

NW1487



**Stantec Consulting Corporation**  
12034 - 134th Court Northeast Suite 102  
Redmond WA 98052  
Tel: (425) 372-1600  
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DEPT. OF ECOLOGY  
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**Stantec**

December 8, 2008

Mr. Mark Adams  
Washington Dept. of Ecology  
3190 160<sup>th</sup> Avenue SE  
Bellevue, WA 98008-5452

Dear Mr. Adams:

Enclosed is a copy of the 3rd Quarter Groundwater Monitoring Report for ConocoPhillips Site 1571, 200 South 36<sup>th</sup> Street, Bellingham, WA.

If you have any questions regarding the report, please contact Chris Gdak at 425-372-1662.

Sincerely,

Pamela Olsen  
Program Assistant  
Stantec Consulting Corporation  
12034 134<sup>th</sup> Court NE, Suite 102  
Redmond, WA 98052

NW 1487

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DEC 09 2008

DEPT. OF ECOLOGY  
TCP-NWRC

**QUARTERLY GROUNDWATER  
MONITORING REPORT FOR**

**CONOCOPHILLIPS  
COMPANY**

**RM&R #1571  
200 South 36<sup>th</sup> Street  
Bellingham, Washington**



**Stantec**

**Stantec Consulting Corporation**  
12034 134<sup>th</sup> Court NE, Suite 102  
Redmond, WA 98052  
Tel: (425) 372-1600  
Fax: (425) 372-1650

**Quarterly Groundwater Monitoring Report - Third Quarter 2008**  
**ConocoPhillips Service Station No. 256380 (RM&R #1571)**  
**Washington Department of Ecology Voluntary Cleanup Program ID #NW1487**  
**200 South 36th Street**  
**Bellingham, Washington 98225**

**Stantec Project No.:**  
**01CP.01571.41.8521**

**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**

**December 3, 2008**

Dear Mr. Adams:

Stantec Consulting Corporation (Stantec) is pleased to submit 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 represents the results of groundwater monitoring activities performed by Stantec on September 10, 2008 at ConocoPhillips Service Station No. 256380 (RM&R #1571, DOE VCP #NW1487), located at 200 South 36<sup>th</sup> Street, Bellingham, Washington (the "site"). Site location is illustrated on Figure 1. Groundwater monitoring was performed in accordance with Stantec's protocols for groundwater monitoring events (Attachment A).

### **GROUNDWATER MONITORING AND SAMPLING**

On September 10, 2008, Stantec performed third quarter 2008 groundwater monitoring activities at the site. Eight groundwater monitoring wells (MW-1 through MW-8) were gauged and sampled. These activities are described below.

#### **Monitoring Well Gauging**

The monitoring wells were gauged for the presence of separate phase hydrocarbons (SPH) and depth to groundwater prior to the beginning of purging and sampling. SPH was not present in the groundwater monitoring wells. The depth to groundwater ranged from 4.30 feet (MW-5) to 8.80 feet (MW-2) below the top of casing (TOC). These depths to groundwater were used to calculate the groundwater elevation in each well, and evaluate the groundwater flow direction and gradient. Well locations and groundwater flow direction are shown on Figure 2. Based on these data, the inferred groundwater flow direction was divergent to the northeast at an approximate gradient of 0.04 foot per foot (ft/ft), and to the southwest at an approximate gradient of 0.05 ft/ft.

Groundwater gauging data for the current quarter and the previous three quarters are summarized in Table 1. Current and historical groundwater gauging data are summarized in Table 2.

#### **Monitoring Well Purging**

Once the depth to groundwater was measured in the site wells, the wells were purged via low-flow methodology using a peristaltic pump and dedicated polyethylene tubing. Water quality parameters were measured during purging and recorded on field data sheets (Attachment B). A total of approximately 22.5 liters of purged groundwater and an unspecified amount of rinsate

water was stored onsite in a 55-gallon steel drum, pending laboratory characterization and offsite disposal.

### **Monitoring Well Sampling**

Following purging operations, groundwater samples were collected using a peristaltic pump and placed into appropriate containers for the requested analyses. Samples that were analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX) and methyl tertiary butyl ether (MTBE) and total petroleum hydrocarbons gasoline range organics (TPH-G) were contained in 40 milliliter (mL) volatile organic analyte vials (VOAs) and preserved with hydrochloric acid (HCl). Samples that were analyzed for total petroleum hydrocarbons diesel range organics (TPH-D) and total petroleum hydrocarbons as oil/heavy range organics (TPH-O) were contained in 1-liter amber bottles preserved with HCl.

Once the sample containers were filled and sealed, they were labeled with the site name, sample name, sample number, collection date and time, preservative used, and analyses requested. This information was included on the chain-of-custody form. The containers were placed on ice in an insulated cooler for delivery under chain-of-custody documentation to Lancaster Laboratories, located in Lancaster, Pennsylvania.

## **GROUNDWATER SAMPLING RESULTS**

### **Analytical Results**

During the third quarter 2008, groundwater samples were analyzed for the presence BTEX and MTBE by Environmental Protection Agency (EPA) Method 8260B, TPH-G by the Washington State DOE Method NWTPH-Gx, and TPH-D and TPH-O by DOE Method NWTPH-Dx, with silica gel cleanup for TPH-D. Current groundwater analytical results are summarized in Table 1, along with the analytical results from the previous three quarters. Historical analytical results are summarized in Table 2. Analytical results for TPH-G, TPH-D, TPH-O, BTEX, and MTBE are illustrated on Figure 3 for the current quarter and the three previous quarters. A summary of the analytical results includes the following:

- TPH-G was detected at MW-7 at a concentration of 250 micrograms per liter ( $\mu\text{g/L}$ ) which is below the Model Toxics Control Act (MTCA) Method A cleanup level of 1,000  $\mu\text{g/L}$ . TPH-G was not reported above the method reporting limits (MRLs) in any of the other groundwater samples collected.
- TPH-D was detected at MW-7 at a concentration of 580  $\mu\text{g/L}$  which is above the MTCA Method A cleanup level of 500  $\mu\text{g/L}$ . TPH-D was not reported above the laboratory MRLs in any of the other groundwater samples collected.

- MTBE was detected at MW-1 at a concentration of 1 µg/L which is below the MTCA Method A cleanup level of 20 µg/L.
- TPH-O and BTEX were not reported above the laboratory MRLs in any of the groundwater samples collected.

A copy of the certified laboratory analytical report and chain of custody documentation from Lancaster Laboratories are included in Attachment C.

### **Laboratory Quality Control**

The laboratory report from Lancaster Laboratories did not report quality assurance/quality control (QA/QC) issues. The analytical data can be considered valid.

### **WASTE DISPOSAL**

Purge and rinsate water generated during the monitoring and sampling event was temporarily stored onsite in a labeled, DOT approved 55-gallon steel drum. On October 1, 2008 the 55-gallon drum was removed by General Environmental Management, Inc. for proper disposal. The manifest for the disposal of this drum will be submitted under separate cover.

### **CONCLUSIONS**

Based on analytical results from the third quarter 2008, only TPH-D at MW-7 exceeded MTCA Method A cleanup levels. TPH-D and MTBE were detected at wells MW-7 and MW-1, respectively, at concentrations below MTCA Method A cleanup levels. TPH-O and BTEX were not reported above the MRLs in any of the groundwater samples collected. Hydrocarbon concentrations in wells MW-2, MW-4, and MW-5 have historically been below the MRLs.

### **LIMITATIONS**

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional environmental consulting practices existing at the time this report 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 investigation. No other warranties, expressed or implied, are made by Stantec.

