



November 12, 2012

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

*Subject:* **Third Quarter 2012 Groundwater Monitoring and Sampling Report**  
**76 Products Facility No. 351386**  
1300 West 12<sup>th</sup> 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 August 28, 2012. The Blaine Tech groundwater monitoring and sampling package is provided as Attachment A.

#### **FIELD ACTIVITIES**

On August 28, 2012, depth to groundwater was measured in wells MW-1, MW-2, MW-4, MW-5A, and MW-6. The groundwater elevation ranged from 53.78 feet (MW-1) to 53.86 feet (MW-6) based on an arbitrary benchmark elevation of 100.00 feet.

Groundwater flow is to the southeast at a gradient of approximately 0.001 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 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 third 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:

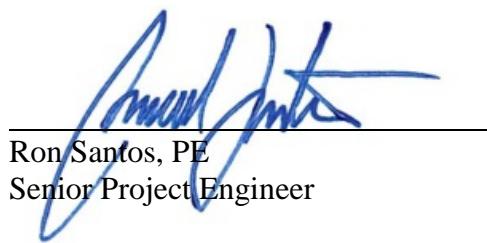
- TPH-D was detected in groundwater from well MW-4 at a concentration greater than the Model Toxic Control Act (MTCA) Method A cleanup level.
- TPH-O was detected in groundwater from wells MW-4 and MW-5A at concentrations greater than the MTCA Method A cleanup level.
- Tetrachloroethene was detected in groundwater from wells MW-1, 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.

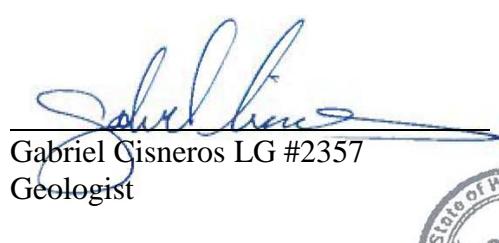
Blaine Tech will continue to perform groundwater monitoring and sampling on a quarterly basis.

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

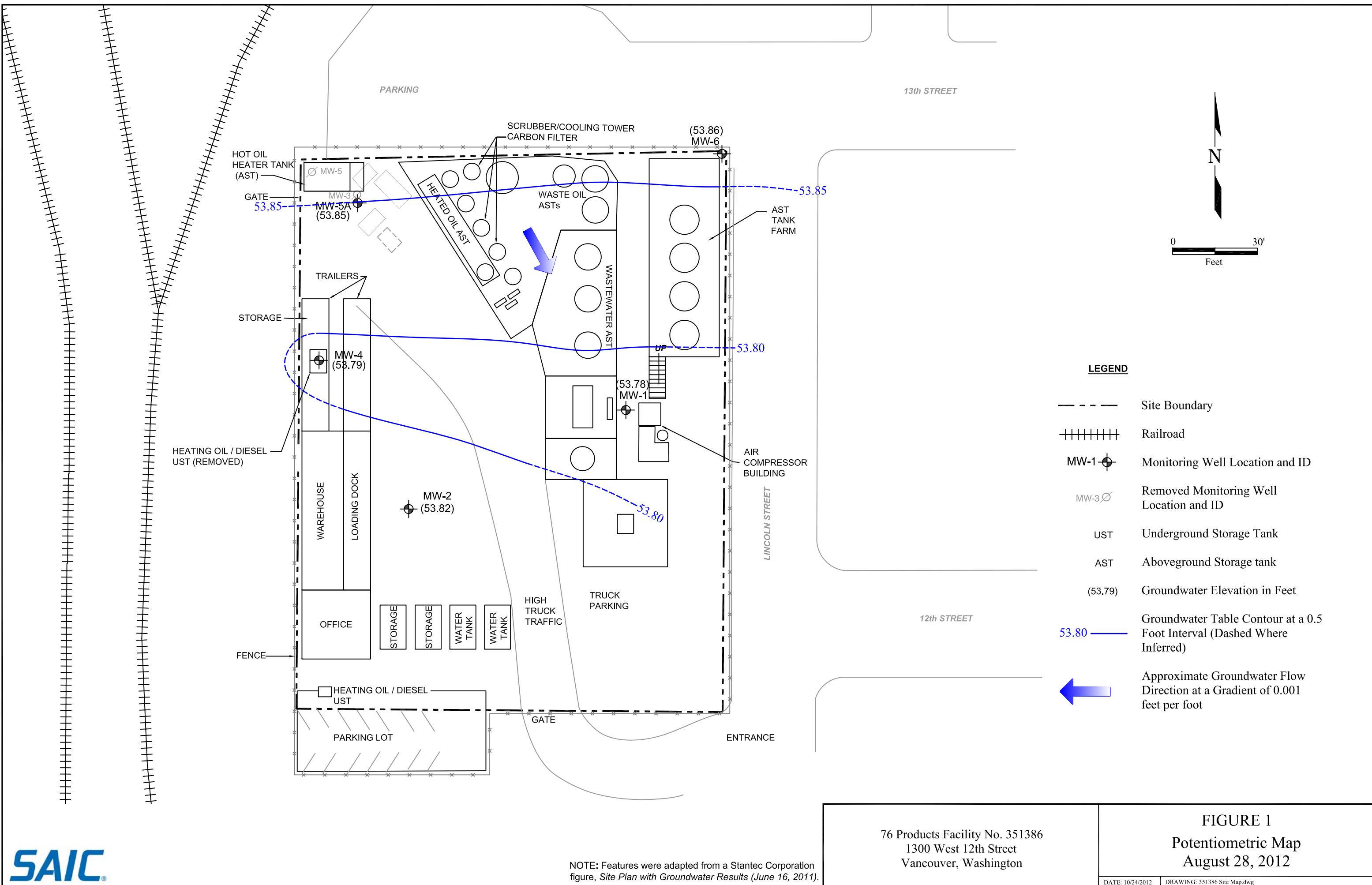
This technical document was prepared on behalf of Chevron and is intended for its sole use and for use by the local, state or federal regulatory agency that the technical document was sent to by SAIC. Any other person or entity obtaining, using, or relying on this technical document hereby acknowledges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

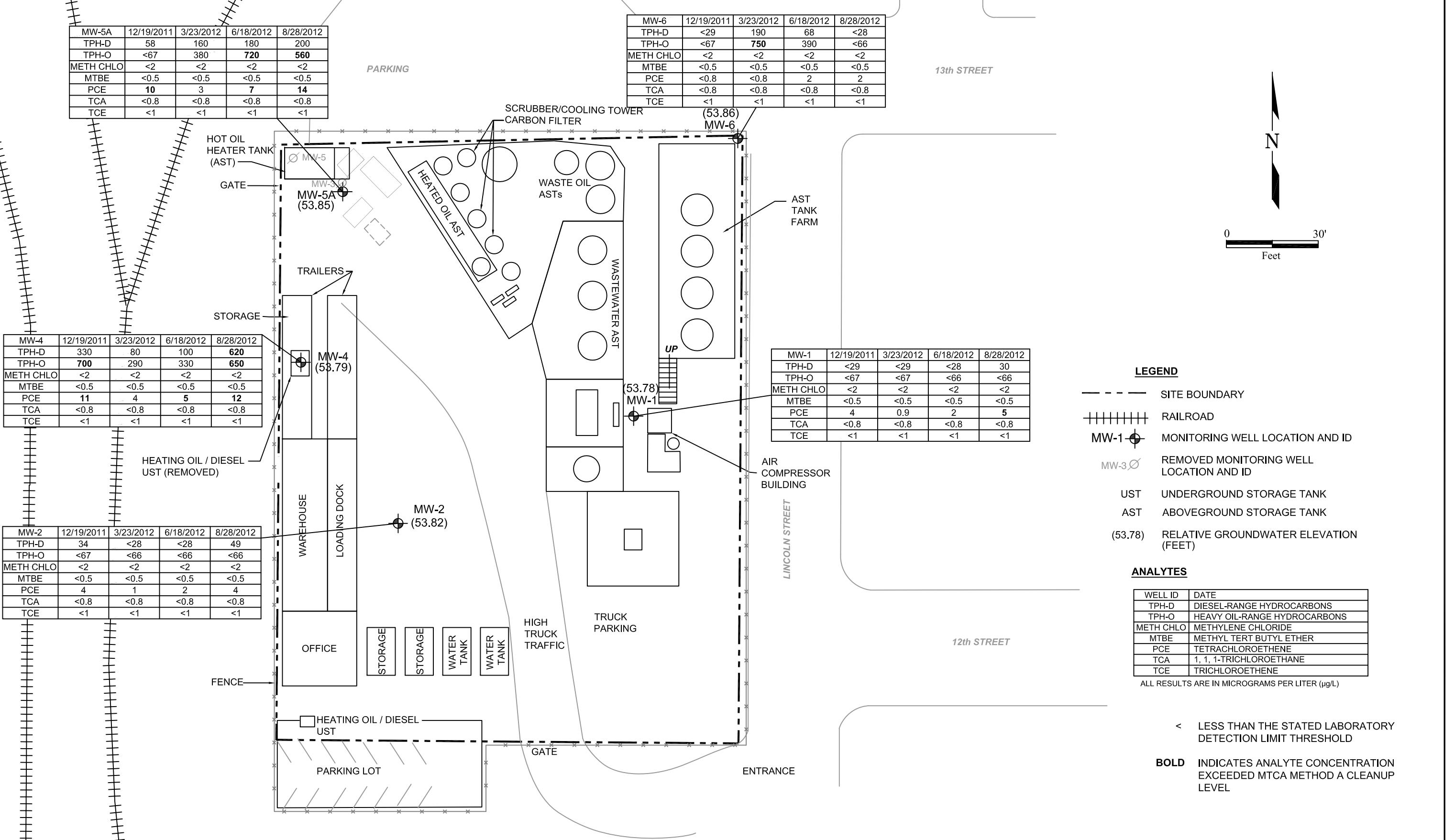
Site history and background information provided in this technical document are based on sources that may include interviews with environmental regulatory agencies and property management personnel and a review of acquired environmental regulatory agency documents and property information obtained from 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.





