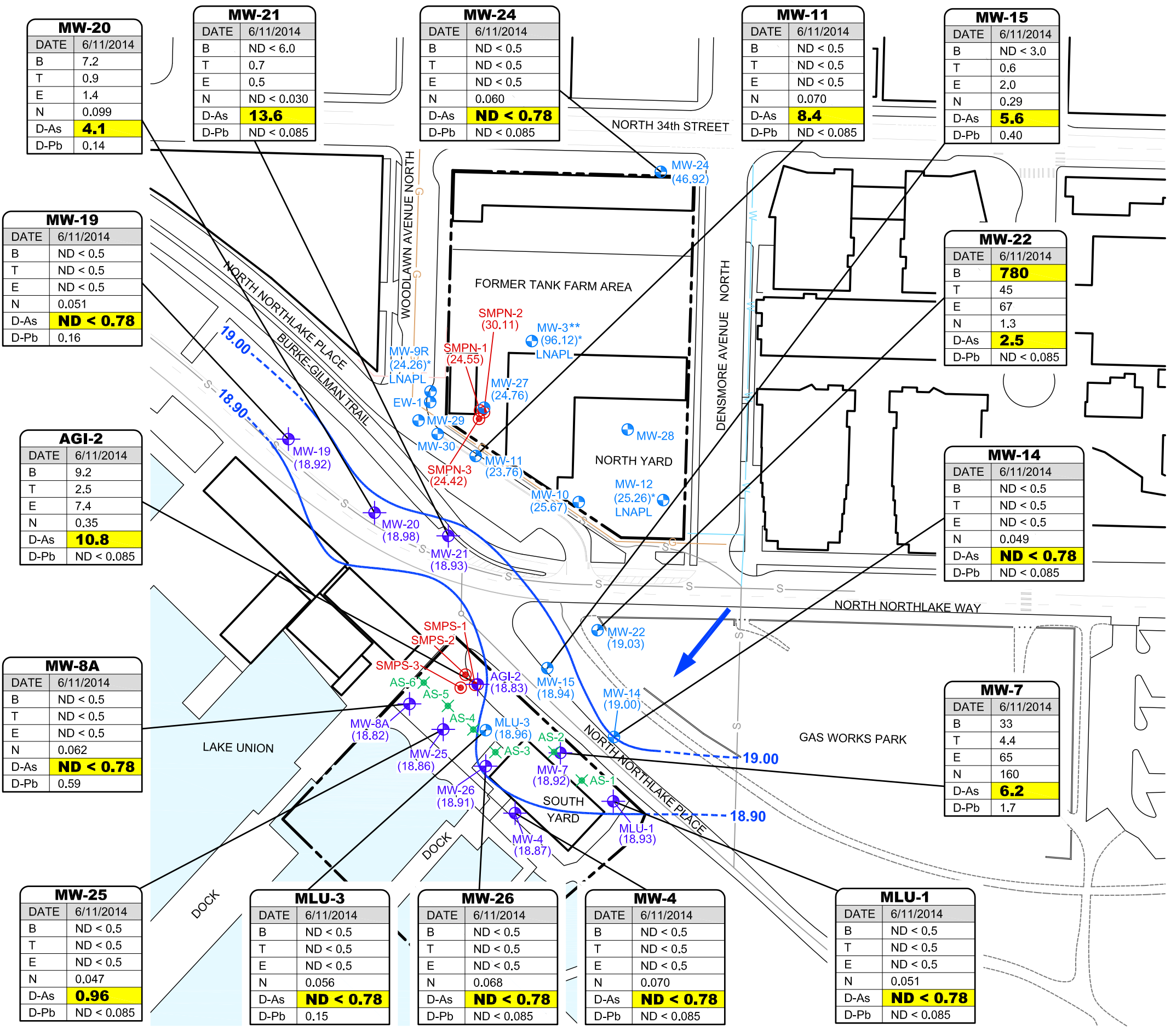


FORMER CHEVRON BULK PLANT No. 100-1327
FACILITIES NORTH / KING COUNTY (METRO)
SEATTLE, WASHINGTON

GROUNDWATER MONITORING REPORT

POTENTIOMETRIC MAP WITH
ANALYTICAL RESULTS
JUNE 10 and 11, 2014

FIGURE
2



MW-20	
DATE	6/11/2014
B	7.2
T	0.9
E	1.4
N	0.099
D-As	4.1
D-Pb	0.14

MW-21	
DATE	6/11/2014
B	ND < 6.0
T	0.7
E	0.5
N	ND < 0.030
D-As	13.6
D-Pb	ND < 0.085

MW-24	
DATE	6/11/2014
B	ND < 0.5
T	ND < 0.5
E	ND < 0.5
N	0.060
D-As	ND < 0.78
D-Pb	ND < 0.085

MW-11	
DATE	6/11/2014
B	ND < 0.5
T	ND < 0.5
E	ND < 0.5
N	0.070
D-As	8.4
D-Pb	ND < 0.085

MW-15	
DATE	6/11/2014
B	ND < 3.0
T	0.6
E	2.0
N	0.29
D-As	5.6
D-Pb	0.40

MW-19	
DATE	6/11/2014
B	ND < 0.5
T	ND < 0.5
E	ND < 0.5
N	0.051
D-As	ND < 0.78
D-Pb	0.16

MW-22	
DATE	6/11/2014
B	780
T	45
E	67
N	1.3
D-As	2.5
D-Pb	ND < 0.085

AGI-2	
DATE	6/11/2014
B	9.2
T	2.5
E	7.4
N	0.35
D-As	10.8
D-Pb	ND < 0.085

MW-14	
DATE	6/11/2014
B	ND < 0.5
T	ND < 0.5
E	ND < 0.5
N	0.049
D-As	ND < 0.78
D-Pb	ND < 0.085

MW-8A	
DATE	6/11/2014
B	ND < 0.5
T	ND < 0.5
E	ND < 0.5
N	0.062
D-As	ND < 0.78
D-Pb	0.59

MW-7	
DATE	6/11/2014
B	33
T	4.4
E	65
N	160
D-As	6.2
D-Pb	1.7

MW-25	
DATE	6/11/2014
B	ND < 0.5
T	ND < 0.5
E	ND < 0.5
N	0.047
D-As	0.96
D-Pb	ND < 0.085

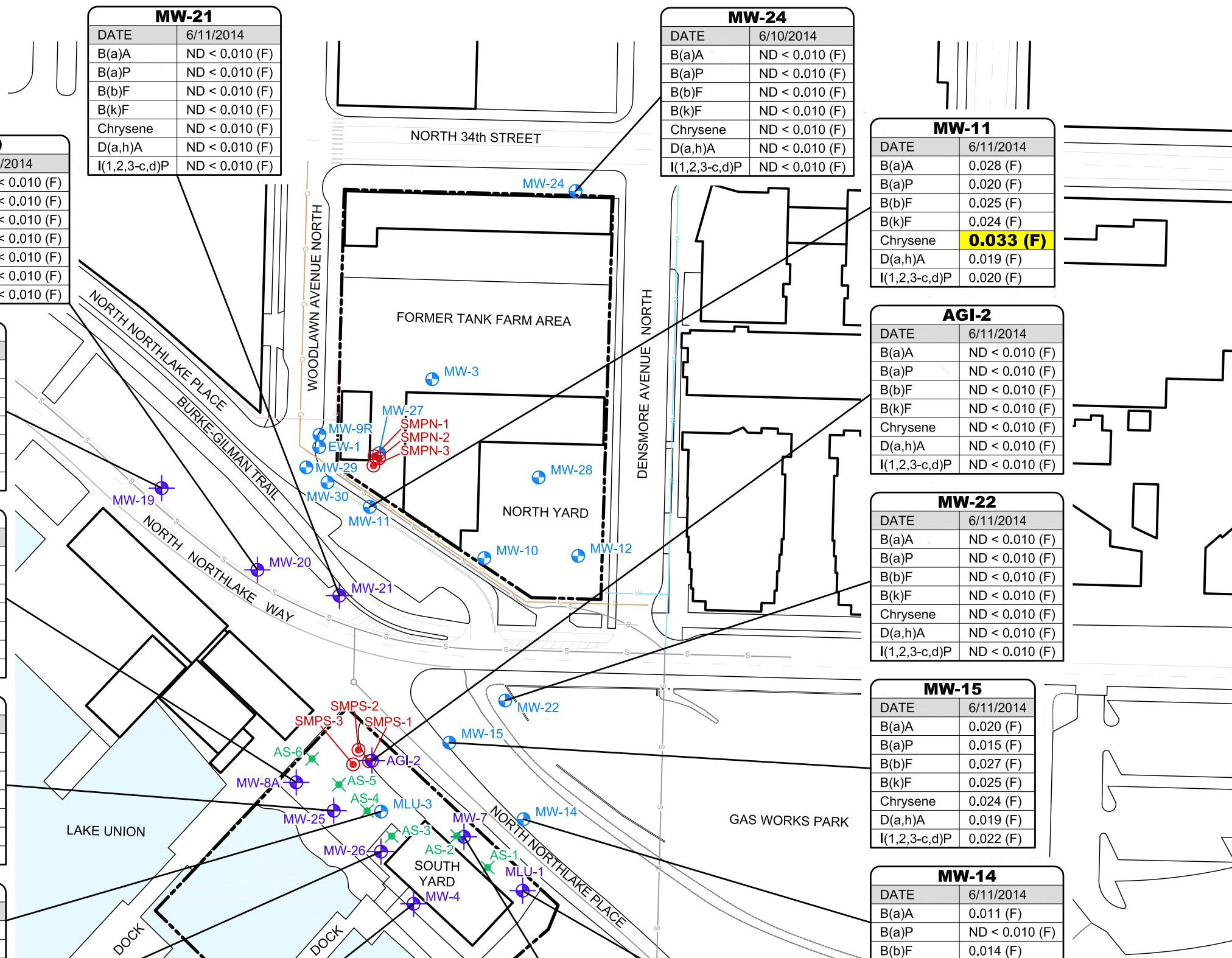
MLU-3	
DATE	6/11/2014
B	ND < 0.5
T	ND < 0.5
E	ND < 0.5
N	0.056
D-As	ND < 0.78
D-Pb	0.15

MW-26	
DATE	6/11/2014
B	ND < 0.5
T	ND < 0.5
E	ND < 0.5
N	0.068
D-As	ND < 0.78
D-Pb	ND < 0.085

MW-4	
DATE	6/11/2014
B	ND < 0.5
T	ND < 0.5
E	ND < 0.5
N	0.070
D-As	ND < 0.78
D-Pb	ND < 0.085

MLU-1	
DATE	6/11/2014
B	ND < 0.5
T	ND < 0.5
E	ND < 0.5
N	0.051
D-As	ND < 0.78
D-Pb	ND < 0.085

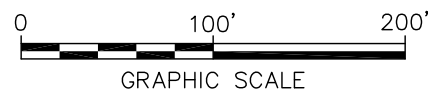
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 XREFS: 45799X02 45799X01 45799X00
 IMAGES: PROJECTNAME: --



- LEGEND:**
- GROUNDWATER MONITORING WELL
 - BIOSPARGE INJECTION WELL
 - COMPLIANCE MONITORING WELL
 - SEPARATE-PHASE MONITORING POINT LOCATION
 - CATCH BASIN
 - ND NOT DETECTED, VALUE SHOWN IS DETECTION LIMIT
 - (F) FIELD-FILTERED SAMPLE

SAMPLE ID	
DATE	Sample Collection Date
B(a)A	Benzo (a) anthracene (µg/L)
B(a)P	Benzo (a) pyrene (µg/L)
B(b)F	Benzo (b) fluoranthene (µg/L)
B(k)F	Benzo (k) fluoranthene (µg/L)
Chrysene	Chrysene (µg/L)
D(a,h)A	Dibenz (a,h) anthracene (µg/L)
I(1,2,3-c,d)P	Indeno (1,2,3-c,d) pyrene (µg/L)

- NOTES:**
- BASE MAP FROM A DRAWING BY SAIC TITLED "SITE MAP", DATED 09-14-07, @ A SCALE OF 1" = 60'. REVISED IN ACCORDANCE WITH A SURVEY DRAWING BY OTAK CONDUCTED IN APRIL & MAY, 2011 AND OCTOBER 2014.
 - BIOSPARGE INJECTION WELL, SMPS, MW-3, AND MW-24 LOCATIONS ARE APPROXIMATE.
 - BOLD** = CONCENTRATION EXCEEDS THE REMEDIAL CLEANUP LEVEL.
 - MTCA METHOD B SURFACE WATER CUL FOR EACH INDIVIDUAL cPAH REPORTED IS 0.0296 µg/L.



FORMER CHEVRON BULK PLANT No. 100-1327
 FACILITIES NORTH / KING COUNTY (METRO)
 SEATTLE, WASHINGTON
GROUNDWATER MONITORING REPORT

cPAH ANALYTICAL RESULTS
JUNE 10 and 11, 2014

FIGURE 3

MW-20	
DATE	6/10/2014
B(a)A	ND < 0.010 (F)
B(a)P	ND < 0.010 (F)
B(b)F	ND < 0.010 (F)
B(k)F	ND < 0.010 (F)
Chrysene	ND < 0.010 (F)
D(a,h)A	ND < 0.010 (F)
I(1,2,3-c,d)P	ND < 0.010 (F)

MW-21	
DATE	6/11/2014
B(a)A	ND < 0.010 (F)
B(a)P	ND < 0.010 (F)
B(b)F	ND < 0.010 (F)
B(k)F	ND < 0.010 (F)
Chrysene	ND < 0.010 (F)
D(a,h)A	ND < 0.010 (F)
I(1,2,3-c,d)P	ND < 0.010 (F)

MW-24	
DATE	6/10/2014
B(a)A	ND < 0.010 (F)
B(a)P	ND < 0.010 (F)
B(b)F	ND < 0.010 (F)
B(k)F	ND < 0.010 (F)
Chrysene	ND < 0.010 (F)
D(a,h)A	ND < 0.010 (F)
I(1,2,3-c,d)P	ND < 0.010 (F)

MW-11	
DATE	6/11/2014
B(a)A	0.028 (F)
B(a)P	0.020 (F)
B(b)F	0.025 (F)
B(k)F	0.024 (F)
Chrysene	0.033 (F)
D(a,h)A	0.019 (F)
I(1,2,3-c,d)P	0.020 (F)

AGI-2	
DATE	6/11/2014
B(a)A	ND < 0.010 (F)
B(a)P	ND < 0.010 (F)
B(b)F	ND < 0.010 (F)
B(k)F	ND < 0.010 (F)
Chrysene	ND < 0.010 (F)
D(a,h)A	ND < 0.010 (F)
I(1,2,3-c,d)P	ND < 0.010 (F)

