



March 13, 2013

Mr. Eugene Radcliff
Washington State Department of Ecology
PO Box 47775
Olympia, Washington 98504

Subject: **Fourth Quarter 2012 Groundwater Monitoring and Sampling Report
76 Products Facility No. 351386
1300 West 12th Street
Vancouver, Washington
Washington State Department of Ecology Facility No. 47231541**

Dear Mr. Radcliff:

On behalf of Chevron Environmental Management Company, for itself and as Attorney-in-Fact for Union Oil Company of California (EMC), SAIC Energy, Environment & Infrastructure, LLC (SAIC) submits this Groundwater Monitoring and Sampling Report for the above-referenced site (Figure 1). Quarterly groundwater monitoring and sampling activities were conducted by Blaine Tech Services, Inc. (Blaine Tech) on December 17, 2012. The Blaine Tech groundwater monitoring and sampling package is provided as Attachment A.

FIELD ACTIVITIES

On December 17, 2012, depth to groundwater was measured in wells MW-1, MW-2, MW-4, MW-5A, and MW-6. The groundwater elevation ranged from 7.56 feet (MW-2) to 57.64 feet (MW-5A and MW-6) based on an arbitrary benchmark elevation of 100.00 feet. Groundwater flow is to the south at a gradient of approximately 0.0007 foot per foot (ft/ft). A potentiometric map is provided on Figure 1.

Groundwater samples were collected from all monitoring wells and shipped under chain-of-custody protocol to Eurofins Lancaster Laboratories, Inc. in Lancaster, Pennsylvania.

Groundwater samples were submitted for the following analyses:

- Total petroleum hydrocarbons (TPH) as diesel-range organics (TPH-D) and TPH as heavy oil-range organics (TPH-O) by Northwest Method NWTPH-Dx; and
- Selected Volatile Organic Compounds by United States Environmental Protection Agency Method 8260B.

Laboratory analytical results are included as Attachment B and a site plan with groundwater analytical results is shown on Figure 2. In addition, hydrographs for wells MW-1, MW-2, MW-4, and MW-5A are included as Attachment C.

RESULTS

The results of the fourth quarter 2012 sampling event indicate that concentrations of contaminants of concern are generally consistent and following a downward trend with respect to historical data. Below is a summary of analytical results:

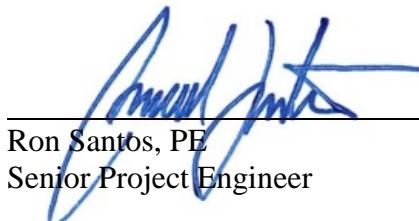
- Tetrachloroethene was detected in groundwater from wells MW-4 and MW-5A at concentrations greater than the MTCA Method A cleanup level.
- Remaining analytes were below their respective MTCA Method A cleanup levels or laboratory reporting limits.

Blaine Tech will continue to perform groundwater monitoring and sampling on a quarterly basis.

If you have any questions or comments, please contact me at (208) 429-3772 or via email at ronald.santos@saic.com.

Sincerely,

SAIC Energy, Environment & Infrastructure, LLC


Ron Santos, PE
Senior Project Engineer


Gabriel Cisneros LG #2357
Geologist



Enclosures:

Figure 1 – Potentiometric Map

Figure 2 – Site Plan with Groundwater Analytical Results

Table 1 – Groundwater Monitoring Data and Analytical Results

Attachment A – Groundwater Monitoring and Sampling Data Package

Attachment B – Laboratory Analysis Report

Attachment C – Hydrographs

cc: Mr. J. Mark Inglis – Union Oil of California
Ms. Sheila Smith, Emerald West, LLC – Property Owner
Project File

REPORT LIMITATIONS

This technical document was prepared on behalf of Chevron and is intended for its sole use and for use by the local, state or federal regulatory agency that the technical document was sent to by SAIC. Any other person or entity obtaining, using, or relying on this technical document hereby acknowledges that they do so at their own risk, and that SAIC shall have no responsibility or liability for the consequences thereof.

Site history and background information provided in this technical document are based on sources that may include interviews with environmental regulatory agencies and property management personnel and a review of acquired environmental regulatory agency documents and property information obtained from CEMC and others. SAIC has not made, nor has it been asked to make, any independent investigation concerning the accuracy, reliability, or completeness of such information beyond that described in this technical document.

Recognizing reasonable limits of time and cost, this technical document cannot wholly eliminate uncertainty regarding the vertical and lateral extent of impacted environmental media.

Opinions and recommendations presented in this technical document apply only to site conditions and features as they existed at the time of SAIC's site visits or site work and cannot be applied to conditions and features of which SAIC is unaware and has not had the opportunity to evaluate.

All sources of information on which SAIC has relied in making its conclusions (including direct field observations) are identified by reference in this technical document or in appendices attached to this technical document. Any information not listed by reference or in appendices has not been evaluated or relied upon by SAIC in the context of this technical document. The conclusions, therefore, represent our professional opinion based on the identified sources of information.

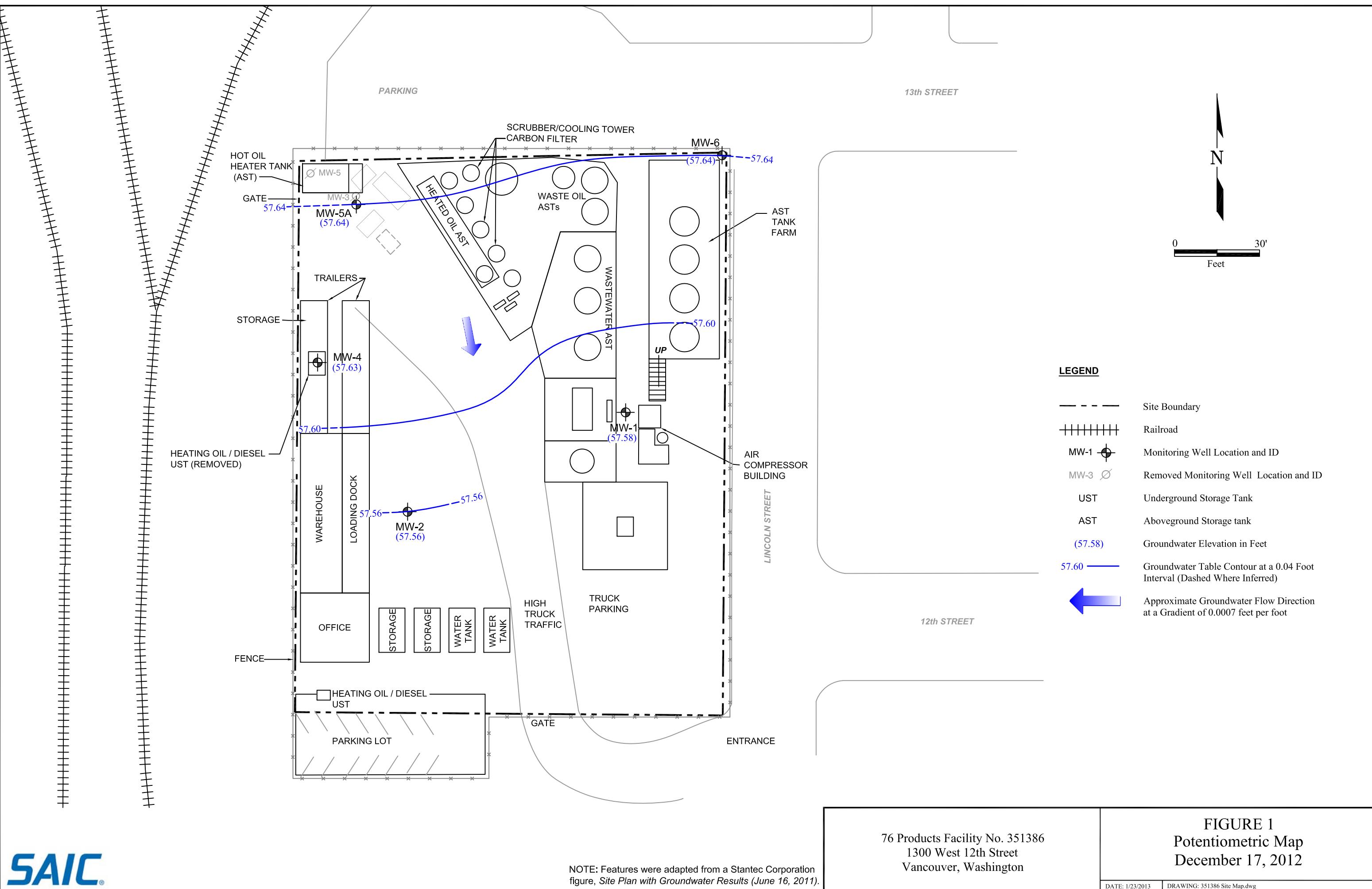
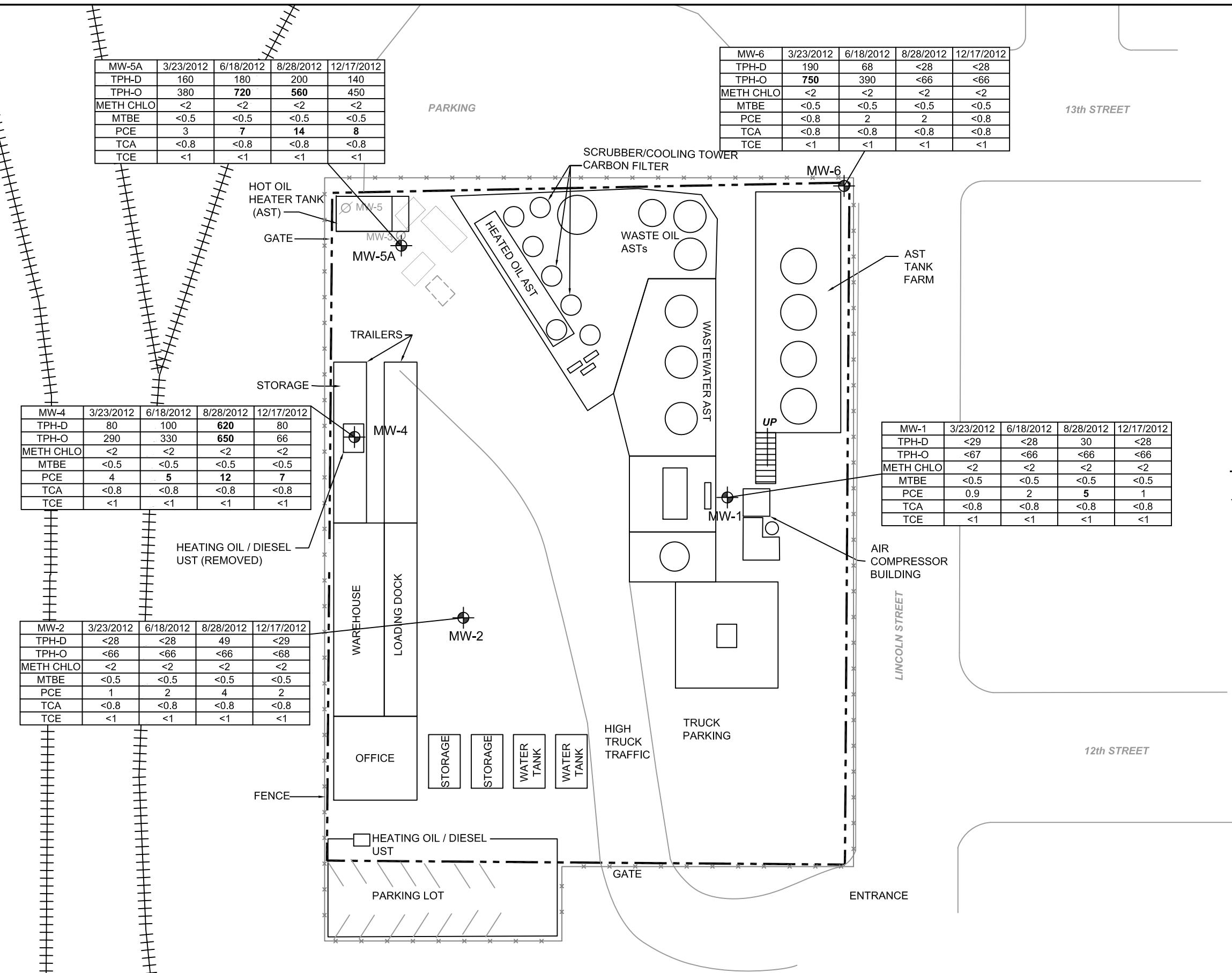