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 (August 28, 2012)

**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	1.96	--	--	--	--	--	
	10/04/00	44.75	51.77	--	--	--	--	--	--	--	ND	ND	ND	1.98	<0.00100	--	--	--	--	
	01/15/01	43.41	53.11	--	--	--	--	--	--	--	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	<b>0.0478</b>	--	--	
	10/16/01	45.38	51.14	--	--	--	--	--	--	--	ND	1.67	ND	ND	1.29	<0.00859	<b>0.0231</b>	--	--	
	01/09/02	40.90	55.62	--	--	--	--	--	--	--	ND	ND	ND	ND	<0.00100	0.00252	--	--	--	
	04/04/02	42.96	53.56	--	--	--	--	--	--	--	ND	<b>5,120</b>	ND	ND	<b>108</b>	--	--	--	--	
	07/08/02	40.24	56.28	--	--	--	--	--	--	--	ND	<b>476</b>	ND	ND	<b>28.2</b>	--	--	--	--	
	10/30/02	45.25	51.27	--	--	--	--	--	--	--	ND	<b>144</b>	ND	1.46	<b>11.4</b>	--	--	--	--	
	01/17/03	43.05	53.47	--	--	--	--	--	--	--	ND	<b>346</b>	ND	ND	<b>15.1</b>	--	--	--	--	
	04/04/03	40.23	56.29	--	--	--	--	--	--	--	ND	<b>85.3</b>	ND	ND	2.93	--	--	--	--	
	07/02/03	42.58	53.94	--	--	--	--	--	--	--	ND	<b>574</b>	ND	ND	<b>17.3</b>	--	--	--	--	
	01/28/04	40.90	55.62	--	--	--	--	--	--	--	ND	<b>326</b>	ND	ND	ND	--	--	--	--	
	04/26/04	42.75	53.77	--	--	--	--	--	--	--	ND	<b>338</b>	ND	0.757	<b>6.31</b>	--	--	--	2.03	
	07/23/04	44.25	52.27	--	--	--	--	--	--	--	ND	<b>127</b>	ND	2.06	<b>19.5</b>	--	--	--	--	
	11/05/04	44.13	52.39	--	--	--	--	--	--	--	1.01	<b>447</b>	ND	1.3	<b>8.06</b>	--	--	--	2.88	
	02/04/05	43.68	52.84	--	--	--	--	--	--	--	<1.0	<b>192</b>	ND	<b>12.6</b>	1.08	--	--	--	--	
	05/10/05	41.02	55.50	--	--	--	--	--	--	--	<5.0	<b>197</b>	ND	ND	ND	--	--	--	--	
	08/08/05	43.72	52.80	--	--	--	--	--	--	--	<1.0	<b>234</b>	<200	1.33	<b>12.9</b>	--	--	--	4.88	
	12/13/05	43.67	52.85	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	<1.0	<b>6.0</b>	--	--	--	7.59	
	03/03/06	40.78	55.74	--	--	--	--	--	--	--	<2.0	<b>100</b>	<0.8	<1.0	<b>6.0</b>	--	--	--	6.23	
	06/29/06	40.30	56.22	--	--	--	--	--	--	--	<2.0	18	<0.8	<1.0	<b>10</b>	--	--	--	6.04	
	09/08/06	44.40	52.12	--	--	--	--	--	--	--	<2.0	<b>58</b>	<0.8	1.0	<b>10</b>	--	--	--	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	<b>7.0</b>	--	--	--	7.35	
	06/28/07	43.10	53.42	--	--	--	--	--	--	--	<2	<0.5	<0.8	1	<b>12</b>	--	--	--	7.0	
	02/01/08	42.25	54.27	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	<1	<b>7</b>	--	--	--	
	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	<b>9.2</b>	--	--	--	
	11/07/08	44.65	51.87	--	--	--	<0.5	<0.7	<0.8	<0.8	<0.8	<2	<0.5	<0.8	<1	<b>8</b>	--	--	--	
	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	<b>8.5</b>	--	--	--	
	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	<b>6.1</b>	--	--	--	
	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	<b>5.1</b>	--	--	--	
	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	--	--	--	
	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	--	--	--	

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**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 (cont)	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	1.4	--	--	--	--	
	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	<b>6</b>	--	--	<50	
	12/19/11	45.15	51.95	--	<29	<67	<0.5	<0.5	<0.5	<1	<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	<1	<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	<1	<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	<b>5</b>	--	--	<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	ND	1.24	--	--	--	
	04/23/01	44.97	51.98	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	2.29	<0.00100	0.00600	--	
	07/25/01	46.65	50.30	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	<b>6.74</b>	<0.00100	<b>0.0733</b>	--	
	10/16/01	45.72	51.23	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	3.26	<0.00100	<b>0.0157</b>	--	
	01/09/02	41.34	55.61	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	2.33	<0.00100	0.00757	--	
	04/04/02	43.42	53.53	--	--	--	--	--	--	--	ND	ND	1.54	ND	ND	3.78	--	--	--	
	07/08/02	40.69	56.26	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	<b>6.88</b>	--	--	--	
	10/30/02	45.74	51.21	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	7.1	<5	--	--	
	01/17/03	43.49	53.46	--	--	--	--	--	--	--	ND	ND	1.03	ND	1.22	<b>8.83</b>	--	--	--	
	04/04/03	40.70	56.25	--	--	--	--	--	--	--	ND	ND	11.8	ND	ND	<b>5.34</b>	--	--	--	
	07/02/03	43.02	53.93	--	--	--	--	--	--	--	ND	ND	3.33	ND	1.55	<b>8.91</b>	--	--	--	
	01/28/04	41.35	55.60	--	--	--	--	--	--	--	ND	ND	<b>40.4</b>	ND	2.1	<b>9.4</b>	--	--	--	
	04/26/04	43.21	53.74	--	--	--	--	--	--	--	ND	ND	16.1	0.563	2.53	<b>12.5</b>	--	--	1.91	
	07/23/04	44.70	52.25	--	--	--	--	--	--	--	ND	ND	7.24	0.899	3.58	<b>18.5</b>	--	--	--	
	11/05/04	44.60	52.35	--	--	--	--	--	--	--	ND	ND	2.67	ND	2.74	<b>10.8</b>	--	--	2.83	
	02/04/05	44.13	52.82	--	--	--	--	--	--	--	<1.0	2.78	ND	3.20	<b>17</b>	--	--	--	--	
	05/10/05	41.42	55.53	--	--	--	--	--	--	--	<5.0	ND	ND	ND	ND	4.84	--	--	--	
	08/08/05	44.16	52.79	--	--	--	--	--	--	--	<1.0	<b>29.2</b>	<200	3.26	<b>15.6</b>	--	--	--	3.84	
	12/13/05	44.14	52.81	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	1.0	<b>9.0</b>	--	--	--	7.36	
	03/03/06	41.22	55.73	--	--	--	--	--	--	--	<2.0	7.0	<0.8	2.0	<b>8.0</b>	--	--	--	6.3	
	06/29/06	40.78	56.17	--	--	--	--	--	--	--	<2.0	12	<0.8	2.0	<b>13</b>	--	--	--	6.2	
	09/08/06	42.82	54.13	--	--	--	--	--	--	--	<2.0	<b>120</b>	<0.8	4.0	<b>20</b>	--	--	--	5.5	
	12/01/06	41.81	55.14	--	--	--	--	--	--	--	<2.0	5.0	<0.8	<1.0	<b>8.0</b>	--	--	--	4.95	
	03/01/07	42.08	54.87	--	--	--	--	--	--	--	<2.0	<b>23.0</b>	<0.8	2.0	<b>11.0</b>	--	--	--	5.7	
	06/28/07	43.64	53.31	--	--	--	--	--	--	--	<2	<b>35</b>	<0.8	2	<b>13</b>	--	--	--	6.40	
	02/01/08	42.70	54.25	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	<1	<b>7</b>	--	--	--	
	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	<b>7</b>	--	--	--	
	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	<b>11</b>	--	--	--	
	11/07/08	45.10	51.85	--	--	--	<0.5	<0.7	<0.8	<0.8	2	<2	<0.5	<0.8	<1	<b>8</b>	--	--	--	
	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	<b>9.2</b>	--	--	--	
	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	<b>8.8</b>	--	--	--	
	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	<b>5.1</b>	--	--	--	
	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	--	--	--	