MW-22	
DATE	6/11/2014
B(a)A	ND < 0.010 (F)
B(a)P	ND < 0.010 (F)
B(b)F	ND < 0.010 (F)
B(k)F	ND < 0.010 (F)
Chrysene	ND < 0.010 (F)
D(a,h)A	ND < 0.010 (F)
I(1,2,3-c,d)P	ND < 0.010 (F)

MW-15	
DATE	6/11/2014
B(a)A	0.020 (F)
B(a)P	0.015 (F)
B(b)F	0.027 (F)
B(k)F	0.025 (F)
Chrysene	0.024 (F)
D(a,h)A	0.019 (F)
I(1,2,3-c,d)P	0.022 (F)

MW-14	
DATE	6/11/2014
B(a)A	0.011 (F)
B(a)P	ND < 0.010 (F)
B(b)F	0.014 (F)
B(k)F	0.012 (F)
Chrysene	0.012 (F)
D(a,h)A	ND < 0.010 (F)
I(1,2,3-c,d)P	0.011 (F)

MW-19	
DATE	6/10/2014
B(a)A	ND < 0.010 (F)
B(a)P	ND < 0.010 (F)
B(b)F	ND < 0.010 (F)
B(k)F	ND < 0.010 (F)
Chrysene	ND < 0.010 (F)
D(a,h)A	ND < 0.010 (F)
I(1,2,3-c,d)P	ND < 0.010 (F)

MW-8A	
DATE	6/11/2014
B(a)A	0.011 (F)
B(a)P	ND < 0.010 (F)
B(b)F	0.012 (F)
B(k)F	0.011 (F)
Chrysene	ND < 0.010 (F)
D(a,h)A	ND < 0.010 (F)
I(1,2,3-c,d)P	ND < 0.010 (F)

MW-25	
DATE	6/10/2014
B(a)A	ND < 0.010 (F)
B(a)P	ND < 0.010 (F)
B(b)F	ND < 0.010 (F)
B(k)F	ND < 0.010 (F)
Chrysene	ND < 0.010 (F)
D(a,h)A	ND < 0.010 (F)
I(1,2,3-c,d)P	ND < 0.010 (F)

MLU-3	
DATE	6/11/2014
B(a)A	ND < 0.010 (F)
B(a)P	ND < 0.010 (F)
B(b)F	ND < 0.010 (F)
B(k)F	ND < 0.010 (F)
Chrysene	ND < 0.010 (F)
D(a,h)A	ND < 0.010 (F)
I(1,2,3-c,d)P	ND < 0.010 (F)

MW-26	
DATE	6/10/2014
B(a)A	ND < 0.010 (F)
B(a)P	ND < 0.010 (F)
B(b)F	ND < 0.010 (F)
B(k)F	ND < 0.010 (F)
Chrysene	ND < 0.010 (F)
D(a,h)A	ND < 0.010 (F)
I(1,2,3-c,d)P	ND < 0.010 (F)

MW-4	
DATE	6/11/2014
B(a)A	ND < 0.010 (F)
B(a)P	ND < 0.010 (F)
B(b)F	ND < 0.010 (F)
B(k)F	ND < 0.010 (F)
Chrysene	ND < 0.010 (F)
D(a,h)A	ND < 0.010 (F)
I(1,2,3-c,d)P	ND < 0.010 (F)

MW-7	
DATE	6/11/2014
B(a)A	ND < 0.010 (F)
B(a)P	ND < 0.010 (F)
B(b)F	ND < 0.010 (F)
B(k)F	ND < 0.010 (F)
Chrysene	0.013 (F)
D(a,h)A	ND < 0.010 (F)
I(1,2,3-c,d)P	ND < 0.010 (F)

MLU-1	
DATE	6/11/2014
B(a)A	ND < 0.010 (F)
B(a)P	ND < 0.010 (F)
B(b)F	ND < 0.010 (F)
B(k)F	ND < 0.010 (F)
Chrysene	ND < 0.010 (F)
D(a,h)A	ND < 0.010 (F)
I(1,2,3-c,d)P	ND < 0.010 (F)

ARCADIS

Appendix A

Field Notes

WELL GAUGING DATA

Project # 1410327-LB1 Date 3/27/14 Client CHEVRON

Site 1602 N. NORTHLAKE PL SEATTLE WA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOG	Notes
MW-3	1051	2					22.78	45.50	✓	
MW-4	0910	2					15.69	19.65		
MW-7	0906	2					12.82	16.33		
MW-8A	0938	2					12.21	24.71		
MW-9	1058	2	ODOR	11.76			11.93	—		ABS SOCK
MW-10	1138	2	ODOR				8.28	17.88		ABS SOCK
MW-11	1132	2					9.38	15.67		
MW-14	—	—	—	UNABLE TO LOCATE			—	—		
MW-15	—	—	—	UNABLE TO LOCATE			—	—		
MW-19	1024	2					12.63	16.41	✓	
MW-20	1016	2					13.24	21.86	✓	
MW-21	1010	2					12.98	20.42	✓	
MW-22	—	—	—	UNABLE TO LOCATE			—	—		
MW-24	1046	2					22.06	33.51		
MW-25	0931	4					12.72	19.53		
MW-26	0924	4					12.45	19.62		
MW-27	1103	4	ODOR	7.08	0.02		7.10	—	✓	ABS SOCK

WELL GAUGING DATA

Project # 140327-LB Date 3/27/14 Client CHEVRON

Site 1602 N NORTH LAKE PL SEATTLE, WA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or DOC	Notes
SMPN-1	1126	2					9.46	14.60		ABS SOCK
SMPN-2	1108	2					9.39	14.54		ABS SOCK
SMPN-3	1115	2					8.68	14.75		
AGE-2	0928	2					12.41	22.35		
MLU-1	0900	4					14.61	22.46		
MLU-3	0944	4					12.44 14.61	20.73 22.40	↓	

WELLHEAD INSPECTION FORM

Client: CHEVRON Site: 1602 N. NORTHLAKE PL, SEATTLE, WA Date: 3/27/14
 Job #: 140327-LB1 Technician: L. BURES Page 1 of 2

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency											Well Not Inspected (explain in notes)	Notes (list if cap or lick replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)		
		Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty)	Tabs stripped (list qty)	Tabs broken (list qty)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade			Other (explain in notes)	
MW-3	X															
MW-4				X												STAND PIPE
MW-7						3/3										
MW-8A						3/3										
MW-9					1/3											
MW-10	X															
MW-11	X															
MW-14															X	
MW-15															X	
MW-19						3/3										
MW-20						2/3	1/3									
MW-21					4/3	3/3										
MW-22															X	
MW-24	X															
MW-25					3/3											
MW-26	X															
MW-27	X															

NOTES: _____

WELLHEAD INSPECTION FORM

Client: CHEVRON Site: 1602 N. NORTHLAKE PL, SEATTLE WA Date: 3/27/14
 Job #: 140327-LB1 Technician: L. BURES Page 2 of 2

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency											Well Not Inspected (explain in notes)	Notes (list if cap or lick replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)		
		Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty)	Tabs stripped (list qty)	Tabs broken (list qty)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade			Other (explain in notes)	
SMPN-1					3/3	3										
SMPN-2					3/3											
SMPN-3					3/3											
AGI-2							1/2									1/2 BOLTS BROKEN IN TAB
MLU-1				X												STAND PIPE
MLU-3				X												UNDER VAULT PLATE

NOTES: _____

Permit To Work

for Chevron EMC Sites

Client: CHEVRON Date: 3/20/14
 Site Address: 1602 N. NORTH LAKE PL, SEATTLE, WA
 Job Number: 140327-181 Technician(s): L. BURES

Pre-Job Safety Review

1. JMP reviewed, site restrictions and parking/access issues addressed. Reviewed:

2. Special Permit Required Task Review

Are there any conditions or tasks that would require:

	Yes	No
Confined space entry	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Working at height	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Lock-out/Tag-out	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Excavations greater than 4 feet deep	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Excavations within 3 feet of a buried active electrical line or product piping or within 10 feet of a high pressure gas line.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Use of overhead equipment within 15 feet of an overhead electrical power line or pole supporting one	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hot work	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If "Yes" was the answer to any of the Special Permit Required Tasks above, the Project Manager will contact the client and arrange to modify the Scope of Work so that the Special Permit Required Tasks are not required to be performed by Blaine Tech Services employees.

3. Is a Traffic Control Permit required for today's work?

	Yes	No
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If so is it in the folder?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is it current?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Do you understand the Traffic Control Plan and what equipment you will need? Yes No

On-site Pre-Job Safety Review

- | | |
|---|-------------------------------------|
| 1. Reviewed and signed the site specific HASP. | <input checked="" type="checkbox"/> |
| 2. Route to hospital understood. | <input checked="" type="checkbox"/> |
| 3. Reviewed "Groundwater Monitoring Well Sampling General Job Safety Analysis included in the HASP. | <input checked="" type="checkbox"/> |
| 4. Exceptional circumstances today that are not covered by the HASP, JSA or JMP have been addressed and mitigated. | <input checked="" type="checkbox"/> |
| 5. Understands procedure to follow, if site circumstances change, to address new site hazards. | <input checked="" type="checkbox"/> |
| 6. There are no unexpected conditions which would make your task a Special Permit Required Task. If there is, contact your Project Manager. | <input checked="" type="checkbox"/> |
| 7. All site hazards have been communicated to all necessary onsite personnel during tailgate safety meeting. | <input checked="" type="checkbox"/> |
| 8. After lunch tailgate safety meeting refresher conducted. | <input checked="" type="checkbox"/> |

If Checklist Task cannot be completed, explain:

Permit To Work Authority:

Ryan Prevorsek
Name

PM
Title

3/20/14
Date

9:30
Time

SCOPE OF WORK

GROUNDWATER MONITORING FOR CUSA

SITE ADDRESS: 1602 N Northlake Place
 CITY: Seattle
 State: Washington

Lab: Lancaster
 Phone: (717) 656-2300
 Contact: Natalie Luciano

Site # 100-1327
 Consultant: ARCADIS
 Contact: Sam Miles
 Phone: 206-853-7428 Cell
 Fax: 206-726-4720

Lock/Key: 1776/1911
 Gauge to: TOC

Engineer: Marlea Harmon
 Phone #:

Required regulatory notifications/ cooperative sampling requirements: Department of Ecology

Well I.D.	Required Analyses	Sampling Frequency	Sampling Months	Gauging Frequency	Remedial Devices	Notes & Tasks
MW-3	NONE	NEVER	NONE	QRTLY		Check for SPH
MW-4	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QRTLY		
MW-7	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QRTLY		
MW-8A	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QRTLY		Take Dup
MW-9	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QRTLY		Check for SPH
MW-10	None	Never	None	QRTLY		
MW-11	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	Semi-Annual		
MW-14	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	Semi-Annual		
MW-15	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	Semi-Annual		
MW-19	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QRTLY		Cone Off
MW-20	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QRTLY		Cone Off
MW-21	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QRTLY		Cone Off
MW-22	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	Semi-Annual		
MW-24	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	Semi-Annual		
MW-25	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QRTLY		

SCOPE OF WORK

GROUNDWATER MONITORING FOR CUSA

SITE ADDRESS: 1602 N Northlake Place

Lab: Lancaster

Site # 100-1327

MW-26	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QRTLY		
MW-27	NONE	NEVER	NONE	QRTLY		Check for SPH
SMPN-1	NONE	NEVER	NONE	QRTLY		Check for SPH
SMPN-2	NONE	NEVER	NONE	QRTLY		Check for SPH
SMPN-3	NONE	NEVER	NONE	QRTLY		Check for SPH
AGI-2	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QRTLY		
MLU-1	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QRTLY		
MLU-3	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QRTLY		
DUP	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	Semi-Annual		Take on MW-8A
QA	BTE by 8021	Semi-Annual	MAY/NOV	QRTLY		

SCOPE OF WORK

GROUNDWATER MONITORING FOR CUSA

SITE ADDRESS: 1602 N Northlake Place

Lab: Lancaster

Site # 100-1327

CHANGES AND SPECIAL INSTRUCTIONS:

BTE by 8021- (3) HCl VOA's (BTEX without the xylenes)

Dissolved Arsenic and Dissolved Lead (1) 250ml HNO3 Poly (Field Filtered)

Dissolved cPAHs and naphthalenes (8270c SIM) (2) 250 Round Amber Glass (Field Filtered)

cPAHs (2) 250 Round Amber Glass

DO NOT SAMPLE WELL WITH SPH: If a well that historically does not have SPH call in to Project manager before sampling the well.

NAPL Recovery: Bring Six Absorbent Socks to replace socks in wells with NAPL (MW-3, MW-9, MW-27, SMPN-1, SMPN-2, and SMPN-3)

Waste Disposal: Need 2 New 55 Gallon Drums for GWM and Absorbent Socks in lower yard, put non-HAZ label on them. *Over pack on site*

Cone Wells off day before job takes place: MW-19, MW-20, MW-21

Low-Flow Purge with Peri - Pump

- These wells will be purged at a rate of 100- 500 ml/min.
- One system volume is must be purged prior to sample collection
- $617 \times (\text{Tubing ID radius} \times \text{Tubing Length}) = 1 \text{ system volume in mL}$
- Parameters will be taken with the YSI 556 Flow Cell.
- Collect Parameters every 3 min.
- Sample through tubing when 3 consecutive stable parameters (4- 5 parameters min.)
- Stabilization Requirements:
 - Temp= 10C
 - PH = 0.1
 - Conductivity = 3%
 - Turbidity = 10% if >5NTU
 - DO = 0.3mg/L
 - ORP = 10 MV
- Decon thoroughly between wells. Use liquinox with steam cleaner

ADDITIONAL EQUIPMENT:

Interface Probe

NOTIFICATIONS:

(360-670-5884) Cell

Rory Henneck 206-726-4732 (GW Coord Contact)

1911

Center for Wooden Boats, Kyle Hunter 206-382-2628x32 for Combination to lock (~~4776~~ previously)

Touchstone Corp, Paul Klansnic 206-357-2305, Cell 425-417-5109 has the Key to SMPN well and MW-3 areas

Contact James Lemieux

206-432-8991

206-450-5084

WELL GAUGING DATA

Project # 140010-LB1 Date 6/10/14 Client CHEVRON

Site 1602 N. NORTHLAKE PLACE, SEATTLE, WA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-3	0845	2	ODOR	6.97		~50ml	11.88	—		ABS SOCK 286.4
MW-4	1053	2					15.05	19.61		0.0
MW-7	1105	2					12.21	16.38		0.4
MW-8A	1038	2					11.49	24.83		0.0
MW-10	0910	2					7.42	17.83		ABS SOCK 161.3
MW-11	1007	2					9.53	15.63		0.0
MW-14	1121	2					12.61	18.69		0.0
MW-15	1127	2					12.66	18.91		0.0
MW-19	1018	2					11.95	16.46		
MW-20	1024	2					12.51	21.79		
MW-21	1030	2					12.33	20.39		0.0
MW-22	0945	2					13.65	20.75		0.1
MW-24	1000	2					22.85	33.40		
MW-25	1042	4					12.05	19.31		
MW-26	1048	4					11.71	19.88		
MW-27	0926	4	SHEEN				9.25	19.74		ABS SOCK 2.5
SMAN-1	0923	2	ODOR				9.23	14.63	↓	ABS SOCK 20.8