FIGURE 1
Potentiometric Map
December 17, 2012



N
0 30' Feet

LEGEND

- Site Boundary
- ||||| Railroad
- MW-1 Monitoring Well Location and ID
- MW-3 Removed Monitoring Well Location and ID
- UST Underground Storage Tank
- AST Aboveground Storage Tank
- (53.78) Relative Groundwater Elevation (Feet)

ANALYTES

WELL ID	DATE
TPH-D	DIESEL-RANGE HYDROCARBONS
TPH-O	HEAVY OIL-RANGE HYDROCARBONS
METH CHLO	METHYLENE CHLORIDE
MTBE	METHYL TERT BUTYL ETHER
PCE	TETRACHLOROETHENE
TCA	1, 1, 1-TRICHLOROETHANE
TCE	TRICHLOROETHENE

All Results are in Micrograms per Liter ($\mu\text{g/L}$)

< Less Than the Stated Laboratory Detection Limit Threshold

BOLD Indicates Analyte Concentration Exceeded MTCA Method A Cleanup Level

NOTE: Features were adapted from a Stantec Corporation figure, Site Plan with Groundwater Results (June 16, 2011).

76 Products Facility No. 351386
1300 West 12th Street
Vancouver, Washington

FIGURE 2

Site Plan with Groundwater Analytical Results (December 17, 2012)

DATE: 1/23/2013 DRAWING: 351386 Site Map.dwg

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
76 PRODUCTS FACILITY No. 351386
1300 W 12th Street, Vancouver, Washington
Concentrations reported in µg/L unless otherwise noted

Well ID TOC Elevation (ft)	Sample Date	Depth to Water (ft)	GW Elevation (ft)	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Chloroform	Methylene Chloride	MTBE	1,1,1-TCA	TCE	PCE	Dissolved Lead (mg/L)	Total Lead (mg/L)	Ethanol	Dissolved Oxygen (mg/L)
MW-1 96.52	04/24/00	37.34	59.18	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	--	--	
	08/30/00	44.19	52.33	--	--	--	--	--	--	--	ND	ND	ND	ND	1.96	--	--	--	--	
	10/04/00	44.75	51.77	--	--	--	--	--	--	--	ND	ND	ND	ND	1.98	<0.00100	--	--	--	
	01/15/01	43.41	53.11	--	--	--	--	--	--	--	ND	ND	ND	ND	1.88	--	--	--	--	
	04/23/01	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	07/25/01	46.17	50.35	--	--	--	--	--	--	--	ND	3.63	ND	ND	1.83	<0.00100	0.0478	--	--	
	10/16/01	45.38	51.14	--	--	--	--	--	--	--	ND	1.67	ND	ND	1.29	<0.00859	0.0231	--	--	
	01/09/02	40.90	55.62	--	--	--	--	--	--	--	ND	ND	ND	ND	<0.00100	0.00252	--	--	--	
	04/04/02	42.96	53.56	--	--	--	--	--	--	--	ND	5,120	ND	ND	108	--	--	--	--	
	07/08/02	40.24	56.28	--	--	--	--	--	--	--	ND	476	ND	ND	28.2	--	--	--	--	
	10/30/02	45.25	51.27	--	--	--	--	--	--	--	ND	144	ND	1.46	11.4	--	--	--	--	
	01/17/03	43.05	53.47	--	--	--	--	--	--	--	ND	346	ND	ND	15.1	--	--	--	--	
	04/04/03	40.23	56.29	--	--	--	--	--	--	--	ND	85.3	ND	ND	2.93	--	--	--	--	
	07/02/03	42.58	53.94	--	--	--	--	--	--	--	ND	574	ND	ND	17.3	--	--	--	--	
	01/28/04	40.90	55.62	--	--	--	--	--	--	--	ND	326	ND	ND	ND	--	--	--	--	
	04/26/04	42.75	53.77	--	--	--	--	--	--	--	ND	338	ND	0.757	6.31	--	--	--	2.03	
	07/23/04	44.25	52.27	--	--	--	--	--	--	--	ND	127	ND	2.06	19.5	--	--	--	--	
	11/05/04	44.13	52.39	--	--	--	--	--	--	--	1.01	447	ND	1.3	8.06	--	--	--	2.88	
	02/04/05	43.68	52.84	--	--	--	--	--	--	--	<1.0	192	ND	12.6	1.08	--	--	--	--	
	05/10/05	41.02	55.50	--	--	--	--	--	--	--	<5.0	197	ND	ND	ND	--	--	--	--	
	08/08/05	43.72	52.80	--	--	--	--	--	--	--	<1.0	234	<200	1.33	12.9	--	--	--	4.88	
	12/13/05	43.67	52.85	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	<1.0	6.0	--	--	--	7.59	
	03/03/06	40.78	55.74	--	--	--	--	--	--	--	<2.0	100	<0.8	<1.0	6.0	--	--	--	6.23	
	06/29/06	40.30	56.22	--	--	--	--	--	--	--	<2.0	18	<0.8	<1.0	10	--	--	--	6.04	
	09/08/06	44.40	52.12	--	--	--	--	--	--	--	<2.0	58	<0.8	1.0	10	--	--	--	6.89	
	12/01/06	41.34	55.18	--	--	--	--	--	--	--	<2.0	19	<0.8	<1.0	4.0	--	--	--	5.20	
	03/01/07	41.60	54.92	--	--	--	--	--	--	--	<2.0	14	<0.8	<1.0	7.0	--	--	--	7.35	
	06/28/07	43.10	53.42	--	--	--	--	--	--	--	<2	<0.5	<0.8	1	12	--	--	--	7.0	
	02/01/08	42.25	54.27	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	<1	7	--	--	--	
	03/20/08	42.07	54.45	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	<1	5	--	--	--	
	06/19/08	36.39	60.13	--	--	--	<0.5	<0.7	<0.8	<0.8	2	<2	<0.5	<0.8	<1	3	--	--	--	
	09/30/08	44.92	51.60	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	9.2	--	--	--	
	11/07/08	44.65	51.87	--	--	--	<0.5	<0.7	<0.8	<0.8	<0.8	<2	<0.5	<0.8	<1	8	--	--	--	
	02/19/09	44.19	52.33	--	--	--	<0.12	<0.21	<0.20	<0.27	0.78	<1.0	<0.16	<0.20	0.34	8.5	--	--	--	
	04/21/09	42.02	55.08	--	--	--	<0.12	<0.21	<0.20	<0.27	1.7	<1.0	<0.16	<0.20	<0.22	4.3	--	--	--	
	07/30/09	44.25	52.85	--	--	--	<0.12	<0.21	<0.20	<0.27	1.1	<1.0	<0.16	<0.20	0.32 J	6.1	--	--	--	
	10/27/09	45.98	51.12	--	--	--	0.13 J	0.69 J	<0.20	<0.42	1.1	<1.0	<0.16	<0.20	<0.22	5.1	--	--	--	
	03/12/10	44.38	52.72	--	--	--	<0.12	<0.21	<0.20	<0.42	1.6	<0.26	<0.16	<0.20	<0.22	3.3	--	--	--	