**Prepared by:**

*Jimmy Paise*  
*for*

Matt Jenkins  
Staff Geologist

**Reviewed by:**

*[Signature]*  
Jeffrey S. Thompson, L.G., L.E.G.  
Principal Geologist



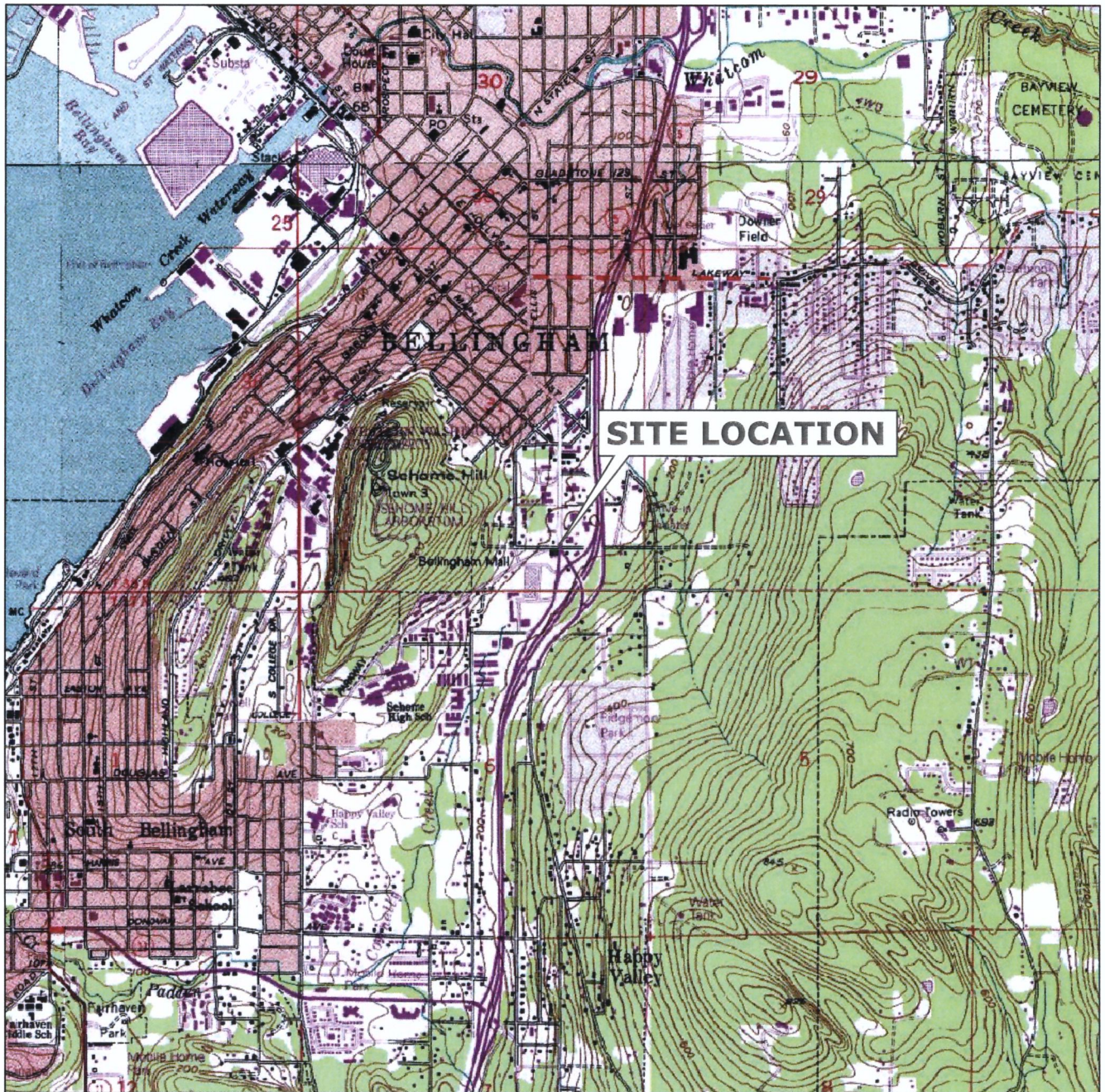
JEFFREY S. THOMPSON

cc: Mr. Victor Boulos, Keith Oil Company, P.O. Box 189, Ferndale, WA 98248

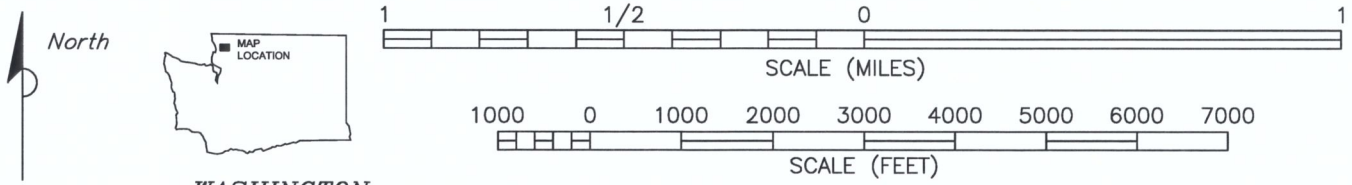
**ATTACHMENTS**

- Figure 1 Site Location Map
- Figure 2 Groundwater Elevation Contour Map
- Figure 3 Recent Groundwater Concentration Map
  
- Table 1 Recent Groundwater Elevations and Sample Analytical Results
- Table 2 Historical Groundwater Elevations and Sample Analytical Results
  
- Attachment A Field and Laboratory Procedures
- Attachment B Field Data Sheets
- Attachment C Certified Laboratory Analytical Report and Chain of Custody Documentation


## FIGURES



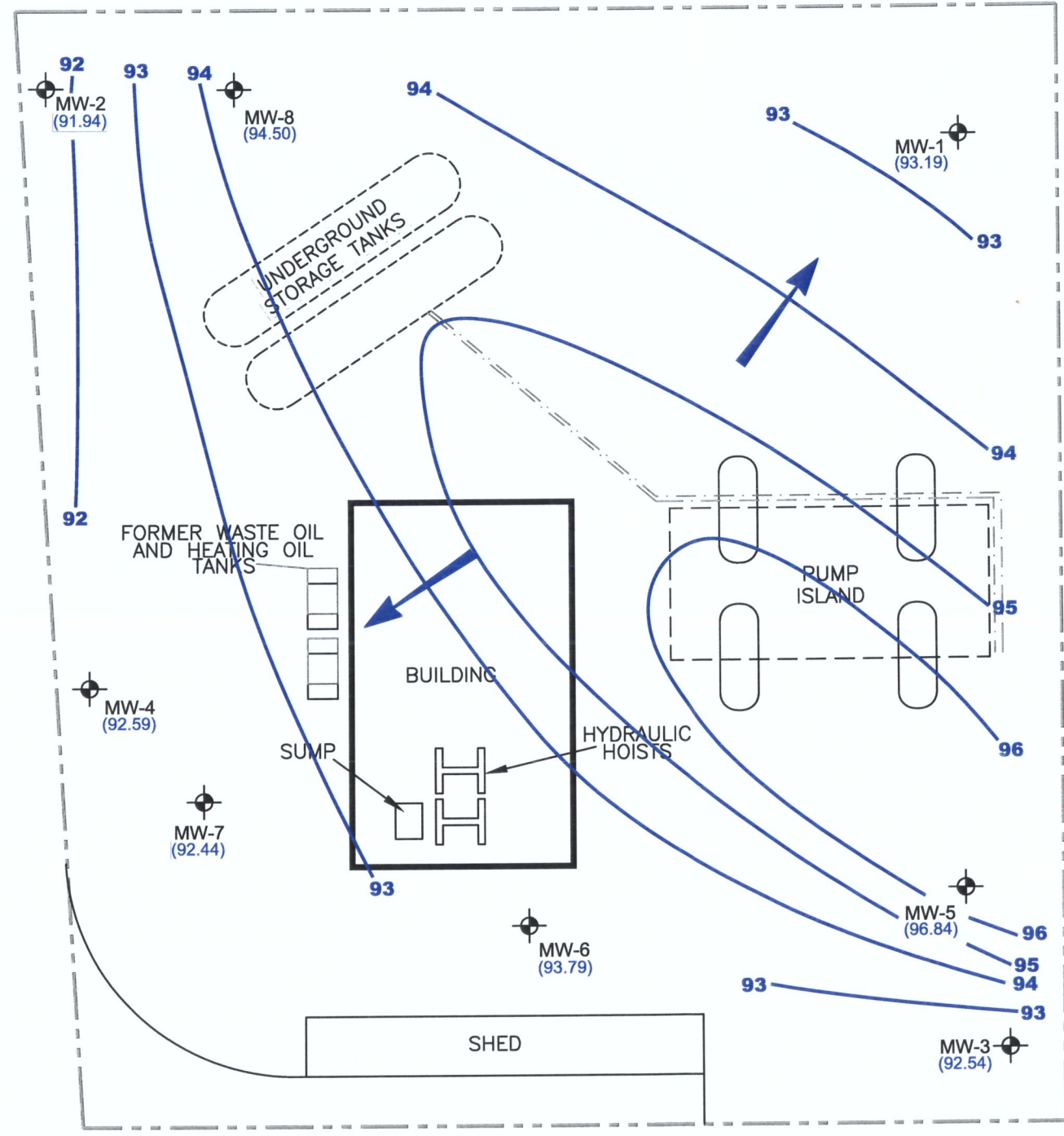
REFERENCE: USGS 7.5 MINUTE QUADRANGLE; BELLINGHAM SOUTH, WASHINGTON; 1972



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 <p><b>Stantec</b> 12034 134th COURT, SUITE 102 REDMOND, WASHINGTON PHONE: (425) 372-1600 FAX: (425) 372-1650</p>	<p>FOR:</p> <p><b>ConocoPhillips</b> FACILITY NO 256380 (RM &amp; R 1571) 200 SOUTH 36th STREET BELLINGHAM, WASHINGTON</p>		<p>FIGURE:</p> <p><b>1</b></p>	
	<p>JOB NUMBER: 01CP.01571.07</p>	<p>DRAWN BY: ARA</p>	<p>CHECKED BY: MA</p>	<p>APPROVED BY: MA</p>






BILL McDONALD PARKWAY



SAMISH WAY

SOUTH 36th STREET

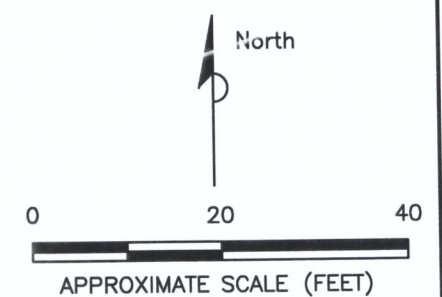
**LEGEND**

-  MONITORING WELL LOCATION
-  SITE BOUNDARY
- GROUNDWATER**
-  (70.60) GROUNDWATER ELEVATION (FEET)
-  INFERRED GROUNDWATER FLOW DIRECTION
-  94 — GROUNDWATER ELEVATION CONTOUR (FEET)

\* WELLS MW-1 NOT USED IN CONTOURING DUE TO AN ANOMALY

**NOTES:**

- 1). ALL LOCATIONS ARE APPROXIMATE.



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**SOURCE:**  
 BASE MAP FROM; ENVIRONMENTAL RESOLUTIONS, INC.  
 (ERI) TITLED GROUNDWATER SAMPLE ANALYSIS MAP—  
 06/10/03, PLATE 1, DATED 07/08/03, PROJECT  
 NO. 31065. CADD FILE 31065.13.DWG



**Stantec**  
 12034 134th COURT, SUITE 102  
 REDMOND, WASHINGTON  
 PHONE: (425) 372-1600 FAX: (425) 372-1650

FOR:  
**ConocoPhillips**  
 FACILITY NO. 256380 (RM & R 1571)  
 200 SOUTH 36th STREET  
 BELLINGHAM, WASHINGTON

JOB NUMBER: 01CP.01571.40  
 DRAWN BY: ARA

**SITE PLAN WITH GROUNDWATER ELEVATIONS (9/10/08)**

CHECKED BY: CG  
 APPROVED BY: JT

FIGURE:  
**2**

DATE:  
 11/6/08

MW-8	12/03/07	3/5/08	6/11/08	9/10/08
TPHg	<50	<50	<50 <sup>d</sup>	<50
TPHd	<76	<150	240	<79
TPHo	290	<b>860</b>	<b>1,000</b>	<99
B	<0.5	<0.5	<0.5 <sup>d</sup>	<0.5
T	<0.7	<0.7	<0.7 <sup>d</sup>	<0.7
E	<0.8	<0.8	<0.5 <sup>d</sup>	<0.8
X	<0.8	<0.8	<0.5 <sup>d</sup>	<0.8
MTBE	<0.5	<0.5	<0.5 <sup>d</sup>	<0.5

MW-2	12/03/07	3/5/08	6/11/08	9/10/08
TPHg	<50	<50	<50	<50
TPHd	<75	<800 <sup>c,e</sup>	<76 <sup>b</sup>	<78
TPHo	<94	<1,000 <sup>c,e</sup>	<95 <sup>b</sup>	<97
B	<0.5	<0.5	<0.5	<0.5
T	<0.7	<0.7	<0.5	<0.7
E	<0.8	<0.8	<0.5	<0.8
X	<0.8	<0.8	<0.5	<0.8
MTBE	<0.5	<0.5	<0.5	<0.5