WELL GAUGING DATA

Project # 14060-LB1 Date 6/10/14 Client CHEVRON

Site 1602 N. NORTHLAKE PLACE, SEATTLE, WA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOG	Notes
SMPN-2	0919	2	ODOR				3.74	14.87	↓	ABS SOCK 41.3
SMPN-3	0916	2	ODOR			9.89	14.77	ABS SOCK 12.2		
AGI-2	1112	2	ODOR			11.85	22.31	22.1		
MLG-1	1059	4				13.97	22.35	0.0		
MLG-3	1118	4				11.68	20.62	0.0		
MW-9	0935	2	ODOR	12.19	6.03	200mL	12.22	—		ABS SOCK 98.4
MW-12	0902	2	ODOR	7.62	6.66	200mL	7.68	—		ABS SOCK 138.4

LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>140610-LB</u>	Client: <u>CHEVRON</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/10/14</u>
Well I.D.: <u>MW-4</u>	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): <u>19.61</u>	Depth to Water (ft.): <u>15.05</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PYC</u> Grade	Flow Cell Type: <u>YSE 556</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 0736 Flow Rate: 200 ML/MIN Pump Depth: 17.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or ml)	Depth to Water (ft.)
0733	12.12	7.08	226	18	1.68	62.0	600	15.08
0736	12.08	7.01	229	17	1.65	57.8	1200	15.08
0739	12.07	7.02	230	16	1.63	56.2	1800	15.08
0742	12.06	7.03	232	15	1.62	55.1	2400	15.08
0745	12.05	7.04	233	14	1.61	54.8	3000	15.08

Did well dewater? Yes <input checked="" type="checkbox"/> NO	Amount actually evacuated: <u>3L</u>
Sampling Time: <u>0746</u>	Sampling Date: <u>6/11/14</u>
Sample I.D.: <u>MW-4</u>	Laboratory: <u>LANCASTER</u>
Analyzed for: TPHE PIEX MTBE TPHE	Other: <u>SEE COC</u>
Equipment Blank I.D.: @ _____	Duplicate I.D.: _____

LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>140610-LB1</u>	Client: <u>CHEVRON</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/10/14</u>
Well I.D.: <u>MW-7</u>	Well Diameter (in.): <u>Ø 3 4 6 8</u>
Total Well Depth (ft.): <u>16.38</u>	Depth to Water (ft.): <u>12.21</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>VSE 536</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 0946 Flow Rate: 200 mL / MIN Pump Depth: 14.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or ml)	Depth to Water (ft.)
0949	13.99	6.46	1741	21	1.22	-13.8	600	12.26
0952	13.92	6.49	1749	19	1.21	-22.1	1200	12.26
0955	13.90	6.52	1750	17	1.20	-24.1	1800	12.27
0958	13.88	6.53	1751	16	1.19	-23.2	2400	12.27
1001	13.87	6.54	1753	15	1.18	-22.6	3000	12.27

Did well dewater? Yes <u>NO</u>	Amount actually evacuated: <u>3L</u>
Sampling Time: <u>1002</u>	Sampling Date: <u>6/11/14</u>
Sample I.D.: <u>MW-7</u>	Laboratory: <u>LANCASTER</u>
Analyzed for: <u>TPH-G</u> <u>PTX</u> <u>MTBE</u> <u>TPH-D</u>	Other: <u>SEE COC</u>
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

LOW FLOW WELL MONITORING DATA SHEET

Project #: 140610-LB	Client: CHEVRON
Sampler: LB	Gauging Date: 6/10/14
Well I.D.: MW-8A	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): 24.83	Depth to Water (ft.): 11.49
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	Flow Cell Type: <u>MSI 536</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 0657 Flow Rate: 200 mL / MIN Pump Depth: 18.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
0700	12.45	6.65	145	10	1.98	48.5	600	11.52
0703	12.37	6.64	147	15	1.95	46.3	1200	11.52
0706	12.35	6.62	148	14	1.93	44.2	1800	11.52
0709	12.34	6.61	149	13	1.92	43.6	2400	11.52
0712	12.33	6.62	150	12	1.91	42.1	3000	11.52

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Amount actually evacuated: <u>3L</u>
Sampling Time: <u>0713</u>	Sampling Date: <u>6/11/14</u>
Sample I.D.: <u>MW-8A</u>	Laboratory: <u>LANCASTER</u>
Analyzed for: TPH-G <input checked="" type="checkbox"/> BTEX <input checked="" type="checkbox"/> MTBE <input type="checkbox"/> TPH-D	Other: <u>SEE LOG</u>
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: <u>DUP</u>

LOW FLOW WELL MONITORING DATA SHEET

Project #: 140610-LB	Client: CHEVRON
Sampler: LB	Gauging Date: 6/10/14
Well I.D.: MW-9	Well Diameter (in.): <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 6 <input type="checkbox"/> 8
Total Well Depth (ft.): _____	Depth to Water (ft.): 12.22
Depth to Free Product: 12.19	Thickness of Free Product (feet): 0.03
Referenced to: <u>PVC</u> Grade	Flow Cell Type: _____

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: _____ Flow Rate: _____ Pump Depth: _____

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
_____			0.03'	SPH	DETECTED w/			
			TINTERFACE	PROBE				
_____			APPROX 200 mL	OF SPH	+ H ₂ O			
			REMOVED FROM WELL					
_____			DRUMMED	ONSITE				
_____			ABS SOCK	INSTALLED				
_____			NO SAMPLE	TAKEN				

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Amount actually evacuated: _____
Sampling Time: _____	Sampling Date: _____
Sample I.D.: _____	Laboratory: _____
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: _____
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

LOW FLOW WELL MONITORING DATA SHEET

Project #: 140610-LR1	Client: CHEVRON
Sampler: LB	Gauging Date: 6/6/14
Well I.D.: MW-11	Well Diameter (in.): ② 3 4 6 8 ____
Total Well Depth (ft.): 15.63	Depth to Water (ft.): 9.53
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVO Grade	Flow Cell Type: VSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____

Start Purge Time: 1236 Flow Rate: 200 mL / MIN Pump Depth: 13'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or gal)	Depth to Water (ft.)
1239	17.35	6.82	277	18	1.73	73.4	600	9.55
1242	17.46	6.83	278	16	1.68	71.7	1200	9.55
1245	17.46	6.82	276	15	1.67	70.2	1800	9.55
1248	17.45	6.81	275	14	1.66	69.2	2400	9.55
1251	17.44	6.80	274	13	1.65	68.3	3000	9.55

Did well dewater? Yes <input checked="" type="checkbox"/> No	Amount actually evacuated: 3 L
Sampling Time: 1252	Sampling Date: 6/11/14
Sample I.D.: MW-11	Laboratory: LANCASTER
Analyzed for: TPH-G <input checked="" type="checkbox"/> BTEX MTBE TPH-D	Other: SEE COC
Equipment Blank I.D.: @ Time	Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>140610-LR1</u>	Client: <u>CHEVRON</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/10/14</u>
Well I.D.: <u>MW-14</u>	Well Diameter (in.): <u>3</u> <u>4</u> <u>6</u> <u>8</u> <u> </u>
Total Well Depth (ft.): <u>18.69</u>	Depth to Water (ft.): <u>12.61</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PV0</u> Grade	Flow Cell Type: <u>YSE 556</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____

Start Purge Time: 1102 Flow Rate: 200 mL / MIN Pump Depth: 16'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1105	13.33	6.72	218	18	1.19	39.4	600	12.63
1108	13.31	6.71	220	16	1.15	30.1	1200	12.63
1111	13.29	6.76	221	15	1.14	29.6	1800	12.63
1114	13.26	6.69	222	14	1.13	28.1	2400	12.63
1117	13.27	6.68	233	13	1.12	27.6	3000	12.63

Did well dewater? Yes <u>No</u>	Amount actually evacuated: <u>3L</u>
Sampling Time: <u>1118</u>	Sampling Date: <u>6/11/14</u>
Sample I.D.: <u>MW-14</u>	Laboratory: <u>LANCASTER</u>
Analyzed for: TPH-G <u>BTEX</u> MTBE TPH-D Other: <u>SEE COX</u>	
Equipment Blank I.D.: @ Time	Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 140610-LA	Client: CHEVRON
Sampler: LB	Gauging Date: 6/10/14
Well I.D.: MW-15	Well Diameter (in.): \varnothing 3 4 6 8
Total Well Depth (ft.): 18.91	Depth to Water (ft.): 12.66
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: RVD Grade	Flow Cell Type: Y3 E 55L

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1131 Flow Rate: 200 mL / MIN Pump Depth: 16'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or μ S/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1134	12.96	6.58	212	22	1.51	28.4	600	12.69
1137	12.91	6.61	210	20	1.48	25.6	1200	12.69
1140	12.93	6.63	198	18	1.47	24.1	1800	12.69
1143	12.94	6.64	197	17	1.46	23.2	2400	12.69
1146	12.95	6.65	196	16	1.45	22.6	3000	12.69

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Amount actually evacuated: 3L
Sampling Time: 1147	Sampling Date: 6/11/14
Sample I.D.: MW-15	Laboratory: LANCASTER
Analyzed for: TPH-G <input checked="" type="checkbox"/> BTEX <input checked="" type="checkbox"/> MTBE TPH-D	Other: <input checked="" type="checkbox"/> SEE CDC
Equipment Blank I.D.: @ <small>Time</small>	Duplicate I.D.:

Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (408) 573-0555

LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>140610-LB1</u>	Client: <u>CHEVRON</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/15/14</u>
Well I.D.: <u>MW-19</u>	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): <u>16.46</u>	Depth to Water (ft.): <u>11.95</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVG</u> Grade	Flow Cell Type: <u>YSI 536</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1217 Flow Rate: 200 mL/MIN Pump Depth: 14.5

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or ml)	Depth to Water (ft.)
1220	16.51	7.05	421	18	1.93	109.8	600	11.98
1223	16.55	6.98	414	16	1.71	90.8	1200	11.99
1226	16.53	6.96	413	14	1.69	86.8	1800	11.99
1229	16.54	6.97	413	13	1.68	85.2	2400	11.99
1232	16.56	6.98	412	12	1.67	84.3	3000	11.99

Did well dewater? Yes <input checked="" type="checkbox"/> NO <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3L</u>
Sampling Time: <u>1233</u>	Sampling Date: <u>6/10/14</u>
Sample I.D.: <u>MW-19</u>	Laboratory: <u>LANCASTER</u>
Analyzed for: <u>TRIG</u> <u>BTEX</u> MTBE TPH-D	Other: <u>SEE COC</u>
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (408) 573-0555

LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>140610-LB1</u>	Client: <u>CHEVRON</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/10/14</u>
Well I.D.: <u>MW-20</u>	Well Diameter (in.): <u>Ø 3 4 6 8</u> _____
Total Well Depth (ft.): <u>21.79</u>	Depth to Water (ft.): <u>12.57</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>ISE 556</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____

Start Purge Time: 1249 Flow Rate: 200 mL / MIN Pump Depth: 17.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or ml)	Depth to Water (ft.)
1252	16.60	7.17	999	17	1.56	50.5	600	12.61
1255	16.66	7.19	1019	16	1.51	48.4	1200	12.61
1258	16.64	7.20	1020	15	1.50	47.3	1800	12.61
1301	16.63	7.21	1021	14	1.49	46.9	2400	12.61
1304	16.62	7.23	1022	13	1.48	45.4	3000	12.61

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3L</u>
Sampling Time: <u>1305</u>	Sampling Date: <u>6/10/14</u>
Sample I.D.: <u>MW-20</u>	Laboratory: <u>LANCASTER</u>
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: <u>SEE COC</u>
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

LOW FLOW WELL MONITORING DATA SHEET

Project #: 140610-LB1	Client: CHEVRON
Sampler: LB	Gauging Date: 6/10/14
Well I.D.: MWI-21	Well Diameter (in.): ② 3 4 6 8
Total Well Depth (ft.): 20.39	Depth to Water (ft.): 12.33
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PN</u> Grade	Flow Cell Type: <u>YSE 556</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 0915 Flow Rate: 200 mL / MIN Pump Depth: 16.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or μS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
0918	16.33	6.70	795	18	1.24	-5.2	600	12.38
0921	16.48	6.74	788	16	1.21	-12.2	1200	12.38
0924	16.49	6.76	786	14	1.20	-14.3	1800	12.39
0927	16.50	6.77	785	13	1.19	-15.8	2400	12.39
0930	16.51	6.78	784	12	1.18	-16.2	3000	12.39

Did well dewater? Yes <u>Ng</u>	Amount actually evacuated: <u>3L</u>
Sampling Time: <u>0931</u>	Sampling Date: <u>6/11/14</u>
Sample I.D.: <u>MW-21</u>	Laboratory: <u>LANCASTER</u>
Analyzed for: TPH-G <u>BTEX</u> MTBE TPH-D	Other: <u>SEE CAL</u>
Equipment Blank I.D.: @ _____ Time	Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>140610-LB1</u>	Client: <u>CHEVRON</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/10/14</u>
Well I.D.: <u>MW-22</u>	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): <u>20.75</u>	Depth to Water (ft.): <u>13.65</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PYC</u> Grade	Flow Cell Type: <u>YSI 556</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1203 Flow Rate: 200 mL/MIN Pump Depth: 17.5

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or ml)	Depth to Water (ft.)
1206	18.04	6.80	1242	22	1.01	-12.0	600	13.68
1209	18.14	6.86	1230	18	0.95	-25.3	1200	13.68
1212	18.13	6.90	1227	17	0.94	-31.6	1800	13.68
1215	18.12	6.91	1225	16	0.95	-32.8	2400	13.68
1218	18.10	6.92	1224	15	0.92	-33.4	3000	13.68

Did well dewater? Yes <input checked="" type="checkbox"/> No	Amount actually evacuated: <u>3L</u>
Sampling Time: <u>1219</u>	Sampling Date: <u>6/11/14</u>
Sample I.D.: <u>MW-22</u>	Laboratory: <u>LANCASTER</u>
Analyzed for: TPH-G <input checked="" type="checkbox"/> BTEX <input checked="" type="checkbox"/> MTBE TPH-D	Other <input checked="" type="checkbox"/> <u>SEE COC</u>
Equipment Blank I.D.: @ _____ Time	Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 140610-LB1	Client: CHEVRON
Sampler: LB	Gauging Date: 6/10/14
Well I.D.: MW-24	Well Diameter (in.): \varnothing 3 4 6 8 _____
Total Well Depth (ft.): 33.40	Depth to Water (ft.): 22.85
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVE Grade	Flow Cell Type: YSE 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1142 Flow Rate: 200 mL / MIN Pump Depth: 28.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or ml)	Depth to Water (ft.)
1145	16.04	6.74	675	48	2.22	118.6	600	22.93
1148	15.80	6.73	676	18	2.17	99.2	1200	22.93
1151	15.83	6.71	676	17	2.16	98.3	1800	22.93
1154	15.82	6.70	677	16	2.14	97.8	2400	22.93
1157	15.81	6.69	678	15	2.12	96.2	3000	22.93