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Well ID TOC Elevation (ft)	Sample Date	Depth to Water (ft)	GW Elevation (ft)	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Chloroform	Methylene Chloride	MTBE	1,1,1-TCA	TCE	PCE	Dissolved Lead (mg/L)	Total Lead (mg/L)	Ethanol	Dissolved Oxygen (mg/L)
MW-1 (cont)	06/04/10	40.20	56.90	--	<77.7	<388	<1.0	<1.0	<1.0	<3.0	1.6	<4.0	<1.0	<1.0	<1.0	2.8	--	--	--	--
	09/02/10	46.00	51.10	--	<75.8	<379	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	4.6	--	--	--	--
	12/01/10	43.36	53.74	--	<75.5	<377	<1.0	<1.0	<1.0	<3.0	2.0	<4.0	<1.0	<1.0	<1.0	2.4	--	--	--	--
	03/08/11	40.53	56.57	--	<75.5	<377	<1.0	<1.0	<1.0	<3.0	1.8	<4.0	<1.0	<1.0	<1.0	2.2	--	--	--	--
	06/16/11	31.98	65.12	--	<88.9	<444	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	1.4	--	--	--	--
	09/26/11	45.00	52.10	<50	<30	<69	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	6	--	--	<50	--
	12/19/11	45.15	51.95	--	<29	<67	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	4	--	--	<50	--
	03/23/12	28.61	68.49	--	<29	<67	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	0.9	--	--	<50	--
	06/18/12	38.27	58.83	--	<28	<66	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	2	--	--	<50	--
	08/28/12	43.32	53.78	--	30	<66	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	5	--	--	<50	--
	12/17/12	39.52	57.58	--	<28	<66	<0.5	<0.5	<0.5	<0.5	1	<2	<0.5	<0.8	<1	1	--	--	<50	--
MW-2 96.95	04/24/00	37.76	59.19	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	--	--	--
	08/30/00	44.63	52.32	--	--	--	--	--	--	--	ND	ND	1.07	ND	4.00	--	--	--	--	--
	10/04/00	45.26	51.69	--	--	--	--	--	--	--	ND	ND	ND	ND	3.37	<0.00100	--	--	--	--
	01/15/01	43.87	53.08	--	--	--	--	--	--	--	ND	ND	ND	ND	1.24	--	--	--	--	--
	04/23/01	44.97	51.98	--	--	--	--	--	--	--	ND	ND	ND	ND	2.29	<0.00100	0.00600	--	--	--
	07/25/01	46.65	50.30	--	--	--	--	--	--	--	ND	ND	ND	ND	6.74	<0.00100	0.0733	--	--	--
	10/16/01	45.72	51.23	--	--	--	--	--	--	--	ND	ND	ND	ND	3.26	<0.00100	0.0157	--	--	--
	01/09/02	41.34	55.61	--	--	--	--	--	--	--	ND	ND	ND	ND	2.33	<0.00100	0.00757	--	--	--
	04/04/02	43.42	53.53	--	--	--	--	--	--	--	ND	1.54	ND	ND	3.78	--	--	--	--	--
	07/08/02	40.69	56.26	--	--	--	--	--	--	--	ND	ND	ND	ND	6.88	--	--	--	--	--
	10/30/02	45.74	51.21	--	--	--	--	--	--	--	ND	ND	ND	7.1	<5	--	--	--	--	--
	01/17/03	43.49	53.46	--	--	--	--	--	--	--	ND	1.03	ND	1.22	8.83	--	--	--	--	--
	04/04/03	40.70	56.25	--	--	--	--	--	--	--	ND	11.8	ND	ND	5.34	--	--	--	--	--
	07/02/03	43.02	53.93	--	--	--	--	--	--	--	ND	3.33	ND	1.55	8.91	--	--	--	--	--
	01/28/04	41.35	55.60	--	--	--	--	--	--	--	ND	40.4	ND	2.1	9.4	--	--	--	--	--
	04/26/04	43.21	53.74	--	--	--	--	--	--	--	ND	16.1	0.563	2.53	12.5	--	--	--	1.91	--
	07/23/04	44.70	52.25	--	--	--	--	--	--	--	ND	7.24	0.899	3.58	18.5	--	--	--	--	--
	11/05/04	44.60	52.35	--	--	--	--	--	--	--	ND	2.67	ND	2.74	10.8	--	--	--	--	2.83
	02/04/05	44.13	52.82	--	--	--	--	--	--	--	<1.0	2.78	ND	3.20	17	--	--	--	--	--
	05/10/05	41.42	55.53	--	--	--	--	--	--	--	<5.0	ND	ND	ND	4.84	--	--	--	--	--
	08/08/05	44.16	52.79	--	--	--	--	--	--	--	<1.0	29.2	<200	3.26	15.6	--	--	--	--	3.84
	12/13/05	44.14	52.81	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	1.0	9.0	--	--	--	--	7.36
	03/03/06	41.22	55.73	--	--	--	--	--	--	--	<2.0	7.0	<0.8	2.0	8.0	--	--	--	--	6.3
	06/29/06	40.78	56.17	--	--	--	--	--	--	--	<2.0	12	<0.8	2.0	13	--	--	--	--	6.2
	09/08/06	42.82	54.13	--	--	--	--	--	--	--	<2.0	120	<0.8	4.0	20	--	--	--	--	5.5
	12/01/06	41.81	55.14	--	--	--	--	--	--	--	<2.0	5.0	<0.8	<1.0	8.0	--	--	--	--	4.95
	03/01/07	42.08	54.87	--	--	--	--	--	--	--	<2.0	23.0	<0.8	2.0	11.0	--	--	--	--	5.7

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Well ID TOC Elevation (ft)	Sample Date	Depth to Water (ft)	GW Elevation (ft)	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Chloroform	Methylene Chloride	MTBE	1,1,1-TCA	TCE	PCE	Dissolved Lead (mg/L)	Total Lead (mg/L)	Ethanol	Dissolved Oxygen (mg/L)
MW-2 (cont)	06/28/07	43.64	53.31	--	--	--	--	--	--	--	<2	35	<0.8	2	13	--	--	--	6.40	
	02/01/08	42.70	54.25	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	<1	7	--	--	--	
	03/20/08	42.50	54.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	06/19/08	36.82	60.13	--	--	--	<0.5	<0.7	<0.8	<0.8	3	<2	<0.5	<0.8	<1	7	--	--	--	
	09/30/08	45.30	51.65	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	1.9	11	--	--	--	
	11/07/08	45.10	51.85	--	--	--	<0.5	<0.7	<0.8	<0.8	2	<2	<0.5	<0.8	<1	8	--	--	--	
	02/19/09	45.60	51.35	--	--	--	<0.12	<0.21	<0.20	<0.27	2.5	<1.0	<0.16	0.22	1.1	9.2	--	--	--	
	04/21/09	41.82	55.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	07/30/09	44.00	52.95	--	--	--	<0.12	<0.21	<0.20	<0.27	2.1	<1.0	<0.16	<0.20	1.1	8.8	--	--	--	
	10/27/09	45.77	51.18	--	--	--	<0.12	<0.21	<0.20	<0.42	2.1	<1.0	<0.16	<0.20	0.60 J	5.1	--	--	--	
	03/12/10	44.15	52.80	--	--	--	<0.12	<0.21	<0.20	<0.42	2.7	<0.26	<0.16	<0.20	0.54 J	3.6	--	--	--	
	06/04/10	40.06	56.89	--	<77.7	<388	<1.0	<1.0	<1.0	<3.0	3.5	<4.0	<1.0	<1.0	<1.0	2.1	--	--	--	
	09/02/10	45.82	51.13	--	<75.8	<379	<1.0	<1.0	<1.0	<3.0	1.6	<4.0	<1.0	<1.0	1.0	6.0	--	--	--	
	12/01/10	43.15	53.80	--	<75.5	<377	<1.0	<1.0	<1.0	<3.0	3.5	<4.0	<1.0	<1.0	<1.0	2.3	--	--	--	
	03/08/11	40.33	56.62	--	<75.5	<377	<1.0	<1.0	<1.0	<3.0	3.6	<4.0	<1.0	<1.0	<1.0	2.9	--	--	--	
	06/16/11	31.87	65.08	--	<81.6	<408	<1.0	<1.0	<1.0	<3.0	2.5	<4.0	<1.0	<1.0	<1.0	2.2	--	--	--	
	09/26/11	44.79	52.16	<50	<28	<66	<0.5	<0.5	<0.5	<0.5	2	<2	<0.5	<0.8	<1	6	--	--	<50	
	12/19/11	45.11	51.84	--	34	<67	<0.5	<0.5	<0.5	<0.5	2	<2	<0.5	<0.8	<1	4	--	--	<50	
	03/23/12	28.49	68.46	--	<28	<66	<0.5	<0.5	<0.5	<0.5	3	<2	<0.5	<0.8	<1	1	--	--	<50	
	06/18/12	38.09	58.86	--	<28	<66	<0.5	<0.5	<0.5	<0.5	4	<2	<0.5	<0.8	<1	2	--	--	<50	
	08/28/12	43.13	53.82	--	49	<66	<0.5	<0.5	<0.5	<0.5	2	<2	<0.5	<0.8	<1	4	--	--	<50	
	12/17/12	39.39	57.56	--	<29	<68	<0.5	<0.5	<0.5	<0.5	4	<2	<0.5	<0.8	<1	2	--	--	<50	
MW-4 95.80	08/30/00	43.50	52.30	--	--	--	--	--	--	--	ND	ND	ND	ND	12.6	--	--	--	--	
	10/04/00	44.07	51.73	--	--	--	--	--	--	--	ND	ND	ND	ND	12.8	0.00122	--	--	--	
	01/15/01	42.69	53.11	--	--	--	--	--	--	--	ND	ND	ND	ND	5.19	--	--	--	--	
	04/23/01	43.87	51.93	--	--	--	--	--	--	--	ND	ND	ND	ND	9.02	<0.00100	0.00238	--	--	
	07/25/01	45.43	50.37	--	--	--	--	--	--	--	ND	ND	ND	ND	7.92	<0.00100	0.0620	--	--	
	10/16/01	44.59	51.21	--	--	--	--	--	--	--	ND	ND	ND	ND	3.8	<0.00100	0.0108	--	--	
	01/09/02	40.17	55.63	--	--	--	--	--	--	--	ND	ND	ND	ND	3.21	<0.00100	0.00139	--	--	
	04/04/02	43.32	52.48	--	--	--	--	--	--	--	ND	8.58	2.87	15.4	45.5	--	--	--	--	
	07/08/02	39.53	56.27	--	--	--	--	--	--	--	ND	22.7	1.83	9.59	22.2	--	--	--	--	
	10/30/02	44.53	51.27	--	--	--	--	--	--	--	ND	1,090	ND	35	76.6	--	--	--	--	
	01/17/03	42.32	53.48	--	--	--	--	--	--	--	ND	2,960	ND	27.2	84.8	--	--	--	--	
	04/04/03	39.53	56.27	--	--	--	--	--	--	--	ND	779	ND	12.2	48.2	--	--	--	--	
	07/02/03	41.90	53.90	--	--	--	--	--	--	--	ND	397	2.38	11.6	58.2	--	--	--	--	
	01/28/04	40.20	55.60	--	--	--	--	--	--	--	ND	289	ND	11.2	63.9	--	--	--	--	
	04/26/04	42.05	53.75	--	--	--	--	--	--	--	ND	362	1.62	6.86	49.6	--	--	--	2.11	
	07/23/04	43.61	52.19	--	--	--	--	--	--	--	ND	86.1	1.7	4.97	48.4	--	--	--	--	

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
76 PRODUCTS FACILITY No. 351386
1300 W 12th Street, Vancouver, Washington
Concentrations reported in µg/L unless otherwise noted