**TABLE 1**  
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**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-2 (cont)	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	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	<b>6.0</b>	--	--	--	
	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	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	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	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	<b>6</b>	--	--	<50	--
	12/19/11	45.11	51.84	--	34	<67	<0.5	<0.5	<0.5	<1	2	<2	<0.5	<0.8	<1	4	--	--	<50	--
	03/23/12	28.49	68.46	--	<28	<66	<0.5	<0.5	<0.5	<1	3	<2	<0.5	<0.8	<1	1	--	--	<50	--
	06/18/12	38.09	58.86	--	<28	<66	<0.5	<0.5	<0.5	<1	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	--
MW-4 95.80	08/30/00	43.50	52.30	--	--	--	--	--	--	--	ND	ND	ND	ND	<b>12.6</b>	--	--	--	--	
	10/04/00	44.07	51.73	--	--	--	--	--	--	--	ND	ND	ND	ND	<b>12.8</b>	0.00122	--	--	--	
	01/15/01	42.69	53.11	--	--	--	--	--	--	--	ND	ND	ND	ND	<b>5.19</b>	--	--	--	--	
	04/23/01	43.87	51.93	--	--	--	--	--	--	--	ND	ND	ND	ND	<b>9.02</b>	<0.00100	0.00238	--	--	
	07/25/01	45.43	50.37	--	--	--	--	--	--	--	ND	ND	ND	ND	<b>7.92</b>	<0.00100	<b>0.0620</b>	--	--	
	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	<b>15.4</b>	<b>45.5</b>	--	--	--	--	
	07/08/02	39.53	56.27	--	--	--	--	--	--	--	ND	<b>22.7</b>	1.83	<b>9.59</b>	<b>22.2</b>	--	--	--	--	
	10/30/02	44.53	51.27	--	--	--	--	--	--	--	ND	<b>1,090</b>	ND	<b>35</b>	<b>76.6</b>	--	--	--	--	
	01/17/03	42.32	53.48	--	--	--	--	--	--	--	ND	<b>2,960</b>	ND	<b>27.2</b>	<b>84.8</b>	--	--	--	--	
	04/04/03	39.53	56.27	--	--	--	--	--	--	--	ND	<b>779</b>	ND	<b>12.2</b>	<b>48.2</b>	--	--	--	--	
	07/02/03	41.90	53.90	--	--	--	--	--	--	--	ND	<b>397</b>	2.38	<b>11.6</b>	<b>58.2</b>	--	--	--	--	
	01/28/04	40.20	55.60	--	--	--	--	--	--	--	ND	<b>289</b>	ND	<b>11.2</b>	<b>63.9</b>	--	--	--	--	
	04/26/04	42.05	53.75	--	--	--	--	--	--	--	ND	<b>362</b>	1.62	<b>6.86</b>	<b>49.6</b>	--	--	--	2.11	
	07/23/04	43.61	52.19	--	--	--	--	--	--	--	ND	<b>86.1</b>	1.7	4.97	<b>48.4</b>	--	--	--	--	
	11/05/04	43.49	52.31	--	--	--	--	--	--	--	ND	<b>59.8</b>	2.13	<b>6.14</b>	<b>45.5</b>	--	--	--	3.18	
	02/04/05	42.96	52.84	--	--	--	--	--	--	--	<1.0	<b>169</b>	2.14	<b>5.15</b>	<b>46.8</b>	--	--	--	--	
	05/10/05	40.29	55.51	--	--	--	--	--	--	--	<5.0	4.86	ND	ND	4.91	--	--	--	--	
	08/08/05	43.00	52.80	--	--	--	--	--	--	--	<1.0	<b>139</b>	1.85	<b>5.3</b>	<b>44.8</b>	--	--	--	1.94	
	12/13/05	42.97	52.83	--	--	--	--	--	--	--	<2.0	<b>110</b>	0.9	2.0	<b>17</b>	--	--	--	6.07	
	03/03/06	40.02	55.78	--	--	--	--	--	--	--	<2.0	<b>70</b>	<0.8	2.0	<b>11</b>	--	--	--	4.89	
	06/29/06	39.63	56.17	--	--	--	--	--	--	--	<2.0	<b>110</b>	<0.8	3.0	<b>23</b>	--	--	--	4.90	
	09/08/06	43.66	52.14	--	--	--	--	--	--	--	<2.0	<b>270</b>	1	<b>5.0</b>	<b>35</b>	--	--	--	4.30	
	12/01/06	40.65	55.15	--	--	--	--	--	--	--	<2.0	<b>160</b>	<0.8	2.0	<b>18</b>	--	--	--	3.80	
	03/01/07	40.90	54.90	--	--	--	--	--	--	--	<2.0	<b>180</b>	<0.8	2.0	<b>25</b>	--	--	--	4.65	
	06/28/07	42.48	53.32	--	--	--	--	--	--	--	<2	2	<0.8	2	<b>33</b>	--	--	--	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	<b>11</b>	--	--	--	
	06/19/08	35.66	60.14	--	--	--	<0.5	<0.7	<0.8	<0.8	0.9	<2	<0.5	<0.8	<1	<b>9</b>	--	--	--	
	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	<b>15</b>	--	--	--	
	11/07/08	43.94	51.86	--	--	--	<0.5	<0.7	<0.20	<0.8	<0.8	<2	<0.5	<0.8	1	<b>16</b>	--	--	--	
	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	<b>26</b>	--	--	--	
	04/21/09	40.65	55.15	--	--	--	<0.12	<0.21	<0.20	&										