Did well dewater? Yes <input checked="" type="checkbox"/> No	Amount actually evacuated: 3L
Sampling Time: 1158	Sampling Date: 6/10/14
Sample I.D.: MW-24	Laboratory: LANCASTER
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: SEE COC
Equipment Blank I.D.: @ <small>Time</small>	Duplicate I.D.:

Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (408) 573-0555

LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>140610-LB1</u>	Client: <u>CHEVRON</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/10/14</u>
Well I.D.: <u>MW-25</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>19.31</u>	Depth to Water (ft.): <u>12.05</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PTG</u> Grade	Flow Cell Type: <u>YSE 536</u>

Purge Method: 2" Grundfos Pump ~~Peristaltic Pump~~ Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____

Start Purge Time: 1335 Flow Rate: 200 mL / MIN Pump Depth: 16'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or ml)	Depth to Water (ft.)
1338	14.47	6.52	926	16	1.55	58.8	600	12.07
1341	14.60	6.56	928	14	1.50	57.3	1200	12.07
1344	14.58	6.56	930	13	1.49	56.7	1800	12.07
1347	14.57	6.55	931	12	1.48	55.2	2400	12.07
1350	14.56	6.54	932	11	1.47	54.6	3000	12.07

Did well dewater? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>31</u>
Sampling Time: <u>1351</u>	Sampling Date: <u>6/10/14</u>
Sample I.D.: <u>MW-25</u>	Laboratory: <u>LANCASTER</u>
Analyzed for: <u>TPH-G</u> <u>BTEX</u> <u>MTBE</u> <u>TPH-D</u>	Other: <u>SEE COC</u>
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

LOW FLOW WELL MONITORING DATA SHEET

Project #: 140610-LB1	Client: CHEVRON
Sampler: LB	Gauging Date: 6/10/14
Well I.D.: MW-26	Well Diameter (in.): 2 3 ④ 6 8
Total Well Depth (ft.): 19.88	Depth to Water (ft.): 11.71
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVO Grade	Flow Cell Type: YSE 536

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1402 Flow Rate: 200 mL / MIN Pump Depth: 16'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or ml)	Depth to Water (ft.)
1405	15.36	6.61	770	19	1.74	108.9	600	11.74
1408	15.24	6.70	771	17	1.68	104.2	1200	11.74
1411	15.23	6.74	769	15	1.67	102.9	1800	11.74
1414	15.24	6.75	768	14	1.66	101.4	2400	11.74
1417	15.25	6.76	767	13	1.65	100.6	3000	11.75

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Amount actually evacuated: 3L
Sampling Time: 1418	Sampling Date: 6/10/14
Sample I.D.: MW-26	Laboratory: LANCASTER
Analyzed for: TPH-G <input checked="" type="checkbox"/> MTBE <input type="checkbox"/> TPH-D <input type="checkbox"/> Other: SEE COL	
Equipment Blank I.D.: @ Time	Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 140610-LR1	Client: CHEVRON
Sampler: LB	Gauging Date: 6/10/14
Well I.D.: AGE-2	Well Diameter (in.): <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8 <input type="radio"/> _____
Total Well Depth (ft.): 22.31	Depth to Water (ft.): 11.85
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	Flow Cell Type: YSI 506

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 0843 Flow Rate: 200 mL / MIN Pump Depth: 17.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
0846	13.55	6.75	931	19	0.96	-16.1	600	11.88
0849	13.61	6.75	935	17	0.87	-13.4	1200	11.88
0852	13.65	6.70	940	15	0.86	-19.2	1800	11.88
0855	13.66	6.71	939	14	0.85	-20.4	2400	11.88
0858	13.67	6.72	938	13	0.84	-21.6	3000	11.88

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Amount actually evacuated: 3L
Sampling Time: 0859	Sampling Date: 6/11/14
Sample I.D.: AGE-2	Laboratory: LANCASTER
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: SEE COC
Equipment Blank I.D.: @ Time	Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 140610-LB1	Client: CHEVRON
Sampler: LB	Gauging Date: 6/10/14
Well I.D.: MLU-1	Well Diameter (in.): 2 3 <u>4</u> 6 8
Total Well Depth (ft.): 22.35	Depth to Water (ft.): 13.97
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Grade	Flow Cell Type: YSL 536

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 0808 Flow Rate: 200 mL/MIN Pump Depth: 18.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
0811	11.36	6.85	144	15	1.85	68.8	600	13.99
0814	11.27	6.78	151	13	1.82	67.3	1200	13.99
0817	11.26	6.76	150	12	1.80	65.2	1800	13.99
0820	11.25	6.75	149	11	1.79	64.3	2400	13.99
0823	11.24	6.74	147	10	1.78	63.2	3000	13.99

Did well dewater? Yes No Amount actually evacuated: 3L

Sampling Time: 0824 Sampling Date: 6/11/14

Sample I.D.: MLU-1 Laboratory: LANCASTER

Analyzed for: TPH-G BTEX MTBE TPH-D Other: SEE CAL

Equipment Blank I.D.: @ _____ Time Duplicate I.D.: _____

Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (408) 573-0555

LOW FLOW WELL MONITORING DATA SHEET

Project #: 140610 - LBI	Client: CHEVRON
Sampler: LB	Gauging Date: 6/10/14
Well I.D.: MLU-3	Well Diameter (in.): 2 3 ④ 6 8
Total Well Depth (ft.): 20.62	Depth to Water (ft.): 11.68
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PPG Grade	Flow Cell Type: YSI 536

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1017 Flow Rate: 200 mL / MIN Pump Depth: 16.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or μS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or ml)	Depth to Water (ft.)
1020	15.81	6.33	1038	18	1.75	22.1	600	11.70
1023	15.76	6.44	1041	16	1.67	16.0	1200	11.70
1026	15.77	6.45	1043	14	1.64	14.8	1800	11.70
1029	15.78	6.44	1044	13	1.63	13.2	2400	11.70
1032	15.79	6.43	1045	12	1.62	12.4	3000	11.70

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: 3L
Sampling Time: 1033	Sampling Date: 6/11/14
Sample I.D.: MLU-3	Laboratory: LANCASTER
Analyzed for: TPH-G <input checked="" type="checkbox"/> BTEX <input checked="" type="checkbox"/> MTBE <input type="checkbox"/> TPH-D <input type="checkbox"/>	Other: SEE COL
Equipment Blank I.D.: @ Time	Duplicate I.D.:

Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (408) 573-0555

CHAIN OF CUSTODY FORM

Chevron Environmental Management Company ■ 6001 Bollinger Canyon Road ■ San Ramon, CA 94583-2324 COC 1 of 2


Chevron Site Number: <u>100-1327</u> Program Designation: <u>CMP</u> Site Address (street, city, state / county): <u>1602 N Northlake Place, Seattle, WA</u> Chevron PM: <u>Marlea Harmon</u> Chevron PM Phone No.: _____ <input type="checkbox"/> Retail and Terminal Business Unit (RTBU) Job <input type="checkbox"/> Construction/Retail Job				Chevron Consultant: <u>ARCADIS</u> Address: <u>1100 olive Way, Suite 800, Seattle WA</u> Consultant Contact: <u>Sam Miles</u> Consultant Phone No. <u>206-853-7428</u> Consultant Project No. <u>140G10-LB1</u> Sampling Company: <u>Blaine Tech Services</u> Sampled By (Print): <u>LEE BURES</u> Sampler Signature:				ANALYSES REQUIRED													
Charge Code: <u>NWRTB 00SITE NUMBER-0- OML</u> WBS ELEMENTS: SITE ASSESSMENT: A1L REMEDIATION IMPLEMENTATION: R6L SITE MONITORING: OML OPERATION MAINTENANCE & MONITORING: M1L				Lancaster Laboratories <input checked="" type="checkbox"/> Lancaster, PA Lab Contact: Megan Moeller 2425 New Holland Pike, Lancaster, PA 17801 Phone No: (717)656-2300		Other Lab _____ _____ _____ _____		Temp. Blank Check Time Temp. _____ _____ _____ _____ _____ _____ _____ _____		HCL NH4-N NH4-P NH4-S NH4-T NH4-U NH4-V NH4-W NH4-X NH4-Y NH4-Z DISSOLVED NAPHTHALENES <input checked="" type="checkbox"/> DISSOLVED CPAHS (8270C SIM) <input checked="" type="checkbox"/> DISSOLVED LEAD <input checked="" type="checkbox"/> DISSOLVED ARSENIC <input checked="" type="checkbox"/> CPAH'S <input type="checkbox"/> 8270 SIM TPH-G (NWTPH-Gx) ALKALINITY 2320 <input type="checkbox"/> DISSOLVED LEAD (6020) TPH-D AND TPH-O BY (NWTPH-DX) RBDM VOCs (OREGON RISK BASED DECISION MAKING LIST) SULFATE 300 <input type="checkbox"/> NITRATE 300 <input type="checkbox"/> FERROUS IRON SM20.3500 <input type="checkbox"/>											
SAMPLE ID																					
Field Point Name	Matrix	Top Depth	Date (yyymmdd)	Sample Time	# of Containers	Container Type	BTE BY 8021 <input checked="" type="checkbox"/>	DISSOLVED NAPHTHALENES <input checked="" type="checkbox"/>	DISSOLVED CPAHS (8270C SIM) <input checked="" type="checkbox"/>	6020 DISSOLVED LEAD <input checked="" type="checkbox"/>	CPAH'S <input type="checkbox"/> 8270 SIM	TPH-G (NWTPH-Gx)	ALKALINITY 2320 <input type="checkbox"/>	DISSOLVED LEAD (6020)	TPH-D AND TPH-O BY (NWTPH-DX)	RBDM VOCs (OREGON RISK BASED DECISION MAKING LIST)	SULFATE 300 <input type="checkbox"/> NITRATE 300 <input type="checkbox"/> FERROUS IRON SM20.3500 <input type="checkbox"/>	Special Instructions			
Notes/Comments																					
MW-4	GW	—	140611	0746	6	VOL, AMBER, POLY	X	X	X	X											
MW-7	GW	—	140611	1002	6		X	X	X	X											
MW-8A	GW	—	140611	0713	6		X	X	X	X											
MW-11	GW	—	140611	1252	6		X	X	X	X											
MW-14	GW	—	140611	1118	6		X	X	X	X											
MW-15	GW	—	140611	1147	6		X	X	X	X											
MW-19	GW	—	140610	1233	6		X	X	X	X											
MW-20	GW	—	140610	1305	6		X	X	X	X											
MW-21	GW	—	140611	0931	6		X	X	X	X											
MW-22	GW	—	140611	1219	6		X	X	X	X											
Relinquished By _____ Company _____ Date/Time: <u>6/11/14</u>				Relinquished To _____ Company _____ Date/Time _____				Turnaround Time: Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> 48 hours <input type="checkbox"/> 72 Hours <input type="checkbox"/> Other <input type="checkbox"/>													
Relinquished By _____ Company _____ Date/Time _____				Relinquished To _____ Company _____ Date/Time _____				Sample Integrity: (Check by lab on arrival) Intact: _____ On Ice: _____ Temp: _____ COC # _____													
Relinquished By _____ Company _____ Date/Time _____				Relinquished To _____ Company _____ Date/Time _____																	

CHAIN OF CUSTODY FORM

Chevron Environmental Management Company ■ 6001 Bollinger Canyon Road ■ San Ramon, CA 94583-2324

COC 2 of 2

Chevron Site Number: 100-1327
 Program Designation: CMP
 Site Address (street, city, state / county): 1602 N Northlake Place, Seattle, WA
 Chevron PM: Marlea Harmon
 Chevron PM Phone No.:
 Retail and Terminal Business Unit (RTBU) Job
 Construction/Retail Job

Chevron Consultant: ARCADIS
 Address: 1100 olive Way, Suite 800, Seattle WA
 Consultant Contact: Sam Miles
 Consultant Phone No. 206-853-7428
 Consultant Project No. 140610-LB1
 Sampling Company: Blaine Tech Services
 Sampled By (Print): LIEBURES
 Sampler Signature: 


Charge Code: NWRTB 00SITE NUMBER-0- OML
WBS ELEMENTS:
 SITE ASSESSMENT: A1L REMEDIATION IMPLEMENTATION: R5L
 SITE MONITORING: OML OPERATION MAINTENANCE & MONITORING: M1L

Lancaster Laboratories
 Lancaster, PA
 Lab Contact: Megan Moeller
 2425 New Holland Pike,
 Lancaster, PA 17601
 Phone No: (717)656-2300

Other Lab	Temp. Blank Check Time	Temp.