Well ID TOC Elevation (ft)	Sample Date	Depth to Water (ft)	GW Elevation (ft)	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Chloroform	Methylene Chloride	MTBE	1,1,1-TCA	TCE	PCE	Dissolved Lead (mg/L)	Total Lead (mg/L)	Ethanol	Dissolved Oxygen (mg/L)
MW-4 (cont)	11/05/04	43.49	52.31	--	--	--	--	--	--	--	ND	59.8	2.13	6.14	45.5	--	--	--	--	3.18
	02/04/05	42.96	52.84	--	--	--	--	--	--	--	<1.0	169	2.14	5.15	46.8	--	--	--	--	--
	05/10/05	40.29	55.51	--	--	--	--	--	--	--	<5.0	4.86	ND	ND	4.91	--	--	--	--	--
	08/08/05	43.00	52.80	--	--	--	--	--	--	--	<1.0	139	1.85	5.3	44.8	--	--	--	--	1.94
	12/13/05	42.97	52.83	--	--	--	--	--	--	--	<2.0	110	0.9	2.0	17	--	--	--	--	6.07
	03/03/06	40.02	55.78	--	--	--	--	--	--	--	<2.0	70	<0.8	2.0	11	--	--	--	--	4.89
	06/29/06	39.63	56.17	--	--	--	--	--	--	--	<2.0	110	<0.8	3.0	23	--	--	--	--	4.90
	09/08/06	43.66	52.14	--	--	--	--	--	--	--	<2.0	270	1	5.0	35	--	--	--	--	4.30
	12/01/06	40.65	55.15	--	--	--	--	--	--	--	<2.0	160	<0.8	2.0	18	--	--	--	--	3.80
	03/01/07	40.90	54.90	--	--	--	--	--	--	--	<2.0	180	<0.8	2.0	25	--	--	--	--	4.65
	06/28/07	42.48	53.32	--	--	--	--	--	--	--	<2	2	<0.8	2	33	--	--	--	--	3.5
	02/01/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	03/20/08	41.34	54.46	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	1	11	--	--	--	--
	06/19/08	35.66	60.14	--	--	--	<0.5	<0.7	<0.8	<0.8	0.9	<2	<0.5	<0.8	<1	9	--	--	--	--
	09/30/08	44.15	51.65	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	1.2	15	--	--	--	--
	11/07/08	43.94	51.86	--	--	--	<0.5	<0.7	<0.20	<0.8	<0.8	<2	<0.5	<0.8	1	16	--	--	--	--
	02/19/09	43.54	52.26	--	--	--	<0.12	<0.21	<0.20	<0.27	0.19	<1.0	0.89	0.33	0.98	26	--	--	--	--
	04/21/09	40.65	55.15	--	--	--	<0.12	<0.21	<0.20	<0.27	1.6	<1.0	0.32 J	<0.20	0.88 J	11.7	--	--	--	--
	07/30/09	42.85	52.95	--	--	--	<0.12	<0.21	<0.20	<0.27	1.0	<1.0	0.40 J	0.29 J	1.2	19.0	--	--	--	--
	10/27/09	44.61	51.19	--	--	--	<0.12	<0.21	<0.20	<0.42	0.99 J	<1.0	0.31 J	<0.15	1.0	16.6	--	--	--	--
	03/12/10	43.02	52.78	--	--	--	<0.12	<0.21	<0.20	<0.42	0.79 J	<0.26	0.33 J	0.26 J	1.0	13.9	--	--	--	--
	06/04/10	38.90	56.90	--	<75.8	<379	<1.0	<1.0	<1.0	<3.0	2.60	<4.0	<1.0	<1.0	<1.0	5.2	--	--	--	--
	09/02/10	44.65	51.15	--	<75.8	<379	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	11.6	--	--	--	--
	12/01/10	42.00	53.80	--	<75.5	<377	<1.0	<1.0	<1.0	<3.0	2.3	<4.0	<1.0	<1.0	<1.0	7.1	--	--	--	--
	03/08/11	39.16	56.64	--	130	<377	<1.0	<1.0	<1.0	<3.0	1.8	<4.0	<1.0	<1.0	<1.0	8.6	--	--	--	--
	06/16/11	31.25	64.55	--	<83.3	<417	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	3.9	--	--	--	--
	09/26/11	43.63	52.17	99	<28	<66	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	14	--	<50	--	--
	12/19/11	43.82	51.98	--	330	700	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	11	--	<50	--	--
	03/23/12	27.33	68.47	--	80	290	<0.5	<0.5	<0.5	<0.5	2	<2	<0.5	<0.8	<1	4	--	<50	--	--
	06/18/12	39.16	56.64	--	100	330	<0.5	<0.5	<0.5	<0.5	2	<2	<0.5	<0.8	<1	5	--	<50	--	--
	08/28/12	42.01	53.79	--	620	650	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	12	--	<50	--	--
	12/17/12	38.17	57.63	--	80	66	<0.5	<0.5	<0.5	<0.5	0.9	<2	<0.5	<0.8	<1	7	--	<50	--	--
MW-5 96.47	08/30/00	44.18	52.29	--	--	--	--	--	--	--	ND	ND	2.0	1.56	25.6	--	--	--	--	--
	10/04/00	44.72	51.75	--	--	--	--	--	--	--	ND	ND	ND	1.73	16.9	<0.00100	--	--	--	--
	01/15/01	43.35	53.12	--	--	--	--	--	--	--	ND	ND	ND	ND	7.37	--	--	--	--	--
	04/23/01	44.52	51.95	--	--	--	--	--	--	--	ND	ND	ND	ND	9.21	<0.00100	0.00174	--	--	--
	07/25/01	46.11	50.36	--	--	--	--	--	--	--	ND	ND	ND	1.42	22.9	<0.00100	0.0123	--	--	--
	10/16/01	45.28	51.19	--	--	--	--	--	--	--	ND	ND	ND	1.29	18	<0.00100	0.00602	--	--	--

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GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
76 PRODUCTS FACILITY No. 351386
1300 W 12th Street, Vancouver, Washington
Concentrations reported in µg/L unless otherwise noted

Well ID TOC Elevation (ft)	Sample Date	Depth to Water (ft)	GW Elevation (ft)	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Chloroform	Methylene Chloride	MTBE	1,1,1-TCA	TCE	PCE	Dissolved Lead (mg/L)	Total Lead (mg/L)	Ethanol	Dissolved Oxygen (mg/L)
MW-5 (cont)	01/09/02	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	04/04/02	42.95	53.52	--	--	--	--	--	--	--	--	ND	ND	2.78	15.1	105	--	--	--	
	07/08/02	40.22	56.25	--	--	--	--	--	--	--	--	ND	ND	1.48	5.6	57.6	--	--	--	
	10/30/02	45.15	51.32	--	--	--	--	--	--	--	--	ND	1.37	2.75	14.8	101	--	--	--	
MW-5A 96.46	01/17/03	42.93	53.53	--	--	--	--	--	--	--	--	ND	15.1	2.29	10.3	79	--	--	--	
	04/04/03	40.18	56.28	--	--	--	--	--	--	--	--	ND	67	ND	1.91	17.1	--	--	--	
	07/02/03	42.55	53.91	--	--	--	--	--	--	--	--	ND	35.7	2.2	9.8	78.1	--	--	--	
	01/28/04	40.83	55.63	--	--	--	--	--	--	--	--	ND	449	ND	ND	31.4	--	--	--	
	04/26/04	42.68	53.78	--	--	--	--	--	--	--	--	ND	164	3.9	7.43	68	--	--	2.89	
	07/23/04	44.21	52.25	--	--	--	--	--	--	--	--	ND	45	5.07	9.93	79.3	--	--	--	
	11/05/04	44.06	52.40	--	--	--	--	--	--	--	--	ND	ND	ND	ND	2.98	--	--	4.89	
	02/04/05	43.60	52.86	--	--	--	--	--	--	--	--	<1.0	26	2.71	5.47	58.8	--	--	--	
	05/10/05	40.94	55.52	--	--	--	--	--	--	--	--	<5.0	214	ND	ND	21.2	--	--	--	
	08/08/05	43.64	52.82	--	--	--	--	--	--	--	--	<1.0	89	2.3	5.8	59.4	--	--	4.62	
	12/13/05	43.60	52.86	--	--	--	--	--	--	--	--	<2.0	95	1.0	3.0	26	--	--	5.82	
	03/03/06	40.71	55.75	--	--	--	--	--	--	--	--	<2.0	110	0.8	2.0	25	--	--	3.09	
	06/29/06	40.25	56.21	--	--	--	--	--	--	--	--	<2.0	130	1.0	3.0	37	--	--	4.15	
	09/08/06	44.30	52.16	--	--	--	--	--	--	--	--	<2.0	16	2.0	6.0	66	--	--	3.30	
	12/01/06	41.29	55.17	--	--	--	--	--	--	--	--	<2.0	12	<0.8	2.0	25	--	--	4.10	
	03/01/07	41.54	54.92	--	--	--	--	--	--	--	--	<2.0	26	0.9	2.0	38	--	--	5.50	
	06/28/07	43.12	53.34	--	--	--	--	--	--	--	--	<2	1	<0.8	3	40	--	--	3.5	
	02/01/08	42.19	54.27	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	1	32	--	--	--	
	03/20/08	42.00	54.46	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	2	28	--	--	--	
	06/19/08	36.25	60.21	--	--	--	<0.5	<0.7	<0.8	<0.8	1	<2	<0.5	<0.8	<1	9	--	--	--	
	09/30/08	44.80	51.66	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	1.5	26	--	--	--	
	11/07/08	44.62	51.84	--	--	--	<0.5	<0.7	<0.8	<0.8	<0.8	<2	<0.5	<0.8	1.0	26	--	--	--	
	02/19/09	44.15	52.31	--	--	--	<0.12	<0.21	<0.20	<0.27	3.1	<1.0	0.23	0.26	0.97	26	--	--	--	
	04/21/09	41.31	55.15	--	--	--	0.26 J	0.90 J	0.54 J	0.99 J	1.8	<1.0	0.22 J	<0.20	0.65 J	14.1	--	--	--	
	07/30/09	43.50	52.96	--	--	--	<0.12	<0.21	<0.20	<0.27	1.8	<1.0	0.28 J	0.28 J	1.0	23.5	--	--	--	
	10/27/09	45.22	51.24	--	--	--	<0.12	<0.21	<0.20	<0.42	0.73 J	<1.0	<0.16	<0.20	0.46 J	10.4	--	--	--	
	03/12/10	43.65	52.81	--	--	--	<0.12	<0.21	<0.20	<0.42	3.1	<0.26	0.16 J	<0.20	0.66 J	11.6	--	--	--	
	06/04/10	39.59	56.87	--	<77.7	<388	<1.0	<1.0	<1.0	<3.0	1.6	<4.0	<1.0	<1.0	<1.0	7.3	--	--	--	
	09/02/10	45.29	51.17	--	<75.8	<379	<1.0	<1.0	<1.0	<3.0	1.9	<4.0	<1.0	<1.0	<1.0	13.0	--	--	--	
	12/01/10	42.59	53.87	--	<75.5	<377	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	7.4	--	--	--	
	03/08/11	39.81	56.65	--	118	<377	<1.0	<1.0	<1.0	<3.0	1.6	<4.0	<1.0	<1.0	<1.0	9.2	--	--	--	
	06/16/11	30.62	65.84	--	<81.6	<408	<1.0	<1.0	<1.0	<3.0	2.3	<4.0	<1.0	<1.0	<1.0	3.0	--	--	--	
	09/26/11	44.30	52.16	58	<28	<66	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	20	--	<50	--	
	12/19/11	44.37	52.09	--	58	<67	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	10	--	<50	--	

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76 PRODUCTS FACILITY No. 351386
1300 W 12th Street, Vancouver, Washington
Concentrations reported in $\mu\text{g/L}$ unless otherwise noted