**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)	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	<b>19.0</b>	--	--	--	--
	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	<b>16.6</b>	--	--	--	--
	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	<b>13.9</b>	--	--	--	--
	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	<b>5.2</b>	--	--	--	--
	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	<b>11.6</b>	--	--	--	--
	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	<b>7.1</b>	--	--	--	--
	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	<b>8.6</b>	--	--	--	--
	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	<b>14</b>	--	--	<50	--
	12/19/11	43.82	51.98	--	330	<b>700</b>	<0.5	<0.5	<0.5	<1	<0.8	<2	<0.5	<0.8	<1	<b>11</b>	--	--	<50	--
	03/23/12	27.33	68.47	--	80	290	<0.5	<0.5	<0.5	<1	2	<2	<0.5	<0.8	<1	4	--	--	<50	--
	06/18/12	39.16	56.64	--	100	330	<0.5	<0.5	<0.5	<1	2	<2	<0.5	<0.8	<1	<b>5</b>	--	--	<50	--
	08/28/12	42.01	53.79	--	<b>620</b>	<b>650</b>	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	<b>12</b>	--	--	<50	--
MW-5 96.47	08/30/00	44.18	52.29	--	--	--	--	--	--	--	ND	ND	2.0	1.56	<b>25.6</b>	--	--	--	--	--
	10/04/00	44.72	51.75	--	--	--	--	--	--	--	ND	ND	1.73	<b>16.9</b>	<0.00100	--	--	--	--	--
	01/15/01	43.35	53.12	--	--	--	--	--	--	--	ND	ND	ND	<b>7.37</b>	--	--	--	--	--	--
	04/23/01	44.52	51.95	--	--	--	--	--	--	--	ND	ND	ND	<b>9.21</b>	<0.00100	0.00174	--	--	--	--
	07/25/01	46.11	50.36	--	--	--	--	--	--	--	ND	ND	ND	1.42	<b>22.9</b>	<0.00100	0.0123	--	--	--
	10/16/01	45.28	51.19	--	--	--	--	--	--	--	ND	ND	ND	1.29	<b>18</b>	<0.00100	0.00602	--	--	--
	01/09/02	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/04/02	42.95	53.52	--	--	--	--	--	--	--	ND	ND	2.78	<b>15.1</b>	<b>105</b>	--	--	--	--	--
	07/08/02	40.22	56.25	--	--	--	--	--	--	--	ND	ND	1.48	<b>5.6</b>	<b>57.6</b>	--	--	--	--	--
	10/30/02	45.15	51.32	--	--	--	--	--	--	--	ND	1.37	2.75	<b>14.8</b>	<b>101</b>	--	--	--	--	--
MW-5A 96.46	01/17/03	42.93	53.53	--	--	--	--	--	--	--	ND	15.1	2.29	<b>10.3</b>	<b>79</b>	--	--	--	--	--
	04/04/03	40.18	56.28	--	--	--	--	--	--	--	ND	<b>67</b>	ND	1.91	<b>17.1</b>	--	--	--	--	--
	07/02/03	42.55	53.91	--	--	--	--	--	--	--	ND	<b>35.7</b>	2.2	<b>9.8</b>	<b>78.1</b>	--	--	--	--	--
	01/28/04	40.83	55.63	--	--	--	--	--	--	--	ND	<b>449</b>	ND	ND	<b>31.4</b>	--	--	--	--	--
	04/26/04	42.68	53.78	--	--	--	--	--	--	--	ND	<b>164</b>	3.9	<b>7.43</b>	<b>68</b>	--	--	--	2.89	--
	07/23/04	44.21	52.25	--	--	--	--	--	--	--	ND	<b>45</b>	5.07	<b>9.93</b>	<b>79.3</b>	--	--	--	--	--
	11/05/04	44.06	52.40	--	--	--	--	--	--	--	ND	ND	ND	ND	2.98	--	--	--	4.89	--
	02/04/05	43.60	52.86	--	--	--	--	--	--	--	<1.0	<b>26</b>	2.71	<b>5.47</b>	<b>58.8</b>	--	--	--	--	--
	05/10/05	40.94	55.52	--	--	--	--	--	--	--	<5.0	<b>214</b>	ND	ND	<b>21.2</b>	--	--	--	--	--
	08/08/05	43.64	52.82	--	--	--	--	--	--	--	<1.0	<b>89</b>	2.3	<b>5.8</b>	<b>59.4</b>	--	--	--	4.62	--
	12/13/05	43.60	52.86	--	--	--	--	--	--	--	<2.0	<b>95</b>	1.0	3.0	<b>26</b>	--	--	--	5.82	--
	03/03/06	40.71	55.75	--	--	--	--	--	--	--	<2.0	<b>110</b>	0.8	2.0	<b>25</b>	--	--	--	3.09	--
	06/29/06	40.25	56.21	--	--	--	--	--	--	--	<2.0	<b>130</b>	1.0	3.0	<b>37</b>	--	--	--	4.15	--
	09/08/06	44.30	52.16	--	--	--	--	--	--	--	<2.0	16	2.0	<b>6.0</b>	<b>66</b>	--	--	--	3.30	--
	12/01/06	41.29	55.17	--	--	--	--	--	--	--	<2.0	12	<0.8	2.0	<b>25</b>	--	--	--	4.10	--
	03/01/07	41.54	54.92	--	--	--	--	--	--	--	<2.0	<b>26</b>	0.9	2.0	<b>38</b>	--	--	--	5.50	--
	06/28/07	43.12	53.34	--	--	--	--	--	--	--	<2	1	<0.8	3	<b>40</b>	--	--	--	3.5	--
	02/01/08	42.19	54.27	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	1	<b>32</b>	--	--	--	--
	03/20/08	42.00	54.46	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	2	<b>28</b>	--	--	--	--</

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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)	11/07/08	44.62	51.84	--	--	--	<0.5	<0.7	<0.8	<0.8	<0.8	<2	<0.5	<0.8	1.0	<b>26</b>	--	--	--	
	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	<b>26</b>	--	--	--	
	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	<b>14.1</b>	--	--	--	
	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	<b>23.5</b>	--	--	--	
	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	<b>10.4</b>	--	--	--	
	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	<b>11.6</b>	--	--	--	
	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	<b>7.3</b>	--	--	--	
	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	<b>13.0</b>	--	--	--	
	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	<b>7.4</b>	--	--	--	
	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	<b>9.2</b>	--	--	--	
	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	<b>20</b>	--	--	<50	
	12/19/11	44.37	52.09	--	58	<67	<0.5	<0.5	<0.5	<1	<0.8	<2	<0.5	<0.8	<1	<b>10</b>	--	--	<50	
	03/23/12	27.98	68.48	--	160	380	<0.5	<0.5	<0.5	<1	1	<2	<0.5	<0.8	<1	3	--	--	<50	
	06/18/12	37.57	58.89	--	180	<b>720</b>	<0.5	<0.5	<0.5	<1	2	<2	<0.5	<0.8	<1	<b>7</b>	--	--	<50	
	08/28/12	42.61	53.85	--	200	<b>560</b>	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	<b>14</b>	--	--	<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	ND	<0.00100	--	--	--	
	01/15/01	57.04	53.15	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	--	--	
	04/23/01	58.18	52.01	--	--	--	--	--	--	--	ND	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	ND	--	--	--	--	
	01/09/02	54.58	55.61	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	<0.00830	0.00714	--	--	
	04/04/02	56.64	53.55	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	<b>5.84</b>	<0.00100	0.00461	--	--
	07/08/02	53.90	56.29	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	3.8	--	--	--	--
	10/30/02	58.90	51.29	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	2.26	--	--	--	--
	01/17/03	56.69	53.50	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	4.56	--	--	--	--
	04/04/03	53.90	56.29	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	2.64	--	--	--	--
	07/02/03	56.24	53.95	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	4.26	--	--	--	--
	01/28/04	54.56	55.63	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	2.39	--	--	--	--
	04/26/04	56.38	53.81	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	<b>14.9</b>	--	--	--	1.83
	07/23/04	58.01	52.18	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	<b>7.26</b>	--	--	--	--
	11/05/04	57.76	52.43	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	3.05	<b>17.7</b>	--	--	3.08
	02/04/05	57.34	52.85	--	--	--	--	--	--	--	<1.0	ND	ND	ND	ND	<b>8.55</b>	--	--	--	--
	05/10/05	54.70	55.49	--	--	--	--	--	--	--	<5.0	ND	ND	ND	ND	1.53	--	--	--	--
	08/08/05	57.40	52.79	--	--	--	--	--	--	--	<1.0	<1	<200	<5.0	<b>5.48</b>	--	--	--	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	<b>6.0</b>	--	--	--	6.48	
	06/29/06	53.94	56.25	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	<1.0	<b>11</b>	--	--	--	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	<b>6.0</b>	--	--	--	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</							

**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)	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	<2	<0.5	<0.8	<1	1	--	--	--	--
	09/30/08	58.60	51.59	--	--	--	<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	--	--	--	--
	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	<1	<0.8	<2	<0.5	<0.8	<1	<0.8	--	--	<50	--
	03/23/12	51.73	58.46	--	190	<b>750</b>	<0.5	<0.5	<0.5	<1	<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	<1	<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	--
MTCA Method A Cleanup Levels:		1,000/800 <sup>a</sup>	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**

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## WELL GAUGING DATA

Project # 120828-LB1 Date 8/28/12 Client CHEVRON

Site 1300 W 12<sup>TH</sup> ST, VANCOUVER, WA

## **LOW FLOW WELL MONITORING DATA SHEET**

Project #:	120826-LB	Client:	CHEVRON
Sampler:	LB	Gauging Date:	8/26/12
Well I.D.:	MW-1	Well Diameter (in.) :	<input checked="" type="radio"/> 3    4    6    8
Total Well Depth (ft.) :	48.59	Depth to Water (ft.) :	43.32
Depth to Free Product:		Thickness of Free Product (feet):	
Referenced to:	PVC	Grade	Flow Cell Type: VSE 525

Purge Method: 2" Grundfos Pump

Sampling Method: Dedicated Tubing

## Peristaltic Pump

### New Tubing

## Bladder Pump

Other

Start Purge Time: 0856

Flow Rate: 200 mL/min

Pump Depth: 47

Did well dewater? Yes  No

Amount actually evacuated: 3/

Sampling Time: 09/2

Sampling Date: 8/28/17

Sample I.D.: M46-1

Laboratory: LANCASTER

Analyzed for: TPH-G BTEX MTBE TPH-D

Other: See col.

