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UNOCAL STATION 4165

Snohomish

EVST 1995

**Quarterly Groundwater Monitoring Report - First Quarter 2009**  
**ConocoPhillips Facility No. 254165 (RM&R #01234)**  
**Washington Department of Ecology Voluntary Cleanup Program ID #NW1804**  
**202 Avenue D**  
**Snohomish, Washington 98290**

**Stantec Project No.:**  
**212301492**

**Submitted to:**  
**Mr. Mark Adams**  
**Washington State Department of Ecology**  
**3190 160<sup>th</sup> Avenue SE**  
**Bellevue, WA 98008-5452**

**Submitted by:**  
**Stantec Consulting Corporation**  
**12034 134<sup>th</sup> Court NE, Suite 102**  
**Redmond, WA 98052**

**Prepared on behalf of:**  
**ConocoPhillips Company**

June 19, 2009

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**Stantec**

**Quarterly Status Summary Report First Quarter 2009**

June 19, 2009

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Dear Mr. Adams:

Stantec Consulting Corporation (Stantec) is pleased to present this quarterly groundwater monitoring report to the Washington State Department of Ecology (DOE) Voluntary Cleanup Program (VCP) on behalf of the ConocoPhillips Company (ConocoPhillips). This report describes the results of groundwater monitoring activities performed by Stantec during the First Quarter of 2009 (the reporting period) at ConocoPhillips Facility No. 254165 (RM&R #01234; DOE VCP #NW1804) located at 202 Avenue D in Snohomish, Washington (the Site).

### **GROUNDWATER MONITORING ACTIVITIES**

Groundwater monitoring activities during the reporting period were performed on March 26, 2009. Groundwater monitoring activities were performed in accordance with Stantec's protocols for groundwater monitoring events. A copy of Stantec's for groundwater monitoring events is included in Appendix A.

Nine of the existing ten groundwater monitoring wells (MW-1A, MW-2, MW-6A, MW-9, MW-11, MW-12, MW-13, MW-14, and MW-15) were gauged and sampled. Well MW-10 was not sampled due to the well being located in a dangerous traffic location. Gauging, purging, and sampling activities are described below.

#### **Monitoring Well Gauging**

Nine groundwater monitoring wells were gauged: MW-1A, MW-2, MW-6A, MW-9, MW-11, MW-12, MW-13, MW-14, and MW-15. Monitoring wells were gauged for the presence of liquid phase hydrocarbons (LPH) and depth-to-groundwater prior to purging and sampling. LPH was not measured in the groundwater monitoring wells at thicknesses greater than or equal to 0.01 foot. The depth to groundwater ranged from 3.61 feet (MW-2) to 8.75 feet (MW-13) below the top of casing (TOC). Depth-to-groundwater data was used to calculate the groundwater elevation in each well and evaluate the groundwater flow direction and gradient. Historical groundwater gauging data and gauging data from the reporting period are summarized in Table 1. Well locations and groundwater flow direction are shown on Figure 1. Based on these data, the inferred groundwater flow direction was to the southeast at an approximate gradient of 0.06 feet per foot (ft/ft).

#### **Monitoring Well Purging**

Wells intended to be sampled were purged after gauging. Groundwater was purged from the wells using low-flow methods, which included using a peristaltic pump and dedicated polyethylene tubing. Water quality parameters were measured during purging and recorded on

field data sheets. Copies of field data sheets are included in Appendix B. Purged groundwater and rinsate/decontamination water were stored on Site in a Department of Transportation (DOT)-approved, steel drum pending laboratory characterization and off-Site disposal.

### **Monitoring Well Sampling**

Following purging operations, groundwater samples were collected using a peristaltic pump and placed directly into pre-cleaned sample containers provided by an independent laboratory.

Once the sample containers were filled and sealed, they were labeled with the pertinent sampling information, and placed on ice in an insulated cooler for delivery under chain-of-custody documentation to an independent laboratory.

## **CHEMICAL ANALYSES AND RESULTS**

### **Chemical Analyses**

Groundwater samples collected during the reporting period were submitted to Pace Analytical Services, Inc. (Pace) in Seattle, Washington for the following chemical analyses:

- Benzene, toluene, ethylbenzene, and total xylenes (BTEX); and methyl tert-butyl ether (MTBE) using Environmental Protection Agency (EPA) Method 8260B;
- Total petroleum hydrocarbons (TPH) as gasoline (TPH-G) using DOE Northwest Method NWTPH-Gx; and
- TPH as diesel (TPH-D) and TPH as oil (TPH-O) using DOE Northwest Method NWTPH-Dx with silica gel/acid cleanup;

Chemical analyses results are described below. A copy of the certified laboratory analytical report and chain-of-custody documentation from Pace are included in Appendix C.

### **Chemical Analyses Results**

Historical chemical analyses results and those from the reporting period are summarized in Table 1. Analytical results for TPH-G, TPH-D, TPH-O, BTEX, and MTBE are illustrated on Figure 2 for the reporting period and the three previous reporting periods.

A summary of the analytical results exceeding Model Toxics Control Act (MTCA) Method A cleanup levels is provided below.

Analytical results did not exceed MTCA Method A cleanup levels at any of the wells sampled.

**Laboratory Quality Assurance/Quality Control (QA/QC)**

A copy of the analytical report for the samples collected during the reporting period is included in Appendix C. Please refer to the analytical report for a description of QA/QC methods and potential concerns, if any, that were identified during chemical analysis. Potential QA/QC concerns identified in the analytical report are noted on the tabulated analytical results included in Table 1.

**WASTE DISPOSAL**

Purge and rinsate water generated during the monitoring and sampling event were temporarily stored on Site in a labeled, DOT-approved, steel drum. The drum and its contents will be transported off Site to a licensed disposal or recycling facility approved by ConocoPhillips. A copy of the signed waste manifest or other disposal documentation will be provided under a separate cover.

**CONCLUSIONS**

Based on data collected during the reporting period, groundwater flow direction were to the southeast at a gradient of approximately 0.06 ft/ft, and concentrations of TPH, BTEX and MTBE did not exceed MTCA Method A cleanup levels. These results are generally consistent with or lower than analytical results from other recent reporting periods.

**LIMITATIONS AND CERTIFICATIONS**

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this work plan was prepared and applicable to the location of the Site. It was prepared for the exclusive use of ConocoPhillips Company for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the Site existing at the time of the field investigations. No other warranties, expressed or implied are made by Stantec.

**Stantec**

**Quarterly Groundwater Monitoring Report First Quarter 2009**

June 19, 2009

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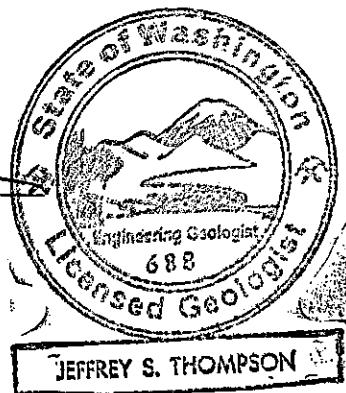
**Prepared by:**

*Tammy Parise*

Tammy Parise  
Staff Scientist

**Reviewed by:**

*JST*  
Jeffrey S. Thompson, L.G., L.E.G.  
Principal Geologist



**ATTACHMENTS**

Table 1      Cumulative Groundwater Elevations and Sample Analytical Results

Figure 1      Site Plan with Groundwater Elevations (March 26, 2009)

Figure 2      Site Plan with Analytical Results (March 26, 2009)

Appendix A    Field and Laboratory Procedures

Appendix B    Field Data Sheets

Appendix C    Certified Laboratory Analytical Report and Chain-of-Custody Documentation

## **TABLES**

**TABLE 1**  
**CUMULATIVE GROUNDWATER ELEVATIONS AND SAMPLE/ANALYTICAL RESULTS**  
ConocoPhillips Facility No. 254165 (RM&R #01234)  
202 Avenue D  
Snohomish, Washington

Well ID TOC Elevation	Sample Date	Elevation Data (feet)				Total Petroleum Hydrocarbons			Aromatic Hydrocarbons					Ferrous Iron ( $\mu\text{g/L}$ )	Alkalinity ( $\mu\text{g/L}$ )	Nitrate ( $\mu\text{g/L}$ )	Nitrite ( $\mu\text{g/L}$ )	Sulfate ( $\mu\text{g/L}$ )
		Top of Casing Elevation	DTW	LPH Thickness	GW Elevation	TPH-G ( $\mu\text{g/L}$ )	TPH-D ( $\mu\text{g/L}$ )	TPH-O ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl- benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MTBE <sup>a</sup> ( $\mu\text{g/L}$ )					
MW-1A	04/04/02	69.32	7.21	—	62.11	73.6	<250	<500	<0.500	<0.500	<0.500	<1.00	—	3,200	61,600	886	—	47,800
69.32	07/02/02	69.32	9.30	—	60.02	<50.0	<250	<500	<0.500	<0.500	<0.500	<1.00	—	0	42,400	<200	—	54,500
	10/02/02	69.32	11.67	—	57.65	<100	<250	<500	<0.500	<2.00	<1.00	<1.50	—	0	103,000	<200	—	50,300
01/14/03	69.32	7.75	—	61.57	90.5	<250	<500	0.550	<0.500	<0.500	<1.00	—	—	—	—	—	—	
04/28/03	69.32	7.85	—	61.47	59.2	<250	<500	1.54	<0.500	<0.500	<1.00	—	500	64,800	300	—	30,400	
07/11/03	69.32	10.31	—	59.01	<50.0	<281	<562 <sup>b</sup>	<0.500	0.702	0.517	1.74	—	—	—	—	—	—	
12/17/03	69.32	7.44	0.00	61.88	<100	<129	<259	0.339	<0.5	<0.5	<1	—	—	64,000	406	—	40,900	
03/31/04	69.32	8.28	0.00	61.04	<100	<119	<237	<1	<1	<1	<2	—	—	62,000	1,010	—	30,400	
08/19/04	69.32	10.89	0.00	58.43	<100	<264	<527 <sup>b</sup>	<1	<1	<1	<2	—	—	66,000	800	—	35,700	
03/21/05	69.32	9.22	0.00	60.10	266	<248	<496	<1	<1	<1	<2	—	—	61,900	1,410	—	32,600	
06/28/05	69.32	8.86	0.00	60.46	<100	<259	<517 <sup>b</sup>	<1	<1	<1	<2	—	—	—	1,200	—	26,300	
09/15/05	69.32	10.67	0.00	58.65	<48	<160	<200	<0.5	<0.7	<0.8	<0.8	—	—	76,200	160	—	24,000	
12/08/05	—	—	—	—	<48	<78	<97	<0.5	<0.7	<0.8	<0.8	—	—	76,700	1,200	—	41,900	
03/10/06	—	—	—	—	<48	<79	<99	<0.5	<0.7	<0.8	<0.8	—	—	62,600	9,400	—	42,600	
06/06/06	69.32	8.92	0.00	60.40	<48	<82	<100	<0.5	<0.7	<0.8	<0.8	—	—	—	—	—	—	
09/05/06	69.32	11.05	0.00	58.27	<48	<78	<98	<0.5	<0.7	<0.8	<0.8	—	—	75,800	540	—	40,900	
12/19/06	69.32	6.75	0.00	62.57	<48	<80	<100	<0.5	<0.7	<0.8	<0.8	—	—	67,400	10,500	—	65,100	
03/20/07	69.32	7.39	0.00	61.93	<48	<79	145	<0.5	<0.7	<0.8	<0.8	—	—	63,200	3,970	—	24,600	
06/28/07	69.32	9.79	0.00	59.53	<50	<79	<99	<0.5	<0.7	<0.8	<0.8	—	—	61,600	1,200	—	18,700	
09/25/07	69.32	11.04	0.00	58.28	<50	<79	120	<0.5	<0.7	<0.8	<0.8	—	—	69,000	480	—	22,300	
12/10/07	69.32	7.44	0.00	61.88	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	—	—	64,100	10,300	<15	244,000	
03/10/08	69.32	8.70	0.00	60.62	<50	<75	<94	<0.5	<0.7	<0.8	<0.8	<0.5	—	63,700	3,300	<15	—	
06/16/08	69.32	8.44	0.00	60.88	<50	<76	<95	<0.5	<0.5	<0.5	<0.5	—	—	—	—	—	—	
09/22/08	69.32	10.80	0.00	58.52	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	—	—	—	—	—	—	
12/08/08	69.32	Removed from sampling schedule 4Q08.				—	—	—	—	—	—	—	—	—	—	—	—	
03/26/09	69.32	7.89	0.00	61.43	<50.0	<82	<410	<1.0	<1.0	<1.0	<1.0	<1.0	—	—	—	—	—	
<b>MW-2</b>	01/08/99	69.80	4.90	—	64.90	1,510	314	<750 <sup>b</sup>	20.7	<2.75	<2.50	<5.00	—	—	—	—	—	—
69.80	04/28/99	69.80	4.91	—	64.89	1,180	324	<750 <sup>b</sup>	16.1	<1.60	<1.32	<3.30	—	—	—	—	—	—
	07/23/99	69.80	6.29	—	63.51	805	368	<750 <sup>b</sup>	12.3	<1.50	<0.500	<4.00	—	—	—	—	—	—
	10/25/99	69.80	8.64	—	61.16	2,100	250	<750 <sup>b</sup>	<0.700	<19.6	<0.700	<1.90	—	—	—	—	—	—
	01/08/00	69.80	4.72	—	65.08	1,530	<250	<750 <sup>b</sup>	22.2	<2.27	<2.43	<6.44	—	—	—	—	—	—
	04/19/00	69.80	5.48	—	64.32	1,210	257	<718 <sup>b</sup>	<0.500	28.5	<2.55	<4.22	—	—	—	—	—	—
	07/12/00	69.80	7.55	—	62.25	888	653	<750 <sup>b</sup>	<1.25	4.75	<1.25	<2.50	—	—	—	—	—	—
	09/08/00	69.80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10/16/00	69.80	8.88	—	60.92	1,110	<358	<1,070 <sup>b</sup>	42.3	<4.13	<2.08	<5.00	—	—	—	—	—	—
	11/27/00	69.80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	01/16/01	69.80	6.02	—	63.78	2,000	614	<918 <sup>b</sup>	<2.50	29.1	<2.50	<5.00	—	—	—	—	—	—
	04/04/01	Unable to locate				—	—	—	—	—	—	—	—	—	—	—	—	—
	05/22/01	69.80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	07/09/01	69.80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10/09/01	69.80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	01/08/02	Obstructed by construction				—	—	—	—	—	—	—	—	—	—	—	—	—
	04/04/02	69.80	3.47	—	66.33	159	<250	<500	16.3	1.25	<0.500	2.57	—	—	—	—	—	—
	07/02/02	69.80	5.49	—	64.31	387	273	<500	23.4	<0.500	<0.500	<1.00	—	3,400	148,000	<200	—	29,600
	10/02/02	69.80	7.88	—	61.92	505	<250	<500	22.5	<2.00	<1.00	<1.50	—	3,400	150,000	<200	—	41,600

**TABLE 1**  
**CUMULATIVE GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS**  
 ConocoPhillips Facility No. 254165 (RM&R #01234)  
 202 Avenue D  
 Snohomish, Washington