Well ID TOC Elevation (ft)	Sample Date	Depth to Water (ft)	GW Elevation (ft)	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Chloroform	Methylene Chloride	MTBE	1,1,1-TCA	TCE	PCE	Dissolved Lead (mg/L)	Total Lead (mg/L)	Ethanol	Dissolved Oxygen (mg/L)
MW-5A (cont)	03/23/12	27.98	68.48	--	160	380	<0.5	<0.5	<0.5	<0.5	1	<2	<0.5	<0.8	<1	3	--	--	<50	--
	06/18/12	37.57	58.89	--	180	720	<0.5	<0.5	<0.5	<0.5	2	<2	<0.5	<0.8	<1	7	--	--	<50	--
	08/28/12	42.61	53.85	--	200	560	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	14	--	--	<50	--
	12/17/12	38.82	57.64	--	140	450	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	8	--	--	<50	--
MW-6 110.19	08/30/00	57.87	52.32	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	--	--	--
	10/04/00	58.42	51.77	--	--	--	--	--	--	--	ND	ND	ND	ND	<0.00100	--	--	--	--	--
	01/15/01	57.04	53.15	--	--	--	--	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--
	04/23/01	58.18	52.01	--	--	--	--	--	--	--	ND	ND	ND	ND	<0.00100	0.00347	--	--	--	--
	07/25/01	59.80	50.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/16/01	59.02	51.17	--	--	--	--	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--
	01/09/02	54.58	55.61	--	--	--	--	--	--	--	ND	ND	ND	ND	<0.00830	0.00714	--	--	--	--
	04/04/02	56.64	53.55	--	--	--	--	--	--	--	ND	ND	ND	5.84	<0.00100	0.00461	--	--	--	--
	07/08/02	53.90	56.29	--	--	--	--	--	--	--	ND	ND	ND	ND	3.8	--	--	--	--	--
	10/30/02	58.90	51.29	--	--	--	--	--	--	--	ND	ND	ND	2.26	--	--	--	--	--	--
	01/17/03	56.69	53.50	--	--	--	--	--	--	--	ND	ND	ND	4.56	--	--	--	--	--	--
	04/04/03	53.90	56.29	--	--	--	--	--	--	--	ND	1.17	ND	ND	2.64	--	--	--	--	--
	07/02/03	56.24	53.95	--	--	--	--	--	--	--	ND	ND	ND	4.26	--	--	--	--	--	--
	01/28/04	54.56	55.63	--	--	--	--	--	--	--	ND	ND	ND	2.39	--	--	--	--	--	--
	04/26/04	56.38	53.81	--	--	--	--	--	--	--	ND	ND	ND	14.9	--	--	--	--	1.83	--
	07/23/04	58.01	52.18	--	--	--	--	--	--	--	ND	ND	ND	7.26	--	--	--	--	--	--
	11/05/04	57.76	52.43	--	--	--	--	--	--	--	ND	332	ND	3.05	17.7	--	--	--	--	3.08
	02/04/05	57.34	52.85	--	--	--	--	--	--	--	ND	ND	ND	8.55	--	--	--	--	--	--
	05/10/05	54.70	55.49	--	--	--	--	--	--	--	ND	ND	ND	1.53	--	--	--	--	--	--
	08/08/05	57.40	52.79	--	--	--	--	--	--	--	<1.0	<1	<200	<5.0	5.48	--	--	--	--	3.71
	12/13/05	57.30	52.89	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	<1.0	2.0	--	--	--	--	7.4
	03/03/06	54.45	55.74	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	<1.0	6.0	--	--	--	--	6.48
	06/29/06	53.94	56.25	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	<1.0	11	--	--	--	--	6.95
	09/08/06	58.09	52.10	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	<1.0	3.0	--	--	--	--	7.10
	12/01/06	55.00	55.19	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	<1.0	2.0	--	--	--	--	6.90
	03/01/07	55.25	54.94	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	<1.0	6.0	--	--	--	--	7.75
	06/28/07	56.77	53.42	--	--	--	--	--	--	--	<2	<0.5	<0.8	<1	2	--	--	--	--	6.70
	02/01/08	55.90	54.29	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	<1	4	--	--	--	--
	03/20/08	55.75	54.44	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	<1	3	--	--	--	--
	06/19/08	50.07	60.12	--	--	--	<0.5	<0.7	<0.8	<0.8	<0.8	<0.8	<2	<0.5	<0.8	<1	1	--	--	--
	09/30/08	58.60	51.59	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	--	--	--
	11/07/08	58.30	51.89	--	--	--	<0.5	<0.7	<0.8	<0.8	<0.8	<2	<0.5	<0.8	<1	0.9	--	--	--	--
	02/19/09	57.87	52.32	--	--	--	<0.12	<0.21	<0.20	<0.27	0.34	<1.0	<0.16	<0.20	<0.22	1.5	--	--	--	--
	04/21/09	55.04	55.15	--	--	--	0.17 J	0.82 J	0.32 J	0.61 J	<0.15	<1.0	<0.16	<0.20	<0.22	3.4	--	--	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
76 PRODUCTS FACILITY No. 351386
1300 W 12th Street, Vancouver, Washington
Concentrations reported in µg/L unless otherwise noted

Well ID TOC Elevation (ft)	Sample Date	Depth to Water (ft)	GW Elevation (ft)	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Chloroform	Methylene Chloride	MTBE	1,1,1-TCA	TCE	PCE	Dissolved Lead (mg/L)	Total Lead (mg/L)	Ethanol	Dissolved Oxygen (mg/L)
MW-6 (cont)	07/30/09	57.25	52.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/09	58.95	51.24	--	--	--	<0.12	<0.21	<0.20	<0.42	0.20 J	<1.0	<0.16	<0.20	<0.22	0.70 J	--	--	--	--
	03/12/10	57.40	52.79	--	--	--	<0.12	<0.21	<0.20	<0.42	<0.15	<0.26	<0.16	<0.20	<0.22	2.0	--	--	--	--
	06/04/10	53.33	56.86	--	<80.0	<400	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	1.6	--	--	--	--
	09/02/10	59.01	51.18	--	129	460	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	1.1	--	--	--	--
	12/01/10	56.39	53.80	--	<75.5	<377	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--
	03/08/11	53.53	56.66	--	<75.5	<377	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	1.1	--	--	--	--
	06/16/11	45.00	65.19	--	<83.3	<417	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--
	09/26/11	58.01	52.18	110	<29	<67	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	0.9	--	--	<50	--
	12/19/11	58.09	52.10	--	<29	<67	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	<0.8	--	--	<50	--
	03/23/12	51.73	58.46	--	190	750	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	<0.8	--	--	<50	--
	06/18/12	51.33	58.86	--	68	390	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	2	--	--	<50	--
	08/28/12	56.33	53.86	--	<28	<66	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	2	--	--	<50	--
	12/17/12	52.55	57.64	--	<28	<66	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	<0.8	--	--	<50	--
MTCA Method A Cleanup Levels:				1,000/800 ^a	500	500	5	1,000	700	1,000	NE	5	20	200	5	5	15	15	NE	NA

NOTES:

Analytical results in bold font indicate concentrations exceed MTCA Method A cleanup levels.

Groundwater monitoring data, top of casing elevations, and laboratory analytical results prior to September 26, 2011 provided by STANTEC Consulting Corporation.

TOC referenced to a site datum with an assumed elevation of 100.00 feet (National Geodetic Vertical Datum).

a MTCA Method A cleanup levels for TPH-G are 1,000 µg/L when no benzene is present and 800 µg/L when benzene is present.

ABBREVIATIONS:

BTEX = Benzene, Toluene, Ethylbenzene, and Total Xylenes

ft = Feet

GW = Groundwater

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

mg/L = Milligrams per liter

MTBE = Methyl Tertiary Butyl Ether

MTCA = Model Toxics Control Act

NE = Not Established

1,1,1-TCA = 1,1,1-Trichloroethane

PCE = Tetrachloroethene

TCE = Trichloroethene

TPH = Total Petroleum Hydrocarbons

TPH-D = TPH as Diesel-range organics

TPH-G = TPH as Gasoline-range organics

TPH-O = TPH as Heavy Oil-range organics

USEPA = United States Environmental Protection Agency

µg/L = Micrograms per liter

-- = Not measured/Not analyzed

< = Less than the stated laboratory reporting limit

ANALYTICAL METHOD:

TPH-G analyzed by Northwest Method NWTPH-Gx.

TPH-D and TPH-O analyzed by Northwest Method NWTPH-Dx.

BTEX analyzed by USEPA Method 8260B.

Methylene Chloride analyzed by USEPA Method 8260B.

MTBE analyzed by USEPA Method 8260B.

1,1,1-TCA analyzed by USEPA Method 8260B.

TCE analyzed by USEPA Method 8260B.

PCE analyzed by USEPA Method 8260B.

Total and dissolved lead analyzed by USEPA Method 200 or 6000/7000 Series.

Ethanol analyzed by USEPA Method 8260B.

Attachment A:
Groundwater Monitoring and Sampling Data Package

WELL GAUGING DATA

Project # 121217-LB1 Date 12/17/12 Client CHEVRON

Site 1300 W. 12th St, Vancouver, 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 TGC	Notes
MW-1	0950	2					39.52	48.52	/	
MW-2	0958	2					39.39	48.92		
MW-4	1010	2					38.17	48.81		
MW-5A	1004	2					38.82	49.16		
MW-6	0945	2					52.55	64.76	↓	

LOW FLOW WELL MONITORING DATA SHEET

Project #: 121217-LB1	Client: CHEVRON
Sampler: LB	Gauging Date: 12/17/12
Well I.D.: MW-1	Well Diameter (in.): 5 3 4 6 8
Total Well Depth (ft.): 48.52	Depth to Water (ft.): 39.52
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC	Grade: Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other
 Start Purge Time: 1043 Flow Rate: 200 mL/min Pump Depth: 45'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µScm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1046	16.93	6.65	194	11	1.18	59.4	600	39.66
1049	11.03	6.61	198	9	1.15	56.0	1200	39.58
1052	11.05	6.78	200	8	1.11	53.2	1800	39.60
1055	11.04	6.76	200	8	1.10	51.9	2400	39.61
1058	11.04	6.75	199	7	1.09	50.6	3000	39.62

Did well dewater? Yes	No	Amount actually evacuated: 3 L
Sampling Time: 1059	Sampling Date: 12/17/12	
Sample I.D.: MW-1	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 #: 121217-LF	Client: Chevron
Sampler: LB	Gauging Date: 12/7/12
Well I.D.: MW-4	Well Diameter (in.): 0 3 4 6 8
Total Well Depth (ft.): 48.01	Depth to Water (ft.): 38.17
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC	Flow Cell Type: VSI 550

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1223 Flow Rate: 200 mL/min Pump Depth: 44'