### Equipment Blank I.D.:

Tuna

### Duplicate LDs:

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

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 120828-LB1	Client: CHEVRON
Sampler: LB	Gauging Date: 8/26/12
Well I.D.: MW-2	Well Diameter (in.): ② 3 4 6 8 _____
Total Well Depth (ft.): 49.14	Depth to Water (ft.): 43.13
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PNQ	Grade: YSC 556

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

Start Purge Time: 0928 Flow Rate: 200 mL/MIN Pump Depth: 47'

Did well dewater? Yes  Amount actually evacuated: 3/

Sampling Time: 0944 Sampling Date: 8/28/12

Sample I.D.: MNR-2 Laboratory: Lancaster

Analyzed for: TPH-G BTEX MTBE TPH-D 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**

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 120828-LB1	Client: CHEVRON
Sampler: LB	Gauging Date: 8/26/12
Well I.D.: MW-4	Well Diameter (in.): <input checked="" type="radio"/> 3    4    6    8
Total Well Depth (ft.): 49.10	Depth to Water (ft.): 42.01
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC	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: 1040 Flow Rate: 200 mL/min Pump Depth: 47

Did well dewater? Yes  No  Amount actually evacuated: 2 /

Sampling Time: 105 Sampling Date: 5/28/12

Sample I.D.: MW-4 Laboratory: Laramie

Analyzed for: TPH-G BTEX MTBE TPH-D Other: *cet/co.*

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

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

AMERICAN BAPTIST HOME, 1101 15TH STREET, WASHINGTON, D.C. 20004-3312 (202) 371-5555

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 120828-LB1	Client: CHEVRON
Sampler: LB	Gauging Date: 8/28/12
Well I.D.: MW-5A	Well Diameter (in.): <input checked="" type="radio"/> 3    4    6    8
Total Well Depth (ft.): 49.33	Depth to Water (ft.): 42.61
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC	Grade
	Flow Cell Type: YSC 536

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

Start Purge Time: 1006 Flow Rate: 200 mL/min Pump Depth: 47'

Start Purge Time: 1006 Flow Rate: 200 mL/min Pump Depth: 47'

Start Purge Time: 1006 Flow Rate: 200 mL/min Pump Depth: 47'

Start Purge Time: 1006 Flow Rate: 200 mL/min Pump Depth: 47'

Start Purge Time: 1006 Flow Rate: 200 mL/min Pump Depth: 47'

Did well dewater? Yes No Amount actually evacuated: 31

Sampling Time: 1022 Sampling Date: 8/28/17

Sample I.D.: MW-5A Laboratory: LANCER

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

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

## **LOW FLOW WELL MONITORING DATA SHEET**

Project #:	120828-48	Client:	CHEVRON
Sampler:	LB	Gauging Date:	8/28/12
Well I.D.:	MW-6	Well Diameter (in.):	<input checked="" type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8    _____
Total Well Depth (ft.):	64.61	Depth to Water (ft.):	56.33
Depth to Free Product:		Thickness of Free Product (feet):	
Referenced to:	PWD	Grade	Flow Cell Type: YSI 526

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

Start Purge Time: 0815 Flow Rate: 200 mL/min Pump Depth: 61'

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

Sampling Time: 0831 Sampling Date: 8/29/17

Sample I.D.: MW-6 Laboratory: Lancer

Analyzed for: TPH-G BTEX MTBE TPH-D Other *see cov*

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

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

**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: <u>35-1386</u>		Chevron Consultant: <u>SAIC</u>		ANALYSES REQUIRED							
Program Designation: <u>CMP</u>		Address: <u>20415 72nd Ave South, Suite 250, Kent WA 98032</u>									
Site Address (street, city, state / county): <u>1300 W. 12th St., Vancouver, WA</u>		Consultant Contact: <u>Ron Santos</u>									
Chevron PM:		Phone No. <u>(208) 429-3772</u>									
Chevron PM Phone No.:		Consultant Project No. <u>123525-1-25</u>									
<input type="checkbox"/> Retail and Terminal Business Unit (RTBU) Job		Sampling Company: <u>Blaine Tech Services</u>									
<input type="checkbox"/> Construction/Retail Job		Sampled By (Print): <u>Lee Boes</u>									
Sampler Signature: <u>[Signature]</u>											
Charge Code:		Lancaster Laboratories		Other Lab	Temp	Blank Check	Time				
WBS ELEMENTS:		REMEDIATION IMPLEMENTATION: RSL									
SITE ASSESSMENT: A1L		OPERATION MAINTENANCE & MONITORING: M1L									
SITE MONITORING: OML											
WV1-1		GW	—	120625	0912	5	<u>Van Amber</u>	X	X	X	X
WV1-2		GW	—	120625	0944			X	X	X	X
WV1-4		GW	—	120625	1056			X	X	X	X
WV1-5A		GW	—	120626	1022			X	X	X	X
WV1-6		GW	—	120626	0631	V		X	X	X	X
GA		GW	—	120626	0730	3	<u>VOA</u>	X	X	X	X
TPH-G (NWTPh-Gx) <u>PAHsD CPAsD 8270 SIM</u>											
TOTAL LEAD (6020) <u>TPH-D AND TPH-D BY (NWTPh-Dx)</u>											
DISSOLVED LEAD (6020) <u>DISSOLVED LEAD (6020)</u>											
TPH-G (NWTPh-Gx) <u>TPH-HRO W SILICA GEL CLEANUP (97-602M) (NWTPh-Dx w/sec)</u>											
TPH-HRO W SILICA GEL CLEANUP (97-602M) (NWTPh-Dx w/sec) <u>8260B FULL LISTED EDCC TBAD TAMEO MTBED</u>											
TPH-HRO W SILICA GEL CLEANUP (97-602M) (NWTPh-Dx w/sec) <u>ETHANOL&amp; BTEXD TBAE TAMEO MTBED</u>											
TPH-HRO W SILICA GEL CLEANUP (97-602M) (NWTPh-Dx w/sec) <u>PAHsD CPAsD 8270 SIM</u>											
TPH-G (NWTPh-Gx) <u>TPH-G (NWTPh-Gx) VOCs (8270C)</u>											
Special Instructions *VOCs include only BTEX, Chloroform, Methylene Chloride, MTBE, 1,1,1-TCA, TCE and PCE. "Quick SIGs!" Cleanup requested!											
Presentation Codes H = HCl, T = Thiosulfate N = HNO <sub>3</sub> , B = NaOH S = H <sub>2</sub> SO <sub>4</sub> , O = Other											
SAMPLE ID											
Field Point Name	Matrix	Top Depth	Date (mmdd)	Sample Time	# of Containers	Container Type	Notes/Comments				
MW-1	GW	—	120625	0912	5	<u>Van Amber</u>	X	X	X	X	X
MW-2	GW	—	120625	0944			X	X	X	X	X
MW-4	GW	—	120625	1056			X	X	X	X	X
MW-5A	GW	—	120626	1022			X	X	X	X	X
MW-6	GW	—	120626	0631	V		X	X	X	X	X
GA	GW	—	120626	0730	3	<u>VOA</u>	X	X	X	X	X
Relinquished By <u>[Signature]</u> Date/Time: <u>8/31/12</u> Relinquished To <u>SACRED V.A. F.D. Ex</u> Date/Time: <u>8/31/12</u> Turnaround Time: <u>Standard</u> 24 Hours <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/> 72 hours <input type="checkbox"/>											
Relinquished By <u>[Signature]</u> Date/Time: <u>8/31/12</u> Relinquished To <u>Company</u> Date/Time: <u>8/31/12</u> Sample Integrity: <u>(Check by lab on arrival)</u>											
Relinquished By <u>[Signature]</u> Date/Time: <u>8/31/12</u> Relinquished To <u>Company</u> Date/Time: <u>8/31/12</u> Intact: <u>On Ice:</u> Temp: <u>COC #:</u>											

# **WELLHEAD INSPECTION FORM**

Client: CHEVRON

Site: 1300 W. 12TH ST., VANCOUVER, WA

Date: 8/28/12

Job #: 120828-LB

Technician: L. BUREK

Page 1 of 1

**NOTES:**

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 72<sup>ND</sup> 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:

CHEVRON #	Ron Santos
1300 W. 12 <sup>TH</sup> ST,	Chevron Project Manager
Street number	Vancouver, city
	state

SOURCE	RECORD	WELL I.D.	GALS.	WELL I.D.	GALS.
PURGEWATER	RECOVERED	MW-1	1.0	/	/
GROUNDWATER WELLS AT CHEVRON FACILITIES IN		MW-2	1.0	/	/
THE STATE OF WASHINGTON AND OREGON. THE		MW-4	1.0	/	/
PURGEWATER WHICH HAS BEEN RECOVERED FROM		MW-5A	1.0	/	/
GROUNDWATER WELLS IS COLLECTED BY THE		MW-6	1.0	/	/
CONTRACTOR AND HAULED TO THEIR FACILITY IN					
KENT, WASHINGTON FOR TEMPORARILY HOLDING					
PENDING TRANSPORT BY OTHERS TO FINAL					
DESTINATION.					

Blaine Tech Services, Inc.

## Permit To Work

for Chevron EMC Sites

Client: CHEVRON

Date 8/28/12

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

Job Number: 120828-LBI 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

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?

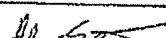
Do you understand the Traffic Control Plan and what equipment you will need?