MW-1	12/03/07	3/5/08	6/11/08	9/10/08
TPHg	<50	<50	<50	<50
TPHd	<400 <sup>c</sup>	<800 <sup>c,e</sup>	<800 <sup>b,c,e</sup>	<77
TPHo	<500 <sup>c</sup>	<1,000 <sup>c,e</sup>	<1,000 <sup>b,c,e</sup>	<96
B	<0.5	<b>11</b>	<b>10</b>	<0.5
T	<0.7	<0.5	<0.5	<0.7
E	<0.8	<5	<0.5	<0.8
X	<0.8	<5	<0.5	<0.8
MTBE	0.6	1	1	1

MW-4	12/03/07	3/5/08	6/11/08	9/10/08
TPHg	<50	<50	<50	<50
TPHd	<76	<77	<75 <sup>b</sup>	<78
TPHo	<95	<96	<94 <sup>b</sup>	<97
B	<0.5	<0.5	<0.5	<0.5
T	<0.7	<0.7	<0.5	<0.7
E	<0.8	<0.8	<0.5	<0.8
X	<0.8	<0.8	<0.5	<0.8
MTBE	<0.5	<0.5	<0.5	<0.5

MW-7	12/03/07	3/5/08	6/11/08	9/10/08
TPHg	400	240	240	250
TPHd	<b>970</b>	<b>930</b>	<b>1,300</b>	<b>580</b>
TPHo	140	100	<b>860</b>	<97
B	<0.5	<0.5	<0.5	<0.5
T	<0.7	<0.7	<0.5	<0.7
E	<0.8	<0.8	<0.5	<0.8
X	<0.8	<0.8	<0.5	<0.8
MTBE	<0.5	<0.5	<0.5	<0.5

MW-6	12/03/07	3/5/08	6/11/08	9/10/08
TPHg	<50	<50	<50	<50
TPHd	<76	<76	<76	<79
TPHo	<95	<95	250	<98
B	<0.5	<0.5	<0.5	<0.5
T	<0.7	<0.7	<0.5	<0.7
E	<0.8	<0.8	<0.5	<0.8
X	<0.8	<0.8	<0.5	<0.8
MTBE	<0.5	<0.5	<0.5	<0.5

MW-5	12/03/07	3/5/08	6/11/08	9/10/08
TPHg	<50	<50	<50	<50
TPHd	99	<76	91	<78
TPHo	<95	<95	<94	<98
B	<0.5	<0.5	<0.5	<0.5
T	<0.7	<.7	<0.5	<0.7
E	<0.8	<0.8	<0.5	<0.8
X	<0.8	<0.8	<0.5	<0.8
MTBE	<0.5	<0.5	<0.5	<0.5

MW-3	12/03/07	3/5/08	6/11/08	9/10/08
TPHg	<50	<50	<50	<50
TPHd	<75	<76	100 <sup>b</sup>	<78
TPHo	<94	<95	<b>560</b> <sup>b</sup>	<98
B	<0.5	<0.5	<0.5	<0.5
T	<0.7	<0.7	<0.5	<0.7
E	<0.8	<0.8	<0.5	<0.8
X	<0.8	<0.8	<0.5	<0.8
MTBE	<0.5	<0.5	<0.5	<0.5

**LEGEND**

- MONITORING WELL LOCATION
- SITE BOUNDARY
- INFERRED GROUNDWATER FLOW DIRECTION

**ANALYTES**

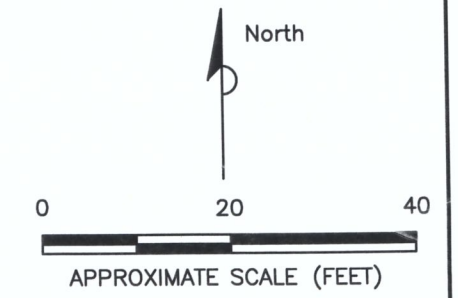
WELL ID	ANALYTES
TPHg	GASOLINE RANGE HYDROCARBONS
TPHd	DIESEL RANGE HYDROCARBONS
TPHo	HEAVY OIL RANGE HYDROCARBONS
B	BENZENE
T	TOLUENE
E	ETHYL BENZENE
X	TOTAL XYLENES
MTBE	METHYL TERT-BUTYL ETHER

UNITS IN MICROGRAMS PER LITER (µg/L)

- < LESS THAN LABORATORY REPORTING LIMITS
- ND NOT DETECTED AT OR ABOVE THE LABORATORY METHOD DETECTION LIMIT
- NOT ANALYZED OR NOT APPLICABLE
- b THE RECOVERY FOR THE LABORATORY CONTROL SAMPLE (LCS) WITH THIS SAMPLE IS BELOW QUALITY CONTROL LIMITS. SINCE NO SAMPLE REMAINED FOR A REEXTRACTION THE DATA IS REPORTED.
- c DUE TO THE NATURE OF THE SAMPLE MATRIX, A REDUCED ALIQUOT WAS USED FOR ANALYSIS. THE REPORTING LIMITS WERE RAISED ACCORDINGLY.
- d PRESERVATION REQUIREMENTS WERE NOT MET. THE VIAL SUBMITTED FOR VOLATILE ANALYSIS DID NOT HAVE A PH < 2 AT THE TIME OF ANALYSES. DUE TO THE VOLATILE NATURE OF THE ANALYTES, IT IS NOT APPROPRIATE FOR THE LABORATORY TO ADJUST THE PH AT THE TIME OF SAMPLE RECEIPT. THE PH OF THIS SAMPLE WAS PH=6.
- e THE LABORATORY REPORTING LIMITS (RLS) ARE ABOVE CURRENT MTCA METHOD A CLEANUP LEVELS.

**NOTES:**

- 1). ALL LOCATIONS ARE APPROXIMATE



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BASE MAP FROM: ENVIRONMENTAL RESOLUTIONS, INC.  
(ERI) TITLED GROUNDWATER SAMPLE ANALYSIS MAP-  
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 12034 134th COURT, SUITE 102 REDMOND, WASHINGTON PHONE: (425) 372-1600 FAX: (425) 372-1650	FOR:  FACILITY NO. 256380 (RM & R 1571) 200 SOUTH 36th STREET BELLINGHAM, WASHINGTON	SITE PLAN WITH ANALYTICAL RESULTS (9/10/08)		FIGURE: <b>3</b>
	JOB NUMBER: 01CP.01571.40	DRAWN BY: ARA	CHECKED BY: CG	APPROVED BY: JT

## TABLES

**TABLE 1**  
**RECENT GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS**

ConocoPhillips Facility No. 256380 (RM&R 1571)  
200 South 36th Street  
Bellingham, Washington

Well Name	Sample Date	Elevation Data (feet)			Total Petroleum Hydrocarbons			Aromatic Hydrocarbons				
		Depth to Water	SPH Thickness	GW Elevation	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE
<b>MW-1</b>	12/03/07	6.63	--	91.86	<50	<400 <sup>c</sup>	<500 <sup>c</sup>	<0.5	<0.7	<0.8	<0.8	0.6
98.49	03/05/08	5.34	--	93.15	<50 <sup>d</sup>	<800 <sup>c,e</sup>	<1,000 <sup>c,e</sup>	<b>11</b>	<0.7	<0.8	<0.8	1
	06/11/08	5.34	0.00	93.15	<50	<800 <sup>b,c,e</sup>	<1,000 <sup>b,c,e</sup>	<b>10</b>	<0.5	<0.5	<0.5	1
	09/10/08	5.30	0.00	93.19	<50	<77	<96	<0.5	<0.7	<0.8	<0.8	1
<b>MW-2</b>	12/03/07	6.69	--	94.05	<50	<75	<94	<0.5	<0.7	<0.8	<0.8	<0.5
100.74	03/05/08	8.05	--	92.69	<50	<800 <sup>c,e</sup>	<1,000 <sup>c,e</sup>	<0.5	<0.7	<0.8	<0.8	<0.5
	06/11/08	8.25	0.00	92.49	<50	<76 <sup>b</sup>	<95 <sup>b</sup>	<0.5	<0.5	<0.5	<0.5	<0.5
	09/10/08	8.80	0.00	91.94	<50	<78	<97	<0.5	<0.7	<0.8	<0.8	<0.5
<b>MW-3</b>	12/03/07	4.70	--	93.14	<50	<75	<94	<0.5	<0.7	<0.8	<0.8	<0.5
97.84	03/05/08	4.89	--	92.95	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5
	06/11/08	5.11	0.00	92.73	<50	100 <sup>b</sup>	<b>560<sup>b</sup></b>	<0.5	<0.5	<0.5	<0.5	<0.5
	09/10/08	5.30	0.00	92.54	<50	<78	<98	<0.5	<0.7	<0.8	<0.8	<0.5
<b>MW-4</b>	12/03/07	6.00	--	93.44	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5
99.44	03/05/08	6.17	--	93.27	<50	<77	<96	<0.5	<0.7	<0.8	<0.8	<0.5
	06/11/08	6.02	0.00	93.42	<50	<75 <sup>b</sup>	<94 <sup>b</sup>	<0.5	<0.5	<0.5	<0.5	<0.5
	09/10/08	6.85	0.00	92.59	<50	<78	<97	<0.5	<0.7	<0.8	<0.8	<0.5
<b>MW-5</b>	12/03/07	4.64	--	96.50	<50	99	<95	<0.5	<0.7	<0.8	<0.8	<0.5
101.14	03/05/08	4.36	--	96.78	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5
	06/11/08	4.21	0.00	96.93	<50	91	<94	<0.5	<0.5	<0.5	<0.5	<0.5
	09/10/08	4.30	0.00	96.84	<50	<78	<98	<0.5	<0.7	<0.8	<0.8	<0.5
<b>MW-6</b>	12/03/07	5.46	--	94.28	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5
99.74	03/05/08	5.46	--	94.28	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5
	06/11/08	5.39	0.00	94.35	<50	<76	250	<0.5	<0.5	<0.5	<0.5	<0.5
	09/10/08	5.95	0.00	93.79	<50	<79	<98	<0.5	<0.7	<0.8	<0.8	<0.5

**TABLE 1  
RECENT GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS**

ConocoPhillips Facility No. 256380 (RM&R 1571)  
200 South 36th Street  
Bellingham, Washington

Well Name	Sample Date	Elevation Data (feet)			Total Petroleum Hydrocarbons			Aromatic Hydrocarbons				
		Depth to Water	SPH Thickness	GW Elevation	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE
<b>MW-7</b>	12/03/07	4.97	--	94.67	400	<b>970</b>	140	<0.5	<0.7	<0.8	<0.8	<0.5
99.64	03/05/08	6.47	--	93.17	240	<b>930</b>	100	<0.5	<0.7	<0.8	<0.8	<0.5
	06/11/08	6.13	0.00	93.51	240	<b>1,300</b>	<b>860</b>	<0.5	<0.5	<0.5	<0.5	<0.5
	09/10/08	7.20	0.00	92.44	250	<b>580</b>	<97	<0.5	<0.7	<0.8	<0.8	<0.5
<b>MW-8</b>	12/03/07	7.51	--	95.19	<50	<76	290	<0.5	<0.7	<0.8	<0.8	<0.5
102.7	03/05/08	7.30	--	95.40	<50	<150	<b>860</b>	<0.5	<0.7	<0.8	<0.8	<0.5
	06/11/08	7.22	0.00	95.48	<50 <sup>d</sup>	240	<b>1,000</b>	<0.5 <sup>d</sup>	0.7 <sup>d</sup>	<0.5 <sup>d</sup>	<0.5 <sup>d</sup>	<0.5 <sup>d</sup>
	09/10/08	8.20	0.00	94.50	<50	<79	<99	<0.5	<0.7	<0.8	<0.8	<0.5
<b>MTCA Method A Cleanup Levels:</b>					<b>1000/800<sup>a</sup></b>	<b>500</b>	<b>500</b>	<b>5</b>	<b>1000</b>	<b>700</b>	<b>1000</b>	<b>20</b>

NOTES:

Concentrations are in micrograms per liter (µg/L).