Well ID TOC: Elevation	Sample Date	Elevation Data (feet)				Total Petroleum Hydrocarbons			Aromatic Hydrocarbons				Ferrous Iron ( $\mu\text{g/L}$ )	Alkalinity ( $\mu\text{g/L}$ )	Nitrate ( $\mu\text{g/L}$ )	Nitrite ( $\mu\text{g/L}$ )	Sulfate ( $\mu\text{g/L}$ )
		Top of Casing Elevation	DTW	LPH Thickness	GW Elevation	TPH-G ( $\mu\text{g/L}$ )	TPH-D ( $\mu\text{g/L}$ )	TPH-O ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethy- benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )				
MW-2	01/14/03	69.80	3.27	—	66.53	681	<250	<500	8.10	<0.500	0.515	2.49	—	—	—	—	—
	04/28/03	69.80	4.05	—	65.75	269	<250	<500	3.51	<0.500	<0.500	1.45	—	2,600	276,000	<200	—
	07/11/03	69.80	6.92	—	62.88	358	<291	<581 <sup>b</sup>	5.64	0.557	0.792	3.04	—	—	—	—	26,800
	12/17/03	69.80	3.65	0.00	66.15	124	<128	<259	<0.25	<0.5	<0.5	<1.00	—	—	310,000	<15	—
	03/31/04	69.80	4.60	0.00	65.20	<100	123	<237	9.05	<1	<1	1.12	—	—	251,000	<15	—
	08/19/04	69.80	7.45	0.00	62.35	<100	<244	<488	<1	<1	<1	<2	—	—	208,000	200	—
	03/21/05	69.80	5.52	0.00	64.28	<100	<251	<502 <sup>b</sup>	5.07	<1	<1	<2	—	—	205,000	<15	—
	06/28/05	69.80	5.26	0.00	64.54	<100	344	568	<1	<1	<1	<2	—	—	—	<15	26,900
	09/15/05	69.80	7.32	0.00	62.48	<48	<80	<100	<0.5	<0.7	<0.8	<0.8	—	—	209,000	<40	—
	12/08/05	69.80	4.06	0.00	65.74	85	97	160	<0.5	<0.7	<0.8	<0.8	—	—	274,000	<40	—
	03/10/06	69.80	3.50	0.00	66.30	160	<79	100	<0.5	<0.7	<0.8	<0.8	—	—	205,000	<40	262
	06/08/06	69.80	5.06	0.00	64.74	<48	<79	290	<0.5	<0.7	<0.8	<0.8	—	—	—	—	—
	09/05/06	69.80	7.93	0.00	61.87	<48	<79	150	<0.5	<0.7	<0.8	<0.8	—	—	225,000	<40	12,900
	12/19/06	Obstructed by a parked vehicle															
	03/20/07	69.80	3.33	—	66.47	68.5	<80	<100	1.64	<0.7	<0.8	<0.8	—	—	163,000	<40	—
	06/28/07	69.80	6.41	—	63.39	<50	<79	<98	<0.5	<0.7	<0.8	<0.8	—	—	193,000	<40	—
	09/25/07	69.80	7.79	—	62.01	<50	<79	<98	<0.5	<0.7	<0.8	<0.8	—	—	200,000	<40	—
	12/10/07	69.80	3.75	—	66.05	<50	<77	<96	<0.5	<0.7	<0.8	<0.8	—	—	200,000	<2,000	<15
	03/10/08	69.80	4.76	0.00	65.04	Not sampled because well was inaccessible due to a parked car.											
	06/16/08	69.80	4.45	0.00	65.35	<50	<76	<95	<0.5	<0.5	<0.5	<0.5	—	—	—	—	—
	09/22/08	69.80	7.56	0.00	62.24	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	—	—	—	—	—
	12/08/08	69.80	Removed from sampling schedule 4Q08.				—	—	—	—	—	—	—	—	—	—	—
	03/26/09	69.80	3.61	0.00	66.19	<50.0	<82	<410	<1.0	<1.0	<1.0	<1.0	—	—	—	—	—
MW-6A	04/04/02	67.65	8.25	—	59.40	2,570	665	<500	2.99	3.16	2.25	7.27	—	—	—	—	—
67.65	07/02/02	67.65	8.98	—	58.67	3,000	613	<500	4.70	4.51	3.42	9.81	—	—	—	—	—
	10/02/02	67.65	10.48	—	57.17	2,970	384	<500	32.4	6.38	8.44	9.75	—	—	—	—	—
	01/14/03	67.65	9.88	—	57.77	1,680	<250	<500	6.69	2.24	1.60	13.4	—	—	—	—	—
	04/29/03	67.65	9.20	—	58.45	1,720	288	<562 <sup>b</sup>	1.65	2.20	2.99	12.6	—	2,800	203,000	<200	—
	07/11/03	67.65	8.48	—	59.17	1,470	<281	<562 <sup>b</sup>	2.13	2.45	3.23	6.92	—	—	—	—	—
	12/17/03	67.65	9.45	0.00	58.20	2,380	457	<265	0.875	1.75	0.941	<1	—	—	87,000	442	—
	03/31/04	67.65	8.97	0.00	58.68	1,810	682	<247	<5	<5	<5	<10	—	—	230,000	<15	—
	08/19/04	67.65	9.22	0.00	58.43	988	347	<476	<1	<1	<1	<2	—	—	205,000	200	—
	03/21/05	67.65	9.45	0.00	58.20	1,610	349	<501 <sup>b</sup>	<0.5	4.58	4.95	4.71	—	—	201,000	<15	—
	06/28/05	67.65	9.02	0.00	58.63	1,710	533	<490	<1	1.3	<1	<2	—	—	—	<15	11,300
	09/15/05	67.65	10.67	0.00	58.98	570	220	120	<0.5	0.9	0.9	<0.8	—	—	178,000	<40	—
	12/08/05	67.65	9.61	0.00	58.04	920	2,805	170	<0.5	0.9	<0.8	<0.8	—	—	225,000	<40	—
	03/10/06	67.65	9.65	0.00	58.00	1,200	180	<100	<0.5	0.8	<0.8	<0.8	—	—	210,000	<40	—
	06/08/06	67.65	9.92	0.00	57.73	1,300	210	260	<0.5	0.9	<0.8	<0.8	—	—	—	—	9,700
	09/05/06	67.65	10.46	0.00	57.19	500	140	130	<0.5	<0.7	<0.8	<0.8	—	—	163,000	<40	—
	12/19/06	67.65	8.21	Sheen	59.44	2,200	910	350	0.6	2.0	<0.8	<0.8	—	—	230,000	<40	—
	03/20/07	67.65	7.79	0.00	59.86	1,380	332	<100	<0.5	0.855	<0.8	<0.8	—	—	216,000	<100	—
	06/28/07	67.65	8.79	0.00	58.86	620	210	<100	<0.5	<0.7	<0.8	<0.8	—	—	185,000	<40	—
	09/25/07	67.65	10.21	0.00	57.44	960	350	120	<0.5	<0.7	<0.8	<0.8	—	—	155,000	<40	—
	12/10/07	67.65	8.46	0.00	59.19	1,700	280	<94	<0.5	1	<0.8	<0.8	—	—	220,000	<2,000	<15
	03/10/08	67.65	9.65	0.00	58.00	1,000	130	<95	<0.5	0.9	<0.8	<0.8	<0.5	—	218,000	<2,000	<15
	06/16/08	67.65	8.44	0.00	59.21	840	140	<95	<0.5	1	0.7	<0.5	—	—	—	—	—
	09/22/08	67.65	9.87	0.00	57.78	1,600	96	<95	<0.5	1	0.9	<0.8	—	—	—	—	—
	12/08/08	67.65	9.50	0.00	58.15	1,800	130	<69	<0.5	1	<0.8	<0.8	—	—	—	—	—
	03/26/09	67.65	7.90	0.00	59.75	124	110	<420	<1.0	<1.0	<1.0	<1.0	<1.0	—	—	—	—

**TABLE 1**  
**CUMULATIVE GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS**  
ConocoPhillips Facility No. 254165 (RM&R #01234)  
202 Avenue D  
Snohomish, Washington

Well ID TOC Elevation	Sample Date	Elevation Data (feet)				Total Petroleum Hydrocarbons			Aromatic Hydrocarbons				Ferrous Iron (µg/L)	Alkalinity (µg/L)	Nitrate (µg/L)	Nitrite (µg/L)	Sulfate (µg/L)
		Top of Casing Elevation	DTW	LPH Thickness	GW Elevation	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)					
MW-9	01/08/99	68.66	6.50	—	62.16	<50.0	<250	<750 <sup>b</sup>	<0.500	<0.500	<0.500	<1.00	—	—	—	—	—
67.77	04/28/99	68.66	7.28	—	61.38	<50.0	<250	<750 <sup>b</sup>	<0.500	<0.500	<0.500	<1.00	—	—	—	—	—
	07/23/99	68.66	7.97	—	60.69	<50.0	<250	<750 <sup>b</sup>	<0.500	<0.500	<0.500	<1.00	—	—	—	—	—
	10/25/99	68.66	—	—	—												
	01/08/00	68.66	6.76	—	61.90	<50.0	<250	<750 <sup>b</sup>	<0.500	<0.500	<0.500	<1.00	—	—	—	—	—
	04/19/00	68.66	—	—	—												—
	07/12/00	68.66	8.65	—	60.01	<50.0	<249	<745 <sup>b</sup>	<0.500	<0.500	<0.500	<1.00	—	—	—	—	—
	09/06/00	68.66	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10/16/00	68.66	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	11/27/00	68.66	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	01/16/01	68.66	8.08	—	60.58	<50.0	—	—	<0.500	<0.500	<0.500	<1.00	—	—	—	—	—
	04/04/01	68.66	7.78	—	60.88	<50.0	<250	<750 <sup>b</sup>	<0.500	<0.500	<0.500	<1.00	—	—	—	—	—
	05/22/01	68.66	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	07/09/01	68.66	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10/09/01	68.66	9.70	—	58.96	<50.0	<250	<500	<0.500	<0.500	<0.500	<1.00	—	0.0	33,000	3,050	—
	01/08/02	68.66	6.16	—	62.50	<50.0	<250	<500	<0.500	<0.500	<0.500	<1.00	—	0.0	32,600	1,780	—
	04/04/02	68.66	6.54	—	62.12	<50.0	<250	<500	<0.500	0.593	<0.500	<1.00	—	0.0	29,800	2,490	—
	07/02/02	68.66	8.49	—	60.17	<50.0	<250	<500	<0.500	<0.500	<0.500	<1.00	—	0.0	28,600	2,020	—
	10/02/02	68.66	10.13	—	58.53	144	<250	<500	3.15	<2.00	7.22	2.25	—	0.0	32,400	2,490	—
	01/14/03	68.66	7.28	—	61.38	<50.0	<284	<568 <sup>b</sup>	<0.500	<0.500	<0.500	<1.00	—	—	—	—	—
	04/28/03	68.66	6.93	—	61.73	<50.0	<250	<500	<0.500	<0.500	<0.500	<1.00	—	0.0	33,400	1,280	—
	07/11/03	68.66	8.91	—	59.75	<50.0	<329	<658 <sup>b</sup>	<0.500	<0.600	<0.500	1.20	—	—	—	—	—
	12/23/03	68.66	6.81	0.00	61.85	<100	<126	<253	<0.25	<0.5	<0.5	<1	—	—	32,000	2,710	—
	03/31/04	68.66	7.34	0.00	61.32	<100	<118	<237	<1	<1	<1	<2	—	—	30,000	1,880	—
	08/19/04	68.66	9.53	0.00	59.13	<100	<256	<512 <sup>b</sup>	<1	<1	<1	<2	—	—	29,000	2,500	—
	03/21/05	67.77	8.11	0.00	59.66	<100	<247	<494	<1	<1	<1	<2	—	—	32,500	1,920	—
	06/28/05	67.77	7.82	0.00	59.95	<100	<258	<516 <sup>b</sup>	<1	<1	<1	<2	—	—	—	1,790	—
	09/15/05	67.77	9.54	0.00	58.23	<48	<77	260	<0.5	<0.7	<0.8	<0.8	—	—	29,800	2,300	—
	12/08/05	67.77	7.42	0.00	60.35	<48	170	470	<0.5	<0.7	<0.8	<0.8	—	—	31,400	2,400	—
	03/10/06	67.77	6.53	0.00	61.24	<48	<78	100	<0.5	<0.7	<0.8	<0.8	—	—	34,400	3,900	—
	06/08/06	67.77	7.80	0.00	59.97	<48	<80	180	<0.5	<0.7	<0.8	<0.8	—	—	—	—	—
	09/05/06	67.77	9.78	0.00	57.99	<48	<78	330	<0.5	<0.7	<0.8	<0.8	—	—	32,800	3,100	—
	12/19/06	67.77	5.98	0.00	61.79	<48	<77	300	<0.5	<0.7	<0.8	<0.8	—	—	37,100	4,500	—
	03/20/07	67.77	6.73	0.00	61.04	<48	<79	170	<0.5	<0.7	<0.8	<0.8	—	—	35,600	3,290	—
	06/28/07	67.77	8.65	0.00	59.12	<50	<79	<98	<0.5	<0.7	<0.8	<0.8	—	—	32,900	3,000	—
	09/25/07	67.77	9.65	0.00	58.12	<50	110	760	<0.5	<0.7	<0.8	<0.8	—	—	31,700	2,600	—
	12/10/07	67.77	6.52	0.00	61.25	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	—	—	30,800	<2,000	<15
	03/10/08	67.77	7.55	0.00	60.22	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5	—	38,200	<2,000	<15
	06/16/08	67.77	7.40	0.00	60.37	<50	<76	<95	<0.5	<0.5	<0.5	<0.5	—	—	—	—	—
	09/22/08	67.77	9.60	0.00	58.17	<50	<75	<94	<0.5	<0.7	<0.8	<0.8	—	—	—	—	—
	12/08/08	67.77	Removed from sampling schedule 4Q08.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	03/26/09	67.77	7.43	0.00	60.34	<50.0	<83	<420	<1.0	<1.0	<1.0	<1.0	<1.0	—	—	—	—

**TABLE 1**  
**CUMULATIVE GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS**  
ConocoPhillips Facility No. 254165 (RM&R #01234)  
202 Avenue D  
Snohomish, Washington