### 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:



Name

PM

3/19/12

842

Title

Date

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

September 13, 2012

Project: 351386

Submittal Date: 09/01/2012  
Group Number: 1332925  
PO Number: 0015093283  
Release Number: INGLIS  
State of Sample Origin: WA

### Client Sample Description

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

### Lancaster Labs (LLI) #

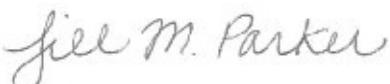
6776009  
6776010  
6776011  
6776012  
6776013  
6776014

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

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

## ***Analysis Report***

Respectfully Submitted,

  
Jill M. Parker  
Senior Specialist

(717) 556-7262

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

LLI Sample # WW 6776009  
 LLI Group # 1332925  
 Account # 11255

**Project Name:** 351386

Collected: 08/28/2012 09:12 by LB

Chevron

L4310

Submitted: 09/01/2012 09:50

6001 Bollinger Canyon Road

Reported: 09/13/2012 19:35

San Ramon CA 94583

12V01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles</b>					
10905	Benzene	71-43-2	N.D.	0.5	1
10905	Chloroform	67-66-3	N.D.	0.8	1
10905	Ethanol	64-17-5	N.D.	50	1
10905	Ethylbenzene	100-41-4	N.D.	0.5	1
10905	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10905	Methylene Chloride	75-09-2	N.D.	2	1
10905	Tetrachloroethene	127-18-4	5	0.8	1
10905	Toluene	108-88-3	N.D.	0.5	1
10905	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10905	Trichloroethene	79-01-6	N.D.	1	1
10905	m+p-Xylene	179601-23-1	N.D.	0.5	1
10905	o-Xylene	95-47-6	N.D.	0.5	1
<b>GC Petroleum Hydrocarbons w/Si</b>					
modified					
02211	DRO C12-C24 w/Si Gel	n.a.	30	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
10905	VOCs by 8260B(Extended) - Water	SW-846 8260B	1	W122541AA	09/10/2012 17:56	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W122541AA	09/10/2012 17:56	Emily R Styer	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	122500015A	09/08/2012 04:30	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	122500015A	09/07/2012 02:30	Sherry L Morrow	1

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Page 1 of 1

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

**LLI Sample #** WW 6776010  
**LLI Group #** 1332925  
**Account #** 11255

**Project Name:** 351386

Collected: 08/28/2012 09:44 by LB

Chevron

L4310

Submitted: 09/01/2012 09:50

6001 Bollinger Canyon Road

Reported: 09/13/2012 19:35

San Ramon CA 94583

12V02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles</b>					
10905	Benzene	71-43-2	N.D.	0.5	1
10905	Chloroform	67-66-3	2	0.8	1
10905	Ethanol	64-17-5	N.D.	50	1
10905	Ethylbenzene	100-41-4	N.D.	0.5	1
10905	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10905	Methylene Chloride	75-09-2	N.D.	2	1
10905	Tetrachloroethene	127-18-4	4	0.8	1
10905	Toluene	108-88-3	N.D.	0.5	1
10905	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10905	Trichloroethene	79-01-6	N.D.	1	1
10905	m+p-Xylene	179601-23-1	N.D.	0.5	1
10905	o-Xylene	95-47-6	N.D.	0.5	1
<b>GC Petroleum Hydrocarbons w/Si</b>					
<b>modified</b>					
02211	DRO C12-C24 w/Si Gel	n.a.	49	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
10905	VOCs by 8260B(Extended) - Water	SW-846 8260B	1	W122541AA	09/10/2012 18:19	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W122541AA	09/10/2012 18:19	Emily R Styer	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	122500015A	09/08/2012 04:52	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	122500015A	09/07/2012 02:30	Sherry L Morrow	1

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Page 1 of 1

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

LLI Sample # WW 6776011  
 LLI Group # 1332925  
 Account # 11255

**Project Name:** 351386

Collected: 08/28/2012 10:56 by LB

Chevron

L4310

Submitted: 09/01/2012 09:50

6001 Bollinger Canyon Road

Reported: 09/13/2012 19:35

San Ramon CA 94583

12V04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles</b>					
10905	Benzene	71-43-2	N.D.	0.5	1
10905	Chloroform	67-66-3	N.D.	0.8	1
10905	Ethanol	64-17-5	N.D.	50	1
10905	Ethylbenzene	100-41-4	N.D.	0.5	1
10905	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10905	Methylene Chloride	75-09-2	N.D.	2	1
10905	Tetrachloroethene	127-18-4	12	0.8	1
10905	Toluene	108-88-3	N.D.	0.5	1
10905	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10905	Trichloroethene	79-01-6	N.D.	1	1
10905	m+p-Xylene	179601-23-1	N.D.	0.5	1
10905	o-Xylene	95-47-6	N.D.	0.5	1
<b>GC Petroleum Hydrocarbons w/Si</b>					
modified					
02211	DRO C12-C24 w/Si Gel	n.a.	620	28	1
02211	HRO C24-C40 w/Si Gel	n.a.	650	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
10905	VOCs by 8260B(Extended) - Water	SW-846 8260B	1	W122541AA	09/10/2012 18:43	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W122541AA	09/10/2012 18:43	Emily R Styer	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	122500015A	09/08/2012 07:28	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	122500015A	09/07/2012 02:30	Sherry L Morrow	1

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Page 1 of 1

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

**LLI Sample #** WW 6776012  
**LLI Group #** 1332925  
**Account #** 11255

**Project Name:** 351386

Collected: 08/28/2012 10:22 by LB

Chevron

L4310

Submitted: 09/01/2012 09:50

6001 Bollinger Canyon Road

Reported: 09/13/2012 19:35

San Ramon CA 94583

12V5A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles</b>					
10905	Benzene	71-43-2	N.D.	0.5	1
10905	Chloroform	67-66-3	N.D.	0.8	1
10905	Ethanol	64-17-5	N.D.	50	1
10905	Ethylbenzene	100-41-4	N.D.	0.5	1
10905	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10905	Methylene Chloride	75-09-2	N.D.	2	1
10905	Tetrachloroethene	127-18-4	14	0.8	1
10905	Toluene	108-88-3	N.D.	0.5	1
10905	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10905	Trichloroethene	79-01-6	N.D.	1	1
10905	m+p-Xylene	179601-23-1	N.D.	0.5	1
10905	o-Xylene	95-47-6	N.D.	0.5	1
<b>GC Petroleum Hydrocarbons w/Si</b>					
<b>modified</b>					
02211	DRO C12-C24 w/Si Gel	n.a.	200	28	1
02211	HRO C24-C40 w/Si Gel	n.a.	560	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
10905	VOCs by 8260B(Extended) - Water	SW-846 8260B	1	W122541AA	09/10/2012 19:07	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W122541AA	09/10/2012 19:07	Emily R Styer	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	122500015A	09/08/2012 07:51	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	122500015A	09/07/2012 02:30	Sherry L Morrow	1

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Page 1 of 1

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

LLI Sample # WW 6776013  
 LLI Group # 1332925  
 Account # 11255

**Project Name:** 351386

Collected: 08/28/2012 08:31 by LB

Chevron

L4310

Submitted: 09/01/2012 09:50

6001 Bollinger Canyon Road

Reported: 09/13/2012 19:35

San Ramon CA 94583

12V06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles</b>					
10905	Benzene	71-43-2	N.D.	0.5	1
10905	Chloroform	67-66-3	N.D.	0.8	1
10905	Ethanol	64-17-5	N.D.	50	1
10905	Ethylbenzene	100-41-4	N.D.	0.5	1
10905	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10905	Methylene Chloride	75-09-2	N.D.	2	1
10905	Tetrachloroethene	127-18-4	2	0.8	1
10905	Toluene	108-88-3	N.D.	0.5	1
10905	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10905	Trichloroethene	79-01-6	N.D.	1	1
10905	m+p-Xylene	179601-23-1	N.D.	0.5	1
10905	o-Xylene	95-47-6	N.D.	0.5	1
<b>GC Petroleum Hydrocarbons w/Si</b>					
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
10905	VOCs by 8260B(Extended) - Water	SW-846 8260B	1	W122541AA	09/10/2012 19:31	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W122541AA	09/10/2012 19:31	Emily R Styer	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	122500015A	09/08/2012 05:15	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	122500015A	09/07/2012 02:30	Sherry L Morrow	1

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Page 1 of 1

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

**LLI Sample #** WW 6776014  
**LLI Group #** 1332925  
**Account #** 11255

**Project Name:** 351386

Collected: 08/28/2012 07:30

Chevron

L4310

Submitted: 09/01/2012 09:50

6001 Bollinger Canyon Road

Reported: 09/13/2012 19:35

San Ramon CA 94583

12VQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
	<b>GC/MS Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10905	Benzene	71-43-2	N.D.	0.5	1
10905	Chloroform	67-66-3	N.D.	0.8	1
10905	Ethanol	64-17-5	N.D.	50	1
10905	Ethylbenzene	100-41-4	N.D.	0.5	1
10905	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10905	Methylene Chloride	75-09-2	N.D.	2	1
10905	Tetrachloroethene	127-18-4	N.D.	0.8	1
10905	Toluene	108-88-3	N.D.	0.5	1
10905	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10905	Trichloroethene	79-01-6	N.D.	1	1
10905	m+p-Xylene	179601-23-1	N.D.	0.5	1
10905	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
10905	VOCs by 8260B(Extended) - Water	SW-846 8260B	1	W122541AA	09/10/2012 13:56	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W122541AA	09/10/2012 13:56	Emily R Styer	1