ANALYSES REQUIRED												Preservation Codes		
<input checked="" type="checkbox"/> BTE BY 8021	<input checked="" type="checkbox"/> DISSOLVED NAPHTHALENES	<input checked="" type="checkbox"/> DISSOLVED CPAHS (8270C SIM)	<input checked="" type="checkbox"/> 6020 DISSOLVED LEAD	<input checked="" type="checkbox"/> 6020 DISSOLVED ARSENIC	<input type="checkbox"/> CPAHS 8270 SIM	<input type="checkbox"/> TPH-G (NWTPH-GX)	<input type="checkbox"/> ALKALINITY 2320	<input type="checkbox"/> DISSOLVED LEAD (6020)	<input type="checkbox"/> TPH-D AND TPH-O BY (NWTPH-DX)	<input type="checkbox"/> RBDM VOCs (OREGON RISK BASED DECISION MAKING LIST)	<input type="checkbox"/> SULFATE 300	<input type="checkbox"/> NITRATE 300	<input type="checkbox"/> FERROUS IRON SIM20 3500	H = HCL T= Thiosulfate N = HNO3 B = NaOH S = H2SO4 O = Other
Special Instructions														
Notes/Comments														

SAMPLE ID				Sample Time	# of Containers	Container Type	ANALYSES REQUIRED												
Field Point Name	Matrix	Top Depth	Date (yyymmdd)				BTE BY 8021	DISSOLVED NAPHTHALENES	DISSOLVED CPAHS (8270C SIM)	6020 DISSOLVED LEAD	6020 DISSOLVED ARSENIC	CPAHS 8270 SIM	TPH-G (NWTPH-GX)	ALKALINITY 2320	DISSOLVED LEAD (6020)	TPH-D AND TPH-O BY (NWTPH-DX)	RBDM VOCs (OREGON RISK BASED DECISION MAKING LIST)	SULFATE 300	NITRATE 300
MW-24	GW	---	140610	1158	6	VIA AMBER POLY	X	X	X	X									
MW-25	GW	---	140610	1351	6		X	X	X	X									
MW-26	GW	---	140610	1418	6		X	X	X	X									
AGE-2	GW	---	140611	0859	6		X	X	X	X									
MLU-1	GW	---	140611	0824	6		X	X	X	X									
MLU-3	GW	---	140611	1033	6		X	X	X	X									
DUP	GW	---	140611	---	6		X	X	X	X									
QA	GW	---	140610	0800	3	VIA	X												

Relinquished By: 	Company: _____	Date/Time: <u>6/11/14</u>	Relinquished To: _____	Company: _____	Date/Time: _____
Relinquished By: _____	Company: _____	Date/Time: _____	Relinquished To: _____	Company: _____	Date/Time: _____
Relinquished By: _____	Company: _____	Date/Time: _____	Relinquished To: _____	Company: _____	Date/Time: _____

Turnaround Time:
 Standard 24 Hours 48 hours 72 Hours
 Other
 Sample Integrity: (Check by lab on arrival)
 Intact: _____ On Ice: _____ Temp: _____
 COC # _____

WELLHEAD INSPECTION FORM

Client: CHEVRON Site: 1602 N. NORTH LAKE PL, SEATTLE, WA Date: 6/10/14
 Job #: 140610-LB1 Technician: L. BURES Page 1 of

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency											Well Not Inspected (explain in notes)	Notes <small>(list if cap or lick replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)</small>		
		Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty)	Tabs stripped (list qty)	Tabs broken (list qty)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade			Other (explain in notes)	
MW-3	Y															
MW-4				X												STAND PIPE
MW-7						3/3										
MW-8A						3/3										
MW-10	X															
MW-11	Y															
MW-14	X															
MW-15	X															
MW-19						3/3										
MW-20						2/3	1/3									
MW-21					1/3	3/3										
MW-22	X															
MW-24	X															
MW-25						3/3										
MW-26	X															
MW-27	X															
SMPAI-1						3/3										

NOTES: _____

WELLHEAD INSPECTION FORM

Client: CHEVRON Site: 1602 N. NORTH LAKE PL. SEATTLE, WA Date: 6/10/14
 Job #: 140610-LB1 Technician: L. BURES Page 2 of 2

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency											Well Not Inspected (explain in notes)	Notes <small>(list if cap or lick replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)</small>		
		Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty)	Tabs stripped (list qty)	Tabs broken (list qty)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade			Other (explain in notes)	
SMPN-2					3/3											
SMPN-3					3/3											
AGE-2						1/2										
MLU-1				X												STAND PIPE
MLU-3				X												UNDER PLATE
MW-9					1/3											
MW-12	X															

NOTES: _____

Permit To Work

for Chevron EMC Sites

Client: ARCADES Date 6/16/14
 Site Address: 1602 N. NORTH LAKE PL., SEATTLE
 Job Number: 1410810-UB1 Technician(s): LIBURES

Pre-Job Safety Review

1. JMP reviewed, site restrictions and parking/access issues addressed.	Reviewed: <input checked="" type="checkbox"/>
2. Special Permit Required Task Review	
Are there any conditions or tasks that would require:	
Confined space entry	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Working at height	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Lock-out/Tag-out	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Excavations greater than 4 feet deep	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Excavations within 3 feet of a buried active electrical line or product piping or within 10 feet of a high pressure gas line.	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Use of overhead equipment within 15 feet of an overhead electrical power line or pole supporting one	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hot work	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<p>If "Yes" was the answer to any of the Special Permit Required Tasks above, the Project Manager will contact the client and arrange to modify the Scope of Work so that the Special Permit Required Tasks are not required to be performed by Blaine Tech Services employees.</p>	
3. Is a Traffic Control Permit required for today's work?	
	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	If so is it in the folder? <input type="checkbox"/> <input checked="" type="checkbox"/>
	Is it current? <input type="checkbox"/> <input checked="" type="checkbox"/>
Do you understand the Traffic Control Plan and what equipment you will need? <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	

On-site Pre-Job Safety Review

1. Reviewed and signed the site specific HASP.	<input checked="" type="checkbox"/>
2. Route to hospital understood.	<input checked="" type="checkbox"/>
3. Reviewed "Groundwater Monitoring Well Sampling General Job Safety Analysis included in the HASP.	<input checked="" type="checkbox"/>
4. Exceptional circumstances today that are not covered by the HASP, JSA or JMP have been addressed and mitigated.	<input checked="" type="checkbox"/>
5. Understands procedure to follow, if site circumstances change, to address new site hazards.	<input checked="" type="checkbox"/>
6. There are no unexpected conditions which would make your task a Special Permit Required Task. If there is, contact your Project Manager.	<input checked="" type="checkbox"/>
7. All site hazards have been communicated to all necessary onsite personnel during tailgate safety meeting.	<input checked="" type="checkbox"/>
8. After lunch tailgate safety meeting refresher conducted.	<input checked="" type="checkbox"/>
If Checklist Task cannot be completed, explain:	

Permit To Work Authority: Ryan Prebo PM 3/20/14 9:30
 Name Title Date Time

Permit To Work

for Chevron EMC Sites

Client: ARCADES Date 6/11/14
 Site Address: 1602 N. NORTHLAKE PL, SEATTLE
 Job Number: 140610-LB1 Technician(s): L. BURES

Pre-Job Safety Review

1. JMP reviewed, site restrictions and parking/access issues addressed.	Reviewed: <input checked="" type="checkbox"/>
2. Special Permit Required Task Review	
Are there any conditions or tasks that would require:	
Confined space entry	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Working at height	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Lock-out/Tag-out	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Excavations greater than 4 feet deep	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Excavations within 3 feet of a buried active electrical line or product piping or within 10 feet of a high pressure gas line.	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Use of overhead equipment within 15 feet of an overhead electrical power line or pole supporting one	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hot work	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<p>If "Yes" was the answer to any of the Special Permit Required Tasks above, the Project Manager will contact the client and arrange to modify the Scope of Work so that the Special Permit Required Tasks are not required to be performed by Blaine Tech Services employees.</p>	
3. Is a Traffic Control Permit required for today's work?	
If so is it in the folder?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Is it current?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Do you understand the Traffic Control Plan and what equipment you will need?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

On-site Pre-Job Safety Review

1. Reviewed and signed the site specific HASP.	<input checked="" type="checkbox"/>
2. Route to hospital understood.	<input checked="" type="checkbox"/>
3. Reviewed "Groundwater Monitoring Well Sampling General Job Safety Analysis included in the HASP.	<input checked="" type="checkbox"/>
4. Exceptional circumstances today that are not covered by the HASP, JSA or JMP have been addressed and mitigated.	<input checked="" type="checkbox"/>
5. Understands procedure to follow, if site circumstances change, to address new site hazards.	<input checked="" type="checkbox"/>
6. There are no unexpected conditions which would make your task a Special Permit Required Task. If there is, contact your Project Manager.	<input checked="" type="checkbox"/>
7. All site hazards have been communicated to all necessary onsite personnel during tailgate safety meeting.	<input checked="" type="checkbox"/>
8. After lunch tailgate safety meeting refresher conducted.	<input checked="" type="checkbox"/>
If Checklist Task cannot be completed, explain:	

Permit To Work Authority: Ryan Prevorsek PM 3/20/14 930
 Name Title Date Time

SCOPE OF WORK

GROUNDWATER MONITORING FOR CUSA

SITE ADDRESS: **1602 N Northlake Place**
 CITY: **Seattle**
 State: **Washington**

Lab: **Lancaster**
 Phone:(717) 656-2300
 Contact: Natalie Luciano

Site # **100-1327**
 Consultant: **ARCADIS**
 Contact: **Sam Miles**
 Phone: **206-853-7428**
 Fax: **206-726-4720**

Lock/Key: 1776/1911
 Gauge to: **TOC**

Engineer: **Marlea Harmon**
 Phone #:

Required regulatory notifications/ cooperative sampling requirements: Department of Ecology

Well I.D.	Required Analyses	Sampling Frequency	Sampling Months	Gauging Frequency	Remedial Devices	Notes & Tasks
MW-3	NONE	NEVER	NONE	QTRLY		Check for SPH
MW-4	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QTRLY		
MW-7	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QTRLY		
MW-8A	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QTRLY		Take Dup
MW-9	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QTRLY		Check for SPH
MW-10	None	Never	None	QTRLY		
MW-11	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	Semi-Annual		
MW-14	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	Semi-Annual		
MW-15	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	Semi-Annual		
MW-19	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QTRLY		Cone Off
MW-20	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QTRLY		Cone Off
MW-21	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QTRLY		Cone Off
MW-22	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	Semi-Annual		
MW-24	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	Semi-Annual		
MW-25	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QTRLY		
MW-26	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QTRLY		

SCOPE OF WORK

GROUNDWATER MONITORING FOR CUSA

SITE ADDRESS: 1602 N Northlake Place

Lab: Lancaster

Site # 100-1327

MW-27	NONE	NEVER	NONE	QTRLY		Check for SPH
SMPN-1	NONE	NEVER	NONE	QTRLY		Check for SPH
SMPN-2	NONE	NEVER	NONE	QTRLY		Check for SPH
SMPN-3	NONE	NEVER	NONE	QTRLY		Check for SPH
AGI-2	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QTRLY		
MLU-1	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QTRLY		
MLU-3	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	QTRLY		
DUP	BTE by 8021, Dissolved naphthalenes, cPAHs by (8270c SIM), Dissolved cPAHs (8270c SIM), Dissolved Lead (6020), Dissolved Arsenic (6020)	Semi-Annual	MAY/NOV	Semi-Annual		Take on MW-8A
QA	BTE by 8021	Semi-Annual	MAY/NOV	QTRLY		

SITE ADDRESS: 1602 N Northlake Place

Lab: Lancaster

Site # 100-1327

CHANGES AND SPECIAL INSTRUCTIONS:

BTE by 8021- (3) HCl VOA's (BTEX without the xylenes)

Dissolved Arsenic and Dissolved Lead (1) 250ml HNO₃ Poly (**Field Filtered**)Dissolved cPAHs and naphthalenes (8270c SIM) (2) 250 Round Amber Glass (**Field Filtered**)

cPAHs (2) 250 Round Amber Glass

DO NOT SAMPLE WELL WITH SPH: If a well that historically does not have SPH call in to Project manager before sampling the well.

NAPL Recovery: Bring Six Absorbent Socks to replace socks in wells with NAPL (MW-3, MW-9, MW-27, SMPN-1, SMPN-2, and SMPN-3)

Waste Disposal: Need 2 New 55 Gallon Drums for GWM and Absorbent Socks in lower yard, put non-HAZ label on them.

Cone Wells off day before job takes place: MW-19, MW-20, MW-21

Low-Flow Purge with Peri - Pump

- These wells will be purged at a rate of 100- 500 ml/min.
- One system volume is must be purged prior to sample collection
- $617 \times (\text{Tubing ID radius} \times 2 \times \text{Tubing Length}) = 1 \text{ system volume in mL}$
- Parameters will be taken with the YSI 556 Flow Cell.
- Collect Parameters every 3 min.
- Sample through tubing when 3 consecutive stable parameters (4- 5 parameters min.)
- Stabilization Requirements:
 - Temp= 1°C
 - PH = 0.1
 - Conductivity = 3%
 - Turbidity = 10% if >5NTU
 - DO = 0.3mg/L
 - ORP = 10 MV
- Decon thoroughly between wells. Use liquinox with steam cleaner

ADDITIONAL EQUIPMENT:

Interface Probe

NOTIFICATIONS:

Rory Henneck 206-726-4732/ Cell 360-670-5884 (GW Coord Contact)

Center for Wooden Boats, Kyle Hunter 206-382-2628x32 for Combination to lock (1776 previously)

Touchstone Corp, Paul Klansnic 206-357-2305, Cell 425-417-5109 has the Key to SMPN well and MW-3

KE Metro Gauging Round

7/22/2014

S. McGuire
R. Brauchta

0900 - ARCADIS on site don PPE, calibrate PID.

0930 - Gauging Round. #1's tail site form. Review hazards.

Weather: low 60 with scattered showers.

Time	Well	PID (ppm)	DTW (ft btoe)	DTP (ft btoe)
935	MW-30	6.2	12.37	-
940	MW-29	7.4	13.80	-
945	EW-1	1,566	12.25	-
955	MW-27	98.4	10.02	10.015 = DTP (sheen)
1010	MW-11	1.5	10.60	-
1020	MW-10	118.8	8.81	-
1025	MW-28	117.2	7.24	-
1030	MW-12	346.4	8.48	8.44 = DTP
1040	MW-22	0.5	14.34	-
1045	MW-21	1.8	13.05	-
1050	MW-20	242.5	13.35	-
1055	MW-19	1.7	12.73	-
1105	MW-3	624.8	10.52	9.83 = DTP

1115 - MW-9R is secured with allen head screws - off site to get allen keys

1225	MW-9R	1,257	13.31	-
------	-------	-------	-------	---

1230 - ARCADIS off site (to WA-1835)

- ARCADIS returns to label drums @

- ARCADIS out: 1230

Methodology: Wells were measured using a calibrated PID and an oil/water interface probe. The probe was disconnected between wells.

Drum Inventory: Fourteen 55-gallon steel drums - stored in the south yard

- 10 soil drums
- 2 decon water drums
- 2 purge water drums

S. Ryan W. Brauchta
7/22/2014

ARCADIS

Appendix B

Hydraulic Gradient Three Point
Solution Worksheet

Lower Pond / South Pond

Appendix H

Hydraulic Gradient Three Point Solution Worksheet

Instructions to determine groundwater (GW) gradient and flow direction based on static water elevations (SWE) of 3 wells.

SITE NAME: _____

A. Record elevation difference and horizontal distances (HD) between the wells:

Well	Topographic Elevation (ft)	Depth to Static Water (ft bgs*)	SWE (ft)	Wells	HD (ft)
MW-15 #1	-	-	18.94	#1 to #2	140
MLU-1 #2	-	-	18.93	#2 to #3	126
MW-26 #3	-	-	18.91	#3 to #1	110

* bgs = below ground surface

B. Plot the well locations on a scaled diagram

SCALE: _____ " = _____'

SEE FIGURE

C. Perform the following calculations:

1. Calculate the position between the High Static Water Elevation (HSWE) well and the Low Static Water Elevation (LSWE) well where the SWE is the same as the Intermediate Static Water Elevation (ISWE).

(a) HSWE 18.94 minus LSWE 18.91 = (a) 0.03 (ft)

(b) Horizontal distance between HSWE well and LSWE well 110 divided by (a) 0.03 = (b) 3666.6 (ft)

(c) HSWE 18.94 minus ISWE 18.93 = (c) 0.01 (ft)

(d) (b) 3666.6 x (c) 0.01 = (d) 36.66 (ft) (= the horizontal distance between the HSWE well and LSWE well that is equal to the ISWE).