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.)
1226	11.55	6.55	306	12	1.21	38.4	600	38.21
1227	11.56	6.56	305	11	1.18	35.6	1200	38.23
1228	11.61	6.57	303	16	1.16	34.1	1800	38.24
1229	11.62	6.58	303	9	1.15	33.4	2400	38.26
1230	11.63	6.59	302	8	1.14	32.5	3000	38.27

Did well dewater? Yes	No	Amount actually evacuated: 3L
Sampling Time: 1239	Sampling Date: 12/7/12	
Sample I.D.: MW-4	Laboratory: LANCASTER	
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: SEE COA	
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 #: 1227-48	Client: CHEVRON	
Sampler: LR	Gauging Date: 12/17/12	
Well I.D.: MW-5A	Well Diameter (in.): ⑧ 3 4 6 8	
Total Well Depth (ft.): 49.16	Depth to Water (ft.): 38.82	
Depth to Free Product:	Thickness of Free Product (feet):	
Referenced to: RVC	Grade	Flow Cell Type: SEE COC

Purge Method: 2" Grundfos Pump
 Sampling Method: Dedicated Tubing

Peristaltic Pump
 New Tubing

Bladder Pump
 Other

Start Purge Time: 1151 Flow Rate: 200 ml/min Pump Depth: 45'

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.)
1154	11.36	6.79	280	10	1.13	37.5	600	38.84
1157	11.41	6.81	282	10	1.10	36.5	1200	38.86
1200	11.43	6.83	284	10	1.09	32.3	1800	38.89
1203	11.45	6.84	285	9	1.08	31.4	2400	38.91
1206	11.46	6.82	284	10	1.08	30.8	3000	38.92

Did well dewater? Yes <input checked="" type="checkbox"/>	Amount actually evacuated: 3L
Sampling Time: 1207	Sampling Date: 12/17/12
Sample I.D.: MW-5A	Laboratory: LANCASTER
Analyzed for: TPH-G BTEX MTBE <input checked="" type="checkbox"/> TPH/D	Other SEE COC
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 #:	121217-681	Client:	CHEVRON
Sampler:	LB	Gauging Date:	12/17/12
Well I.D.:	MW-6	Well Diameter (in.):	(2) 3 4 6 8
Total Well Depth (ft.):	64.76	Depth to Water (ft.):	52.65
Depth to Free Product:		Thickness of Free Product (feet):	
Referenced to:	PVC Grade	Flow Cell Type:	YSL 532

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1015 Flow Rate: 200 mL/min Pump Depth: 59'

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.)
1018	11.52	6.94	229	10	1.22	65.3	600	52.58
1021	11.55	6.83	233	10	1.20	64.4	1200	52.59
1024	11.56	6.81	232	10	1.19	60.3	1800	52.61
1027	11.55	6.80	231	11	1.17	59.1	2400	52.63
1030	11.54	6.82	231	11	1.16	57.8	3000	52.66

Did well dewater?	Yes <input checked="" type="checkbox"/>	Amount actually evacuated:	3L
Sampling Time:	1031	Sampling Date:	12/17/12
Sample I.D.:	MW-6	Laboratory:	LANCaster
Analyzed for:	THG BTEX MTBE TPH-D	Other:	see COC
Equipment Blank I.D.:	@ Time	Duplicate I.D.:	

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

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

CHAIN OF CUSTODY FORM

Chevron Site Number: 35-1385

Program Designation: QME

Site Address (street, city, state / county): 1300 W. 12th St.
Vancouver, WA

Chevron PM:

Chevron PM Phone No.:
 Retail and Terminal Business Unit (RTBU) Job
 Construction/Retail Job

Chevron Consultant: SAC

Address: 20415 72nd Ave South, Suite 250, Kent WA 98032

Consultant Contact: Ron Santos

Consultant Phone No. (208) 429-3772

Consultant Project No. K2K07-LB1

Sampling Company: Blaine Tech Services

Sampled By (Print): LEE BURG

Charge Code:

NWRTB 00 SITE NUMBER-0- OML

WES 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

SAMPLE ID

Field Point Name Matrix Top Depth Date (ymmd)
 MW-1 GW — 12/27 1059
 MW-2 GW — 12/27 1131
 MW-4 GW — 12/27 1239
 MW-5A GW — 12/27 1207
 MW-6 GW — 12/27 1031
 GW GW — 12/27 1000

Sample Time # of Containers Container Type

TPH-DRO w/ SILICA GEL CLEANUP (97-602M) (NWTPH-Dx w/ sgc)
 TPH-ORO w/ SILICA GEL CLEANUP (97-602M) (NWTPH-Dx w/ sgc)
 TPH-HRO w/ SILICA GEL CLEANUP (97-602M) (NWTPH-Dx w/ sgc)
 8260B FULL LISTED EDC□ TBA□ TAME□ EDB□
 ETHANOLE□ BTEX□ MTBED□
 PAH's□ CPAH's□ 8270 SIM
 TPH-G (NWTPH-Gx)
 TOTAL LEAD (6020)
 DISSOLVED LEAD (6020)
 TPH-D AND TPH-O BY (NWTPH-DX)

Special Instructions
 "VOC's include only
 BTEX, Chloroform,
 Methylene Chloride,
 MTBE, 1,1-TCA,
 TCE and PCE.
 *Quick Sigel
 Cleanup requested"

ANALYSES REQUIRED

Preservation Codes

H = HCL T = Thiosulfate
 N = HNO₃ B = NaOH
 S = H₂SO₄ O = Other

COC 1 of 1

Relinquished By <i>[Signature]</i>	Company	Date/Time:	Relinquished To	Company	Date/Time	Turnaround Time: Standard □ Other □
<i>[Signature]</i>	<i>[Signature]</i>	<i>12/17/11</i>	<i>SHIPPED</i>	<i>FedEx</i>		<i>24 Hours □ 48 hours □ 72 Hours □</i>
Relinquished By	Company	Date/Time	Relinquished To	Company	Date/Time	Sample Integrity: (Check by lab on arrival)
Relinquished By	Company	Date/Time	Relinquished To	Company	Date/Time	Intact: _____ On Ice: _____ Temp: _____ COC #: _____

CHEVRON-WASHINGTON/OREGON TYPE A BILL OF LADING

BILL OF LADING

SOURCE RECORD PURGEWATER RECOVERED FROM GROUNDWATER WELLS AT CHEVRON FACILITIES IN THE STATE OF WASHINGTON AND OREGON. THE PURGEWATER WHICH HAS BEEN RECOVERED FROM GROUNDWATER WELLS IS COLLECTED BY THE CONTRACTOR AND HAULED TO THEIR FACILITY IN KENT, WASHINGTON FOR TEMPORARILY HOLDING PENDING TRANSPORT BY OTHERS TO FINAL DESTINATION.

The contractor performing this work is BLAINE TECH SERVICES, INC. (BLAINE TECH), 22727 72ND Ave South, Suite D - 102, Kent, WA 98032. BLAINE TECH is authorized by Chevron Environmental Management Company (CHEVRON EMC) to recover, collect, apportion into loads, and haul the purgewater that is drawn from wells at the CHEVRON EMC facility indicated below and to deliver that purgewater to BLAINE TECH for temporarily holding. Transport routing of the purgewater may be direct from one CHEVRON EMC facility to BLAINE TECH; from one CHEVRON EMC facility to BLAINE TECH via another CHEVRON EMC facility; or any combination thereof. The well purgewater is and remains the property of CHEVRON EMC.

This Source Record **BILL OF LADING** was initiated to cover the recovery of Non-Hazardous Well Purge water from wells at the Chevron facility described below:

35-1360

Ron Santos
Chevron Project Manager
1300 W. 12th St., Vancouver, WA
Street number street name city state

SOURCE RECORD #	WELL I.D.	GALS.	WELL I.D.	GALS.
MW-1	/	1.0	/	/
MW-2	/	1.0	/	/
MW-4	/	1.0	/	/
MW-5A	/	1.0	/	/
MW-6	/	1.0	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
TOTAL GALS. RECOVERED	/0			
added equip. rinse water	/	5		
BTS event #	121217-LB		time	
			date	

Blaine Tech Services, Inc.

Permit To Work

for Chevron EMC Sites

Client: CHEVRON

Date 12/17/12

Site Address: 1300 W. 12TH ST, VANCUVER, WA

Job Number: 121217-LB1

Technician(s): L.BORES

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

Working at height

Lock-out/Tag-out

Excavations greater than 4 feet deep

Excavations within 3 feet of a buried active electrical line or product piping

or within 10 feet of a high pressure gas line.

Use of overhead equipment within 15 feet of an overhead electrical power

line or pole supporting one

Hot work

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

If so is it in the folder?

Is it current?

Do you understand the Traffic Control Plan and what equipment you will need?

On site Pre-Job Safety Review

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

If Checklist Task cannot be completed, explain:

Permit To Work Authority:

H.S.
Name

Bm
Title

3/19/12
Date

842
Time

TEST EQUIPMENT CALIBRATION LOG

Attachment B:
Laboratory Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

December 31, 2012

Project: 351386

Submittal Date: 12/22/2012
Group Number: 1358500
PO Number: 0015093283
Release Number: INGLIS
State of Sample Origin: WA

Client Sample Description

MW-1 Groundwater
MW-2 Groundwater
MW-4 Groundwater
MW-5A Groundwater
MW-6 Groundwater
QA Water

Lancaster Labs (LLI)

6905905
6905906
6905907
6905908
6905909
6905910

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

ELECTRONIC	Blaine Tech Services	Attn: Alex Stack
COPY TO		
ELECTRONIC	SAIC	Attn: Gabe Cisneros
COPY TO		
ELECTRONIC	SAIC	Attn: Kinga Kozlowska
COPY TO		
ELECTRONIC	SAIC	Attn: Ron Santos
COPY TO		

Analysis Report

Respectfully Submitted,



Jill M. Parker
Senior Specialist

(717) 556-7262

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-1 Groundwater
Facility# 351386
1300 W. 12th St - Vancouver, WA

LLI Sample # WW 6905905
LLI Group # 1358500
Account # 11255

Project Name: 351386

Collected: 12/17/2012 10:59 by LB

Chevron

L4310

Submitted: 12/22/2012 11:20

6001 Bollinger Canyon Road

Reported: 12/31/2012 15:40

San Ramon CA 94583

12V01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles					
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Chloroform	67-66-3	1	0.8	1
10335	Ethanol	64-17-5	N.D.	50	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Tetrachloroethene	127-18-4	1	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
GC Petroleum Hydrocarbons w/Si					
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1

General Sample Comments

State of Washington Lab Certification No. C259

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
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W123633AA	12/29/2012 00:46	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W123633AA	12/29/2012 00:46	Brett W Kenyon	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123590012A	12/29/2012 14:05	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123590012A	12/27/2012 08:30	William H Saadeh	1