## Quality Control Summary

Client Name: Chevron  
Reported: 09/13/12 at 07:35 PM

Group Number: 1332925

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: W122541AA			Sample number(s): 6776009-6776014					
Benzene	N.D.	0.5	ug/l	99		77-121		
Chloroform	N.D.	0.8	ug/l	98		77-122		
Ethanol	N.D.	50.	ug/l	76		54-149		
Ethylbenzene	N.D.	0.5	ug/l	94		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	99		68-121		
Methylene Chloride	N.D.	2.	ug/l	94		84-118		
Tetrachloroethene	N.D.	0.8	ug/l	101		79-120		
Toluene	N.D.	0.5	ug/l	97		79-120		
1,1,1-Trichloroethane	N.D.	0.8	ug/l	97		66-126		
Trichloroethene	N.D.	1.	ug/l	97		80-120		
m+p-Xylene	N.D.	0.5	ug/l	93		77-120		
o-Xylene	N.D.	0.5	ug/l	93		77-120		
Batch number: 122500015A			Sample number(s): 6776009-6776013					
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	91	94	50-120	3	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					

### 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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>BKG MAX</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: W122541AA			Sample number(s): 6776009-6776014 UNSPK: P776033					
Benzene	107	108	72-134	1	30			
Chloroform	105	108	81-134	3	30			
Ethanol	72	72	53-146	0	30			
Ethylbenzene	104	105	71-134	2	30			
Methyl Tertiary Butyl Ether	104	103	72-126	1	30			
Methylene Chloride	100	102	78-133	2	30			
Tetrachloroethene	117	120	80-128	3	30			
Toluene	107	106	80-125	0	30			
1,1,1-Trichloroethane	110	110	69-140	0	30			
Trichloroethene	104	107	88-133	3	30			
m+p-Xylene	105	104	79-125	1	30			
o-Xylene	99	102	79-125	3	30			

\*- 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: 09/13/12 at 07:35 PM

Group Number: 1332925

**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: VOCs by 8260B(Extended) -Water  
Batch number: W122541AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6776009	102	101	98	96
6776010	101	103	99	96
6776011	104	100	99	96
6776012	101	102	99	96
6776013	103	101	98	96
6776014	101	101	99	96
Blank	101	101	98	97
LCS	102	102	100	100
MS	102	103	102	101
MSD	101	99	99	101

Limits: 80-116      77-113      80-113      78-113

Analysis Name: NWTPH-Dx water w/Si Gel  
Batch number: 122500015A  
Orthoterphenyl

6776009	99
6776010	102
6776011	108
6776012	107
6776013	106
Blank	101
LCS	108
LCSD	106

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# 1332925 Sample# 6716009-14

## CHAIN OF CUSTODY FORM

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

COC 1 of 1

Chevron Site Number: 35-1386				Chevron Consultant: SAIC				ANALYSES REQUIRED								
Program Designation: CMP				Address: 20415 72nd Ave South, Suite 250, Kent WA 98032				<input checked="" type="checkbox"/>								
Site Address (street, city, state / county): 1300 W. 12th St. Vancouver, WA				Consultant Contact: Ron Santos				<input checked="" type="checkbox"/>								
Chevron PM:				Consultant Phone No. (208) 429-3772				<input checked="" type="checkbox"/>								
Chevron PM Phone No.:				Consultant Project No. 120828-LB				<input checked="" type="checkbox"/>								
<input type="checkbox"/> Retail and Terminal Business Unit (RTBU) Job <input type="checkbox"/> Construction/Retail Job				Sampling Company: Blaine Tech Services				<input checked="" type="checkbox"/>								
				Sampled By (Print): Lee Bures				<input checked="" type="checkbox"/>								
				Sampler Signature: 												
<b>Charge Code:</b> NWRTB 00 SITE NUMBER-0- OML <b>WBS ELEMENTS:</b> SITE ASSESSMENT: A1L REMEDIATION IMPLEMENTATION: R5L SITE MONITORING: OML OPERATION MAINTENANCE & MONITORING: M1L				Lancaster Laboratories	Other Lab	Temp. Blank Check Time	Temp.									
				<input checked="" type="checkbox"/> Lancaster, PA Lab Contact: Megan Moeller 2425 New Holland Pike, Lancaster, PA 17601 Phone No: (717)656-2300												
<b>SAMPLE ID</b>				Sample Time	# of Containers	Container Type										
Field Point Name	Matrix	Top Depth	Date (yymmdd)													
MW-1	GW	—	120828	0912	5	VAC, Amber	X	X								
MW-2	GW	—	120828	0944	↓		X	X	X							
MW-4	GW	—	120828	1056	↓		X	X	X							
MW-5A	GW	—	120828	1022	↓		X	X	X							
MW-6	GW	—	120828	0831	↓		X	X	X							
GA	GW	—	120828	0730	3	VAC			X							
Relinquished By Company Date/Time: 8/31/12				Relinquished To Company Date/Time: SHIPPED VAC FED EX				Turnaround Time: 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				Sample Integrity: (Check by lab on arrival) Intact: <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/> Temp: 1.2-2.5								
Relinquished By Company Date/Time				Relinquished To Company Date/Time: 9/1/12 0950				COC #								

H =HCl T= Thiosulfate  
 N =HNO<sub>3</sub> B = NaOH  
 S = H<sub>2</sub>SO<sub>4</sub> O = Other

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

Notes/Comments

Voc's (82/62)

X

Y

Z

X

COC #

# Explanation of Symbols and Abbreviations

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

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

#### 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.

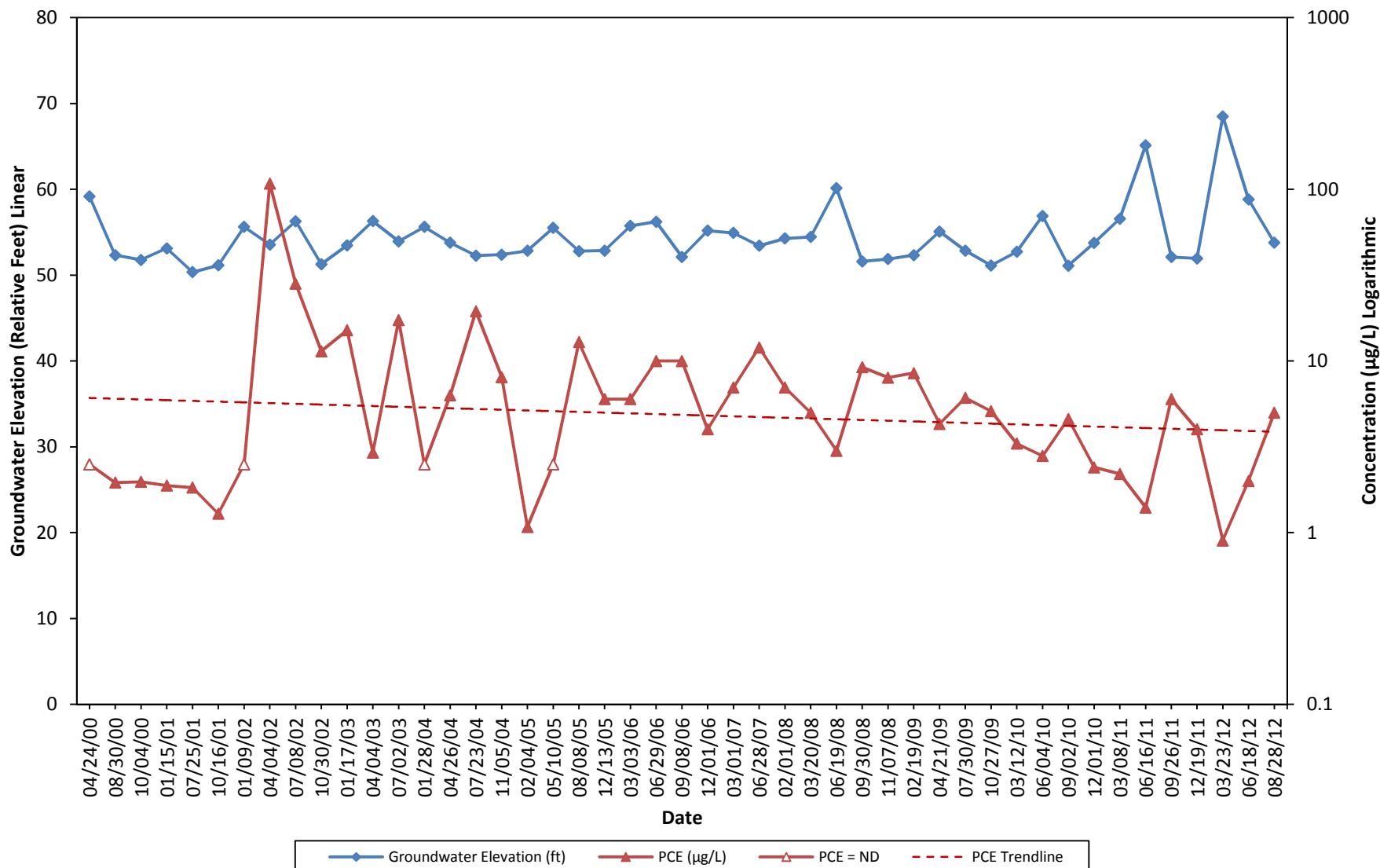
Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