- Measure the distance (d) from the HSWE well along the line between it and the LSWE well, and plot that position on the diagram.
- Draw a straight line from the ISWE well to position (d) on the well location diagram. This represents the water level contour line along which the SWE is the same as the ISWE well.
- Draw a line perpendicular to the ISWE contour line through the HSWE well location on the well location diagram. This is the ground water flow direction (high to low). The distance along this groundwater flow line from the HSWE well to the ISWE contour line is (e).

D. Calculate the Hydraulic Gradient (HG) of the groundwater by dividing (c) by (e).

(c) 0.01 divided by (e) 34 = HG 0.00029 (ft/ft)

Upper Ford / North Ford

Appendix H

Hydraulic Gradient Three Point Solution Worksheet

Instructions to determine groundwater (GW) gradient and flow direction based on static water elevations (SWE) of 3 wells.

SITE NAME: _____

A. Record elevation difference and horizontal distances (HD) between the wells:

Well	Topographic Elevation (ft)		Depth to Static Water (ft bgs*)		SWE (ft)	Wells		HD (ft)
MW-9 #1		-		=	24.26	#1 to #2	=	52
MW-27 #2		-		=	24.76	#2 to #3	=	46
MW-11 #3		-		=	23.76	#3 to #1	=	74

* bgs = below ground surface

B. Plot the well locations on a scaled diagram

SCALE: _____ " = _____'

See figure

C. Perform the following calculations:

1. Calculate the position between the High Static Water Elevation (HSWE) well and the Low Static Water Elevation (LSWE) well where the SWE is the same as the Intermediate Static Water Elevation (ISWE).

(a) HSWE 24.76 minus LSWE 23.76 = (a) 1.0 (ft)

(b) Horizontal distance between HSWE well and LSWE well 46 divided by (a) 40
= (b) 46 (ft/ft)

(c) HSWE 24.76 minus ISWE 24.26 = (c) 0.50 (ft)

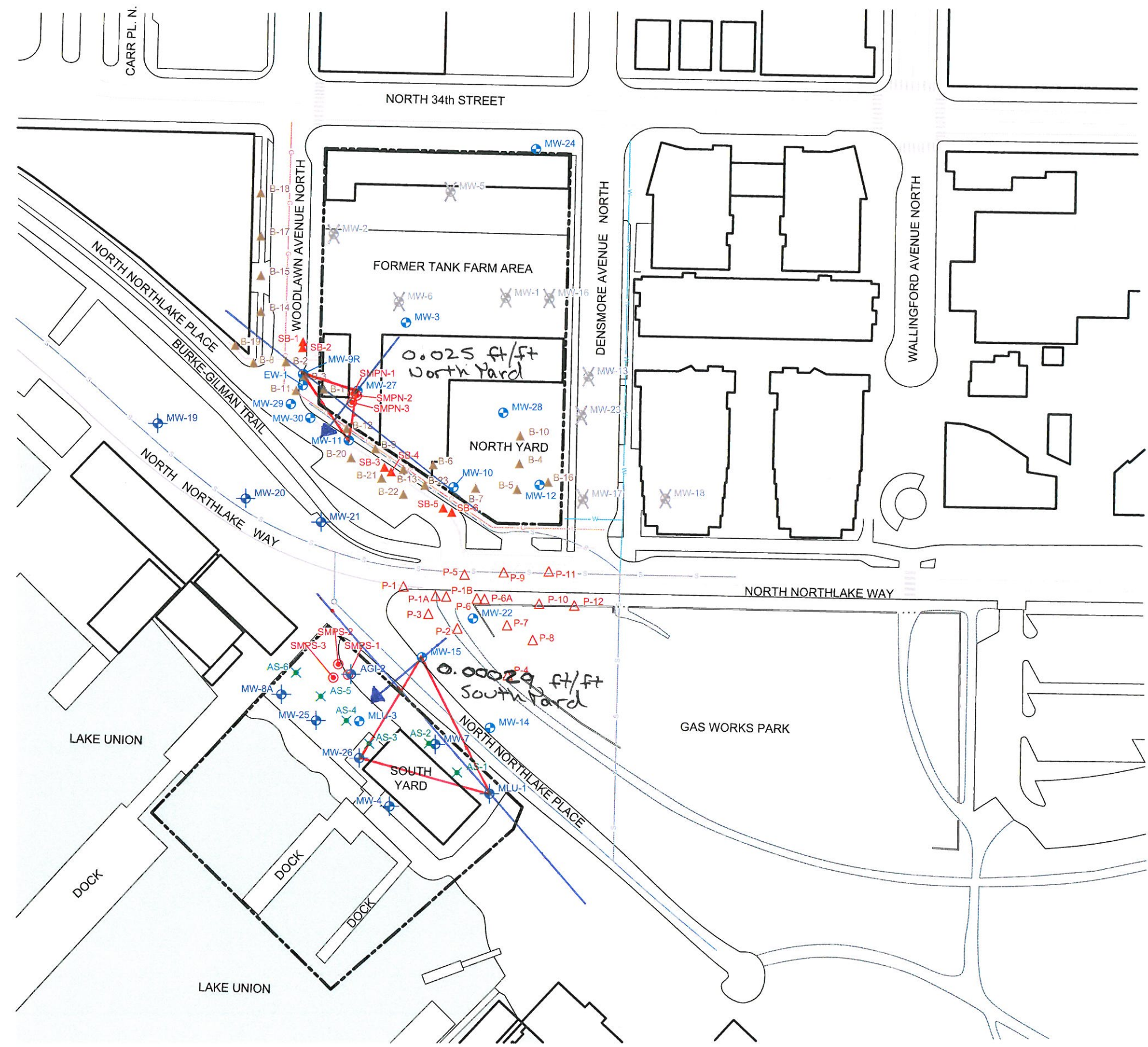
(d) (b) 46 x (c) 0.5 = (d) 23 (ft) (= the horizontal distance between the HSWE well and LSWE well that is equal to the ISWE).

- Measure the distance (d) from the HSWE well along the line between it and the LSWE well, and plot that position on the diagram.
- Draw a straight line from the ISWE well to position (d) on the well location diagram. This represents the water level contour line along which the SWE is the same as the ISWE well.
- Draw a line perpendicular to the ISWE contour line through the HSWE well location on the well location diagram. This is the ground water flow direction (high to low). The distance along this groundwater flow line from the HSWE well to the ISWE contour line is (e).

D. Calculate the Hydraulic Gradient (HG) of the groundwater by dividing (c) by (e).

(c) 0.50 divided by (e) 20 = HG 0.025 (ft/ft)

CITY: SYRACUSE NY DIV/GROUP: ENV/CAD DB: E. KRAHMER PIC: M. FLEISCHNER PM/TM: S. ZORN TR: R. LAGRANDEUR L/R: ON=OFF-REF
 G:\ENV\CAD\SYRACUSE\ACT\B0045799\001\1003000\DWG\45799B01.dwg LAYOUT: 1 SAVED: 11/6/2014 9:16 AM ACADVER: 18.15 (LMS TECH) PAGES: 10
 PLOTSTYLETABLE: PLT\FULL.CTB PLOTTED: 11/6/2014 9:26 AM BY: KRAHMER, ERIC
 XREFS: 45799X02 45799X01 45799X03 45799X04 45799X05 45799X06 45799X07 45799X08 45799X09 45799X10 45799X11 45799X12
 PROJECTNAME: _____

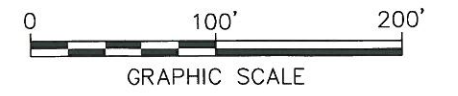


LEGEND:

- ▲ SOIL BORING LOCATION
- ▲ 2007 BORING LOCATION
- GROUNDWATER MONITORING WELL
- ⊗ ABANDONED MONITORING WELL
- ✕ BIOSPARGE INJECTION WELL
- ⊕ COMPLIANCE MONITORING WELL
- SEPARATE-PHASE MONITORING POINT LOCATION
- CATCH BASIN
- ▲ ADDITIONAL SOIL BORING LOCATION
- NATURAL GAS LINE (APPROX.)
- UNDERGROUND ELECTRIC LINE (APPROX.)
- WATER LINE (APPROX.)
- SEWER LINE (APPROX.)

NOTES:

1. BASE MAP FROM A DRAWING BY SAIC TITLED "SITE MAP", DATED 09-14-07, @ A SCALE OF 1" = 60'. REVISED IN ACCORDANCE WITH A SURVEY DRAWING BY OTAK CONDUCTED IN APRIL & MAY, 2011 AND OCTOBER 2014.
2. 2007 SOIL BORING, ADDITIONAL SOIL BORING, ABANDONED MONITORING WELL, BIOSPARGE INJECTION WELL, SMPS, MW-3, AND MW-24 LOCATIONS ARE APPROXIMATE.



FORMER CHEVRON BULK PLANT No. 100-1327
 FACILITIES NORTH / KING COUNTY (METRO)
 SEATTLE, WASHINGTON
TECHNICAL REVIEW OF GAS WORKS PARK
Hydraulic Gradient 3 Point
SITE PLAN
Worksheet

FIGURE 1

ARCADIS

Appendix C

Laboratory Analytical Reports

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

June 26, 2014

Project: 1001327

Submittal Date: 06/13/2014

Group Number: 1481771

PO Number: 0015143985

Release Number: ROEHL

State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
MW-4 NA Groundwater	7498311
MW-4 Filtered NA Groundwater	7498312
MW-7 NA Groundwater	7498313
MW-7 Filtered NA Groundwater	7498314
MW-8A NA Groundwater	7498315
MW-8A Filtered NA Groundwater	7498316
MW-11 NA Groundwater	7498317
MW-11 Filtered NA Groundwater	7498318
MW-14 NA Groundwater	7498319
MW-14 Filtered NA Groundwater	7498320
MW-15 NA Groundwater	7498321
MW-15 Filtered NA Groundwater	7498322
MW-19 NA Groundwater	7498323
MW-19 Filtered NA Groundwater	7498324
MW-20 NA Groundwater	7498325
MW-20 Filtered NA Groundwater	7498326
MW-21 NA Groundwater	7498327
MW-21 Filtered NA Groundwater	7498328
MW-22 NA Groundwater	7498329
MW-22 Filtered NA Groundwater	7498330
MW-24 NA Groundwater	7498331
MW-24 Filtered NA Groundwater	7498332
MW-25 NA Groundwater	7498333
MW-25 Filtered NA Groundwater	7498334
MW-26 NA Groundwater	7498335
MW-26 Filtered NA Groundwater	7498336
AGI-2 NA Groundwater	7498337
AGI-2 Filtered NA Groundwater	7498338
MLU-1 NA Groundwater	7498339
MLU-1 Filtered NA Groundwater	7498340
MLU-3 NA Groundwater	7498341

MLU-3 Filtered NA Groundwater	7498342
DUP NA Groundwater	7498343
DUP Filtered NA Groundwater	7498344
QA NA Water	7498345

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	ARCADIS U.S., Inc.	Attn: Sam Miles
ELECTRONIC COPY TO	Blaine Tech Services	Attn: Alex Stack
ELECTRONIC COPY TO	Arcadis	Attn: Alan Kahal

Respectfully Submitted,



Natalie R. Luciano
Senior Specialist

(717) 556-7258

Sample Description: MW-4 NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498311
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 07:46 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
		SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14170A53A	06/20/2014 13:30	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170A53A	06/20/2014 13:30	Marie D Beamenderfer	1

Sample Description: **MW-4 Filtered NA Groundwater**
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # **WW 7498312**
 LL Group # **1481771**
 Account # **11964**

Project Name: **1001327**

Collected: 06/11/2014 07:46 by LB Chevron
 L4310
 Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
 Reported: 06/26/2014 19:20 San Ramon CA 94583

NPSM4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	0.019	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.026	0.010	1
08357	Naphthalene	91-20-3	0.070	0.030	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

Metals Dissolved SW-846 6020			ug/l	ug/l	
06025	Arsenic	7440-38-2	N.D.	0.78	1
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved cPAHs, lead and arsenic.
 Carcinogenic PAHs have been reported for this sample

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14165WAF026	06/24/2014 03:06	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14165WAF026	06/16/2014 10:00	Anna E Stager	1
06025	Arsenic	SW-846 6020	1	141686050001A	06/18/2014 18:58	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 18:58	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1

Sample Description: MW-7 NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498313
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 10:02 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles			SW-846 8021B	ug/l	
02102	Benzene	71-43-2	33	0.5	1
02102	Ethylbenzene	100-41-4	65	0.5	1
02102	Toluene	108-88-3	4.4	0.5	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14170A53A	06/20/2014 21:18	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170A53A	06/20/2014 21:18	Laura M Krieger	1

Sample Description: **MW-7 Filtered NA Groundwater**
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # **WW 7498314**
 LL Group # **1481771**
 Account # **11964**

Project Name: **1001327**

Collected: 06/11/2014 10:02 by LB Chevron
 L4310
 Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
 Reported: 06/26/2014 19:20 San Ramon CA 94583

NPSM7

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	0.013	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	19	0.20	20
08357	2-Methylnaphthalene	91-57-6	18	0.20	20
08357	Naphthalene	91-20-3	160	0.60	20

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

Metals Dissolved SW-846 6020			ug/l	ug/l	
06025	Arsenic	7440-38-2	6.2	0.78	1
06035	Lead	7439-92-1	1.7	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved cPAHs, lead and arsenic.
 Carcinogenic PAHs have been reported for this sample

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14165WAF026	06/24/2014 03:33	Catherine E Bachman	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14165WAF026	06/25/2014 08:38	Joseph M Gambler	20
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14165WAF026	06/16/2014 10:00	Anna E Stager	1
06025	Arsenic	SW-846 6020	1	141686050001A	06/18/2014 19:00	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 19:00	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1

Sample Description: MW-8A NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498315
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 07:13 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
		SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1

General Sample Comments

State of Washington Lab Certification No. C457
All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14170A53A	06/20/2014 13:58	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170A53A	06/20/2014 13:58	Marie D Beamenderfer	1

Sample Description: **MW-8A Filtered NA Groundwater**
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # **WW 7498316**
 LL Group # **1481771**
 Account # **11964**

Project Name: **1001327**

Collected: 06/11/2014 07:13 by LB Chevron
 L4310
 Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
 Reported: 06/26/2014 19:20 San Ramon CA 94583

NPSM8

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	0.011	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	0.012	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	0.011	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	0.017	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.024	0.010	1
08357	Naphthalene	91-20-3	0.062	0.030	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
 The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

Metals Dissolved SW-846 6020			ug/l	ug/l	
06025	Arsenic	7440-38-2	N.D.	0.78	1
06035	Lead	7439-92-1	0.59	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved cPAHs, lead and arsenic.
 Carcinogenic PAHs have been reported for this sample

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14165WAF026	06/24/2014 04:00	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14165WAF026	06/16/2014 10:00	Anna E Stager	1
06025	Arsenic	SW-846 6020	1	141686050001A	06/18/2014 18:26	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 18:26	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1

Sample Description: MW-11 NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498317
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 12:52 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
		SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1