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

GW Elev. = Groundwater elevation relative to top of casing elevation.

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

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

BTEX = Benzene, Toluene, Ethylbenzene, and Total Xylenes by EPA Method 5030/8260B.

Total lead by ICP-US EPA Method 6010.

-- = Not Analyzed or Sampled.

< = Less than the stated laboratory reporting limit.

**Bolded** values equal or exceed MTCA Method A Cleanup Levels.

<sup>a</sup> Cleanup levels stated by MTCA Method A for TPH-G are 1000 µg/L when no benzene is present and 800 µg/L when benzene is present.

<sup>b</sup> The recovery for the laboratory control sample (LCS) with this sample is below quality control limits. Since no sample remained for a reextraction the data is reported.

<sup>c</sup> Due to the nature of the sample matrix, a reduced aliquot was used for analysis. The reporting limits were raised accordingly.

<sup>d</sup> Preservation requirements were not met. The vial submitted for volatile analysis did not have a pH < 2 at the time of analyses. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt. The pH of this sample was pH=6.

<sup>e</sup> The laboratory reporting limits (RLs) are above MTCA Method A cleanup levels

**TABLE 2  
HISTORICAL GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS**

ConocoPhillips Facility No. 256380  
200 South 36th Street  
Bellingham, Washington

Well Name TOC Elevation	Sample Date	Elevation Data (feet)			Total Petroleum Hydrocarbons			Aromatic Hydrocarbons					Lead	
		Depth to Water	SPH Thickness	GW Elevation	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE	Total Pb	Diss Pb
<b>MW1</b>	03/11/99	4.96	--	93.53	<50	<250	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	2.41	--
98.49	05/25/99	5.33	--	93.16	<50.0	<250	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	---	--	--
	08/12/99	6.66	--	91.83	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--
	12/07/99	6.10	--	92.39	<50.0	<250	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	6.18	--
	02/10/00	6.10	--	92.39	<50.0	<250	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	1.75	--
	02/02/01	5.17	--	93.32	<50.0	588	<750 <sup>e</sup>	<b>12.4</b>	1.02	1.10	2.77	--	--	<1.00
	02/08/02	5.77	--	92.72	<b>838</b>	<b>1,600</b>	<500	<b>128</b>	2.15	85.4	6.55	--	7.70	<1.00
	09/20/02	6.27	--	92.22	197	<b>1,320</b>	<588 <sup>e</sup>	1.82	<0.500	33.0	<1.00	--	<1.00	--
	12/04/02	7.05	--	91.44	373	511	<568 <sup>e</sup>	<b>106</b>	1.32	1.39	5.41	--	4.65	--
	03/05/03	5.70	--	92.79	168	<250	<500	<b>28.3</b>	1.70	3.55	5.87	--	4.90	--
	06/10/03	5.92	--	92.57	400	<250	<500	<b>36.9</b>	2.43	30.5	6.97	--	<b>17.1</b>	--
	09/03/03	6.30	--	92.19	258	301	<588 <sup>e</sup>	1.91	3.22	4.30	5.25	--	8.72	--
	12/12/03	5.530	--	92.960	204	<b>700</b>	304	2.45	<0.500	<0.500	<1.500	--	<5.0	--
	03/24/04	6.11	--	92.38	163	<126	<251	<b>12.6</b>	<1.00	<1.00	<3.00	--	14.6	--
	6/17/2004	5.10	--	93.39	<50.0	<118	<237	4.98	<0.500	<0.500	<1.50	--	--	<10.0
	9/23/2004	5.28	--	93.21	190	<267	<535 <sup>e</sup>	<0.50	<0.50	<0.50	<1.0	--	<10.0	--
	12/29/2004	5.42	--	93.07	<100	<241	<482	<1.00	<1.00	<1.00	<3.00	--	--	<10.0
	3/4/2005	5.73	--	92.76	<100	<241	<482	<1.00	<1.00	<1.00	<3.00	--	<10.0	--
	6/9/2005	6.10	--	92.39	<100	<236	<472	<1	<1	<1	<3	1.26	--	<15
	09/15/05	6.60	--	91.89	<48	<160	<200	<0.5	<0.5	<0.5	<1.5	--	--	<0.87
	12/15/05	5.94	--	92.55	<48	170	110	<0.2	<0.2	<0.2	<0.6	--	--	--
	03/10/06	5.34	--	93.15	<48	<76	<95	0.6	<0.2	<0.2	<0.6	--	--	--
	06/30/06	8.88	--	89.61	<48	<76	<95	<0.2	<0.2	<0.2	<0.6	1.3	--	--
	03/07/07	UNABLE TO GAUGE OR SAMPLE; PUBLIC WORKS TRUCKS PARKED OVER WELL.												
	06/01/07	5.47	--	93.02	<50	--	--	<0.5	<0.7	<0.8	<0.8	1.0	--	--
	09/06/07	6.01	--	92.48	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	0.5	--	--
	12/03/07	6.63	--	91.86	<50	<400 <sup>c</sup>	<500 <sup>c</sup>	<0.5	<0.7	<0.8	<0.8	0.6	--	--
	03/05/08	5.34	--	93.15	<50 <sup>d</sup>	<800 <sup>c,e</sup>	<1,000 <sup>c,e</sup>	<b>11</b>	<0.7	<0.8	<0.8	1	--	--
	06/11/08	5.34	0.00	93.15	<50	<800 <sup>b,c,e</sup>	<1,000 <sup>b,c,e</sup>	<b>10</b>	<0.5	<0.5	<0.5	1	--	--
	09/10/08	5.30	0.00	93.19	<50	<77	<96	<0.5	<0.7	<0.8	<0.8	1	--	--

**TABLE 2  
HISTORICAL GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS**

ConocoPhillips Facility No. 256380  
200 South 36th Street  
Bellingham, Washington

Well Name TOC Elevation	Sample Date	Elevation Data (feet)			Total Petroleum Hydrocarbons			Aromatic Hydrocarbons					Lead	
		Depth to Water	SPH Thickness	GW Elevation	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE	Total Pb	Diss Pb
<b>MW2</b>	03/11/99	7.93	--	92.81	<50	<250	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	<b>162</b>	--
100.74	05/25/99	8.18	--	92.56	<50.0	<250	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	--	--
	08/12/99	8.94	--	91.80	<50.0	281	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	--	--
	12/07/99	8.04	--	92.70	<50.0	<250	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	<b>17.0</b>	--
	02/10/00	8.32	--	92.42	<50.0	<250	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	<b>49.1</b>	--
	02/02/01	6.40	--	94.34	<50.0	<250	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	--	<1.00
	02/08/02	7.77	--	92.97	<50.0	<250	<500	<0.500	<0.500	<0.500	<1.00	--	<b>40.6</b>	<1.00
	09/20/02	9.23	--	91.51	<50.0	<250	<500	<0.500	<0.500	<0.500	<1.00	--	<1.00	--
	12/04/02	9.15	--	91.59	<50.0	<250	<500	<0.500	<0.500	<0.500	<1.00	--	2.89	--
	03/05/03	8.28	--	92.46	<50.0	<250	<500	<0.500	<0.500	<0.500	<1.00	--	<b>19.8</b>	--
	06/10/03	8.56	--	92.18	<50.0	<284	<568 <sup>e</sup>	<0.500	1.36	<0.500	2.53	--	<b>40.1</b>	--
	09/03/03	9.13	--	91.61	<80.0	<298	<595 <sup>e</sup>	0.829	1.25	0.519	2.49	--	<b>33.3</b>	--
	12/12/03	8.120	--	92.62	<50.0	<119	<237	<0.250	<0.500	<0.500	<1.500	--	<5.0	--
	03/24/04	8.13	--	92.61	<100	<124	<248	<1.00	<1.00	<1.00	<3.00	--	<b>21.3</b>	--
	6/17/2004	8.13	--	92.61	<50.0	<119	<238	<0.250	<0.500	<0.500	<1.50	--	--	<10.0
	9/23/2004	8.33	--	92.41	<50	<271	<542 <sup>e</sup>	<0.50	<0.50	<0.50	<1.0	--	<10.0	--
	12/29/2004	7.82	--	92.92	<100	<239	<478	<1.00	<1.00	<1.00	<3.00	--	--	<10.0
	3/4/2005	8.34	--	92.40	<100	<239	<478	<1.00	<1.00	<1.00	<3.00	--	<10.0	--
	6/9/2005	8.66	--	92.08	<100	<238	<475	<1	<1	<1	<3	<1	--	<15
	9/15/2005	5.40	--	95.34	<48	<75	<94	<0.5	<0.5	<0.5	<1.5	--	--	<0.87
	12/15/2005	8.44	--	92.30	<48	<75	<94	<0.2	<0.2	<0.2	<0.6	--	--	--
	3/10/2006	8.28	--	92.46	<48	<76	<95	<0.2	<0.2	<0.2	<0.6	--	--	--
	06/30/06	8.71	--	92.03	<48	<76	<95	<0.2	<0.2	<0.2	<0.6	<0.3	--	--
	03/07/07	7.80	--	92.94	<48	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	06/01/07	8.38	--	92.36	<50	--	--	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	09/06/07	9.06	--	91.68	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	12/03/07	6.69	--	94.05	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	03/05/08	8.05	--	92.69	<50	<800 <sup>c,e</sup>	<1,000 <sup>c,e</sup>	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	06/11/08	8.25	0.00	92.49	<50	<76 <sup>b</sup>	<95 <sup>b</sup>	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
	09/10/08	8.80	0.00	91.94	<50	<78	<97	<0.5	<0.7	<0.8	<0.8	<0.5	--	--