Well ID TOC Elevation	Sample Date	Elevation Data (feet)			Total Petroleum Hydrocarbons			Aromatic Hydrocarbons				Ferrous Iron (µg/L)	Alkalinity (µg/L)	Nitrate (µg/L)	Nitrite (µg/L)	Sulfate (µg/L)		
		Top of Casing Elevation	DTW	LPH Thickness	GW Elevation	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)							
MW-10	01/08/99	67.33	4.91	—	62.42	331	266	<750 <sup>b</sup>	2.30	<0.500	<1.50	<2.50	—	—	—	—		
67.33	04/28/99	67.33	5.04	—	62.29	280	<250	<750 <sup>b</sup>	2.99	<0.800	<1.10	<3.00	—	—	—	—		
	07/23/99	67.33	5.44	—	61.89	529	<250	<750 <sup>b</sup>	2.34	<2.60	2.81	9.37	—	—	—	—		
	10/25/99	67.33	7.00	—	60.33	519	251	<750 <sup>b</sup>	<0.800	<5.65	<2.75	<8.65	—	—	—	—		
	01/08/00	67.33	4.64	—	62.69	504	<250	<750 <sup>b</sup>	<1.22	<0.828	<3.27	<7.59	—	—	—	—		
	04/19/00	67.33	5.02	—	62.31	332	<250	<750 <sup>b</sup>	<0.610	<4.43	<2.84	<6.91	—	—	—	—		
	07/12/00	67.33	8.27	—	59.06	498	<250	<750 <sup>b</sup>	<0.500	4.02	<3.52	<7.18	—	—	—	—		
	09/06/00	67.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	10/16/00	67.33	7.41	—	59.92	770	616	<1,330 <sup>b</sup>	<4.17	<3.47	<2.69	<8.05	—	—	—	—		
	11/27/00	67.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	01/16/01	67.33	4.39	—	62.84	209	299	<859 <sup>b</sup>	<0.500	2.33	0.980	2.65	—	—	—	—		
	04/04/01	67.33	5.00	—	62.33	198	<250	<750 <sup>b</sup>	<0.500	<0.500	1.03	2.71	—	—	—	—		
	05/22/01	67.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	07/09/01	67.33	6.03	—	61.30	311	334	<853 <sup>b</sup>	<0.500	1.97	0.949	1.07	—	—	—	—		
	10/09/01	67.33	7.15	—	60.18	675	291	<581 <sup>b</sup>	2.16	0.678	0.777	4.67	—	4,600	132,000	<100	—	
	01/08/02	67.33	4.61	—	62.72	258	675	<500	0.837	0.722	1.48	2.71	—	4,200	168,000	<100	—	
	04/04/02	67.33	4.48	—	62.85	208	392	<500	<0.500	<0.500	<0.500	1.33	—	2,000	170,000	<200	—	
	07/02/02	67.33	6.00	—	61.33	201	250	<500	0.552	<0.500	<0.500	1.16	—	2,200	133,000	<200	—	
	10/02/02	67.33	7.96	—	59.37	811	326	<500	3.90	<2.00	4.12	4.63	—	2,200	129,000	<200	—	
	01/14/03	67.33	4.25	—	63.08	280	<309	<617 <sup>b</sup>	0.549	0.844	<0.500	1.76	—	—	—	—	—	
	04/28/03	67.33	4.71	—	62.62	270	<250	<500	0.842	<0.500	<0.500	2.29	—	2,400	162,000	<200	—	
	07/11/03	67.33	6.40	—	60.93	548	<284	<568 <sup>b</sup>	0.929	<0.500	3.19	4.18	—	—	—	—	—	
	12/17/03	Inaccessible; buried under gravel from recent road construction																
	03/31/04	67.33	4.28	0.00	63.05	390	308	<237	<1	<1	<1	<2	—	141,000	<15	—	17,600	
	08/19/04	67.33	6.84	0.00	60.49	244	<251	<501 <sup>b</sup>	<1	<1	<1	<2	—	127,000	200	—	22,700	
	03/21/05	67.33	4.71	0.00	62.62	396	<247	<494	<1	<1	1.93	<2	—	154,000	<15	—	15,100	
	06/28/05	67.33	4.77	0.00	62.56	624	746	<504 <sup>b</sup>	<1	<1	<1	<2	—	—	<15	—	18,600	
	09/15/05	67.33	7.03	0.00	60.30	290	110	120	<0.5	<0.7	<0.8	<0.8	—	110,000	<40	—	19,800	
	12/08/05	67.33	4.23	0.00	63.10	540	<82	<100	<0.5	<0.7	6.0	2.0	—	137,000	<40	—	21,500	
	03/10/06	67.33	3.41	0.00	63.92	3,100	290	220	<0.5	<0.7	9.0	8.0	—	119,000	<100	—	17,400	
	06/08/06	67.33	4.83	0.00	62.50	290	<79	120	<0.5	<0.7	<0.8	<0.8	—	—	—	—	—	
	09/05/06	67.33	7.51	0.00	59.82	290	100	130	<0.5	<0.7	<0.8	<0.8	—	111,000	<40	—	20,400	
	12/19/06	67.33	2.57	0.00	64.76	2,600	390	470	0.6	<0.7	11.0	8.0	—	161,000	<40	—	25,100	
	03/20/07	67.33	3.04	0.00	64.29	4,144	665	162	0.527	<0.7	25.0	18.1	—	117,000	1,740	—	6,940	
	06/28/07	67.33	5.18	0.00	62.15	1,700	430	<97	<0.5	<0.7	5	3	—	137,000	<40	—	12,000	
	09/25/07	67.33	7.43	0.04	59.93	Not sampled due to presence of LPH							—	—	137,000	<40	—	
	12/10/07	67.33	4.22	0.00	63.11	4,800	2,800	<970 <sup>b</sup>	<0.5	<0.7	11	8	—	—	136,000	<2,000	<15	21,100
	03/10/08	67.33	Not sampled due to dangerous traffic location.															
	06/16/08	67.33	Not sampled due to dangerous traffic location.															
	09/22/08	67.33	6.35	0.00	60.98	1,200	82	<95	<0.5	<0.7	3	3	—	—	—	—	—	
	12/08/08	67.33	Removed from sampling schedule 4Q08.						—	—	—	—	—	—	—	—	—	
	03/26/09	67.33	Not sampled due to dangerous traffic location.															

**TABLE 1**  
**CUMULATIVE GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS**  
 ConocoPhillips Facility No. 254165 (RM&R #01234)  
 202 Avenue D  
 Snohomish, Washington

Well ID TOC Elevation	Sample Date	Elevation Data (feet)				Total Petroleum Hydrocarbons			Aromatic Hydrocarbons				Ferrous Iron ( $\mu\text{g/L}$ )	Alkalinity ( $\mu\text{g/L}$ )	Nitrate ( $\mu\text{g/L}$ )	Nitrite ( $\mu\text{g/L}$ )	Sulfate ( $\mu\text{g/L}$ )	
		Top of Casing Elevation	DTW	LPH Thickness	GW Elevation	TPH-G ( $\mu\text{g/L}$ )	TPH-D ( $\mu\text{g/L}$ )	TPH-O ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethy- benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )					
MW-11	01/08/99	66.37	9.32	—	57.05	371	—	—	141	4.95	10.8	6.66	—	—	—	—	—	
66.37	04/28/99	66.37	9.58	—	56.79	782	<250	<750 <sup>b</sup>	175	<11.0	26.1	29.9	—	—	—	—	—	
	07/23/99	66.37	9.83	—	56.54	474	<250	<750 <sup>b</sup>	43.7	<2.70	3.40	8.32	—	—	—	—	—	
	10/25/99	66.37	10.69	—	55.68	845	<250	<750 <sup>b</sup>	9.22	<2.90	<3.75	<6.20	—	—	—	—	—	
	01/08/00	66.37	9.21	—	57.16	133	<250	<750 <sup>b</sup>	22.5	<1.03	1.11	3.34	—	—	—	—	—	
	04/19/00	66.37	9.52	—	56.85	869	<250	<750 <sup>b</sup>	92.8	8.15	9.25	20.2	—	—	—	—	—	
	07/12/00	66.37	10.10	—	56.27	581	387	<896 <sup>b</sup>	25.6	2.32	<2.31	<7.94	—	—	—	—	—	
	09/06/00	66.37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	10/16/00	66.37	10.80	—	55.57	322	<250	<750 <sup>b</sup>	<2.80	<0.640	<0.860	<4.20	—	—	—	—	—	
	11/27/00	66.37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	01/16/01	66.37	10.75	—	55.62	725	311	<866 <sup>b</sup>	16.7	2.41	4.46	7.09	—	—	—	—	—	
	04/04/01	66.37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	05/22/01	66.37	9.69	—	56.68	385	—	—	15.8	2.37	2.47	4.37	—	—	—	—	—	
	07/09/01	66.37	9.98	—	56.39	439	<310	<931 <sup>b</sup>	39.6	2.63	1.72	3.71	—	—	—	—	—	
	10/09/01	66.37	10.67	—	55.70	410	333	<500	6.04	1.08	1.74	4.40	—	3,200	158,000	<100	—	
	01/08/02	66.37	9.05	—	57.32	1,280	572	<500	184	10.6	35.7	21.9	—	3,200	186,000	<100	—	
	04/04/02	66.37	5.67	—	60.70	757	366	<500	30.6	2.20	2.81	5.72	—	5,400	203,000	<200	—	
	07/02/02	66.37	5.90	—	60.47	1,060	384	<500	107	8.73	24.2	15.5	—	4,000	203,000	<200	—	
	10/02/02	66.37	10.94	—	55.43	785	<250	<500	13.8	<2.00	4.96	3.59	—	4,000	169,000	<200	—	
	01/14/03	66.37	9.18	—	57.19	570	<305	<610 <sup>b</sup>	19.3	1.12	1.96	3.82	—	—	—	—	—	
	04/28/03	66.37	9.25	—	57.12	1,100	<287	<575 <sup>b</sup>	135	10.7	34.1	20.1	—	4,000	208,000	<200	—	
	07/11/03	66.37	10.19	—	56.18	684	<250	<500	29.7	3.20	10.0	9.17	—	—	—	—	—	
	12/17/03	66.37	8.35	0.00	58.02	673	215	<265	15.1	0.569	<0.5	<1	—	—	170,000	<150	—	
	03/31/04	66.37	8.70	0.00	57.67	409	<127	<253	93.9	5.02	10.4	5.39	—	—	218,000	<15	—	
65.52	08/19/04	65.52	9.73	0.00	55.79	289	<240	<480	2.69	<1	<1	<2	—	—	167,000	200	—	
	03/21/05	65.52	9.10	0.00	56.42	564	<244	<488	36.8	4.18	9.48	7.34	—	—	189,000	<15	—	
	06/28/05	65.52	8.84	0.00	56.68	653	13,300	5,650	74.8	4.9	11.20	6.41	—	—	—	<15	—	
	09/15/05	65.52	9.73	0.00	55.79	280	89	170	12.0	0.7	<0.8	1.0	—	—	150,000	<40	—	
	12/08/05	65.52	8.60	0.00	56.92	480	130	230	0.6	<0.7	<0.8	0.9	—	—	157,000	<40	—	
	03/10/06	65.52	8.18	0.00	57.34	1,600	420	<98	86	6.0	33	8.0	—	—	164,000	<40	—	
	06/08/06	65.52	8.81	0.00	56.71	940	230	170	48	3.0	8.0	4.0	—	—	—	—	—	
	09/05/06	65.52	10.01	0.00	55.51	330	180	210	7.0	<0.7	<0.8	<0.8	—	—	157,000	<40	—	
	12/19/06	65.52	8.10	0.00	57.42	340	140	190	18.0	0.8	4.0	<0.8	—	—	166,000	<40	—	
	03/20/07	65.52	8.20	0.00	57.32	158	372	291	16.2	0.774	3.38	<0.8	—	—	159,000	<1,000	—	
	06/28/07	65.52	9.05	0.00	56.47	290	390	<97	6	<0.7	2	<0.8	—	—	156,000	<40	—	
	09/25/07	65.52	9.89	0.00	55.63	110	360	300	1	<0.7	<0.8	<0.8	—	—	145,000	<40	—	
	12/10/07	65.52	8.37	0.00	57.15	84	<75	<94	<0.5	<0.7	<0.8	<0.8	—	—	124,000	<2,000	<15	
	03/10/08	65.52	8.73	0.00	56.79	150	<76	<95	5	<0.7	1	<0.8	<0.5	—	144,000	<2,000	<15	
	06/16/08	65.52	8.63	0.00	55.89	98	<76	<95	4	<0.5	<0.5	<0.5	—	—	—	—	—	
	09/22/08	65.52	9.73	0.00	55.79	360	<75	<94	6	<0.7	1	<0.8	—	—	—	—	—	
	12/08/08	65.52	8.65	0.00	56.87	<50	<29	<69	<0.5	<0.7	<0.8	<0.8	—	—	—	—	—	
	03/26/09	65.52	8.37	0.00	57.15	<50.0	<82	<410	<1.0	<1.0	<1.0	<1.0	<1.0	—	—	—	—	—

**TABLE 1**  
**CUMULATIVE GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS**  
 ConocoPhillips Facility No. 254165 (RM&R #01234)  
 202 Avenue D  
 Snohomish, Washington