General Sample Comments

State of Washington Lab Certification No. C457
All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14170A53A	06/20/2014 14:25	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170A53A	06/20/2014 14:25	Marie D Beamenderfer	1

Sample Description: MW-11 Filtered NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498318
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 12:52 by LB Chevron
 L4310
 Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
 Reported: 06/26/2014 19:20 San Ramon CA 94583

NPS11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	0.028	0.010	1
08357	Benzo(a)pyrene	50-32-8	0.020	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	0.025	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	0.024	0.010	1
08357	Chrysene	218-01-9	0.033	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	0.019	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.020	0.010	1
08357	1-Methylnaphthalene	90-12-0	0.020	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.027	0.010	1
08357	Naphthalene	91-20-3	0.070	0.030	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

Metals Dissolved SW-846 6020			ug/l	ug/l	
06025	Arsenic	7440-38-2	8.4	0.78	1
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved cPAHs, lead and arsenic.
 Carcinogenic PAHs have been reported for this sample

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14165WAF026	06/25/2014 09:05	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14165WAF026	06/16/2014 10:00	Anna E Stager	1
06025	Arsenic	SW-846 6020	1	141686050001A	06/18/2014 19:05	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 19:05	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1

Sample Description: MW-14 NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498319
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 11:18 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
		SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1

General Sample Comments

State of Washington Lab Certification No. C457
All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14170A53A	06/20/2014 14:53	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170A53A	06/20/2014 14:53	Marie D Beamenderfer	1

Sample Description: **MW-14 Filtered NA Groundwater**
 Facility# 1001327
 1602 N Northlake Place - Seattle, WA

LL Sample # **WW 7498320**
 LL Group # **1481771**
 Account # **11964**

Project Name: 1001327

Collected: 06/11/2014 11:18 by LB Chevron
 L4310
 Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
 Reported: 06/26/2014 19:20 San Ramon CA 94583

NPS14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	0.011	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	0.014	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	0.012	0.010	1
08357	Chrysene	218-01-9	0.012	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.011	0.010	1
08357	1-Methylnaphthalene	90-12-0	0.014	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.020	0.010	1
08357	Naphthalene	91-20-3	0.049	0.030	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

Metals Dissolved SW-846 6020			ug/l	ug/l	
06025	Arsenic	7440-38-2	N.D.	0.78	1
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved cPAHs, lead and arsenic.
 Carcinogenic PAHs have been reported for this sample

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14165WAF026	06/25/2014 09:32	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14165WAF026	06/16/2014 10:00	Anna E Stager	1
06025	Arsenic	SW-846 6020	1	141686050001A	06/18/2014 19:07	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 19:07	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1

Sample Description: MW-15 NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498321
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 11:47 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
		SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	3.0	1
02102	Ethylbenzene	100-41-4	2.0	0.5	1
02102	Toluene	108-88-3	0.6	0.5	1
Reporting limits were raised due to interference from the sample matrix.					

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14170A53A	06/20/2014 15:48	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170A53A	06/20/2014 15:48	Marie D Beamenderfer	1

Sample Description: MW-15 Filtered NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498322
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 11:47 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

NPS15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	0.020	0.010	1
08357	Benzo(a)pyrene	50-32-8	0.015	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	0.027	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	0.025	0.010	1
08357	Chrysene	218-01-9	0.024	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	0.019	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.022	0.010	1
08357	1-Methylnaphthalene	90-12-0	0.55	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.024	0.010	1
08357	Naphthalene	91-20-3	0.29	0.030	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

Metals Dissolved SW-846 6020			ug/l	ug/l	
06025	Arsenic	7440-38-2	5.6	0.78	1
06035	Lead	7439-92-1	0.40	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved cPAHs, lead and arsenic.
Carcinogenic PAHs have been reported for this sample

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14165WAF026	06/25/2014 10:00	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14165WAF026	06/16/2014 10:00	Anna E Stager	1
06025	Arsenic	SW-846 6020	1	141686050001A	06/18/2014 19:09	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 19:09	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1

Sample Description: MW-19 NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498323
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/10/2014 12:33 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
		SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14169A53A	06/19/2014 14:22	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14169A53A	06/19/2014 14:22	Marie D Beamenderfer	1

Sample Description: MW-19 Filtered NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498324
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/10/2014 12:33 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

NPS19

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	0.015	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.021	0.010	1
08357	Naphthalene	91-20-3	0.051	0.031	1
Metals Dissolved SW-846 6020			ug/l	ug/l	
06025	Arsenic	7440-38-2	N.D.	0.78	1
06035	Lead	7439-92-1	0.16	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved cPAHs, lead and arsenic.
Carcinogenic PAHs have been reported for this sample

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14167WAB026	06/17/2014 08:56	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14167WAB026	06/16/2014 19:45	Nicholas W Shroyer	1
06025	Arsenic	SW-846 6020	1	141686050001A	06/18/2014 19:10	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 19:10	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1

Sample Description: MW-20 NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498325
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/10/2014 13:05 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
		SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	7.2	0.5	1
02102	Ethylbenzene	100-41-4	1.4	0.5	1
02102	Toluene	108-88-3	0.9	0.5	1

General Sample Comments

State of Washington Lab Certification No. C457
All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14169A53A	06/19/2014 16:41	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14169A53A	06/19/2014 16:41	Marie D Beamenderfer	1

Sample Description: MW-20 Filtered NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498326
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/10/2014 13:05 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

NPS20

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	0.32	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.19	0.010	1
08357	Naphthalene	91-20-3	0.099	0.030	1
Metals Dissolved SW-846 6020			ug/l	ug/l	
06025	Arsenic	7440-38-2	4.1	0.78	1
06035	Lead	7439-92-1	0.14	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved cPAHs, lead and arsenic.
Carcinogenic PAHs have been reported for this sample

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14167WAB026	06/17/2014 09:23	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14167WAB026	06/16/2014 19:45	Nicholas W Shroyer	1
06025	Arsenic	SW-846 6020	1	141686050001A	06/18/2014 19:12	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 19:12	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1

Sample Description: MW-21 NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498327
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 09:31 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
		SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	6.0	1
02102	Ethylbenzene	100-41-4	0.5	0.5	1
02102	Toluene	108-88-3	0.7	0.5	1
Reporting limits were raised due to interference from the sample matrix.					

General Sample Comments

State of Washington Lab Certification No. C457
All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14170A53A	06/20/2014 16:15	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170A53A	06/20/2014 16:15	Marie D Beamenderfer	1

Sample Description: MW-21 Filtered NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498328
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 09:31 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

NPS21

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	8.7	0.010	1
08357	2-Methylnaphthalene	91-57-6	1.5	0.010	1
08357	Naphthalene	91-20-3	N.D.	0.030	1
Metals Dissolved SW-846 6020			ug/l	ug/l	
06025	Arsenic	7440-38-2	13.6	0.78	1
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved cPAHs, lead and arsenic.
Carcinogenic PAHs have been reported for this sample

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14167WAB026	06/17/2014 09:51	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14167WAB026	06/16/2014 19:45	Nicholas W Shroyer	1
06025	Arsenic	SW-846 6020	1	141686050001A	06/18/2014 19:14	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 19:14	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1

Sample Description: MW-22 NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498329
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 12:19 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
		SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	780	2.5	5
02102	Ethylbenzene	100-41-4	67	2.5	5
02102	Toluene	108-88-3	45	2.5	5

General Sample Comments

State of Washington Lab Certification No. C457
All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14171A53B	06/23/2014 10:48	Marie D Beamenderfer	5
01146	GC VOA Water Prep	SW-846 5030B	1	14171A53B	06/23/2014 10:48	Marie D Beamenderfer	5

Sample Description: MW-22 Filtered NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498330
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 12:19 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

NPS22

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	0.24	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.063	0.010	1
08357	Naphthalene	91-20-3	1.3	0.031	1
Metals Dissolved SW-846 6020			ug/l	ug/l	
06025	Arsenic	7440-38-2	2.5	0.78	1
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved cPAHs, lead and arsenic.
Carcinogenic PAHs have been reported for this sample

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14167WAB026	06/17/2014 10:19	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14167WAB026	06/16/2014 19:45	Nicholas W Shroyer	1
06025	Arsenic	SW-846 6020	1	141686050001A	06/18/2014 19:16	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 19:16	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1

Sample Description: MW-24 NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498331
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/10/2014 11:58 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
		SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1

General Sample Comments

State of Washington Lab Certification No. C457
All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14169A53A	06/19/2014 17:08	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14169A53A	06/19/2014 17:08	Marie D Beamenderfer	1

Sample Description: MW-24 Filtered NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498332
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/10/2014 11:58 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

NPS24

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	0.017	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.022	0.010	1
08357	Naphthalene	91-20-3	0.060	0.030	1
Metals Dissolved SW-846 6020			ug/l	ug/l	
06025	Arsenic	7440-38-2	N.D.	0.78	1
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved cPAHs, lead and arsenic.
Carcinogenic PAHs have been reported for this sample

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14167WAB026	06/17/2014 10:47	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14167WAB026	06/16/2014 19:45	Nicholas W Shroyer	1
06025	Arsenic	SW-846 6020	1	141686050002A	06/19/2014 07:00	Choon Y Tian	1
06035	Lead	SW-846 6020	1	141686050002A	06/19/2014 07:00	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050002	06/18/2014 10:38	James L Mertz	1

Sample Description: MW-25 NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498333
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/10/2014 13:51 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
		SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1

General Sample Comments

State of Washington Lab Certification No. C457
All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14169A53A	06/19/2014 17:36	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14169A53A	06/19/2014 17:36	Marie D Beamenderfer	1

Sample Description: MW-25 Filtered NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498334
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/10/2014 13:51 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

NPS25

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	0.013	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.019	0.010	1
08357	Naphthalene	91-20-3	0.047	0.030	1
Metals Dissolved SW-846 6020			ug/l	ug/l	
06025	Arsenic	7440-38-2	0.96	0.78	1
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved cPAHs, lead and arsenic.
Carcinogenic PAHs have been reported for this sample

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14167WAB026	06/17/2014 11:15	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14167WAB026	06/16/2014 19:45	Nicholas W Shroyer	1
06025	Arsenic	SW-846 6020	1	141686050002A	06/19/2014 07:01	Choon Y Tian	1
06035	Lead	SW-846 6020	1	141686050002A	06/19/2014 07:01	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050002	06/18/2014 10:38	James L Mertz	1

Sample Description: MW-26 NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498335
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/10/2014 14:18 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
		SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1

General Sample Comments

State of Washington Lab Certification No. C457
All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14169A53A	06/19/2014 18:04	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14169A53A	06/19/2014 18:04	Marie D Beamenderfer	1

Sample Description: **MW-26 Filtered NA Groundwater**
 Facility# 1001327
 1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498336
 LL Group # 1481771
 Account # 11964

Project Name: 1001327

Collected: 06/10/2014 14:18 by LB Chevron
 L4310
 Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
 Reported: 06/26/2014 19:20 San Ramon CA 94583

NPS26

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	0.017	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.024	0.010	1
08357	Naphthalene	91-20-3	0.068	0.030	1
Metals Dissolved SW-846 6020			ug/l	ug/l	
06025	Arsenic	7440-38-2	N.D.	0.78	1
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved cPAHs, lead and arsenic.
 Carcinogenic PAHs have been reported for this sample

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14167WAB026	06/17/2014 11:43	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14167WAB026	06/16/2014 19:45	Nicholas W Shroyer	1
06025	Arsenic	SW-846 6020	1	141686050002A	06/19/2014 07:03	Choon Y Tian	1
06035	Lead	SW-846 6020	1	141686050002A	06/19/2014 07:03	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050002	06/18/2014 10:38	James L Mertz	1

Sample Description: AGI-2 NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498337
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 08:59 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles			ug/l	ug/l	
02102	Benzene	71-43-2	9.2	0.5	1
02102	Ethylbenzene	100-41-4	7.4	0.5	1
02102	Toluene	108-88-3	2.5	0.5	1

General Sample Comments

State of Washington Lab Certification No. C457
All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14170A53A	06/20/2014 16:43	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170A53A	06/20/2014 16:43	Marie D Beamenderfer	1

Sample Description: AGI-2 Filtered NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498338
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 08:59 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

NPSA1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	0.20	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.062	0.010	1
08357	Naphthalene	91-20-3	0.35	0.030	1
Metals Dissolved SW-846 6020			ug/l	ug/l	
06025	Arsenic	7440-38-2	10.8	0.78	1
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved cPAHs, lead and arsenic.
Carcinogenic PAHs have been reported for this sample

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14167WAB026	06/17/2014 12:10	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14167WAB026	06/16/2014 19:45	Nicholas W Shroyer	1
06025	Arsenic	SW-846 6020	1	141686050002A	06/19/2014 07:05	Choon Y Tian	1
06035	Lead	SW-846 6020	1	141686050002A	06/19/2014 07:05	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050002	06/18/2014 10:38	James L Mertz	1

Sample Description: MLU-1 NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498339
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 08:24 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
		SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1

General Sample Comments

State of Washington Lab Certification No. C457
All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14170A53A	06/20/2014 17:10	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170A53A	06/20/2014 17:10	Marie D Beamenderfer	1

Sample Description: **MLU-1 Filtered NA Groundwater**
 Facility# 1001327
 1602 N Northlake Place - Seattle, WA

LL Sample # **WW 7498340**
 LL Group # **1481771**
 Account # **11964**

Project Name: 1001327

Collected: 06/11/2014 08:24 by LB Chevron
 L4310
 Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
 Reported: 06/26/2014 19:20 San Ramon CA 94583

NPSU1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	0.016	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.022	0.010	1
08357	Naphthalene	91-20-3	0.051	0.030	1
Metals Dissolved SW-846 6020			ug/l	ug/l	
06025	Arsenic	7440-38-2	N.D.	0.78	1
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved cPAHs, lead and arsenic.
 Carcinogenic PAHs have been reported for this sample

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14167WAB026	06/17/2014 12:38	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14167WAB026	06/16/2014 19:45	Nicholas W Shroyer	1
06025	Arsenic	SW-846 6020	1	141686050002A	06/19/2014 07:07	Choon Y Tian	1
06035	Lead	SW-846 6020	1	141686050002A	06/19/2014 07:07	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050002	06/18/2014 10:38	James L Mertz	1

Sample Description: MLU-3 NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498341
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 10:33 by LB Chevron
L4310
Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
Reported: 06/26/2014 19:20 San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
		SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1

General Sample Comments

State of Washington Lab Certification No. C457
All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14170A53A	06/20/2014 17:38	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170A53A	06/20/2014 17:38	Marie D Beamenderfer	1

Sample Description: **MLU-3 Filtered NA Groundwater**
 Facility# 1001327
 1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498342
 LL Group # 1481771
 Account # 11964