Lancaster
Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-2 Groundwater
Facility# 351386
1300 W. 12th St - Vancouver, WA

LLI Sample # WW 6905906
LLI Group # 1358500
Account # 11255

Project Name: 351386

Collected: 12/17/2012 11:31 by LB

Chevron

L4310

Submitted: 12/22/2012 11:20

6001 Bollinger Canyon Road

Reported: 12/31/2012 15:40

San Ramon CA 94583

12V02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles					
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Chloroform	67-66-3	4	0.8	1
10335	Ethanol	64-17-5	N.D.	50	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Tetrachloroethene	127-18-4	2	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
GC Petroleum Hydrocarbons w/Si					
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

General Sample Comments

State of Washington Lab Certification No. C259

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
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W123633AA	12/29/2012 01:10	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W123633AA	12/29/2012 01:10	Brett W Kenyon	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123590012A	12/29/2012 14:28	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123590012A	12/27/2012 08:30	William H Saadeh	1

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-4 Groundwater
Facility# 351386
1300 W. 12th St - Vancouver, WA

LLI Sample # WW 6905907
LLI Group # 1358500
Account # 11255

Project Name: 351386

Collected: 12/17/2012 12:39 by LB

Chevron

L4310

Submitted: 12/22/2012 11:20

6001 Bollinger Canyon Road

Reported: 12/31/2012 15:40

San Ramon CA 94583

12V04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Chloroform	67-66-3	0.9	0.8	1
10335	Ethanol	64-17-5	N.D.	50	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Tetrachloroethene	127-18-4	7	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
	GC Petroleum Hydrocarbons w/Si	ECY 97-602 NWTPH-Dx modified	ug/l	ug/l	
02211	DRO C12-C24 w/Si Gel	n.a.	80	28	1
02211	HRO C24-C40 w/Si Gel	n.a.	66	66	1

General Sample Comments

State of Washington Lab Certification No. C259

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
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W123633AA	12/29/2012 01:34	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W123633AA	12/29/2012 01:34	Brett W Kenyon	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123590012A	12/29/2012 15:14	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123590012A	12/27/2012 08:30	William H Saadeh	1

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-5A Groundwater
Facility# 351386
1300 W. 12th St - Vancouver, WA

LLI Sample # WW 6905908
LLI Group # 1358500
Account # 11255

Project Name: 351386

Collected: 12/17/2012 12:07 by LB

Chevron

L4310

Submitted: 12/22/2012 11:20

6001 Bollinger Canyon Road

Reported: 12/31/2012 15:40

San Ramon CA 94583

12V5A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Ethanol	64-17-5	N.D.	50	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Tetrachloroethene	127-18-4	8	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
	GC Petroleum Hydrocarbons w/Si	ECY 97-602 NWTPH-Dx modified	ug/l	ug/l	
02211	DRO C12-C24 w/Si Gel	n.a.	140	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	450	67	1

General Sample Comments

State of Washington Lab Certification No. C259

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
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W123633AA	12/29/2012 01:58	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W123633AA	12/29/2012 01:58	Brett W Kenyon	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123590012A	12/29/2012 15:37	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123590012A	12/27/2012 08:30	William H Saadeh	1



Lancaster
Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-6 Groundwater
Facility# 351386
1300 W. 12th St - Vancouver, WA

LLI Sample # WW 6905909
LLI Group # 1358500
Account # 11255

Project Name: 351386

Collected: 12/17/2012 10:31 by LB

Chevron

L4310

Submitted: 12/22/2012 11:20

6001 Bollinger Canyon Road

Reported: 12/31/2012 15:40

San Ramon CA 94583

12V06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles					
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Ethanol	64-17-5	N.D.	50	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
GC Petroleum Hydrocarbons w/Si					
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1

General Sample Comments

State of Washington Lab Certification No. C259

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
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W123633AA	12/29/2012 02:22	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W123633AA	12/29/2012 02:22	Brett W Kenyon	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123590012A	12/29/2012 14:51	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123590012A	12/27/2012 08:30	William H Saadeh	1

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: QA Water
Facility# 351386
1300 W. 12th St - Vancouver, WA

LLI Sample # WW 6905910
LLI Group # 1358500
Account # 11255

Project Name: 351386

Collected: 12/17/2012 10:00

Chevron

L4310

Submitted: 12/22/2012 11:20

6001 Bollinger Canyon Road

Reported: 12/31/2012 15:40

San Ramon CA 94583

12VQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Ethanol	64-17-5	N.D.	50	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1

General Sample Comments

State of Washington Lab Certification No. C259

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
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W123633AA	12/29/2012 02:46	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W123633AA	12/29/2012 02:46	Brett W Kenyon	1

Quality Control Summary

Client Name: Chevron
Reported: 12/31/12 at 03:40 PM

Group Number: 1358500

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

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W123633AA								
Benzene	N.D.	0.5	ug/l	95	91	77-121	4	30
Chloroform	N.D.	0.8	ug/l	97	91	77-122	6	30
Ethanol	N.D.	50.	ug/l	99	85	54-149	15	30
Ethylbenzene	N.D.	0.5	ug/l	95	92	79-120	3	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	98	96	68-121	2	30
Methylene Chloride	N.D.	2.	ug/l	95	90	84-118	5	30
Tetrachloroethene	N.D.	0.8	ug/l	94	92	79-120	2	30
Toluene	N.D.	0.5	ug/l	95	90	79-120	5	30
1,1,1-Trichloroethane	N.D.	0.8	ug/l	89	89	66-126	0	30
Trichloroethene	N.D.	1.	ug/l	95	92	80-120	3	30
m+p-Xylene	N.D.	0.5	ug/l	96	93	77-120	3	30
o-Xylene	N.D.	0.5	ug/l	95	91	77-120	4	30
Batch number: 123590012A								
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	74	81	50-120	9	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					

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: 8260 Ext. Water Master w/GRO

Batch number: W123633AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6905905	102	101	96	96
6905906	101	99	96	96
6905907	102	99	96	96
6905908	102	99	96	96
6905909	103	102	95	96
6905910	101	102	96	97
Blank	99	101	98	98
LCS	102	98	100	102
LCSD	100	101	98	100
Limits:	80-116	77-113	80-113	78-113

*- 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: 12/31/12 at 03:40 PM

Group Number: 1358500

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 123590012A
Orthoterphenyl

Surrogate Quality Control

6905905	89
6905906	94
6905907	91
6905908	100
6905909	90
Blank	97
LCS	103
LCSD	105

Limits: 50-150

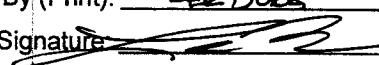
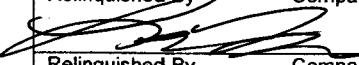
*- Outside of specification

- (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.

Acct# 11255 Cap# 1358500 Sample# 6905905-10

CHAIN OF CUSTODY FORM

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

Chevron Site Number: <u>35-1386</u> Program Designation: <u>CMP</u> Site Address (street, city, state / county): <u>1300 W. 12th St, Vancouver, WA</u> Chevron PM: Chevron PM Phone No.: <input type="checkbox"/> Retail and Terminal Business Unit (RTBU) Job <input type="checkbox"/> Construction/Retail Job				Chevron Consultant: <u>SAIC</u> Address: <u>20415 72nd Ave South, Suite 250, Kent WA 98032</u> Consultant Contact: <u>Ron Santos</u> Consultant Phone No. <u>(208) 429-3772</u> Consultant Project No. <u>12247-LB1</u> Sampling Company: <u>Blaine Tech Services</u> Sampled By (Print): <u>LEE BURKE</u> Sampler Signature: 				ANALYSES REQUIRED				Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other					
Charge Code: <u>NWRTB 00 SITE NUMBER-0- OML</u> 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										
SAMPLE ID				Sample Time	# of Containers	Container Type	TPH-DRO w/ SILICA GEL CLEANUP (97-602M) (NWTPH-DX w/ SCC)	TPH-HRO w/ SILICA GEL CLEANUP (97-602M) (NWTPH-Dx w/ SCC)	TPH-HRO w/ SILICA GEL CLEANUP (97-602M) (NWTPH-Dx w/ SCC)	TPH-G (NWTPH-Gx)	TOTAL LEAD (6020)	DISSOLVED LEAD (6020)	TPH-D AND TPH-O BY (NWTPH-DX)	Vec's (8245)	Special Instructions "VOC's include only BTEX, Chloroform, Methylene Chloride, MTBE, 1,1,1-TCA, TCE and PCE". *Quick SiGel Cleanup requested*		
Field Point Name	Matrix	Top Depth	Date (ymmmdd)														
MW-1	GW	—	12/21/17	1059	5	VGA, AMBER	X	X	X	X	X	X	X	X			
MW-2	GW	—	12/21/17	1131			X	X	X	X	X	X	X	X			
MW-4	GW	—	12/21/17	1239			X	X	X	X	X	X	X	X			
MW-5A	GW	—	12/21/17	1207			X	X	X	X	X	X	X	X			
MW-6	GW	—	12/21/17	1031			X	Y	X	X	X	X	X	X			
QA	GW	—	12/21/17	1000	3	VQA								X			
Relinquished By	Company	Date/Time:		Relinquished To	Company	Date/Time		Turnaround Time:									
		12/17/17		<u>SHIPPED</u>	<u>Via FedEx</u>			Standard <input checked="" type="checkbox"/>	24 Hours <input type="checkbox"/>	48 hours <input type="checkbox"/>	72 Hours <input type="checkbox"/>						
Relinquished By	Company	Date/Time		Relinquished To	Company	Date/Time		Other <input type="checkbox"/>				Sample Integrity: (Check by lab on arrival)					
Relinquished By	Company	Date/Time		Relinquished To	Company	Date/Time		Intact: <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/> Temp: <u>02-4.5</u>				COC # <u>1120</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 <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).		
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 of gas 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.		

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.