Well ID TOC Elevation	Sample Date	Elevation Data (feet)				Total Petroleum Hydrocarbons			Aromatic Hydrocarbons				Ferrous Iron ( $\mu\text{g/L}$ )	Alkalinity ( $\mu\text{g/L}$ )	Nitrate ( $\mu\text{g/L}$ )	Nitrite ( $\mu\text{g/L}$ )	Sulfate ( $\mu\text{g/L}$ )	
		Top of Casing Elevation	DTW	LPH Thickness	GW Elevation	TPH-G ( $\mu\text{g/L}$ )	TPH-D ( $\mu\text{g/L}$ )	TPH-O ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethy- benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )						
MW-12	01/08/99	66.40	8.74	—	57.66	2,670	—	—	21.1	<5.00	40.1	48.1	—	—	—	—	—	
66.40	04/28/99	66.40	9.22	0.03	57.20	Not sampled due to presence of LPH												
	07/23/99	66.40	9.51	0.01	56.90	Not sampled due to presence of LPH												
	10/25/99	66.40	10.81	0.29	55.82	Not sampled due to presence of LPH												
	01/08/00	66.40	8.71	—	57.69	5,480	8,380	<8,250 <sup>b</sup>	<15.6	<10.2	53.2	47.8	—	—	—	—	—	
	04/19/00	66.40	8.97	—	57.43	5,980	3,060	<3,750 <sup>b</sup>	<2.60	<21.5	66.6	<63.5	—	—	—	—	—	
	07/12/00	66.40	—	0.20	—	Not sampled due to presence of LPH												
	09/06/00	66.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	10/16/00	66.40	—	0.25	—	Not sampled due to presence of LPH												
	11/27/00	66.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	01/16/01	66.40	9.44	—	56.96	5,360	20,100	<8,250 <sup>b</sup>	<5.00	12.9	72.0	63.8	—	—	—	—	—	
	04/06/01	66.40	9.16	—	57.24	15,900	6,950	2,280	17.6	9.04	219	131	—	—	—	—	—	
	05/22/01	66.40	9.39	—	57.01	15,800	—	—	<10.0	10.3	307	142	—	—	—	—	—	
	07/09/01	66.40	—	0.30	—	Not sampled due to presence of LPH												
	10/09/01	66.40	10.65	0.20	55.91	Not sampled due to presence of LPH												
	01/08/02	66.40	8.15	0.08	58.31	Not sampled due to presence of LPH												
	04/04/02	66.40	8.65	0.15	57.87	Not sampled due to presence of LPH												
	07/02/02	66.40	9.66	0.36	57.03	Not sampled due to presence of LPH												
	10/02/02	66.40	11.18	0.60	55.70	Not sampled due to presence of LPH												
	01/14/03	66.40	8.66	0.10	57.82	Not sampled due to presence of LPH												
	04/28/03	66.40	—	0.25	—	Not sampled due to presence of LPH												
	07/11/03	66.40	11.10	0.04	55.33	Not sampled due to presence of LPH												
	12/17/03	66.40	8.52	0.01	57.89	Not sampled due to presence of LPH												
	03/31/04	66.40	8.98	Sheen	57.42	23,400	17,800	2,200	<50	<50	<50	<100	—	—	129,000	<15	—	
66.33	08/19/04	66.33	10.32	0.14	56.12	Not sampled due to presence of LPH												
	10/14/04	66.33	10.00	Sheen	56.33	—	—	—	—	—	—	—	—	—	—	—	—	
	03/21/05	66.33	9.30	0.01	57.04	Not sampled due to presence of LPH												
	06/28/05	66.33	8.96	Sheen	57.37	8,030	<252	<503 <sup>b</sup>	<5	<5	30.20	<10	—	—	—	<75	—	
	09/15/05	66.33	10.28	0.12	56.15	Not sampled due to presence of LPH												
	12/08/05	66.33	9.02	0.13	57.41	Not sampled due to presence of LPH												
	03/10/06	66.33	8.13	0.00	58.20	2,400	2,500	1,100	<0.5	<0.7	4.0	3.0	—	—	116,000	150	—	
	06/08/06	66.33	9.00	0.00	57.33	9,300	930	420	1.0	2.0	20	4.0	—	—	—	—	—	
	09/05/06	66.33	10.56	0.05	55.81	Not sampled due to presence of LPH												
	12/19/06	66.33	6.01	Sheen	60.32	7,300	1,400	580	<0.5	<0.7	4.0	<0.8	—	—	111,000	<40	—	
	03/20/07	66.33	8.21	0.00	58.12	1,291	2,837	1,947	<0.5	<0.7	4.25	0.853	—	—	116,000	1,190	—	
	06/28/07	66.33	9.42	0.00	58.91	1,800	1,300	540	<0.5	<0.7	4	<0.8	—	—	123,000	<40	—	
	09/25/07	66.33	10.39	0.00	55.94	4,000	4,700	1,900	<0.5	<0.7	7	1	—	—	121,000	<40	—	
	12/10/07	66.33	8.49	0.00	57.84	710	110	<94	<0.5	0.8	3	<0.8	—	—	110,000	<2,000	<15	
	03/10/08	66.33	8.92	0.00	57.41	1,000	110	<96	<0.5	1	23	3	<0.5	—	108,000	<2,000	<15	
	06/16/08	66.33	8.75	0.00	57.58	350	<75	<94	<0.5	<0.5	1	<0.5	—	—	—	—	—	
	09/22/08	66.33	10.17	0.00	56.16	1,600	360	140	<0.5	<0.7	0.8	<0.8	—	—	—	—	—	
	12/08/08	66.33	8.75	0.00	57.58	<50	<29	<68	<0.5	<0.7	<0.8	<0.8	—	—	—	—	—	
	03/26/09	66.33	8.40	0.00	57.93	<50.0	<82	<410	<1.0	<1.0	<1.0	<1.0	<1.0	—	—	—	—	—

**TABLE 1**  
**CUMULATIVE GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS**  
ConocoPhillips Facility No. 254165 (RM&R #01234)  
202 Avenue D  
Snohomish, Washington

Well ID TOC Elevation	Sample Date	Elevation Data (feet)				Total Petroleum Hydrocarbons			Aromatic Hydrocarbons				Ferrous Iron (µg/L)	Alkalinity (µg/L)	Nitrate (µg/L)	Nitrite (µg/L)	Sulfate (µg/L)	
		Top of Casing Elevation	DTW	LPH Thickness	GW Elevation	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)					
MW-13	03/21/05	67.59	9.72	0.00	57.87	424	<239	<478	2.84	1.71	5.21	1.86	—	—	229,000	<15	—	13,800
67.59	06/28/05	67.59	9.43	0.00	58.16	402	<244	<487	<1	<1	<1	<2	—	—	—	<15	—	16,600
	09/15/05	67.59	10.87	0.00	56.72	260	81	<98	<0.5	<0.7	<0.8	<0.8	—	—	225,000	<40	—	11,100
	12/08/05	67.59	9.34	0.00	58.25	230	<80	<100	<0.5	<0.7	<0.8	<0.8	—	—	228,000	<40	—	13,800
	03/10/06	67.59	8.46	0.00	59.13	400	<78	<97	22	<0.7	2.0	<0.8	—	—	229,000	<1000	—	18,500
	06/08/06	67.59	9.41	0.00	58.18	380	<81	<100	<0.5	<0.7	<0.8	<0.8	—	—	—	—	—	—
	09/05/06	67.59	11.28	0.00	56.31	240	<80	<99	<0.5	<0.7	<0.8	<0.8	—	—	218,000	<40	—	13,700
	12/19/06	67.59	8.30	0.00	59.29	430	100	220	<0.5	<0.7	<0.8	<0.8	—	—	191,000	<40	—	23,700
	03/20/07	67.59	8.50	0.00	59.09	391	<78	<97	14.3	<0.7	3.65	2.81	—	—	199,000	<1000	—	16,400
	06/28/07	67.59	9.93	0.00	57.66	270	<79	<99	<0.5	<0.7	<0.8	<0.8	—	—	209,000	<40	—	14,400
	09/25/07	67.59	11.13	0.00	56.46	170	84	<100	<0.5	<0.7	<0.8	<0.8	—	—	208,000	<40	—	13,100
	12/10/07	67.59	8.76	0.00	58.83	340	<77	<96	<0.5	<0.7	<0.8	<0.8	—	—	200,000	<2,000	<15	17,500
	03/10/08	67.59	9.32	0.00	58.27	230	<78	<97	<0.5	<0.7	<0.8	<0.8	2	—	192,000	<2,000	<15	—
	06/16/08	67.59	9.05	0.00	58.54	160	<76	<95	<0.5	<0.5	<0.5	<0.5	—	—	—	—	—	—
	09/22/08	67.59	10.91	0.00	56.68	250	<76	<95	<0.5	<0.7	<0.8	<0.8	—	—	—	—	—	—
	12/08/08	67.59	Removed from sampling schedule 4Q08.			—	—	—	—	—	—	—	—	—	—	—	—	—
	03/26/09	67.59	8.75	0.00	58.84	271	<83	<410	<1.0	<1.0	<1.0	<1.0	2.2	—	—	—	—	—
MW-14	03/21/05	67.67	9.17	0.00	58.50	<100	<245	<489	<1	<1	<1	<2	—	—	97,400	29	—	46,200
67.67	06/28/05	67.67	8.87	0.00	58.80	197	<244	<488	<1	<1	<1	<2	—	—	<75	—	—	52,700
	09/15/05	67.67	10.68	0.00	56.99	66	130	170	<0.5	<0.7	<0.8	<0.8	—	—	96,100	<40	—	43,100
	12/08/05	67.67	8.79	0.00	58.88	74	140	180	<0.5	<0.7	<0.8	<0.8	—	—	97,300	<40	—	45,000
	03/10/06	67.67	7.74	0.00	59.93	55	<77	<97	<0.5	<0.7	<0.8	<0.8	—	—	104,000	<1,000	—	54,800
	06/08/06	67.67	8.92	0.00	58.75	<48	<81	150	<0.5	<0.7	<0.8	<0.8	—	—	—	—	—	—
	09/05/06	67.67	11.15	0.00	58.52	140	89	<100	<0.5	<0.7	<0.8	<0.8	—	—	89,700	<40	—	49,500
	12/19/06	67.67	7.40	0.00	60.27	<48	<76	96	<0.5	<0.7	<0.8	<0.8	—	—	96,900	<40	—	44,400
	03/20/07	67.67	7.60	0.00	60.07	52.9	<80	119	<0.5	<0.7	<0.8	<0.8	—	—	109,000	<40	—	48,900
	06/28/07	67.67	9.60	0.00	59.07	240	82	<97	<0.5	<0.7	<0.8	<0.8	—	—	89,600	<40	—	52,300
	09/25/07	67.67	10.96	0.00	56.71	140	<89	<110	<0.5	<0.7	<0.8	<0.8	—	—	84,400	<40	—	53,400
	12/10/07	67.67	7.98	0.00	59.69	<50	<77	<96	<0.5	<0.7	<0.8	<0.8	—	—	104,000	<2,000	<15	45,000
	03/10/08	67.67	5.69	0.00	61.98	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5	—	92,000	<2,000	<15	—
	06/16/08	67.67	8.90	0.00	58.77	<50	<75	<94	<0.5	<0.5	<0.5	<0.5	—	—	—	—	—	—
	09/22/08	67.67	10.68	0.00	56.99	190	<76	<94	<0.5	<0.7	<0.8	<0.8	—	—	—	—	—	—
	12/08/08	67.67	Removed from sampling schedule 4Q08.			—	—	—	—	—	—	—	—	—	—	—	—	—
	03/26/09	67.67	7.75	0.00	59.92	<50.0	<82	<410	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—

**TABLE 1**  
**CUMULATIVE GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS**  
 ConocoPhillips Facility No. 254165 (RM&R #01234)  
 202 Avenue D  
 Snohomish, Washington

Well ID TOC Elevation	Sample Date	Elevation Data (feet)				Total Petroleum Hydrocarbons			Aromatic Hydrocarbons				Ferrous Iron ( $\mu\text{g/L}$ )	Alkalinity ( $\mu\text{g/L}$ )	Nitrate ( $\mu\text{g/L}$ )	Nitrite ( $\mu\text{g/L}$ )	Sulfate ( $\mu\text{g/L}$ )	
		Top of Casing Elevation	DTW	LPH Thickness	GW Elevation	TPH-G ( $\mu\text{g/L}$ )	TPH-D ( $\mu\text{g/L}$ )	TPH-O ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethy- benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )					
<b>MW-16</b>	03/21/05	66.66	9.02	0.00	57.64	<100	<248	<497	<1	1.5	<1	<2	—	54,100	2,040	—	21,000	
66.66	06/28/05	66.66	8.64	0.00	58.02	<100	<247	<493	<1	<1	<1	<2	—	—	2,420	—	19,000	
	09/15/05	66.66	10.19	0.00	56.47	<48	140	230	<0.5	<0.7	<0.8	<0.8	—	—	39,800	2,600	—	14,600
	12/08/05	66.66	8.60	0.00	58.06	<48	<80	<100	<0.5	<0.7	<0.8	<0.8	—	—	40,400	2,200	—	18,800
	03/10/06	66.66	7.99	0.00	58.67	<48	<77	<96	<0.5	<0.7	<0.8	<0.8	—	—	41,800	2,500	—	28,500
	06/08/06	66.66	8.74	0.00	57.92	<48	<78	<98	<0.5	<0.7	<0.8	<0.8	—	—	—	—	—	—
	09/05/06	66.66	10.45	0.00	56.21	<48	<79	<98	<0.5	<0.7	<0.8	<0.8	—	—	39,200	2,900	—	15,200
	12/19/06	66.66	6.00	0.00	60.66	<48	<80	<100	<0.5	<0.7	<0.8	<0.8	—	—	43,300	2,100	—	21,100
	03/20/07	66.66	7.70	0.00	58.96	<48	<80	110	<0.5	<0.7	<0.8	<0.8	—	—	10,500	554	—	12,400
	06/28/07	66.66	9.30	0.00	57.36	<50	<82	<100	<0.5	<0.7	<0.8	<0.8	—	—	45,400	3,300	—	16,200
	09/25/07	66.66	10.34	0.00	56.32	<50	<78	<97	<0.5	<0.7	<0.8	<0.8	—	—	41,500	2,700	—	16,300
	12/10/07	66.66	8.34	0.00	58.32	<50	<76	<94	<0.5	<0.7	<0.8	<0.8	—	—	42,100	<2,000	<15	21,500
	03/10/08	66.66	8.69	0.00	57.97	<50	<77	<96	<0.5	<0.7	<0.8	<0.8	<0.5	—	—	<2,000	<15	—
	06/16/08	66.66	8.51	0.00	58.15	<50	<75	<94	<0.5	<0.5	<0.5	<0.5	—	—	—	—	—	—
	09/22/08	66.66	10.22	0.00	56.44	<50	<75	<94	<0.5	<0.7	<0.8	<0.8	—	—	—	—	—	—
	12/08/08	66.66	Removed from sampling schedule 4Q08.				—	—	—	—	—	—	—	—	—	—	—	—
	03/26/09	66.66	8.34	0.00	58.32	<60.0	<83	<420	<1.0	<1.0	<1.0	<1.0	<1.0	—	—	—	—	—

**MTCA Method A Cleanup Levels:**

1,000/800<sup>a</sup> | 500 | 500 | 5 | 1,000 | 700 | 1,000 | 20 | — | — | — | — | — | — | — | — | — | — | —

**NOTES:**

Concentrations are in micrograms per liter ( $\mu\text{g/L}$ ).

DTW = Depth to water in feet below top of casing.

TOC = Top of casing elevation in feet.

GW Elevation = Groundwater elevation in feet relative to top of casing elevation.

TPH-G = Gasoline range hydrocarbons by Ecology Method NWTPH-Gx.

TPH-D and TPH-O = Diesel and oil range hydrocarbons, respectively, by Ecology Method NWTPH-Dx.

BTEX = Benzene, Toluene, Ethylbenzene, Total Xylenes by EPA Method 8260B; previous results by 8021B or 8260B, refer to laboratory reports.

MTBE = Methyl tert-butyl ether by EPA Method 8260B.

LPH = Liquid phase hydrocarbons.