**TABLE 2  
HISTORICAL GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS**

ConocoPhillips Facility No. 256380  
200 South 36th Street  
Bellingham, Washington

Well Name TOC Elevation	Sample Date	Elevation Data (feet)			Total Petroleum Hydrocarbons			Aromatic Hydrocarbons					Lead	
		Depth to Water	SPH Thickness	GW Elevation	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE	Total Pb	Diss Pb
<b>MW3</b>	03/11/99	4.93	--	92.91	<50	<250	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	6.35	--
<b>97.84</b>	05/25/99	5.19	--	92.65	210	383	<750 <sup>e</sup>	<0.500	<0.500	3.04	3.93	--	--	--
	08/12/99	5.70	--	92.14	56.3	<250	<750 <sup>e</sup>	<0.500	<0.500	0.732	1.84	--	--	--
	12/07/99	5.03	--	92.81	94.7	<250	<750 <sup>e</sup>	<0.500	0.598	<0.500	<1.00	--	4.40	--
	02/10/00	4.92	--	92.92	<50.0	<250	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	<b>17.6</b>	--
	02/02/01	4.76	--	93.08	63.0	413	<750 <sup>e</sup>	<0.500	<0.500	0.503	<1.00	--	--	<1.00
	02/08/02	4.59	--	93.25	91.5	410	<500	<0.500	<0.500	<0.500	<1.00	--	<b>22.3</b>	<1.00
	09/20/02	5.88	--	91.96	129	372	<500	<0.500	<0.500	<0.500	<1.00	--	<1.00	--
	12/04/02	5.26	--	92.58	147	371	<500	<0.500	<0.500	<0.500	<1.00	--	4.60	--
	03/05/03	4.70	--	93.14	62.2	<250	<500	<0.500	<0.500	<0.500	<1.00	--	12.5	--
	06/10/03	5.31	--	92.53	<50.0	<250	<500	<0.500	0.562	<0.500	<1.00	--	6.90	--
	09/03/03	5.66	--	92.18	<80.0	<250	<500	2.12	0.753	<0.500	<1.00	--	<1.00	--
	12/12/03	4.785	--	93.06	<50.0	<119	<237	<0.250	<0.500	<0.500	<1.500	--	<5.0	--
	03/24/04	4.81	--	93.03	<100	<128	<256	<1.00	<1.00	<1.00	<3.00	--	<b>20.0</b>	--
	6/17/2004	4.97	--	92.87	<50.0	<119	<238	<0.250	<0.500	<0.500	<1.50	--	--	<10.0
	9/23/2004	5.03	--	92.81	140	<255	<509 <sup>e</sup>	<0.50	<0.50	<0.50	<1.0	--	<10.0	--
	12/29/2004	4.53	--	93.31	<100	<239	<478	<1.00	<1.00	<1.00	<3.00	--	--	<10.0
	3/4/2005	5.02	--	92.82	<100	<241	<482	<1.00	<1.00	<1.00	<3.00	--	<10.0	--
	6/9/2005	5.25	--	92.59	<100	<238	<475	<1	<1	<1	<3	<1	--	<15
	9/15/2005	7.20	--	90.64	<48	<75	<93	<0.5	<0.5	<0.5	<1.5	--	--	<0.87
	12/15/2005	5.09	--	92.75	<48	<75	<94	<0.2	<0.2	<0.2	<0.6	--	--	--
	3/10/2006	4.75	--	93.09	<48	<75	<94	<0.2	<0.2	<0.2	<0.6	--	--	--
	06/30/06	5.40	--	92.44	<48	<76	<95	<0.2	<0.2	<0.2	<0.6	<0.3	--	--
	03/07/07	4.42	--	93.42	<48	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	06/01/07	4.94	--	92.90	<50	--	--	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	09/06/07	5.43	--	92.41	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	12/03/07	4.70	--	93.14	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	03/05/08	4.89	--	92.95	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	06/11/08	5.11	0.00	92.73	<50	100 <sup>b</sup>	<b>560<sup>b</sup></b>	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
	09/10/08	5.30	0.00	92.54	<50	<78	<98	<0.5	<0.7	<0.8	<0.8	<0.5	--	--

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ConocoPhillips Facility No. 256380  
200 South 36th Street  
Bellingham, Washington

Well Name TOC Elevation	Sample Date	Elevation Data (feet)			Total Petroleum Hydrocarbons			Aromatic Hydrocarbons					Lead	
		Depth to Water	SPH Thickness	GW Elevation	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE	Total Pb	Diss Pb
<b>MW4</b>	03/11/99	6.39	--	93.05	<50	<250	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	<b>29.0</b>	--
99.44	05/25/99	6.62	--	92.82	<50.0	<250	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	--	--
	08/12/99	7.31	--	92.13	<50.0	<250	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	--	--
	12/07/99	6.37	--	93.07	<50.0	<250	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	10.2	--
	02/10/00	6.48	--	92.96	<50.0	<250	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	<b>23.6</b>	--
	02/02/01	6.37	--	93.07	<50.0	<250	<750 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	--	<1.00
	02/08/02	6.03	--	93.41	<50.0	<250	<500	<0.500	<0.500	<0.500	<1.00	--	3.30	<1.00
	09/20/02	7.37	--	92.07	<50.0	<250	<500	<0.500	<0.500	<0.500	<1.00	--	<1.00	--
	12/04/02	7.03	--	92.41	<50.0	<250	<500	<0.500	<0.500	<0.500	<1.00	--	<1.00	--
	03/05/03	6.33	--	93.11	<50.0	<284	<568 <sup>e</sup>	<0.500	<0.500	<0.500	<1.00	--	6.81	--
	06/10/03	6.99	--	92.45	<50.0	<250	<500	<0.500	0.687	<0.500	1.26	--	10.5	--
	09/03/03	7.60	--	91.84	<80.0	<312	<625 <sup>e</sup>	0.620	<0.500	<0.500	<1.00	--	2.75	--
	12/12/03	6.485	--	92.96	<50.0	<118	<237	<0.250	<0.500	<0.500	<1.500	--	<5.0	--
	03/24/04	6.54	--	92.90	<100	<133	<265	<1.00	<1.00	<1.00	<3.00	--	<5.0	--
	6/17/2004	5.91	--	93.53	<50.0	<119	<237	<0.250	<0.500	<0.500	<1.50	--	--	<10.0
	9/23/2004	6.52	--	92.92	<50	<259	<518 <sup>e</sup>	<0.50	<0.50	<0.50	<1.0	--	<10.0	--
	12/29/2004	6.14	--	93.30	<100	<240	<480	<1.00	<1.00	<1.00	<3.00	--	--	<10.0
	3/4/2005	6.65	--	92.79	<100	<240	<481	<1.00	<1.00	<1.00	<3.00	--	<10.0	--
	6/9/2005	6.91	--	92.53	<100	<237	<473	<1	<1	<1	<3	<1	--	<15
	9/15/2005	6.10	--	93.34	<48	150	<93	<0.5	<0.5	<0.5	<1.5	--	--	<0.87
	12/15/2005	6.73	--	92.71	<48	180	<94	<0.2	<0.2	<0.2	<0.6	--	--	--
	3/10/2006	6.28	--	93.16	<48	<75	<94	<0.2	<0.2	<0.2	<0.6	--	--	--
	06/03/06	6.80	--	92.64	<48	130	<95	<0.2	<0.2	<0.2	<0.6	0.8	--	--
	03/07/07	5.81	--	93.63	<48	83	<95	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	06/01/07	6.60	--	92.84	<50	--	--	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	09/06/07	7.12	--	92.32	<50	170	<95	<0.5	<0.7	<0.8	<0.8	0.6	--	--
	12/03/07	6.00	--	93.44	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	03/05/08	6.17	--	93.27	<50	<77	<96	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	06/11/08	6.02	0.00	93.42	<50	<75 <sup>b</sup>	<94 <sup>b</sup>	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
	09/10/08	6.85	0.00	92.59	<50	<78	<97	<0.5	<0.7	<0.8	<0.8	<0.5	--	--

**TABLE 2  
HISTORICAL GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS**

ConocoPhillips Facility No. 256380  
200 South 36th Street  
Bellingham, Washington

Well Name TOC Elevation	Sample Date	Elevation Data (feet)			Total Petroleum Hydrocarbons			Aromatic Hydrocarbons					Lead	
		Depth to Water	SPH Thickness	GW Elevation	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE	Total Pb	Diss Pb
<b>MW-5</b>	1/11/2006	4.04	--	97.10	<48	<75	<94	1.7	<0.2	<0.2	<0.6	--	<8.4	--
101.14	3/10/2006	3.81	--	97.33	65	<75	<94	<b>13</b>	0.2	<0.2	<0.6	--	--	--
	06/30/06	4.46	--	96.68	57	<76	<95	8.6	<0.2	<0.2	<0.6	<5.0	--	--
	03/07/07	3.48	--	97.66	<48	<76	<94	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	06/01/07	4.10	--	97.04	<50	--	--	<0.5	<0.7	<0.8	<0.8	0.6	--	--
	09/06/07	4.43	--	96.71	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	12/03/07	4.64	--	96.50	<50	<b>99</b>	<95	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	03/05/08	4.36	--	96.78	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	06/11/08	4.21	0.00	96.93	<50	91	<94	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
	09/10/08	4.30	0.00	96.84	<50	<78	<98	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
<b>MW-6</b>	1/11/2006	4.89	--	94.85	<48	<75	<94	<0.2	<0.2	<0.2	<0.6	--	<8.4	--
99.74	3/10/2006	5.47	--	94.27	<48	<76	<95	<0.2	<0.2	<0.2	<0.6	--	--	--
	06/30/06	6.50	--	93.24	<48	<80	<100	<0.2	<0.2	<0.2	<0.6	<0.3	--	--
	03/07/07	5.08	--	94.66	<48	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	06/10/07	5.73	--	94.01	<50	--	--	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	09/06/07	6.22	--	93.52	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	12/03/07	5.46	--	94.28	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	03/05/08	5.46	--	94.28	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	06/11/08	5.39	0.00	94.35	<50	<76	250	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
	09/10/08	5.95	0.00	93.79	<50	<79	<98	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
<b>MW-7</b>	1/11/2006	6.07	--	93.57	160	<b>780<sup>b</sup></b>	<94 <sup>b</sup>	<0.2	<0.2	<0.2	<0.6	2.5	<8.4	--
99.64	3/10/2006	6.71	--	92.93	140	<b>540</b>	<94	<0.2	<0.2	<0.2	<0.6	--	--	--
	06/30/06	7.31	--	92.33	190	1,000	<480	0.2	<0.2	<0.2	<0.6	2	--	--
	03/07/07	6.00	--	93.64	340	<b>870</b>	<94	<0.5	<0.7	<0.8	<0.8	0.7	--	--
	06/01/07	6.99	--	92.65	210	--	--	<0.5	<0.7	<0.8	<0.8	0.8	--	--
	09/06/07	7.47	--	92.17	250	<b>1,000</b>	160	<0.5	<0.7	<0.8	<0.8	0.8	--	--
	12/03/07	4.97	--	94.67	400	<b>970</b>	140	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	03/05/08	6.47	--	93.17	240	<b>930</b>	100	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	06/11/08	6.13	0.00	93.51	240	<b>1,300</b>	<b>860</b>	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
	09/10/08	7.20	0.00	92.44	250	<b>580</b>	<97	<0.5	<0.7	<0.8	<0.8	<0.5	--	--