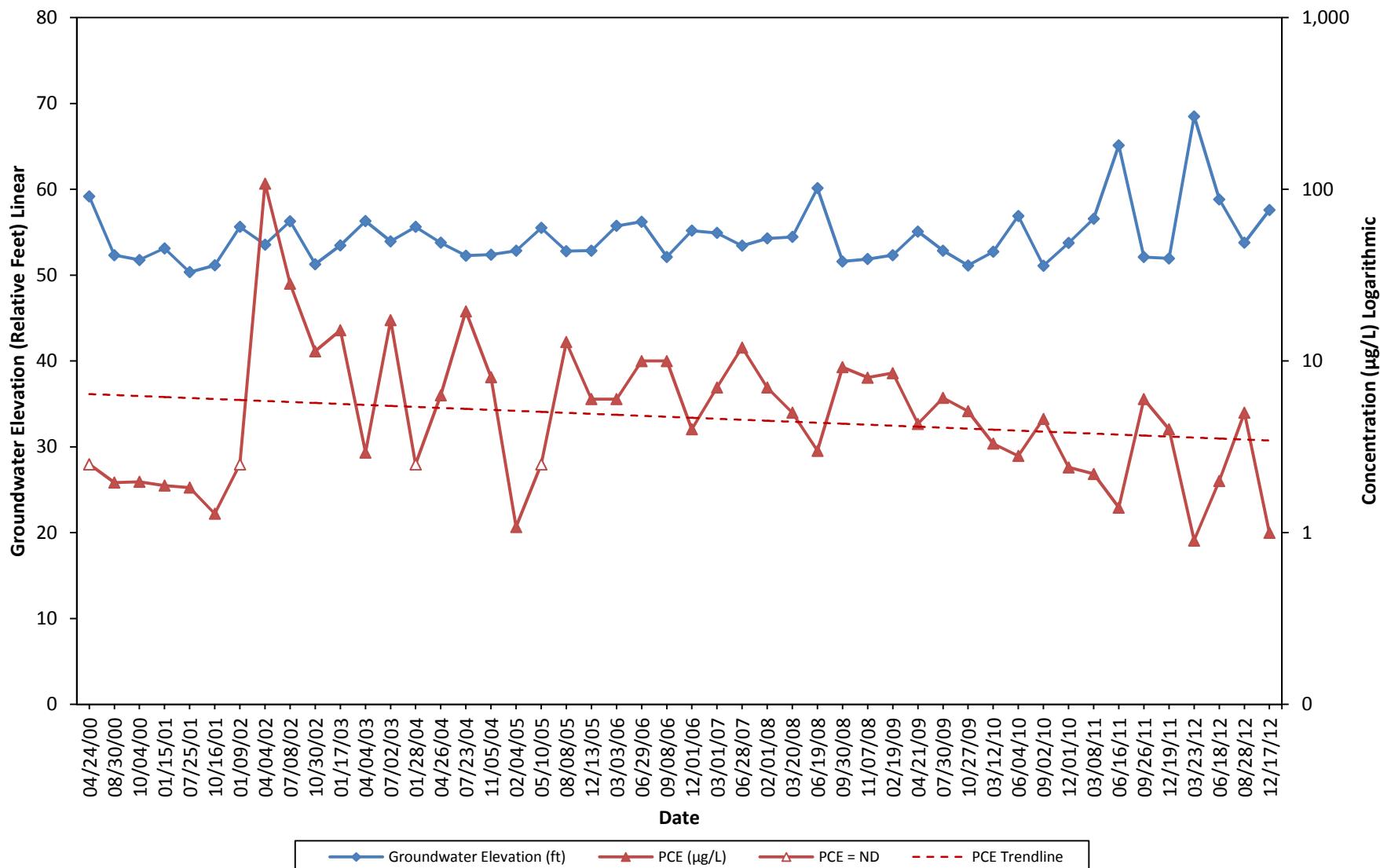
Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have 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.

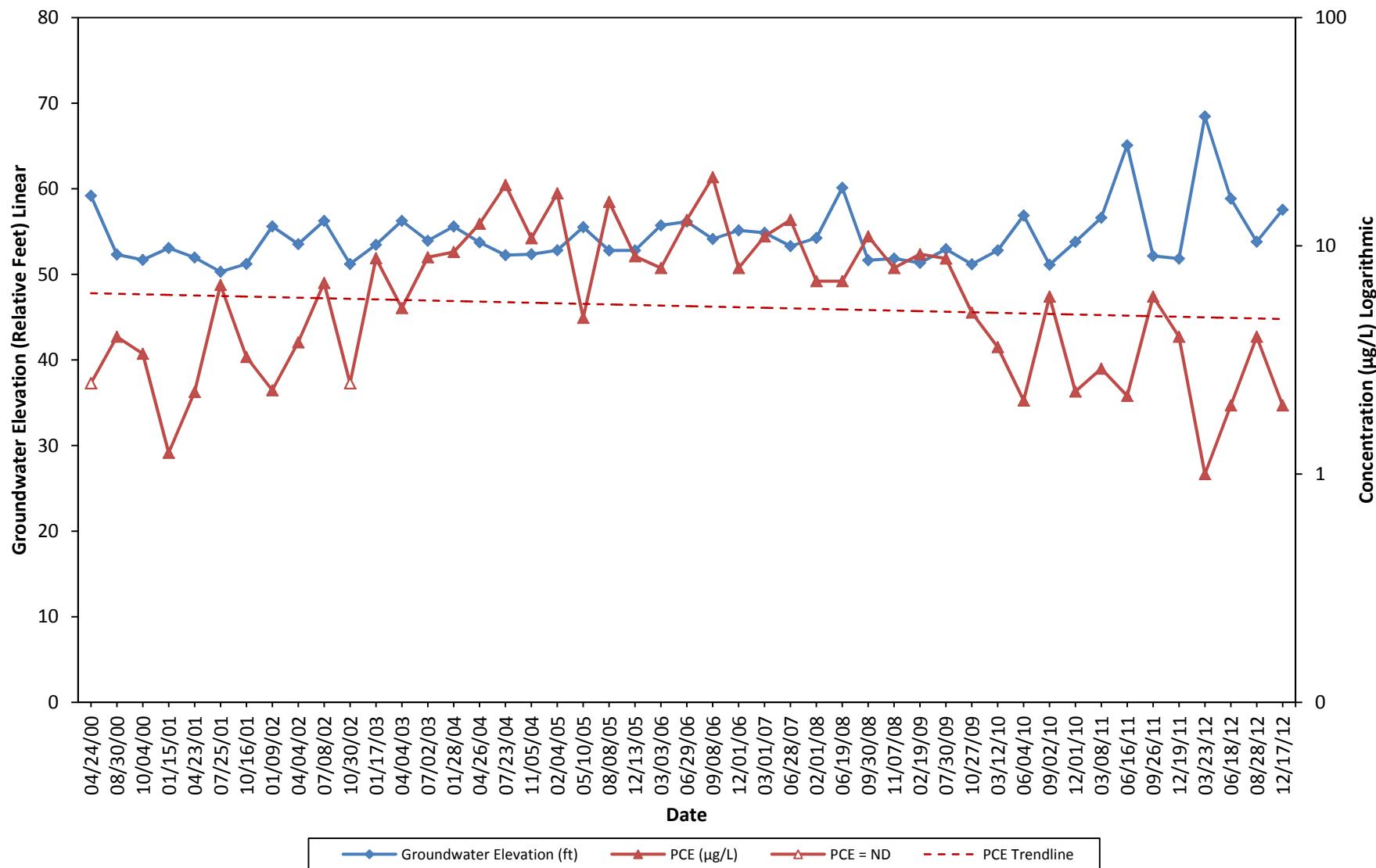
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Attachment C:
Hydrographs

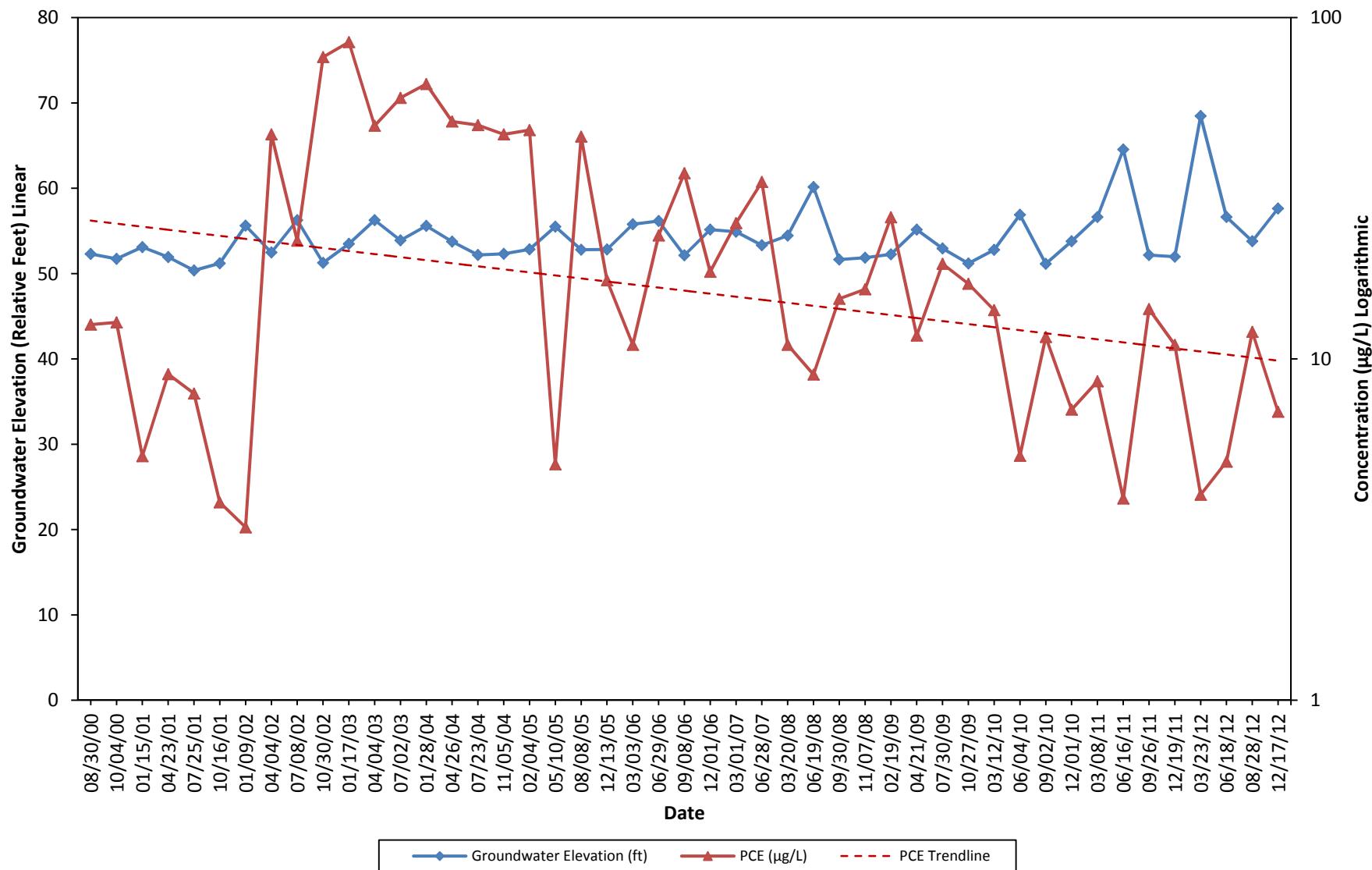
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PCE
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1300 West 12th Street, Vancouver, Washington



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PCE
76 Products Facility No. 351386
1300 West 12th Street, Vancouver, Washington



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1300 West 12th Street, Vancouver, Washington



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1300 West 12th Street, Vancouver, Washington