— = Not Analyzed or Sampled

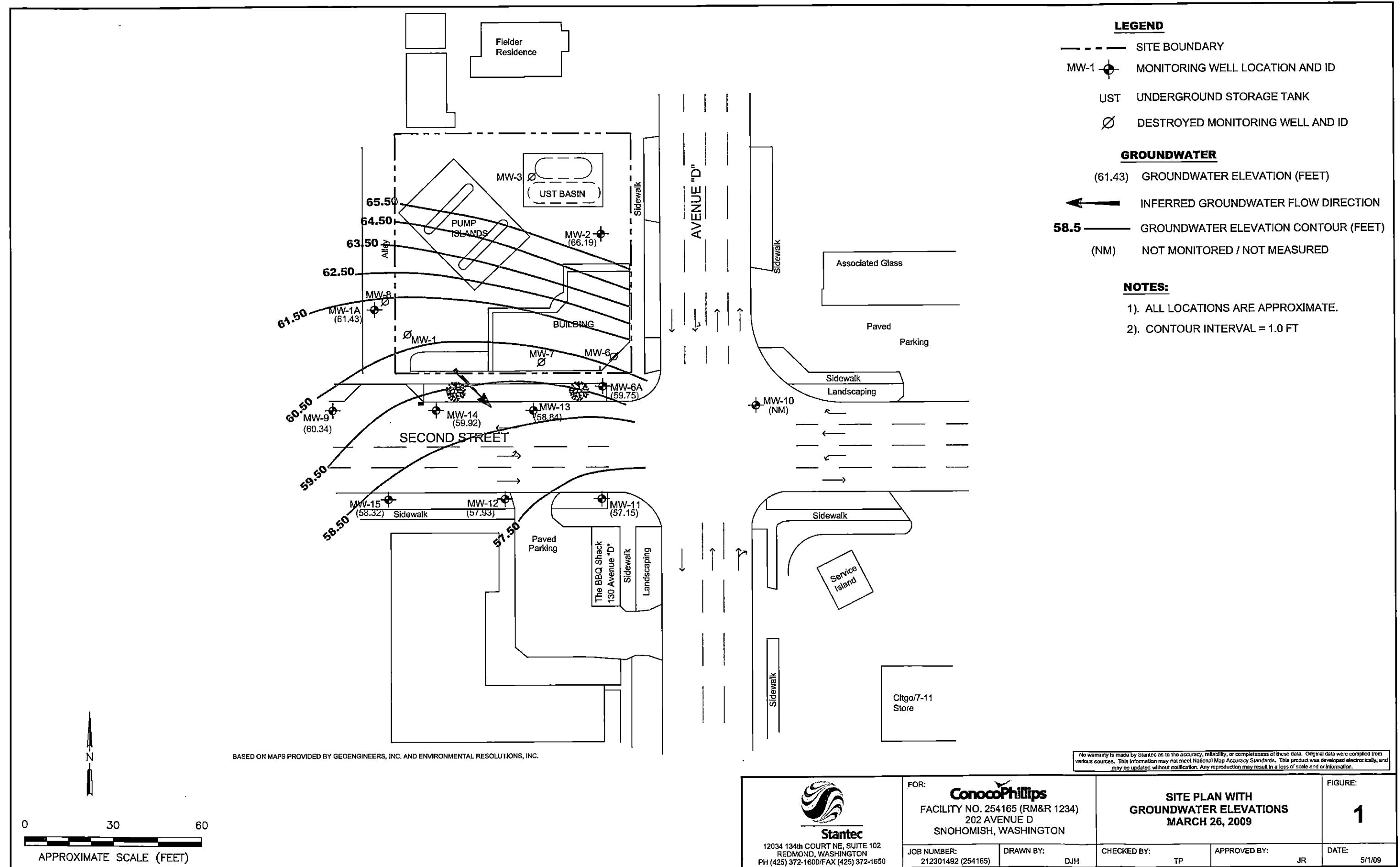
< = Less than the stated laboratory reporting limits

**Bolded** values equal or exceed Model Toxics Control Act (MTCA) Method A Cleanup Levels.

<sup>a</sup> MTCA Method A levels for TPH-g are 1,000  $\mu\text{g/L}$  when no Benzene is present and 800  $\mu\text{g/L}$  when Benzene is present.

<sup>b</sup> The laboratory reporting limit is greater than the MTCA Method A cleanup level

## **FIGURES**



**LEGEND**

- SITE BOUNDARY
- MW-1 MONITORING WELL LOCATION AND ID
- UST UNDERGROUND STORAGE TANK
- ∅ DESTROYED MONITORING WELL AND ID
- ← INFERRED GROUNDWATER FLOW DIRECTION

**ANALYTES**

WELL ID
TPH-G GASOLINE RANGE HYDROCARBONS
TPH-D DIESEL RANGE HYDROCARBONS
TPH-O HEAVY OIL RANGE HYDROCARBONS
B BENZENE
T TOLUENE
E ETHYL BENZENE
X TOTAL XYLENES
MTBE METHYL TERT-BUTYL ETHER

 UNITS IN MICROGRAMS PER LITER ( $\mu\text{g/L}$ )

- < LESS THAN LABORATORY REPORTING LIMITS
- BOLD** ANALYTES DETECTED ABOVE THE METHOD "A" CLEANUP LEVEL
- NOT ANALYZED OR NOT APPLICABLE

**NOTES:**

- ALL LOCATIONS ARE APPROXIMATE

MW-2	6/16/08	9/22/08	12/8/08	3/26/09
TPH-G	<50	<50	--	<50.0
TPH-D	<76	<76	--	<82
TPH-O	<95	<95	--	<410
B	<0.5	<0.5	--	<1.0
T	<0.5	<0.7	--	<1.0
E	<0.5	<0.8	--	<1.0
X	<0.5	<0.8	--	<1.0
MTBE	--	--	--	<1.0

MW-1A	6/16/08	9/22/08	12/8/08	3/26/09
TPH-G	<50	<50	--	<50.0
TPH-D	<76	<76	--	<82
TPH-O	<95	<95	--	<410
B	<0.5	<0.5	--	<1.0
T	<0.5	<0.7	--	<1.0
E	<0.5	<0.8	--	<1.0
X	<0.5	<0.8	--	<1.0
MTBE	--	--	--	<1.0

MW-9	6/16/08	9/22/08	12/8/08	3/26/09
TPH-G	<50	<50	--	<50.0
TPH-D	<76	<75	--	<83
TPH-O	<95	<94	--	<420
B	<0.5	<0.5	--	<1.0
T	<0.5	<0.7	--	<1.0
E	<0.5	<0.8	--	<1.0
X	<0.5	<0.8	--	<1.0
MTBE	--	--	--	<1.0

MW-14	6/16/08	9/22/08	12/8/08	3/26/09
TPH-G	<50	190	--	<50.0
TPH-D	<75	<76	--	<82
TPH-O	<94	<94	--	<410
B	<0.5	<0.5	--	<1.0
T	<0.5	<0.7	--	<1.0
E	<0.5	<0.8	--	<1.0
X	<0.5	<0.8	--	<1.0
MTBE	--	--	--	<1.0

MW-13	6/16/08	9/22/08	12/8/08	3/26/09
TPH-G	160	250	--	271
TPH-D	<76	<76	--	<83
TPH-O	<95	<95	--	<410
B	<0.5	<0.5	--	<1.0
T	<0.5	<0.7	--	<1.0
E	<0.5	<0.8	--	<1.0
X	<0.5	<0.8	--	<1.0
MTBE	--	--	--	2.2

MW-15	6/16/08	9/22/08	12/8/08	3/26/09
TPH-G	<50	<50	--	<50.0
TPH-D	<75	<75	--	<83
TPH-O	<94	<94	--	<420
B	<0.5	<0.5	--	<1.0
T	<0.5	<0.7	--	<1.0
E	<0.5	<0.8	--	<1.0
X	<0.5	<0.8	--	<1.0
MTBE	--	--	--	<1.0

BASED ON MAPS PROVIDED BY GEOENGINEERS, INC. AND ENVIRONMENTAL RESOLUTIONS, INC.

MW-12	6/16/08	9/22/08	12/8/08	3/26/09
TPH-G	350	<b>1,600</b>	<50	<50.0
TPH-D	<75	360	<29	<82
TPH-O	<94	140	<68	<410
B	<0.5	<0.5	<0.5	<1.0
T	<0.5	<0.7	<0.7	<1.0
E	1	0.8	<0.8	<1.0
X	<0.5	<0.8	<0.8	<1.0
MTBE	--	--	--	<1.0

MW-11	6/16/08	9/22/08	12/8/08	3/26/09
TPH-G	98	360	<50	<50.0
TPH-D	<76	<75	<29	<82
TPH-O	<95	<94	<69	<410
B	4	6	<0.5	<1.0
T	<0.5	<0.7	<0.7	<1.0
E	0.5	1	<0.8	<1.0
X	<0.5	<0.8	<0.8	<1.0
MTBE	--	--	--	<1.0

No warranty is made by Stantec as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed electronically, and may be updated without notification. Any reproduction may result in a loss of scale and/or information.

 APPROXIMATE SCALE (FEET)  


FOR: ConocoPhillips		SITE PLAN WITH ANALYTICAL RESULTS		FIGURE: 2
FACILITY NO. 254165 (RM&R 1234)		MARCH 26, 2009		
202 AVENUE D		SNOHOMISH, WASHINGTON		
12034 134th COURT NE, SUITE 102		DRAWN BY: DJH		
REDMOND, WASHINGTON		CHECKED BY: TP		APPROVED BY: JR
PH (425) 372-1800/FAX (425) 372-1650		JOB NUMBER: 212301492 (254165)		DATE: 5/1/09

**APPENDIX A**  
**FIELD AND LABORATORY PROCEDURES**

## **STANTEC MONITORING WELL GAUGING, PURGING AND SAMPLING PROCEDURES**

Monitoring well purging and sampling was conducted based on USEPA approved (Puls and Barcelona, 1996) low-flow sampling techniques whenever possible.

### **Purging Procedures**

- A. Using a decontaminated instrument (i.e., tape measure, continuity meter, or interface probe) measure the depth to groundwater in reference to the measuring point at the top of the casing. Measure the total depth of the well and diameter of the well casing to calculate the volume of water in the well casing.
- B. Based on previously obtained data, if a monitoring well is suspected of containing LPH concentrations, lower a transparent bailer into the well to evaluate the presence of a hydrocarbon sheen on the water table.
- C. Decontaminate the purge pump and/or PVC bailers by scrubbing in Alconox detergent solution, followed by a tap water rinse and then a de-ionized water rinse.
- D. Purge by low-flow pumping (less than 0.5 liters per minute) for approximately five minutes. Monitor the static water level in the well using a decontaminated instrument and adjust the pumping rate to maintain a minimal drawdown. If low-flow purging is not possible and bailing is used to purge the well, then a minimum of three well volumes will be removed. When purging 3 well volumes, parameters should be measured after each casing volume is removed. If the well goes dry, the procedure listed in step E2 (below) should be followed.
- E. Conduct field measurements (i.e., pH, specific conductivity, temperature, and oxidation-reduction potential) note clarity, color, turbidity, and odor of purge water, and measure depth to groundwater.
  1. If the well has not been purged dry and drawdown is minimal, continue to pump and conduct field measurements (including depth to water) again every three to five minutes during purging.
    - a) If the first through third series of measurements vary by less than 10 percent, the well has been adequately purged. If bailers are used to purge the well, then the water level is allowed to recover to 80 percent of its static condition; or for two hours, whichever comes first prior to beginning the sampling procedure.
    - b) If the measurements vary by 10 percent or greater, repeat Step E1 above.
    - c) If a minimum of three parameters cannot be measured during purging and or drawdown cannot be controlled to minimal, remove three well volumes with a bailer prior to sampling.
  2. If the well has been purged dry, measure the water level and allow the well to recharge to 80 percent, or for two hours, whichever occurs first. Calculate the percent recovery, and begin the sampling procedure.

### **Sampling Procedures**

- Use the pump and a clean, dedicated section of tubing to collect the groundwater sample from the screened interval of the water column. If the pump cannot be used, collect the water sample with a clean, dedicated polyethylene disposable bailer.
- Transfer the groundwater sample into the appropriate container(s). Where applicable, some containers are completely filled to achieve zero headspace. Label the samples according to location and date of collection.
- Enter the samples into Chain-of-Custody and preserve on ice until delivery to the analytical laboratory. Complete the Well Development or Purging/Sampling Log to be stored in the project file.

### **Reference:**

Puls, R.W., and Barcelona M.J., 1996. EPA Ground Water Issue Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures, EPA/540/S-95/504.

**APPENDIX B  
FIELD DATA SHEETS**

## SITE VISITATION REPORT

1Q09 - CP 254165 (RM&amp;R 01234) Snohomish, Washington

Name(s) David Reitz/Karen Payne Date: 03/26/09  
Arrival Time: 0800 Departure Time: 1700Time of Arrival Call-In: 0820  
Time of Departure Call-In: 1645  
Who did you call? Parise

## DRUM INVENTORY

1	WATER	CARBON	TOTAL OPEN TOP	1
	SOIL	EMPTY	TOTAL BUNG TOP	

## HEALTH AND SAFETY ASSESSMENT

Appropriate P.P.E.  
 Review HASP, PT.W, J.S.A.,  
 Set-up decon.

## DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

- 0800 Arrive on site. Check-in with site contact to inform of presence. Purchase ice. Set-up decon station.
- 0820 Call-in to office to inform of presence. Meet with A. Hicks (TCS) traffic control, & J. Payne (Stantec) safety observation. Perform site-walk. Don appropriate P.P.E.
- 0835 Conduct tailgate safety meeting.
- 0900 Initiate 1Q09 GWM sample procedures in street. (Gauge & sample 9 wells) Also provide well condition report with photographs.
- 1110 Complete wells in street. Initiate gauging of remaining wells.
- 1130 A. Hicks & J. Payne off-site. Re-start 1Q09 GWM sampling after gauging of physical measurements.
- 1300 Go to lunch
- 1330 Continue 1Q09 GWM sample procedures.
- 1610 Complete 1Q09 GWM sample procedures. Decon, Equipment. Pack sample coolers. Label drums.
- 1630 Release purge water/rinsate solutions into staged drum.
- 1640 Load equipment into truck. Call-in to office to check-in with site-contact to inform of departure.
- Completes daily documentation.
- 1700 Depart job site!