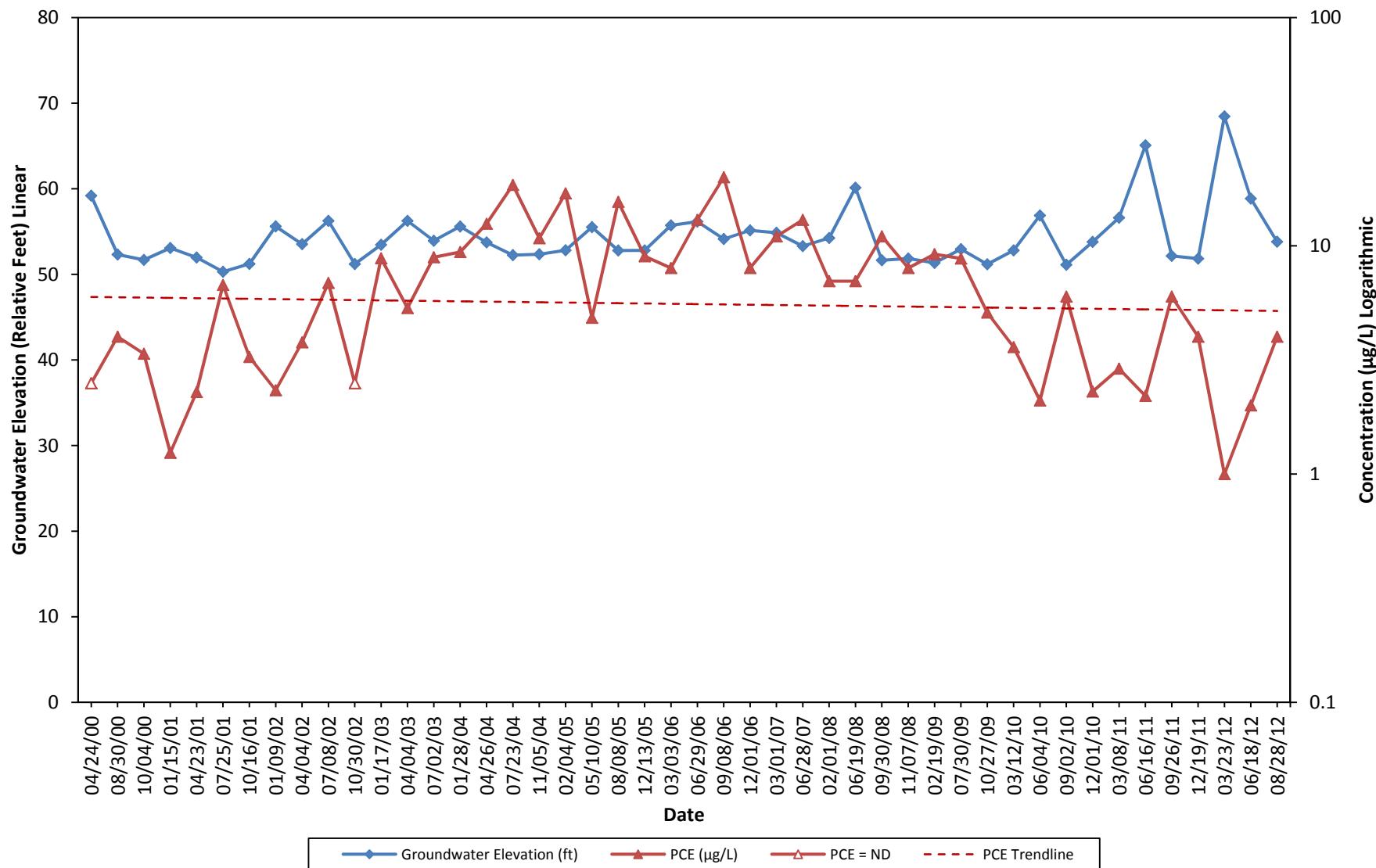
**Attachment C:**  
**Hydrographs**

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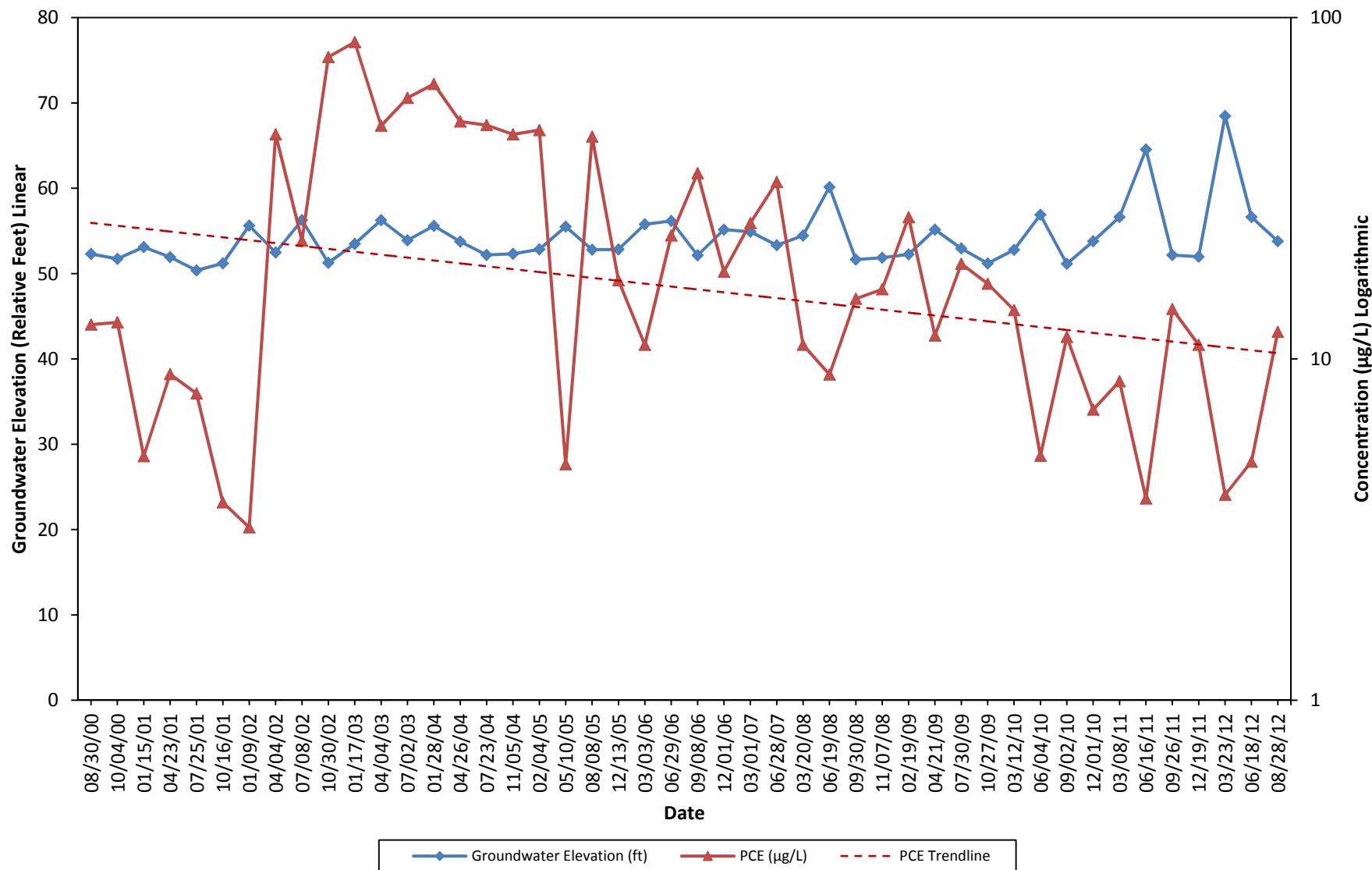
**MW-1**  
**PCE**  
**76 Products Facility No. 351386**  
**1300 West 12th Street, Vancouver, Washington**



**MW-2**  
**PCE**  
**76 Products Facility No. 351386**  
**1300 West 12th Street, Vancouver, Washington**



**MW-4**  
**PCE**  
**76 Products Facility No. 351386**  
**1300 West 12th Street, Vancouver, Washington**



**MW-5A**  
**PCE**  
**76 Products Facility No. 351386**  
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