Project Name: 1001327

Collected: 06/11/2014 10:33 by LB Chevron
 L4310
 Submitted: 06/13/2014 09:45 6001 Bollinger Canyon Road
 Reported: 06/26/2014 19:20 San Ramon CA 94583

NPSU3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	0.014	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.021	0.010	1
08357	Naphthalene	91-20-3	0.056	0.031	1
Metals Dissolved SW-846 6020			ug/l	ug/l	
06025	Arsenic	7440-38-2	N.D.	0.78	1
06035	Lead	7439-92-1	0.15	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved cPAHs, lead and arsenic.
 Carcinogenic PAHs have been reported for this sample

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14167WAB026	06/17/2014 13:06	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14167WAB026	06/16/2014 19:45	Nicholas W Shroyer	1
06025	Arsenic	SW-846 6020	1	141686050002A	06/19/2014 07:09	Choon Y Tian	1
06035	Lead	SW-846 6020	1	141686050002A	06/19/2014 07:09	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050002	06/18/2014 10:38	James L Mertz	1

Sample Description: DUP NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498343
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 by LB

Chevron

L4310

Submitted: 06/13/2014 09:45

6001 Bollinger Canyon Road

Reported: 06/26/2014 19:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
		SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14170A53A	06/20/2014 18:05	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170A53A	06/20/2014 18:05	Marie D Beamenderfer	1

Sample Description: DUP Filtered NA Groundwater
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498344
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/11/2014 by LB

Chevron

L4310

Submitted: 06/13/2014 09:45

6001 Bollinger Canyon Road

Reported: 06/26/2014 19:20

San Ramon CA 94583

NPSFD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	0.012	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.018	0.010	1
08357	Naphthalene	91-20-3	0.036	0.031	1
Metals Dissolved SW-846 6020			ug/l	ug/l	
06025	Arsenic	7440-38-2	N.D.	0.78	1
06035	Lead	7439-92-1	0.53	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved cPAHs, lead and arsenic.
Carcinogenic PAHs have been reported for this sample

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14167WAB026	06/17/2014 13:34	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14167WAB026	06/16/2014 19:45	Nicholas W Shroyer	1
06025	Arsenic	SW-846 6020	1	141686050002A	06/19/2014 07:11	Choon Y Tian	1
06035	Lead	SW-846 6020	1	141686050002A	06/19/2014 07:11	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050002	06/18/2014 10:38	James L Mertz	1

Sample Description: QA NA Water
Facility# 1001327
1602 N Northlake Place - Seattle, WA

LL Sample # WW 7498345
LL Group # 1481771
Account # 11964

Project Name: 1001327

Collected: 06/10/2014 08:00

Chevron

L4310

Submitted: 06/13/2014 09:45

6001 Bollinger Canyon Road

Reported: 06/26/2014 19:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
		SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	14169A53A	06/19/2014 12:05	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14169A53A	06/19/2014 12:05	Marie D Beamenderfer	1

Quality Control Summary

Client Name: Chevron
Reported: 06/26/14 at 07:20 PM

Group Number: 1481771

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 14165WAF026	Sample number(s): 7498312, 7498314, 7498316, 7498318, 7498320, 7498322							
Benzo(a) anthracene	N.D.	0.010	ug/l	87		79-122		
Benzo(a) pyrene	N.D.	0.010	ug/l	79*		80-121		
Benzo(b) fluoranthene	N.D.	0.010	ug/l	86		79-136		
Benzo(k) fluoranthene	N.D.	0.010	ug/l	80*		81-131		
Chrysene	N.D.	0.010	ug/l	83*		84-118		
Dibenz(a, h) anthracene	N.D.	0.010	ug/l	46*		66-133		
Indeno(1, 2, 3-cd) pyrene	N.D.	0.010	ug/l	57*		68-132		
1-Methylnaphthalene	N.D.	0.010	ug/l	86		86-130		
2-Methylnaphthalene	N.D.	0.010	ug/l	82		81-131		
Naphthalene	N.D.	0.030	ug/l	89		82-122		
Batch number: 14167WAB026	Sample number(s): 7498324, 7498326, 7498328, 7498330, 7498332, 7498334, 7498336, 7498338, 7498340, 7498342, 7498344							
Benzo(a) anthracene	N.D.	0.010	ug/l	99	98	79-122	1	30
Benzo(a) pyrene	N.D.	0.010	ug/l	92	93	80-121	1	30
Benzo(b) fluoranthene	N.D.	0.010	ug/l	98	99	79-136	1	30
Benzo(k) fluoranthene	N.D.	0.010	ug/l	95	96	81-131	2	30
Chrysene	N.D.	0.010	ug/l	93	95	84-118	1	30
Dibenz(a, h) anthracene	N.D.	0.010	ug/l	66	73	66-133	11	30
Indeno(1, 2, 3-cd) pyrene	N.D.	0.010	ug/l	74	79	68-132	7	30
1-Methylnaphthalene	N.D.	0.010	ug/l	90	90	86-130	0	30
2-Methylnaphthalene	N.D.	0.010	ug/l	85	86	81-131	1	30
Naphthalene	N.D.	0.030	ug/l	90	91	82-122	1	30
Batch number: 14169A53A	Sample number(s): 7498323, 7498325, 7498331, 7498333, 7498335, 7498345							
Benzene	N.D.	0.2	ug/l	97		80-120		
Ethylbenzene	N.D.	0.2	ug/l	96		80-120		
Toluene	N.D.	0.2	ug/l	97		80-120		
Batch number: 14170A53A	Sample number(s): 7498311, 7498313, 7498315, 7498317, 7498319, 7498321, 7498327, 7498337, 7498339, 7498341, 7498343							
Benzene	N.D.	0.2	ug/l	96	98	80-120	2	30
Ethylbenzene	N.D.	0.2	ug/l	94	97	80-120	2	30
Toluene	N.D.	0.2	ug/l	96	98	80-120	2	30
Batch number: 14171A53B	Sample number(s): 7498329							
Benzene	N.D.	0.2	ug/l	98		80-120		
Ethylbenzene	N.D.	0.2	ug/l	97		80-120		
Toluene	N.D.	0.2	ug/l	98		80-120		
Batch number: 141686050001A	Sample number(s):							

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1481771
Reported: 06/26/14 at 07:20 PM

Analysis Name	Blank	Blank	Report	LCS	LCS	LCS/LCSD	RPD	RPD Max
	Result	MDL	Units	%REC	%REC	Limits		
	7498312, 7498314, 7498316, 7498318, 7498320, 7498322, 7498324, 7498326, 7498328, 7498330							
Arsenic	N.D.	0.78	ug/l	101		86-120		
Lead	N.D.	0.085	ug/l	100		90-110		
Batch number: 141686050002A Sample number(s): 7498332, 7498334, 7498336, 7498338, 7498340, 7498342, 7498344								
Arsenic	N.D.	0.78	ug/l	97		86-120		
Lead	N.D.	0.085	ug/l	98		90-110		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS	MSD	MS/MSD	RPD	BKG	DUP	DUP	Dup RPD
	%REC	%REC	Limits	RPD	Conc	Conc	RPD	Max
Batch number: 14165WAF026 Sample number(s): 7498312, 7498314, 7498316, 7498318, 7498320, 7498322 UNSPK: P497026								
Benzo(a)anthracene	101	102	37-135	1	30			
Benzo(a)pyrene	95	95	64-123	0	30			
Benzo(b)fluoranthene	102	103	41-137	2	30			
Benzo(k)fluoranthene	101	101	38-130	2	30			
Chrysene	102	105	58-117	3	30			
Dibenz(a,h)anthracene	83	85	17-134	4	30			
Indeno(1,2,3-cd)pyrene	83	85	26-130	3	30			
1-Methylnaphthalene	95	96	82-133	2	30			
2-Methylnaphthalene	90	91	73-138	2	30			
Naphthalene	100	102	58-131	3	30			
Batch number: 14169A53A Sample number(s): 7498323, 7498325, 7498331, 7498333, 7498335, 7498345 UNSPK: P497212								
Benzene	104	103	84-126	1	30			
Ethylbenzene	103	102	80-133	1	30			
Toluene	105	104	80-133	1	30			
Batch number: 14171A53B Sample number(s): 7498329 UNSPK: P505172								
Benzene	104	107	84-126	3	30			
Ethylbenzene	102	105	80-133	2	30			
Toluene	104	106	80-133	2	30			
Batch number: 141686050001A Sample number(s): 7498312, 7498314, 7498316, 7498318, 7498320, 7498322, 7498324, 7498326, 7498328, 7498330 UNSPK: 7498316 BKG: 7498316								
Arsenic	108	107	75-125	1	20	N.D.	N.D.	0 (1) 20
Lead	101	100	89-120	1	20	0.59	0.56	5 (1) 20
Batch number: 141686050002A Sample number(s): 7498332, 7498334, 7498336, 7498338, 7498340, 7498342, 7498344 UNSPK: P495786 BKG: P495786								
Arsenic	165*	158*	75-125	2	20	14.2	15.9	11 20
Lead	106	103	89-120	3	20	0.14	0.15	3 (1) 20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 06/26/14 at 07:20 PM

Group Number: 1481771

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PAHs in waters by SIM

Batch number: 14165WAF026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7498312	92	96	84
7498314	91	91	105
7498316	95	85	85
7498318	96	73	87
7498320	93	88	85
7498322	96	90	89
Blank	92	73	85
LCS	88	81	82
MS	100	102	91
MSD	99	102	91

Limits: 59-128 62-141 70-134

Analysis Name: PAHs in waters by SIM

Batch number: 14167WAB026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7498324	96	86	87
7498326	100	103	107
7498328	101	112	99
7498330	96	95	97
7498332	104	85	91
7498334	100	83	90
7498336	106	93	94
7498338	99	108	109
7498340	105	101	94
7498342	99	93	90
7498344	90	63	84
Blank	109	105	97
LCS	110	113	97
LCSD	104	112	95

Limits: 59-128 62-141 70-134

Analysis Name: Method 8021 Water Master

Batch number: 14169A53A

Trifluorotoluene-P

7498323	77
7498325	76
7498331	77
7498333	77
7498335	78
7498345	77
Blank	77
LCS	76
MS	76

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 06/26/14 at 07:20 PM

Group Number: 1481771

Surrogate Quality Control

MSD 76

Limits: 51-120

Analysis Name: Method 8021 Water Master
Batch number: 14170A53A
Trifluorotoluene-P

7498311	78
7498313	98
7498315	78
7498317	78
7498319	78
7498321	80
7498327	71
7498337	78
7498339	77
7498341	77
7498343	78
Blank	78
LCS	77
LCSD	77

Limits: 51-120

Analysis Name: Method 8021 Water Master
Batch number: 14171A53B
Trifluorotoluene-P

7498329	83
Blank	80
LCS	75
MS	76
MSD	76

Limits: 51-120

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

CHAIN OF CUSTODY FORM

Chevron Environmental Management Company ■ 6001 Bollinger Canyon Road ■ San Ramon, CA 94583-2324 COC 1 of 2

Chevron Site Number: <u>100-1327</u> Program Designation: <u>CMP</u> Site Address (street, city, state / county): <u>1602 N Northlake</u> <u>Place, Seattle, WA</u> Chevron PM: <u>Marlea Harmon</u> Chevron PM Phone No.: <input type="checkbox"/> Retail and Terminal Business Unit (RTBU) Job <input type="checkbox"/> Construction/Retail Job				Chevron Consultant: <u>ARCADIS</u> Address: <u>1100 olive Way, Suite 800, Seattle WA</u> Consultant Contact: <u>Sam Miles</u> Consultant Phone No. <u>206-853-7428</u> Consultant Project No. <u>140610-LB1</u> Sampling Company: <u>Blaine Tech Services</u> Sampled By (Print): <u>LEE BURES</u> Sampler Signature:				ANALYSES REQUIRED															
Charge Code: NWRWB 00SITE NUMBER-0- OML WBS ELEMENTS: SITE ASSESSMENT: A1L REMEDIATION IMPLEMENTATION: R5L SITE MONITORING: OML OPERATION MAINTENANCE & MONITORING: M1L				Lancaster Laboratories <input checked="" type="checkbox"/> Lancaster, PA Lab Contact: Megan Moeller 2425 New Holland Pike, Lancaster, PA 17601 Phone No: (717)656-2300		Other Lab _____ _____ _____ _____ _____		Temp. Blank Check Time Temp. _____ _____ _____ _____ _____		Preservation Codes H = HCL T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other 11964 1481771 7498311-45 Special Instructions													
SAMPLE ID																							
Field Point Name	Matrix	Top Depth	Date (yyymmdd)	Sample Time	# of Containers	Container Type		BTE BY 8021 <input checked="" type="checkbox"/>	DISSOLVED NAPHTHALENES <input checked="" type="checkbox"/>	DISSOLVED CPAHS (8270c SIM) <input checked="" type="checkbox"/>	6020 DISSOLVED LEAD <input checked="" type="checkbox"/>	DISSOLVED ARSENIC <input checked="" type="checkbox"/> (FIELD FILTERS)	PAH'S <input type="checkbox"/> CPAH'S <input type="checkbox"/> 8270 SIM	TPH-G (NWTPH-GX)	ALKALINITY 2320 <input type="checkbox"/>	DISSOLVED LEAD (6020)	TPH-D AND TPH-O BY (NWTPH-DX)	RBD M.YOGS. (OREGON RISK BASED DECISION MAKING LIST)	SULFATE 300 <input type="checkbox"/> NITRATE 300 <input type="checkbox"/> FERROUS IRON SM20 3500 <input type="checkbox"/>				
MW-4	GW	—	140611	0746	6	VOA, AMBER, POLY		X	X	X	X												
MW-7	GW	—	140611	1002	6	↓		X	X	X	X												
MW-8A	GW	—	140611	0713	6			X	X	X	X												
MW-11	GW	—	140611	1252	6			X	X	X	X												
MW-14	GW	—	140611	1118	6			X	X	X	X												
MW-15	GW	—	140611	1147	6			X	X	X	X												
MW-19	GW	—	140610	1233	6			X	X	X	X												
MW-20	GW	—	140610	1305	6			X	X	X	X												
MW-21	GW	—	140611	0931	6			X	X	X	X												
MW-22	GW	—	140611	1219	6			X	X	X	X												
Relinquished By			Company	Date/Time: <u>6/11/14</u>	Relinquished To			Company	Date/Time: <u>6/12/14 16:00</u>	Turnaround Time: Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> 48 hours <input type="checkbox"/> 72 Hours <input type="checkbox"/> Other <input type="checkbox"/>													
Relinquished By			Company	Date/Time	Relinquished To			Company	Date/Time	Sample Integrity: (Check by lab on arrival) Intact: <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/> Temp: <u>0.5 - 1.0 °C</u>													
Relinquished By			Company	Date/Time	Relinquished To			Company	Date/Time: <u>6/13/14</u>	COC # <u>0945</u>													

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m³	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns $>25\%$
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is $<$ CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike sample not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- *** Duplicate analysis not within control limits
- +** Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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