 03/26/19

**STANTEC Consulting Corporation**  
HYDROLOGIC DATA SHEET

Gauge Date: 03/26/09

Project Name: CP RM&R 01234

Field Technician: David Reitz

Project Number: 01CP.01234.44/8504

DTP = Depth to Free Product (FP or NAPH) Below TOC  
 DTW = Depth to Groundwater Below TOC  
 DTB = Depth to Bottom of Well Casing Below TOC

Flow through cell calibrated Y  N

Wells checked for product and gauged prior to commencement of bailing or purging the wells Y  N

WELL OR LOCATION	WELL SCREEN DEPTH	PROPOSED INTAKE RANGE (feet below TOC)	MEASUREMENTS				PURGE? (Y/N)	SHEEN? (Y/N)	SAMPLE? (Y/N)	COMMENTS / PROBE CALIBRATION
			TIME	DTP (feet)	DTW (feet)	DTB (feet)				
MW-1A		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	1110		7.89	14.70	Y	N	Y	
MW-2		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	1115		3.61	17.00	Y	N	Y	
MW-6A		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	1255		7.90	19.10	Y	N	Y	
MW-9		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	1035		7.43	17.10	Y	N	Y	
MW-11		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	1120		8.37	14.80	Y	N	Y	
MW-12		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	1125		8.40	15.70	Y	N	Y	
MW-13		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0910		8.75	15.10	Y	N	Y	
MW-14		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0955		7.75	14.60	Y	N	Y	
MW-15		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	1130		8.34	15.10	Y	N	Y	

















**STANTEC Consulting Corporation**

### **WATER SAMPLE FIELD DATA SHEET**

PROJECT #: 01CP.01234.44

PURGED BY: David Ritz

WELL I.D.: M(1) - 6A

CLIENT NAME: ConocoPhillips

SAMPLED BY: David Reitz

SAMPLE I.D.: M14-6A

LOCATION: 202 Avenue D, Snohomish, WA 98290

DATE PURGED 03/26/09 START (2400hr) 1535 END (2400hr) 1610  
 DATE SAMPLED 03/26/09 SAMPLE TIME (2400hr) 1550 LOW-FLOW USED x  
 SAMPLE TYPE: Groundwater x Surface Water \_\_\_\_\_ Treatment Effluent \_\_\_\_\_ Other \_\_\_\_\_  
 CASING DIAMETER: 2" x 3" . 4"  5"  6"  8"  Other   
 Casing Volume: (liters per foot) (0.64) (1.44) (2.45) (3.86) (5.68) (9.84) (

DEPTH TO BOTTOM (feet) = 19.10

DEPTH TO WATER (feet) = 7.90

WATER COLUMN HEIGHT (feet) = 11.20

ACTUAL PURGE (L) = 2.5

## FIELD MEASUREMENTS

Calculated Variance of Final Three Samples: 0      Acceptable Variance Limits:  $\leq 10\%$      $\leq 3\%$      $\leq 0.1$

DEPTH TO PURGE INTAKE DURING PURGE: 14.00 SAMPLE DTW: 8.32

ANTICIPATED PURGE INTAKE DEPTH: 14,00 ANALYSES: TPH-g, TPH-d  
BTEX & MTBE by 8260B

SAMPLE VESSEL (PRESERVATIVE): HCl

PURGING EQUIPMENT: \_\_\_\_\_ SAMPLING EQUIPMENT: \_\_\_\_\_

Horiba water quality monitor  
Interface probe Peristaltic pump

Flow Through Cell Disconnected Prior to Sample Collection?: YES  NO

WELL PAD CONDITION: **Fair** WELL CASING CONDITION: **Fair**

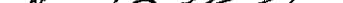
WELL VAULT CONDITION:  SEAL PRESENT?: YES BOLTS PRESENT?: YES

WELL INTEGRITY: YES WELL TAG: YES LOCK#: VES

REMARKS: \_\_\_\_\_

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Digitized by srujanika@gmail.com

SIGNATURE:  Page 8 of 10

## **Chain Of Custody Record**

**PACE Analytical Laboratory**  
940 S. Hamey Street, Seattle, WA  
(206) 767-5060

#### **Comments/Notes (Signature)**

**Received by:** \_\_\_\_\_  
**(Signature)**

8

Time:

Distinguished by: (Signature) *Jasmine Palmer* 3/6/09 750am

Received by (Signature)	Received by (Signature)	Date:	Time:
Received by (Signature)	Received by (Signature)	Date:	Time:
Received by (Signature)	Received by (Signature)	Date:	Time:

019/03 Revision

**APPENDIX C**  
**CERTIFIED LABORATORY ANALYTICAL REPORT**  
**AND CHAIN-OF-CUSTODY DOCUMENTATION**

Pace Analytical Services, Inc.  
940 South Harney  
Seattle, WA 98108  
Phone: (206)767-5060  
Fax: (206)767-5063

Client: Stantec - Conoco Phillips  
12034 134th Ct. NE Suite 102  
Redmond, WA 98052

ATTN: Chris Gdak

Project Name: **Conoco Phillips Site# 01234**

SDG Number: **CPWA0914**

Project Number: **01CP.01234.44**

Date Received: **3/27/2009 10:00:00AM**

Work Description: **Site# 01234**

Date Reported: **04/09/2009**

Dear Chris Gdak,

Enclosed are the analytical results for the sample(s) received by the laboratory on March 27, 2009. The results relate only to the samples included in this report. Unless otherwise instructed all samples with the exception of samples which are consumed during the analysis, such as microbiological samples, will be disposed of on or after July 9, 2009. This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

If you have any question concerning the report, please feel free to contact me.

Respectfully submitted,  
Pace Analytical Services, Inc.

Jennifer Gross

**Pace Analytical Services, Inc.**

Pace Analytical Services, Inc.

940 South Harney

Seattle, WA 98108

Phone: (206)767-5060

Fax: (206)767-5063

**Sample Summary**

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Project Number:	01CP.01234.44	Project Manager:	Chris Gdak

**Sample Identification:**

Sample Description	Lab Sample ID	Collection Date/Time	Type
MW-1A	CPWA0914-001	03/26/2009 11:45	Water
MW-2	CPWA0914-002	03/26/2009 12:30	Water
MW-6A	CPWA0914-003	03/26/2009 15:50	Water
MW-9	CPWA0914-004	03/26/2009 10:50	Water
MW-11	CPWA0914-005	03/26/2009 13:45	Water
MW-12	CPWA0914-006	03/26/2009 14:25	Water
MW-13	CPWA0914-007	03/26/2009 09:30	Water
MW-14	CPWA0914-008	03/26/2009 10:10	Water
MW-15	CPWA0914-009	03/26/2009 15:05	Water
QCTB	CPWA0914-010	03/26/2009 15:05	Water

**Pace Analytical Services, Inc.**

Pace Analytical Services, Inc.

940 South Harney

Seattle, WA 98108

Phone: (206)767-5060

Fax: (206)767-5063

**Test Request Summary**

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Pace Project No.:	01CP.01234.44	Project Manager:	Chris Gdak

Samples	Methods							
Client Sample ID	8260B 1	NWTPH-2	NWTPH-3					
MW-1A	X	X	X					
MW-2	X	X	X					
MW-6A	X	X	X					
MW-9	X	X	X					
MW-11	X	X	X					
MW-12	X	X	X					
MW-13	X	X	X					
MW-14	X	X	X					
MW-15	X	X	X					
QCTB	X	X						

**Determinations:**

1 = 8260-1 VOAs BTEX+MTBE, in water

2 = NWTPH Gx (Water)

3 = NWTPH DX (Water)

**Pace Analytical Services, Inc.**

Pace Analytical Services, Inc.

940 South Harney

Seattle, WA 98108

Phone: (206)767-5060

Fax: (206)767-5063

**Analytical Results**

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Project Number:	01CP.01234.44	Project Manager:	Chris Gdak
Client Sample ID:	<b>MW-1A</b>	Matrix:	Water
Collected On:	3/26/09 11:45	Lab Sample ID:	CPWA0914-001
Received On:	3/27/09 10:00		

Analyte	Result	Units	DF	Detection Limit Threshold	Reporting Limit	QC Batch Group	Prepared	Analyzed	Qualifiers
<b>Purgeable Organic Compounds by GC/MS</b>									
Benzene	ND	ug/L	1		1.0	Q39560	03/28/2009	03/28/2009	
Ethylbenzene	ND	ug/L	1		1.0	Q39560	03/28/2009	03/28/2009	
Methyl tert-butyl ether	ND	ug/L	1		1.0	Q39560	03/28/2009	03/28/2009	
Toluene	ND	ug/L	1		1.0	Q39560	03/28/2009	03/28/2009	
Xylenes, Total	ND	ug/L	1		1.0	Q39560	03/28/2009	03/28/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	114	% Rec	1		72-128	Q39560	03/28/2009	03/28/2009	
Dibromofluoromethane	102	% Rec	1		76-127	Q39560	03/28/2009	03/28/2009	
1,2-Dichloroethane-d4	94	% Rec	1		66-133	Q39560	03/28/2009	03/28/2009	
Toluene-d8	103	% Rec	1		75-130	Q39560	03/28/2009	03/28/2009	
<b>NWTPH Diesel</b>									
Diesel Range Organics	ND	ug/L	1		82	Q39590	03/30/2009	04/02/2009	
Oil Range Organics	ND	ug/L	1		410	Q39590	03/30/2009	04/02/2009	
<i>Surrogates:</i>									
o-Terphenyl	79	% Rec	1		50-150	Q39590	03/30/2009	04/02/2009	
<b>NWTPH Gas</b>									
Gasoline Range Organics	ND	ug/L	1		50.0	Q39753	04/03/2009	04/03/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	87	% Rec	1		53-114	Q39753	04/03/2009	04/03/2009	
Trifluorotoluene	88	% Rec	1		51-142	Q39753	04/03/2009	04/03/2009	

**Pace Analytical Services, Inc.**

Pace Analytical Services, Inc.

940 South Harney

Seattle, WA 98108

Phone: (206)767-5060

Fax: (206)767-5063

**Analytical Results**

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Project Number:	01CP.01234.44	Project Manager:	Chris Gdak
Client Sample ID:	<b>MW-2</b>	Matrix:	Water
Collected On:	3/26/09 12:30	Lab Sample ID:	CPWA0914-002
Received On:	3/27/09 10:00		

Analyte	Result	Units	DF	Detection Limit Threshold	Reporting Limit	QC Batch Group	Prepared	Analyzed	Qualifiers
<b>Purgeable Organic Compounds by GC/MS</b>									
Benzene	ND	ug/L	1		1.0	Q39560	03/28/2009	03/28/2009	
Ethylbenzene	ND	ug/L	1		1.0	Q39560	03/28/2009	03/28/2009	
Methyl tert-butyl ether	ND	ug/L	1		1.0	Q39560	03/28/2009	03/28/2009	
Toluene	ND	ug/L	1		1.0	Q39560	03/28/2009	03/28/2009	
Xylenes, Total	ND	ug/L	1		1.0	Q39560	03/28/2009	03/28/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	117	% Rec	1		72-128	Q39560	03/28/2009	03/28/2009	
Dibromofluoromethane	102	% Rec	1		76-127	Q39560	03/28/2009	03/28/2009	
1,2-Dichloroethane-d4	93	% Rec	1		66-133	Q39560	03/28/2009	03/28/2009	
Toluene-d8	104	% Rec	1		75-130	Q39560	03/28/2009	03/28/2009	
<b>NWTPH Diesel</b>									
Diesel Range Organics	ND	ug/L	1		82	Q39590	03/30/2009	04/02/2009	
Oil Range Organics	ND	ug/L	1		410	Q39590	03/30/2009	04/02/2009	
<i>Surrogates:</i>									
o-Terphenyl	65	% Rec	1		50-150	Q39590	03/30/2009	04/02/2009	
<b>NWTPH Gas</b>									
Gasoline Range Organics	ND	ug/L	1		50.0	Q39753	04/03/2009	04/03/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	93	% Rec	1		53-114	Q39753	04/03/2009	04/03/2009	
Trifluorotoluene	94	% Rec	1		51-142	Q39753	04/03/2009	04/03/2009	

**Pace Analytical Services, Inc.**

Pace Analytical Services, Inc.

940 South Harney

Seattle, WA 98108

Phone: (206)767-5060

Fax: (206)767-5063

**Analytical Results**

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Project Number:	01CP.01234.44	Project Manager:	Chris Gdak
Client Sample ID:	<b>MW-6A</b>	Matrix:	Water
Collected On:	3/26/09 15:50	Lab Sample ID:	CPWA0914-003
Received On:	3/27/09 10:00		

Analyte	Result	Units	DF	Detection Limit Threshold	Reporting Limit	QC Batch Group	Prepared	Analyzed	Qualifiers
<b>Purgeable Organic Compounds by GC/MS</b>									
Benzene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Ethylbenzene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Methyl tert-butyl ether	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Toluene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Xylenes, Total	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	125	% Rec	1		72-128	Q39567	03/28/2009	03/28/2009	
Dibromofluoromethane	105	% Rec	1		76-127	Q39567	03/28/2009	03/28/2009	
1,2-Dichloroethane-d4	99	% Rec	1		66-133	Q39567	03/28/2009	03/28/2009	
Toluene-d8	98	% Rec	1		75-130	Q39567	03/28/2009	03/28/2009	
<b>NWTPH Diesel</b>									
Diesel Range Organics	110	ug/L	1		83	Q39590	03/30/2009	04/02/2009	
Oil Range Organics	ND	ug/L	1		420	Q39590	03/30/2009	04/02/2009	
<i>Surrogates:</i>									
o-Terphenyl	81	% Rec	1		50-150	Q39590	03/30/2009	04/02/2009	
<b>NWTPH Gas</b>									
Gasoline Range Organics	124	ug/L	1		50.0	Q39753	04/03/2009	04/03/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	94	% Rec	1		53-114	Q39753	04/03/2009	04/03/2009	
Trifluorotoluene	97	% Rec	1		51-142	Q39753	04/03/2009	04/03/2009	

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**Analytical Results**

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Project Number:	01CP.01234.44	Project Manager:	Chris Gdak
Client Sample ID:	<b>MW-9</b>	Matrix:	Water
Collected On:	3/26/09 10:50	Lab Sample ID:	CPWA0914-004
Received On:	3/27/09 10:00		

Analyte	Result	Units	DF	Detection Limit Threshold	Reporting Limit	QC Batch Group	Prepared	Analyzed	Qualifiers
<b>Purgeable Organic Compounds by GC/MS</b>									
Benzene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Ethylbenzene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Methyl tert-butyl ether	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Toluene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Xylenes, Total	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	104	% Rec	1		72-128	Q39567	03/28/2009	03/28/2009	
Dibromofluoromethane	107	% Rec	1		76-127	Q39567	03/28/2009	03/28/2009	
1,2-Dichloroethane-d4	94	% Rec	1		66-133	Q39567	03/28/2009	03/28/2009	
Toluene-d8	97	% Rec	1		75-130	Q39567	03/28/2009	03/28/2009	
<b>NWTPH Diesel</b>									
Diesel Range Organics	ND	ug/L	1		83	Q39590	03/30/2009	04/02/2009	
Oil Range Organics	ND	ug/L	1		420	Q39590	03/30/2009	04/02/2009	
<i>Surrogates:</i>									
o-Terphenyl	75	% Rec	1		50-150	Q39590	03/30/2009	04/02/2009	
<b>NWTPH Gas</b>									
Gasoline Range Organics	ND	ug/L	1		50.0	Q39753	04/03/2009	04/03/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	90	% Rec	1		53-114	Q39753	04/03/2009	04/03/2009	
Trifluorotoluene	91	% Rec	1		51-142	Q39753	04/03/2009	04/03/2009	

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**Analytical Results**

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Project Number:	01CP.01234.44	Project Manager:	Chris Gdak
Client Sample ID:	<b>MW-11</b>	Matrix:	Water
Collected On:	3/26/09 13:45	Lab Sample ID:	CPWA0914-005
Received On:	3/27/09 10:00		

Analyte	Result	Units	DF	Detection Limit Threshold	Reporting Limit	QC Batch Group	Prepared	Analyzed	Qualifiers
<b>Purgeable Organic Compounds by GC/MS</b>									
Benzene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Ethylbenzene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Methyl tert-butyl ether	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Toluene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Xylenes, Total	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	105	% Rec	1		72-128	Q39567	03/28/2009	03/28/2009	
Dibromofluoromethane	109	% Rec	1		76-127	Q39567	03/28/2009	03/28/2009	
1,2-Dichloroethane-d4	97	% Rec	1		66-133	Q39567	03/28/2009	03/28/2009	
Toluene-d8	97	% Rec	1		75-130	Q39567	03/28/2009	03/28/2009	
<b>NWTPH Diesel</b>									
Diesel Range Organics	ND	ug/L	1		82	Q39590	03/30/2009	04/02/2009	
Oil Range Organics	ND	ug/L	1		410	Q39590	03/30/2009	04/02/2009	
<i>Surrogates:</i>									
o-Terphenyl	77	% Rec	1		50-150	Q39590	03/30/2009	04/02/2009	
<b>NWTPH Gas</b>									
Gasoline Range Organics	ND	ug/L	1		50.0	Q39753	04/03/2009	04/03/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	99	% Rec	1		53-114	Q39753	04/03/2009	04/03/2009	
Trifluorotoluene	99	% Rec	1		51-142	Q39753	04/03/2009	04/03/2009	