**TABLE 2  
HISTORICAL GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS**

ConocoPhillips Facility No. 256380  
200 South 36th Street  
Bellingham, Washington

Well Name TOC Elevation	Sample Date	Elevation Data (feet)			Total Petroleum Hydrocarbons			Aromatic Hydrocarbons					Lead	
		Depth to Water	SPH Thickness	GW Elevation	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE	Total Pb	Diss Pb
<b>MW-8</b>	1/11/2006	7.00	--	95.70	<48	<76	<95	<0.2	<0.2	<0.2	<0.6	--	<8.4	--
102.7	3/10/2006	7.50	--	95.20	<48	<75	<94	<0.2	<0.2	<0.2	<0.6	--	--	--
	06/30/06	7.97	--	94.73	<48	<77	<96	<0.2	<0.2	<0.2	<0.6	<0.3	--	--
	03/07/07	6.93	--	95.77	<48	<75	<94	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	06/01/07	7.77	--	94.93	<50	--	--	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	09/06/07	8.45	--	94.25	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	12/03/07	7.51	--	95.19	<50	<76	290	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	03/05/08	7.30	--	95.40	<50	<150	<b>860</b>	<0.5	<0.7	<0.8	<0.8	<0.5	--	--
	06/11/08	7.22	0.00	95.48	<50 <sup>d</sup>	240	<b>1,000</b>	<0.5 <sup>d</sup>	0.7 <sup>d</sup>	<0.5 <sup>d</sup>	<0.5 <sup>d</sup>	<0.5 <sup>d</sup>	--	--
	09/10/08	8.20	0.00	94.50	<50	<79	<99	<0.5	<0.7	<0.8	<0.8	<0.5	--	--

<b>MTCA Method A Cleanup Levels</b>				<b>1000/800<sup>a</sup></b>	<b>500</b>	<b>500</b>	<b>5</b>	<b>1000</b>	<b>700</b>	<b>1000</b>	<b>20</b>	<b>15</b>	<b>15</b>
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**NOTES:**

TOC = Top of Casing

All concentrations are in ug/L (ppb).

Wellhead elevations were taken from prior consultant's reports.

DTW = Depth to water in feet below top of casing

GW Elev. = Groundwater elevation relative to top of casing elevation

TPH-G = Total Petroleum Hydrocarbons as Gasoline by Ecology Method NWTPH-Gx

TPH-D and TPH-O = Total Petroleum Hydrocarbons as Diesel and Oil, respectively, by Ecology Method NWTPH-Dx

B = Benzene; T = Toluene; E = Ethylbenzene; X = Total Xylenes

BTEX = Aromatic compounds by EPA Method 8020, 8021B or 8260B, refer to laboratory reports.

Prior to 12/12/03 Total Pb by EPA Method 6020; Diss Pb = Dissolved lead by EPA Method 6020

After 9/03/03 Total Pb = Total lead by ICP-USEPA Method 6010; Diss Pb = Dissolved lead by ICP-USEPA Method 6010

-- = Not Analyzed or Sampled

< = Less than the stated laboratory reporting limit

Shaded values equal or exceed MTCA Method A Cleanup Levels.

<sup>a</sup> Concentration levels stated by MTCA Method A for TPH-G are 1000 ug/L when no benzene is present and 800 ug/L when benzene is present.

Data collected before 12/12/03 are taken from prior consultants.

<sup>b</sup> The recovery for the laboratory control sample (LCS) with this sample is below quality control limits. Since no sample remained for a reextraction the data is reported.

<sup>c</sup> Due to the nature of the sample matrix, a reduced aliquot was used for analysis. The reporting limits were raised accordingly.

<sup>d</sup> Preservation requirements were not met. The vial submitted for volatile analysis did not have a pH < 2 at the time of analyses. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt. The pH of this sample was pH=6.

<sup>e</sup> The laboratory reporting limits (RLs) are above current MTCA Method A cleanup levels

**ATTACHMENT 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.

**ATTACHMENT B  
FIELD DATA SHEETS**

**SITE VISITATION REPORT**  
**3Q08 - CP RM&R 1571 Bellingham, Washington**

Name(s) David Reitz Date: 9/10/08 Time of Arrival Call-In: 0800  
 Arrival Time: 0730 Departure Time: 1650 Time of Departure Call-In: 1650  
 Who did you call? T. Parise

**DRUM INVENTORY**

<u>1</u>	<u>Purge &amp; Decon.</u>				
	WATER		CARBON	TOTAL OPEN TOP	<u>1</u>
	SOIL		EMPTY	TOTAL BUNG TOP	

**HEALTH AND SAFETY ASSESSMENT**

Review HASP, J.S.A., & P.T.U. documentation  
Apply appropriate p.p.e.

**DESCRIPTION OF ACTIVITIES ONSITE AND NOTES**

0730 Arrive on site. Purchase ice. Conduct safety meeting.  
0750 Set-up decon. station, & placement of drums onto stage.  
0800 Call in to office, don p.p.e., & initiate gauging of physical  
measurements of monitoring wells.  
0910 Complete gauging procedures.  
0930 Initiate groundwater sampling procedures  
0950 Sample MW-1  
1050 Sample MW-2  
1135 Sample MW-3  
1220 Sample MW-4  
1330 Sample MW-5  
1415 Sample MW-6  
1500 Sample MW-8  
1550 Sample MW-7  
1615 Decon. equipment and release purge water and decon.  
solutions into waste drum  
1645 Package samples, load equipment & complete documentation  
1730 Call-in to office. Depart job site

**SECOR International Incorporated**  
HYDROLOGIC DATA SHEET

Gauge Date: 9 / 10 / 08

Project Name: CP RM&R 1571 Bellingham

Field Technician: DAVE REITZ

Project Number: 01CP.0571.41.8504

DTP = Depth to Free Product (FP or NAPL) 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-1		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0800		5.30	22.80	Y	N	Y	
MW-2		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0810		8.80	20.80	Y	N	Y	
MW-3		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0820		5.30	21.10	Y	N	Y	
MW-4		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0830		6.85	20.50	Y	N	Y	
MW-5		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0840		4.30	13.80	Y	N	Y	
MW-6		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0850		5.95	13.95	Y	N	Y	
MW-8		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0900		8.20	17.70	Y	N	Y	
MW-7		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0910		7.20	18.10	Y	N	Y	

# Stantec Consulting Corporation

## WATER SAMPLE FIELD DATA SHEET

PROJECT #: 01CP.01571.41 PURGED BY: D. Reitz WELL I.D.: MW-1  
 CLIENT NAME: Conoco Phillips SAMPLED BY: D. Reitz SAMPLE I.D.: MW-1  
 LOCATION: #1571 Bellingham, WA.

DATE PURGED: 9/10/08 START (2400hr): 0930 END (2400hr): 1010  
 DATE SAMPLED: 9/10/08 SAMPLE TIME (2400hr): 0950 LOW-FLOW USED:   
 SAMPLE TYPE: Groundwater  Surface Water \_\_\_\_\_ Treatment Effluent \_\_\_\_\_ Other \_\_\_\_\_

CASING DIAMETER: 2"  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) = 22.80  
 DEPTH TO WATER (feet) = 5.30  
 WATER COLUMN HEIGHT (feet) = 17.50 ACTUAL PURGE (L) = 3.5

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (ML)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
<u>9/10/08</u>	<u>0935</u>	<u>500</u>	<u>16.85</u>	<u>0.885</u>	<u>7.08</u>	<u>CI</u>
<u>9/10/08</u>	<u>0938</u>	<u>500</u>	<u>17.61</u>	<u>0.945</u>	<u>7.03</u>	<u>CI</u>
<u>9/10/08</u>	<u>0941</u>	<u>500</u>	<u>17.94</u>	<u>1.03</u>	<u>7.00</u>	<u>CI</u>
<u>9/10/08</u>	<u>0944</u>	<u>500</u>	<u>17.84</u>	<u>1.08</u>	<u>7.01</u>	<u>CI</u>
<u>9/10/08</u>	<u>0947</u>	<u>500</u>	<u>17.90</u>	<u>1.05</u>	<u>7.02</u>	<u>CI</u>
<u>9/10/08</u>	<u>0950</u>	<u>500</u>	<u>17.87</u>	<u>1.11</u>	<u>7.02</u>	<u>CI</u>
Calculated Variance of Final Three Samples:			<u>0.06</u>	<u>0.06</u>	<u>0.01</u>	
Acceptable Variance Limits:			<u>≤ 10%</u>	<u>≤ 3%</u>	<u>≤ 0.1</u>	

DEPTH TO PURGE INTAKE DURING PURGE: 21.00 SAMPLE DTW: 6.70

ANTICIPATED PURGE INTAKE DEPTH: 21.00 ANALYSES: TPH-G TPH-D  
BTEX (8260)  
MTBE (8260)  
 SAMPLE VESSEL / PRESERVATIVE: Glass / HCL

PURGING EQUIPMENT:  
Peristaltic pump  
Interface probe Horiba water meter

SAMPLING EQUIPMENT:  
Peristaltic pump

Flow Through Cell Disconnected Prior to Sample Collection? YES  NO \_\_\_\_\_

WELL PAD CONDITION: Fair WELL CASING CONDITION: Fair  
 WELL VAULT CONDITION: Fair SEAL PRESENT?: YES BOLTS PRESENT?: YES  
 WELL INTEGRITY: Fair WELL TAG: YES LOCK#: YES

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

SIGNATURE: [Signature] Page 1 of 1







# Stantec Consulting Corporation

## WATER SAMPLE FIELD DATA SHEET

PROJECT #: OICP.01571.41 PURGED BY: D. Reitz WELL I.D.: MW-5  
 CLIENT NAME: Conoco Phillips SAMPLED BY: D. Reitz SAMPLE I.D.: MW-5  
 LOCATION: #1571 Bellingham WA.