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**Analytical Results**

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Project Number:	01CP.01234.44	Project Manager:	Chris Gdak
Client Sample ID:	<b>MW-12</b>	Matrix:	Water
Collected On:	3/26/09 14:25	Lab Sample ID:	CPWA0914-006
Received On:	3/27/09 10:00		

Analyte	Result	Units	DF	Detection Limit Threshold	Reporting Limit	QC Batch Group	Prepared	Analyzed	Qualifiers
<b>Purgeable Organic Compounds by GC/MS</b>									
Benzene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Ethylbenzene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Methyl tert-butyl ether	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Toluene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Xylenes, Total	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	104	% Rec	1		72-128	Q39567	03/28/2009	03/28/2009	
Dibromofluoromethane	110	% Rec	1		76-127	Q39567	03/28/2009	03/28/2009	
1,2-Dichloroethane-d4	98	% Rec	1		66-133	Q39567	03/28/2009	03/28/2009	
Toluene-d8	97	% Rec	1		75-130	Q39567	03/28/2009	03/28/2009	
<b>NWTPH Diesel</b>									
Diesel Range Organics	ND	ug/L	1		82	Q39590	03/30/2009	04/02/2009	
Oil Range Organics	ND	ug/L	1		410	Q39590	03/30/2009	04/02/2009	
<i>Surrogates:</i>									
o-Terphenyl	55	% Rec	1		50-150	Q39590	03/30/2009	04/02/2009	
<b>NWTPH Gas</b>									
Gasoline Range Organics	ND	ug/L	1		50.0	Q39701	04/02/2009	04/02/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	61	% Rec	1		53-114	Q39701	04/02/2009	04/02/2009	
Trifluorotoluene	67	% Rec	1		51-142	Q39701	04/02/2009	04/02/2009	

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**Analytical Results**

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Project Number:	01CP.01234.44	Project Manager:	Chris Gdak
Client Sample ID:	<b>MW-13</b>	Matrix:	Water
Collected On:	3/26/09 9:30	Lab Sample ID:	CPWA0914-007
Received On:	3/27/09 10:00		

Analyte	Result	Units	DF	Detection Limit Threshold	Reporting Limit	QC Batch Group	Prepared	Analyzed	Qualifiers
<b>Purgeable Organic Compounds by GC/MS</b>									
Benzene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Ethylbenzene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
<b>Methyl tert-butyl ether</b>	<b>2.2</b>	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Toluene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Xylenes, Total	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	112	% Rec	1		72-128	Q39567	03/28/2009	03/28/2009	
Dibromofluoromethane	105	% Rec	1		76-127	Q39567	03/28/2009	03/28/2009	
1,2-Dichloroethane-d4	96	% Rec	1		66-133	Q39567	03/28/2009	03/28/2009	
Toluene-d8	97	% Rec	1		75-130	Q39567	03/28/2009	03/28/2009	
<b>NWTPH Diesel</b>									
Diesel Range Organics	ND	ug/L	1		83	Q39590	03/30/2009	04/02/2009	
Oil Range Organics	ND	ug/L	1		410	Q39590	03/30/2009	04/02/2009	
<i>Surrogates:</i>									
o-Terphenyl	81	% Rec	1		50-150	Q39590	03/30/2009	04/02/2009	
<b>NWTPH Gas</b>									
Gasoline Range Organics	271	ug/L	1		50.0	Q39701	04/02/2009	04/02/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	76	% Rec	1		53-114	Q39701	04/02/2009	04/02/2009	
Trifluorotoluene	73	% Rec	1		51-142	Q39701	04/02/2009	04/02/2009	

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**Analytical Results**

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Project Number:	01CP.01234.44	Project Manager:	Chris Gdak
Client Sample ID:	<b>MW-14</b>	Matrix:	Water
Collected On:	3/26/09 10:10	Lab Sample ID:	CPWA0914-008
Received On:	3/27/09 10:00		

Analyte	Result	Units	DF	Detection Limit Threshold	Reporting Limit	QC Batch Group	Prepared	Analyzed	Qualifiers
<b>Purgeable Organic Compounds by GC/MS</b>									
Benzene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Ethylbenzene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Methyl tert-butyl ether	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Toluene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Xylenes, Total	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	105	% Rec	1		72-128	Q39567	03/28/2009	03/28/2009	
Dibromofluoromethane	108	% Rec	1		76-127	Q39567	03/28/2009	03/28/2009	
1,2-Dichloroethane-d4	98	% Rec	1		66-133	Q39567	03/28/2009	03/28/2009	
Toluene-d8	98	% Rec	1		75-130	Q39567	03/28/2009	03/28/2009	
<b>NWTPH Diesel</b>									
Diesel Range Organics	ND	ug/L	1		82	Q39590	03/30/2009	04/02/2009	
Oil Range Organics	ND	ug/L	1		410	Q39590	03/30/2009	04/02/2009	
<i>Surrogates:</i>									
o-Terphenyl	75	% Rec	1		50-150	Q39590	03/30/2009	04/02/2009	
<b>NWTPH Gas</b>									
Gasoline Range Organics	ND	ug/L	1		50.0	Q39701	04/02/2009	04/02/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	79	% Rec	1		53-114	Q39701	04/02/2009	04/02/2009	
Trifluorotoluene	82	% Rec	1		51-142	Q39701	04/02/2009	04/02/2009	

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**Analytical Results**

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Project Number:	01CP.01234.44	Project Manager:	Chris Gdak
Client Sample ID:	<b>MW-15</b>	Matrix:	Water
Collected On:	3/26/09 15:05	Lab Sample ID:	CPWA0914-009
Received On:	3/27/09 10:00		

Analyte	Result	Units	DF	Detection Limit Threshold	Reporting Limit	QC Batch Group	Prepared	Analyzed	Qualifiers
<b>Purgeable Organic Compounds by GC/MS</b>									
Benzene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Ethylbenzene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Methyl tert-butyl ether	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Toluene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Xylenes, Total	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	106	% Rec	1		72-128	Q39567	03/28/2009	03/28/2009	
Dibromofluoromethane	108	% Rec	1		76-127	Q39567	03/28/2009	03/28/2009	
1,2-Dichloroethane-d4	97	% Rec	1		66-133	Q39567	03/28/2009	03/28/2009	
Toluene-d8	98	% Rec	1		75-130	Q39567	03/28/2009	03/28/2009	
<b>NWTPH Diesel</b>									
Diesel Range Organics	ND	ug/L	1		83	Q39590	03/30/2009	04/02/2009	
Oil Range Organics	ND	ug/L	1		420	Q39590	03/30/2009	04/02/2009	
<i>Surrogates:</i>									
o-Terphenyl	68	% Rec	1		50-150	Q39590	03/30/2009	04/02/2009	
<b>NWTPH Gas</b>									
Gasoline Range Organics	ND	ug/L	1		50.0	Q39701	04/02/2009	04/02/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	84	% Rec	1		53-114	Q39701	04/02/2009	04/02/2009	
Trifluorotoluene	87	% Rec	1		51-142	Q39701	04/02/2009	04/02/2009	

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**Analytical Results**

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Project Number:	01CP.01234.44	Project Manager:	Chris Gdak
Client Sample ID:	<b>QCTB</b>	Matrix:	Water
Collected On:	3/26/09 15:05	Lab Sample ID:	CPWA0914-010
Received On:	3/27/09 10:00		

Analyte	Result	Units	DF	Detection Limit Threshold	Reporting Limit	QC Batch Group	Prepared	Analyzed	Qualifiers
<b>Purgeable Organic Compounds by GC/MS</b>									
Benzene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Ethylbenzene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Methyl tert-butyl ether	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Toluene	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
Xylenes, Total	ND	ug/L	1		1.0	Q39567	03/28/2009	03/28/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	103	% Rec	1		72-128	Q39567	03/28/2009	03/28/2009	
Dibromofluoromethane	112	% Rec	1		76-127	Q39567	03/28/2009	03/28/2009	
1,2-Dichloroethane-d4	101	% Rec	1		66-133	Q39567	03/28/2009	03/28/2009	
Toluene-d8	97	% Rec	1		75-130	Q39567	03/28/2009	03/28/2009	
<b>NWTPH Gas</b>									
Gasoline Range Organics	ND	ug/L	1		50.0	Q39701	04/02/2009	04/02/2009	
<i>Surrogates:</i>									
4-Bromofluorobenzene	72	% Rec	1		53-114	Q39701	04/02/2009	04/02/2009	
Trifluorotoluene	75	% Rec	1		51-142	Q39701	04/02/2009	04/02/2009	

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**Quality Control Results**

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Project Number:	01CP.01234.44	Project Manager:	Chris Gdak
QC Batch(es):	<b>Q39560</b>	Analysis Method:	<b>8260B</b>
QC Batch Method:	5030B-L	Analysis Description:	Purgeable Organic Compounds by GC/MS
Preparation Started:	03/28/2009		

**Blank:** B032809MVOWY1

Analyte	Blank Result	Units	DF	Detection Limit Threshold	Control Limit	Qualifiers
Benzene	ND	ug/L	1		0.5	
Ethylbenzene	ND	ug/L	1		0.5	
Methyl tert-butyl ether	ND	ug/L	1		0.5	
Toluene	ND	ug/L	1		0.5	
Xylenes, Total	ND	ug/L	1		0.5	
<i>Surrogates:</i>				% Rec		
4-Bromofluorobenzene			1	115	72-128	
Dibromofluoromethane			1	108	76-127	
1,2-Dichloroethane-d4			1	104	66-133	
Toluene-d8			1	105	75-130	

**LCS:** S032809MVOWY3

LCS Duplicate: S032809MVOWY3D

Analyte	Blank Result	Spike Units	DF	Spike Conc.	% Rec	Limits	RPD	RPD Limit	Qualifiers
Benzene	9.6	ug/L	1	10.0	96	80-120			
	9.5			10.0	95	80-120	1	30	
Ethylbenzene	8.7	ug/L	1	10.0	87	75-125			
	8.6			10.0	86	75-125	2	30	
Methyl tert-butyl ether	8.6	ug/L	1	10.0	86	65-125			
	8.4			10.0	84	65-125	1	30	
Toluene	8.6	ug/L	1	10.0	86	75-120			
	8.6			10.0	86	75-120	0	30	
Xylenes, Total	25	ug/L	1	30.0	82	75-130			
	24			30.0	81	75-130	2	30	
<i>Surrogates:</i>									
4-Bromofluorobenzene			1		112	72-128			
					114	72-128			
Dibromofluoromethane			1		108	76-127			
					109	76-127			
1,2-Dichloroethane-d4			1		103	66-133			
					103	66-133			
Toluene-d8			1		103	75-130			
					103	75-130			

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**Quality Control Results**

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Project Number:	01CP.01234.44	Project Manager:	Chris Gdak
QC Batch(es):	<b>Q39567</b>	Analysis Method:	<b>8260B</b>
QC Batch Method:	5030B-L	Analysis Description:	Purgeable Organic Compounds by GC/MS
Preparation Started:	03/28/2009		

<b>Blank: B032809MVOWB1</b>
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Analyte	Result	Units	DF	Detection Limit		Control Limit	Qualifiers
					Threshold		
Benzene	ND	ug/L	1			0.5	
Ethylbenzene	ND	ug/L	1			0.5	
Methyl tert-butyl ether	ND	ug/L	1			0.5	
Toluene	ND	ug/L	1			0.5	
Xylenes, Total	ND	ug/L	1			0.5	
<i>Surrogates:</i>				% Rec			
4-Bromofluorobenzene			1		108	72-128	
Dibromofluoromethane			1		111	76-127	
1,2-Dichloroethane-d4			1		103	66-133	
Toluene-d8			1		98	75-130	

<b>LCS: S032809MVOWB1</b>
LCS Duplicate: S032809MVOWB1D

Analyte	Result	Units	DF	Spike		% Rec	Limits	RPD	RPD Limit	Qualifiers
				Conc.						
Benzene	10	ug/L	1	10.0		103	80-120			
	10			10.0		100	80-120	3	30	
Ethylbenzene	9.5	ug/L	1	10.0		95	75-125			
	9.2			10.0		92	75-125	3	30	
Methyl tert-butyl ether	8.1	ug/L	1	10.0		81	65-125			
	8.5			10.0		85	65-125	5	30	
Toluene	10	ug/L	1	10.0		101	75-120			
	9.7			10.0		97	75-120	4	30	
Xylenes, Total	29	ug/L	1	30.0		95	75-130			
	28			30.0		.93	75-130	3	30	
<i>Surrogates:</i>										
4-Bromofluorobenzene			1			107	72-128			
						104	72-128			
Dibromofluoromethane			1			109	76-127			
						110	76-127			
1,2-Dichloroethane-d4			1			95	66-133			
						97	66-133			
Toluene-d8			1			100	75-130			
						99	75-130			

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**Quality Control Results**

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Project Number:	01CP.01234.44	Project Manager:	Chris Gdak
QC Batch(es):	<b>Q39590</b>	Analysis Method:	<b>NWTPH-D</b>
QC Batch Method:	3510C (NWTPH)	Analysis Description:	NWTPH Diesel
Preparation Started:	03/30/2009		

**Blank: B033009GSVWLD**

Analyte	Result	Units	DF	Detection Limit		Control Limit	Qualifiers
				Threshold	% Rec		
Diesel Range Organics	ND	ug/L	1			40	
Oil Range Organics	ND	ug/L	1			200	
<i>Surrogates:</i>							
o-Terphenyl			1		77	50-150	

**LCS: S033009GSVWLD**

**LCS Duplicate: SD033009GSVWLD**

Analyte	Result	Units	DF	Spike		% Rec	Limits	RPD	RPD Limit	Qualifiers
				Conc.	% Rec					
Diesel Range Organics	3700	ug/L	1	5030		73	51-147			
	3500			5030		69	51-147	6	50	
<i>Surrogates:</i>										
o-Terphenyl			1			83	50-150			
						88	50-150			

**Pace Analytical Services, Inc.**

Pace Analytical Services, Inc.