DATE PURGED: 9/10/08 START (2400hr): 1310 END (2400hr): 1350  
 DATE SAMPLED: 9/10/08 SAMPLE TIME (2400hr): 1330 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) = 13.80  
 DEPTH TO WATER (feet) = 4.30  
 WATER COLUMN HEIGHT (feet) = 9.50 ACTUAL PURGE (L) = 3.5

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (ML)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
<u>9/10/08</u>	<u>1315</u>	<u>500</u>	<u>19.51</u>	<u>1.14</u>	<u>8.08</u>	<u>CI</u>
<u>9/10/08</u>	<u>1318</u>	<u>500</u>	<u>19.66</u>	<u>1.11</u>	<u>7.87</u>	<u>CI</u>
<u>9/10/08</u>	<u>1321</u>	<u>500</u>	<u>19.75</u>	<u>1.09</u>	<u>7.72</u>	<u>CI</u>
<u>9/10/08</u>	<u>1324</u>	<u>500</u>	<u>19.73</u>	<u>1.09</u>	<u>7.61</u>	<u>CI</u>
<u>9/10/08</u>	<u>1327</u>	<u>500</u>	<u>19.64</u>	<u>1.10</u>	<u>7.59</u>	<u>CI</u>
<u>9/10/08</u>	<u>1330</u>	<u>500</u>	<u>19.47</u>	<u>1.12</u>	<u>7.57</u>	<u>CI</u>
Calculated Variance of Final Three Samples:			<u>0.26</u>	<u>0.03</u>	<u>0.04</u>	
Acceptable Variance Limits:			<u>≤ 10%</u>	<u>≤ 3%</u>	<u>≤ 0.1</u>	

DEPTH TO PURGE INTAKE DURING PURGE: 12.00 SAMPLE DTW: 5.50

ANTICIPATED PURGE INTAKE DEPTH: 12.00 ANALYSES: TPH-G TPH-D  
BTEX (8260)  
MTBE (8260)  
 SAMPLE VESSEL / PRESERVATIVE: Glass / HCL

PURGING EQUIPMENT: Peristaltic pump SAMPLING EQUIPMENT: Peristaltic pump  
Interface probe Horiba water meter

Flow Through Cell Disconnected Prior to Sample Collection? YES X NO \_\_\_\_\_  
 WELL PAD CONDITION: Fair WELL CASING CONDITION: Fair  
 WELL VAULT CONDITION: Fair SEAL PRESENT?: yes BOLTS PRESENT?: No  
 WELL INTEGRITY: Fair WELL TAG: yes LOCK#: yes

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

SIGNATURE: [Signature] Page 1 of 1







# ConocoPhillips Analysis Request/Chain of Custody



000657

For Lancaster Laboratories use only

Acct. #: \_\_\_\_\_ Group # \_\_\_\_\_ Sample #: \_\_\_\_\_

SCR#: \_\_\_\_\_

**Analyses Requested** List total number of containers in the box under each analysis.

Site #: <u>6380</u> WNO #: _____ Site Address: <u>260 South 26th St</u> ConocoPhillips PM: <u>Aranda Moore</u> Company Code: _____ Core Work Order#: _____ Total Lab Budget: _____ Consultant/Office: <u>Stanley &amp; Robinson</u> Consultant Prj. Mgr: _____ Consultant Phone #: _____ Fax #: _____ Sampler: <u>David Keiz</u>	<b>Matrix</b>  <input type="checkbox"/> Potable <input type="checkbox"/> NPDES  <input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="12">Preservation Codes</th> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>	Preservation Codes																								Preservative Codes H = HCl      T = Thiosulfate N = HNO <sub>3</sub> B = NaOH S = H <sub>2</sub> SO <sub>4</sub> O = Other
Preservation Codes																											

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Remarks
MW-1	8/10/08	0950							
MW-2		1050							
MW-3		1135							
MW-4		1220							
MW-5		1330							
MW-6		1415							
MW-7		1500							
MW-8		1650							

<b>Turnaround Time Requested in Business Days (TAT) (please circle):</b> STD. TAT      5 day      48 hour 24 hour      other _____	Relinquished by: <u>David Keiz</u> Relinquished by: _____ Relinquished by: _____ Relinquished by: _____ Relinquished by Commercial Carrier: _____ UPS _____ FedEx _____ Other _____	Date    Time 8/11/08 1500 _____ _____ _____ _____	Received by: _____ Received by: _____ Received by: _____ Received by: _____ Temperature Upon Receipt _____ C°	Date    Time _____ _____ _____ _____
<b>Reporting Requirements (please circle)</b> NJ Reduced      NY ASP Cat. A      Raw Data      Diskette NY ASP Cat. B      Full Type I      Other _____ (Standard Reporting Summary)				

**ATTACHMENT C  
CERTIFIED LABORATORY ANALYTICAL REPORT  
AND CHAIN OF CUSTODY DOCUMENTATION**

## ANALYTICAL RESULTS

Prepared for:

ConocoPhillips  
5528 NW Doane Ave.  
Portland OR 97210

Prepared by:

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

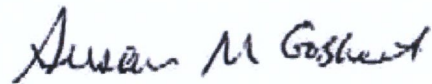
The sample group for this submittal is 1109815. Samples arrived at the laboratory on Friday, September 12, 2008. The PO# for this group is 4509020542 and the release number is NOLL.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
MW-1 Water Sample	5466925
MW-2 Water Sample	5466926
MW-3 Water Sample	5466927
MW-4 Water Sample	5466928
MW-5 Water Sample	5466929
MW-6 Water Sample	5466930
MW-7 Water Sample	5466931
MW-8 Water Sample	5466932
Trip Blank Water Sample	5466933

ELECTRONIC COPY TO	Stantec	Attn: Alice Larsen
ELECTRONIC COPY TO	Stantec	Attn: Tammy Parise
ELECTRONIC COPY TO	ConocoPhillips	Attn: Amanda Magee

Questions? Contact your Client Services Representative  
Barbara A Weyandt at (717) 656-2300

Respectfully Submitted,



**Susan M. Goshert**  
Group Leader

Lancaster Laboratories Sample No. WW5466925

Group No. 1109815

**MW-1 Water Sample**

Site# 1571 (256380)

200 S 36th St - Bellingham, WA

Collected: 09/10/2008 09:50 by DR

Account Number: 11817

Submitted: 09/12/2008 09:40

Reported: 09/23/2008 at 16:48

Discard: 10/24/2008

ConocoPhillips

5528 NW Doane Ave.

Portland OR 97210

36B01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	77	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	96	ug/l	1
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	N.D.	50	ug/l	1
02300	GC/MS Volatiles					
02010	Methyl Tertiary Butyl Ether	1634-04-4	1	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

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 Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	09/19/2008 02:33	Heather E Williams	1
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	09/20/2008 03:27	Carrie E Youtzy	1
02300	GC/MS Volatiles	SW-846 8260B	1	09/16/2008 01:33	Matthew S Woods	1
01146	GC VOA Water Prep	SW-846 5030B	1	09/20/2008 03:27	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	09/16/2008 01:33	Matthew S Woods	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	09/16/2008 03:45	Tracy L Schickel	1

Lancaster Laboratories Sample No. WW5466926

Group No. 1109815

**MW-2 Water Sample**

Site# 1571 (256380)

200 S 36th St - Bellingham, WA

Collected: 09/10/2008 10:50 by DR

Account Number: 11817

Submitted: 09/12/2008 09:40

Reported: 09/23/2008 at 16:48

Discard: 10/24/2008

ConocoPhillips

5528 NW Doane Ave.

Portland OR 97210

36B02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	78	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	97	ug/l	1
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	N.D.	50	ug/l	1
02300	GC/MS Volatiles					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

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 Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	09/19/2008 02:57	Heather E Williams	1
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	09/20/2008 03:49	Carrie E Youtzy	1
02300	GC/MS Volatiles	SW-846 8260B	1	09/16/2008 00:22	Matthew S Woods	1
01146	GC VOA Water Prep	SW-846 5030B	1	09/20/2008 03:49	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	09/16/2008 00:22	Matthew S Woods	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	09/16/2008 03:45	Tracy L Schickel	1

Lancaster Laboratories Sample No. WW5466927

Group No. 1109815

**MW-3 Water Sample**

Site# 1571 (256380)

200 S 36th St - Bellingham, WA

Collected: 09/10/2008 11:35 by DR

Account Number: 11817

Submitted: 09/12/2008 09:40

Reported: 09/23/2008 at 16:49

Discard: 10/24/2008

ConocoPhillips

5528 NW Doane Ave.

Portland OR 97210

36B03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	78	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	98	ug/l	1
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	N.D.	50	ug/l	1
02300	GC/MS Volatiles					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

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 Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	09/19/2008 03:21	Heather E Williams	1
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	09/20/2008 04:33	Carrie E Youtzy	1
02300	GC/MS Volatiles	SW-846 8260B	1	09/16/2008 01:56	Matthew S Woods	1
01146	GC VOA Water Prep	SW-846 5030B	1	09/20/2008 04:33	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	09/16/2008 01:56	Matthew S Woods	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	09/16/2008 03:45	Tracy L Schickel	1



# Analysis Report

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Page 1 of 1

Lancaster Laboratories Sample No. WW5466928

Group No. 1109815

**MW-4 Water Sample**

Site# 1571 (256380)

200 S 36th St - Bellingham, WA

Collected: 09/10/2008 12:20 by DR

Account Number: 11817

Submitted: 09/12/2008 09:40

Reported: 09/23/2008 at 16:49

Discard: 10/24/2008

ConocoPhillips

5528 NW Doane Ave.

Portland OR 97210

36B04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	78	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	97	ug/l	1
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	N.D.	50	ug/l	1
02300	GC/MS Volatiles					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