940 South Harney

Seattle, WA 98108

Phone: (206)767-5060

Fax: (206)767-5063

**Quality Control Results**

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Project Number:	01CP.01234.44	Project Manager:	Chris Gdak
QC Batch(es):	<b>Q39615</b>	Analysis Method:	<b>NWTPH-G</b>
QC Batch Method:	5030B-GCVOA	Analysis Description:	NWTPH Gas
Preparation Started:	03/30/2009		

**Blank: B033009GVOWS1**

Analyte	Blank Result	Units	DF	Detection Limit Threshold	Control Limit	Qualifiers
Gasoline Range Organics	ND	ug/L	1		25	
<i>Surrogates:</i>				% Rec		
4-Bromofluorobenzene			1		80	53-114
Trifluorotoluene			1		96	51-142

**LCS: S033009GVOWS2**

Analyte	Blank Result	Spike Units	DF	Spike Conc.	% Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	271	ug/L	1	250	109	69-138	
<i>Surrogates:</i>							
4-Bromofluorobenzene			1		98	53-114	
Trifluorotoluene			1		100	51-142	

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**Quality Control Results**

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Project Number:	01CP.01234.44	Project Manager:	Chris Gdak
QC Batch(es):	<b>Q39701</b>	Analysis Method:	<b>NWTPH-G</b>
QC Batch Method:	5030B-GCVOA	Analysis Description:	NWTPH Gas
Preparation Started:	04/02/2009		

**Blank: B040209GVOWS1**

Analyte	Blank Result	Units	DF	Detection Limit		Control Limit	Qualifiers
				Threshold	% Rec		
Gasoline Range Organics	ND	ug/L	1			25	
<i>Surrogates:</i>							
4-Bromofluorobenzene			1		89	53-114	
Trifluorotoluene			1		91	51-142	

**LCS: S040209GVOWS1**

Analyte	Blank Spike Result	Units	DF	Spike		% Rec	Limits	Qualifiers
				Conc.	% Rec			
Gasoline Range Organics	268	ug/L	1	250		107	69-138	
<i>Surrogates:</i>								
4-Bromofluorobenzene			1			97	53-114	
Trifluorotoluene			1			97	51-142	

**Matrix Spike: CPWA0916-002MS**

**Parent Sample: CPWA0916-002**

Analyte	Matrix Spike Result	Units	DF	Spike	Parent	% Rec	Limits	Qualifiers
				Conc.	Result			
Gasoline Range Organics	421	ug/L	1	313	ND	131	69-138	
<i>Surrogates:</i>								
4-Bromofluorobenzene			1			92	53-114	
Trifluorotoluene			1			91	51-142	

**Sample Duplicate: KIAWW0901-005D**

**Parent Sample: KIAWW0901-005**

Analyte	Duplicate Result	Units	DF	Parent		RPD	RPD Limit	Qualifiers
				Result	% Rec			
Gasoline Range Organics	ND	ug/L	1		ND	200	50	P5
<i>Surrogates:</i>								
4-Bromofluorobenzene			1		90	53-114		
Trifluorotoluene			1		90	51-142		

# Pace Analytical Services, Inc.

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## Quality Control Results

Project:	Conoco Phillips Site# 01234	SDG Number:	CPWA0914
Project Number:	01CP.01234.44	Project Manager:	Chris Gdak
QC Batch(es):	<b>Q39753</b>	Analysis Method:	<b>NWTPH-G</b>
QC Batch Method:	5030B-GCVOA	Analysis Description:	NWTPH Gas
Preparation Started:	04/03/2009		

**Blank:** B040309GVOWS1

Analyte	Blank Result	Units	DF	Detection Limit		Control Limit	Qualifiers
				Threshold	% Rec		
Gasoline Range Organics	ND	ug/L	1			25	
<i>Surrogates:</i>							
4-Bromofluorobenzene			1		93	53-114	
Trifluorotoluene			1		94	51-142	

**LCS:** S040309GVOWS1

Analyte	Blank Spike Result	Units	DF	Spike Conc.	% Rec		Qualifiers
					Limits	% Rec	
Gasoline Range Organics	293	ug/L	1	250		117	69-138
<i>Surrogates:</i>							
4-Bromofluorobenzene			1			97	53-114
Trifluorotoluene			1			96	51-142

**Matrix Spike:** CPWA0917-004MS

**Parent Sample:** CPWA0917-004

Analyte	Matrix Spike Result	Units	DF	Spike Conc.	Parent Result	% Rec		Qualifiers
						Result	Limits	
Gasoline Range Organics	364	ug/L	1	313	ND	116	69-138	
<i>Surrogates:</i>								
4-Bromofluorobenzene			1			88	53-114	
Trifluorotoluene			1			86	51-142	

**Sample Duplicate:** CPWA0917-003D

**Parent Sample:** CPWA0917-003

Analyte	Duplicate Result	Units	DF	Parent Result	% Rec		RPD	RPD Limit	Qualifiers
					Result	Limits			
Gasoline Range Organics	ND	ug/L	1	ND			0	30	
<i>Surrogates:</i>									
4-Bromofluorobenzene			1			85	53-114		
Trifluorotoluene			1			84	51-142		

**Pace Analytical Services, Inc.**

**Notes and Definitions**

SDG No: **CPWA0914**

**Report Specific Notes:**

ND	The analyte of interest was not detected, to the limit of detection indicated
*	Recovery result outside established control limits

**Laboratory Reporting Conventions:**

DF	Dilution factor
Detection Limit Threshold	The project or method defined limit that defines the lower bound for estimated results. This may be the MDL or IDL or a project-specified value.
MDL	The project or method defined limit that defines the lower bound for estimated results. This may be the MDL or IDL or a project-specified value. Detection Limit Thresholds are listed on the report only if the data has been evaluated below the Reporting Limit. Results between the Reporting Limit and the Detection Limit Threshold are reported as estimated results.
IDL	Instrument Detection Limit. IDLs are in instrument basis units. Reported results for samples are normalized appropriately using the preparation and analysis steps performed.
Reporting Limit	The minimum detection limit for reporting unqualified results under routine laboratory operating conditions. Typically this is the PQL but it may be a different concentration on a project-specific basis.
QC Batch Group	Quality Control Batch Group. The entity that links analytical results and supporting quality control results.
% Rec	Percent recovery.
Limits	The upper and lower control limits for spike recoveries.
RPD	Relative Percent Difference. The relative difference between duplicate results (matrix spike, blank spike, or sample duplicate) expressed as a percentage.
RPD Limit	The maximum RPD allowed for a set of duplicate measurements (see RPD).
Spike conc.	The measured concentration, in sample basis units, of a spiked sample.
PQL	Practical Quantitation Limit. The quantitation limit achievable by the laboratory under routine operating conditions. The PQL will be normalized for deviations from these conditions such as dilutions, dry weight adjustment, etc.
LCS	Laboratory Control Sample

LS#: 11108  
SDG: CPWA-0914

## **Chain Of Custody Record**

**PACE Analytical Laboratory**  
940 S. Harney Street, Seattle, WA  
(206) 767-5060

**Cooler Receipt Form**  
**Pace Analytical Services, Inc.**

SDG: CPWA0914

Taken By: Client

Cooler: AAF951

Transferred: Pace

COC #:

Project: WA Conoco Phillips (Stantec - Conoco Phillips)

Date samples were received at the laboratory: 3/27/2009

Date cooler was opened: 3/27/2009 10:00AM

**A. PRELIMINARY EXAMINATION PHASE:**

1. Did cooler come with a shipping slip (airbill, etc.)? ..... NO  
if YES, record carrier name and airbill number:  
2. Were custody seals unbroken and intact at the date and time of arrival? ..... INTACT  
Date On Custody Seal: 3/26/2009      Custody Seals Description: one in front
3. Were custody papers sealed in a plastic bag and taped inside to the lid? ..... YES  
4. Did you screen samples for radioactivity using the Geiger Counter? ..... NO  
5. Were custody papers filled out properly (ink, signed, etc.)? ..... YES  
6. Did you sign custody papers in the appropriate place? ..... YES  
7. If required, was enough cooling material present? ..... YES  
8. Have designated person initial here to acknowledge receipt of cooler: TYN

**B. LOG-IN PHASE:**      Date samples were logged-in: 3/27/2009 5:01PM

Logged-in by Taryn Namba (sign) Taryn Namba

9. Describe type of packing in cooler:

ice, plastic bags

10. Were all bottles sealed in separate plastic bags? ..... YES  
11. Were labels in good condition? ..... YES  
12. Were all bottle labels complete (ID,date,time signature,preservative,etc.)? ..... YES  
13. Did all bottle labels agree with custody papers? ..... YES  
14. Were correct containers used for the tests indicated? ..... YES  
15. Were the correct pHs observed? ..... YES  
16. Was a sufficient amount of sample sent for tests indicated? ..... YES  
17. Were VOA samples compliant with headspace, septum and cap? ..... YES  
18. Temperatures: 5.9

DISCREPANCIES:

COMMENTS:

Other cooler that samples were received in: AAT309 Temps: 5.3, 4.7, 3.4

Date Printed: 3/27/2009 17:19

**Supplemental Sample Receipt Log**  
**Pace Analytical Services, Inc.**

**SDG:** CPWA0914

**Cooler:** AAF951

**Temperatures:** 5.9

**COC #:**

Sample	Bottle #	Bottle Description	pH	VOA*
CPWA0914-001	0001	1000 mL boston round, amber glass, HCl	<2	N/A
	0003	40 ml OTWS, clear glass, HCl	N/C	Yes
	0004	40 ml OTWS, clear glass, HCl	N/C	Yes
	0005	40 ml OTWS, clear glass, HCl	N/C	Yes
	0006	40 ml OTWS, clear glass, HCl	N/C	Yes
	0007	40 ml OTWS, clear glass, HCl	N/C	Yes
	0008	40 ml OTWS, clear glass, HCl	N/C	Yes
CPWA0914-002	0001	1000 mL boston round, amber glass, HCl	<2	N/A
	0003	40 ml OTWS, clear glass, HCl	N/C	Yes
	0004	40 ml OTWS, clear glass, HCl	N/C	Yes
	0005	40 ml OTWS, clear glass, HCl	N/C	Yes
	0006	40 ml OTWS, clear glass, HCl	N/C	Yes
	0007	40 ml OTWS, clear glass, HCl	N/C	Yes
	0008	40 ml OTWS, clear glass, HCl	N/C	Yes
CPWA0914-003	0001	1000 mL boston round, amber glass, HCl	<2	N/A
	0003	40 ml OTWS, clear glass, HCl	N/C	Yes
	0004	40 ml OTWS, clear glass, HCl	N/C	Yes
	0005	40 ml OTWS, clear glass, HCl	N/C	Yes
	0006	40 ml OTWS, clear glass, HCl	N/C	Yes
	0007	40 ml OTWS, clear glass, HCl	N/C	Yes
	0008	40 ml OTWS, clear glass, HCl	N/C	Yes
CPWA0914-004	0001	1000 mL boston round, amber glass, HCl	<2	N/A
	0003	40 ml OTWS, clear glass, HCl	N/C	Yes
	0004	40 ml OTWS, clear glass, HCl	N/C	Yes
	0005	40 ml OTWS, clear glass, HCl	N/C	Yes
	0006	40 ml OTWS, clear glass, HCl	N/C	Yes
	0007	40 ml OTWS, clear glass, HCl	N/C	Yes
	0008	40 ml OTWS, clear glass, HCl	N/C	Yes
CPWA0914-005	0001	1000 mL boston round, amber glass, HCl	<2	N/A
	0003	40 ml OTWS, clear glass, HCl	N/C	Yes
	0004	40 ml OTWS, clear glass, HCl	N/C	Yes

\* VOA.vial compliant

Allowable temperature and pH ranges (neutral pH defined as a value between 5 and 9)

Temperature      Allowable temperature range is 4+- 2 degrees Celsius

Acid Preserved pH      pH must be less than 2

Base Preserved pH      pH must be greater than 12

NC      Not Checked for pH

**Supplemental Sample Receipt Log**  
**Pace Analytical Services, Inc.**

**SDG:** CPWA0914  
**Cooler:** AAF951  
**Temperatures:** 5.9  
**COC #:**

Sample	Bottle #	Bottle Description	pH	VOA*
CPWA0914-006	0005	40 ml OTWS, clear glass, HCl	N/C	Yes
	0006	40 ml OTWS, clear glass, HCl	N/C	Yes
	0007	40 ml OTWS, clear glass, HCl	N/C	Yes
	0008	40 ml OTWS, clear glass, HCl	N/C	Yes
	0001	1000 mL boston round, amber glass, HCl	<2	N/A
	0003	40 ml OTWS, clear glass, HCl	N/C	Yes
	0004	40 ml OTWS, clear glass, HCl	N/C	Yes
	0005	40 ml OTWS, clear glass, HCl	N/C	Yes
CPWA0914-007	0006	40 ml OTWS, clear glass, HCl	N/C	Yes
	0007	40 ml OTWS, clear glass, HCl	N/C	Yes
	0008	40 ml OTWS, clear glass, HCl	N/C	Yes
	0001	1000 mL boston round, amber glass, HCl	<2	N/A
	0003	40 ml OTWS, clear glass, HCl	N/C	Yes
	0004	40 ml OTWS, clear glass, HCl	N/C	Yes
	0005	40 ml OTWS, clear glass, HCl	N/C	Yes
	0006	40 ml OTWS, clear glass, HCl	N/C	Yes
CPWA0914-008	0007	40 ml OTWS, clear glass, HCl	N/C	Yes
	0008	40 ml OTWS, clear glass, HCl	N/C	Yes
	0001	1000 mL boston round, amber glass, HCl	<2	N/A
	0003	40 ml OTWS, clear glass, HCl	N/C	Yes
	0004	40 ml OTWS, clear glass, HCl	N/C	Yes
	0005	40 ml OTWS, clear glass, HCl	N/C	Yes
	0006	40 ml OTWS, clear glass, HCl	N/C	Yes
	0007	40 ml OTWS, clear glass, HCl	N/C	Yes
CPWA0914-009	0008	40 ml OTWS, clear glass, HCl	N/C	Yes
	0001	1000 mL boston round, amber glass, HCl	<2	N/A
	0003	40 ml OTWS, clear glass, HCl	N/C	Yes
	0004	40 ml OTWS, clear glass, HCl	N/C	Yes
	0005	40 ml OTWS, clear glass, HCl	N/C	Yes
	0006	40 ml OTWS, clear glass, HCl	N/C	Yes
	0007	40 ml OTWS, clear glass, HCl	N/C	Yes

\* VOA vial compliant

Allowable temperature and pH ranges (neutral pH defined as a value between 5 and 9)

Temperature      Allowable temperature range is 4+- 2 degrees Celsius

Acid Preserved pH	pH must be less than 2
Base Preserved pH	pH must be greater than 12
NC	Not Checked for pH

**Supplemental Sample Receipt Log**  
**Pace Analytical Services, Inc.**

**SDG:** CPWA0914

**Cooler:** AAF951

**Temperatures:** 5.9

**COC #:**

Sample	Bottle #	Bottle Description	pH	VOA*
	0008	40 ml OTWS, clear glass, HCl	N/C	Yes
CPWA0914-010	0001	40 ml OTWS, clear glass, HCl	N/C	Yes
	0002	40 ml OTWS, clear glass, HCl	N/C	Yes
	0003	40 ml OTWS, clear glass, HCl	N/C	Yes
	0004	40 ml OTWS, clear glass, HCl	N/C	Yes
	0005	40 ml OTWS, clear glass, HCl	N/C	Yes
	0006	40 ml OTWS, clear glass, HCl	N/C	Yes

\* VOA vial compliant

Allowable temperature and pH ranges (neutral pH defined as a value between 5 and 9)

Temperature                      Allowable temperature range is 4+- 2 degrees Celsius

Acid Preserved pH                pH must be less than 2

Base Preserved pH                pH must be greater than 12

NC                                 Not Checked for pH