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 Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	09/19/2008 03:45	Heather E Williams	1
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	09/20/2008 04:55	Carrie E Youtzy	1
02300	GC/MS Volatiles	SW-846 8260B	1	09/16/2008 02:20	Matthew S Woods	1
01146	GC VOA Water Prep	SW-846 5030B	1	09/20/2008 04:55	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	09/16/2008 02:20	Matthew S Woods	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	09/16/2008 03:45	Tracy L Schickel	1



# Analysis Report

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Page 1 of 1

Lancaster Laboratories Sample No. WW5466929

Group No. 1109815

**MW-5 Water Sample**

Site# 1571 (256380)

200 S 36th St - Bellingham, WA

Collected: 09/10/2008 13:30 by DR

Account Number: 11817

Submitted: 09/12/2008 09:40

Reported: 09/23/2008 at 16:49

Discard: 10/24/2008

ConocoPhillips

5528 NW Doane Ave.

Portland OR 97210

36B05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	78	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	98	ug/l	1
08273	TPH by NWTTPH-Gx waters					
01645	TPH by NWTTPH-Gx waters	n.a.	N.D.	50	ug/l	1
02300	GC/MS Volatiles					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTTPH-Dx(water) w/SiGel	ECY 97-602 NWTTPH-Dx modified	1	09/19/2008 04:09	Heather E Williams	1
08273	TPH by NWTTPH-Gx waters	ECY 97-602 NWTTPH-Gx modified	1	09/22/2008 14:25	Carrie E Youtzy	1
02300	GC/MS Volatiles	SW-846 8260B	1	09/16/2008 02:43	Matthew S Woods	1
01146	GC VOA Water Prep	SW-846 5030B	1	09/22/2008 14:25	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	09/16/2008 02:43	Matthew S Woods	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTTPH-Dx 06/97	1	09/16/2008 03:45	Tracy L Schickel	1

Lancaster Laboratories Sample No. WW5466930

Group No. 1109815

**MW-6 Water Sample**

Site# 1571 (256380)

200 S 36th St - Bellingham, WA

Collected: 09/10/2008 14:15 by DR

Account Number: 11817

Submitted: 09/12/2008 09:40

Reported: 09/23/2008 at 16:49

Discard: 10/24/2008

ConocoPhillips

5528 NW Doane Ave.

Portland OR 97210

36B06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	79	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	98	ug/l	1
08273	TPH by NWTTPH-Gx waters					
01645	TPH by NWTTPH-Gx waters	n.a.	N.D.	50	ug/l	1
02300	GC/MS Volatiles					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

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 Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
02211	TPH by NWTTPH-Dx(water) w/SiGel	ECY 97-602 NWTTPH-Dx modified	1	09/18/2008 18:19	Diane V Do	1
08273	TPH by NWTTPH-Gx waters	ECY 97-602 NWTTPH-Gx modified	1	09/22/2008 14:47	Carrie E Youtzy	1
02300	GC/MS Volatiles	SW-846 8260B	1	09/16/2008 03:06	Matthew S Woods	1
01146	GC VOA Water Prep	SW-846 5030B	1	09/22/2008 14:47	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	09/16/2008 03:06	Matthew S Woods	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTTPH-Dx 06/97	1	09/16/2008 15:30	Doreen K Robles	1

Lancaster Laboratories Sample No. **WW5466931**

 Group No. **1109815**
**MW-7 Water Sample**

Site# 1571 (256380)

200 S 36th St - Bellingham, WA

Collected: 09/10/2008 15:00 by DR

Account Number: 11817

Submitted: 09/12/2008 09:40

Reported: 09/23/2008 at 16:49

Discard: 10/24/2008

ConocoPhillips

5528 NW Doane Ave.

Portland OR 97210

36B07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	580	78	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	97	ug/l	1
08273	TPH by NWTTPH-Gx waters					
01645	TPH by NWTTPH-Gx waters	n.a.	250	50	ug/l	1
02300	GC/MS Volatiles					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

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 Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
02211	TPH by NWTTPH-Dx(water) w/SiGel	ECY 97-602 NWTTPH-Dx modified	1	09/18/2008 15:37	Diane V Do	1
08273	TPH by NWTTPH-Gx waters	ECY 97-602 NWTTPH-Gx modified	1	09/22/2008 15:09	Carrie E Youtzy	1
02300	GC/MS Volatiles	SW-846 8260B	1	09/17/2008 10:56	Matthew S Woods	1
01146	GC VOA Water Prep	SW-846 5030B	1	09/22/2008 15:09	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	09/17/2008 10:56	Matthew S Woods	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTTPH-Dx 06/97	1	09/16/2008 15:30	Doreen K Robles	1



# Analysis Report

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

Page 1 of 1

Lancaster Laboratories Sample No. WW5466932

Group No. 1109815

**MW-8 Water Sample**

Site# 1571 (256380)

200 S 36th St - Bellingham, WA

Collected: 09/10/2008 15:50 by DR

Account Number: 11817

Submitted: 09/12/2008 09:40

Reported: 09/23/2008 at 16:49

Discard: 10/24/2008

ConocoPhillips

5528 NW Doane Ave.

Portland OR 97210

36B08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	79	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	99	ug/l	1
08273	TPH by NWTTPH-Gx waters					
01645	TPH by NWTTPH-Gx waters	n.a.	N.D.	50	ug/l	1
02300	GC/MS Volatiles					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTTPH-Dx(water) w/SiGel	ECY 97-602 NWTTPH-Dx modified	1	09/18/2008 19:00	Diane V Do	1
08273	TPH by NWTTPH-Gx waters	ECY 97-602 NWTTPH-Gx modified	1	09/22/2008 15:31	Carrie E Youtzy	1
02300	GC/MS Volatiles	SW-846 8260B	1	09/17/2008 11:19	Matthew S Woods	1
01146	GC VOA Water Prep	SW-846 5030B	1	09/22/2008 15:31	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	09/17/2008 11:19	Matthew S Woods	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTTPH-Dx 06/97	1	09/16/2008 15:30	Doreen K Robles	1



# Analysis Report

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Page 1 of 1

Lancaster Laboratories Sample No. **WW5466933**

Group No. **1109815**

Trip Blank Water Sample  
Site# 1571 (256380)  
200 S 36th St - Bellingham, WA  
Collected: 09/10/2008

Account Number: 11817

Submitted: 09/12/2008 09:40  
Reported: 09/23/2008 at 16:49  
Discard: 10/24/2008

ConocoPhillips  
5528 NW Doane Ave.  
Portland OR 97210

36BTR

CAT No.	Analysis Name	CAS Number	As Received Result	As Received		Units	Dilution Factor
				Method	Detection Limit		
02300	GC/MS Volatiles						
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5		ug/l	1
05401	Benzene	71-43-2	N.D.	0.5		ug/l	1
05407	Toluene	108-88-3	N.D.	0.7		ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8		ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8		ug/l	1

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 Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
02300	GC/MS Volatiles	SW-846 8260B	1	09/18/2008 11:13	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	09/18/2008 11:13	Jason M Long	1

## Quality Control Summary

 Client Name: ConocoPhillips  
 Reported: 09/23/08 at 04:49 PM

Group Number: 1109815

Matrix QC may not be reported if 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.

### Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 082590038A	Sample number(s): 5466925-5466929							
Diesel Range Organics	N.D.	80.	ug/l	81		61-106		
Heavy Range Organics	N.D.	100.	ug/l					
Batch number: 082600009A	Sample number(s): 5466930-5466932							
Diesel Range Organics	N.D.	80.	ug/l	63	73	61-106	15	20
Heavy Range Organics	N.D.	100.	ug/l					
Batch number: 08263C20A	Sample number(s): 5466925-5466928							
TPH by NWTPH-Gx waters	N.D.	50.	ug/l	106	107	75-135	1	30
Batch number: 08266A20A	Sample number(s): 5466929-5466932							
TPH by NWTPH-Gx waters	N.D.	50.	ug/l	92	101	75-135	9	30
Batch number: L082611AA	Sample number(s): 5466931-5466932							
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	102		73-119		
Benzene	N.D.	0.5	ug/l	98		78-119		
Toluene	N.D.	0.7	ug/l	100		85-115		
Ethylbenzene	N.D.	0.8	ug/l	99		82-119		
Xylene (Total)	N.D.	0.8	ug/l	101		83-113		
Batch number: L082622AA	Sample number(s): 5466933							
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	104		73-119		
Benzene	N.D.	0.5	ug/l	100		78-119		
Toluene	N.D.	0.7	ug/l	101		85-115		
Ethylbenzene	N.D.	0.8	ug/l	100		82-119		
Xylene (Total)	N.D.	0.8	ug/l	102		83-113		
Batch number: T082592AA	Sample number(s): 5466925-5466930							
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	97		73-119		
Benzene	N.D.	0.5	ug/l	107		78-119		
Toluene	N.D.	0.7	ug/l	110		85-115		
Ethylbenzene	N.D.	0.8	ug/l	101		82-119		
Xylene (Total)	N.D.	0.8	ug/l	104		83-113		

### Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 082590038A	Sample number(s): 5466925-5466929 BKG: P465154								

\*- 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: ConocoPhillips  
 Reported: 09/23/08 at 04:49 PM

Group Number: 1109815

### Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Diesel Range Organics						1,800	2,000	11 (1)	20
Heavy Range Organics						N.D.	N.D.	0 (1)	20
Batch number: 08263C20A TPH by NWTPH-Gx waters	Sample number(s): 5466925-5466928 UNSPK: P463783 49* 63-154								
Batch number: 08266A20A TPH by NWTPH-Gx waters	Sample number(s): 5466929-5466932 UNSPK: P467186 105 98 63-154 7 30								
Batch number: L082611AA Methyl Tertiary Butyl Ether	Sample number(s): 5466931-5466932 UNSPK: P467186 95 93 69-127 2 30								
Benzene	95	93	83-128	2	30				
Toluene	97	95	83-127	3	30				
Ethylbenzene	97	93	82-129	4	30				
Xylene (Total)	97	94	82-130	3	30				
Batch number: L082622AA Methyl Tertiary Butyl Ether	Sample number(s): 5466933 UNSPK: P465545 103 104 69-127 1 30								
Benzene	105	105	83-128	0	30				
Toluene	107	106	83-127	0	30				
Ethylbenzene	106	105	82-129	1	30				
Xylene (Total)	106	106	82-130	0	30				
Batch number: T082592AA Methyl Tertiary Butyl Ether	Sample number(s): 5466925-5466930 UNSPK: 5466926 97 100 69-127 3 30								
Benzene	120	118	83-128	1	30				
Toluene	122	123	83-127	0	30				
Ethylbenzene	113	112	82-129	1	30				
Xylene (Total)	117	117	82-130	0	30				

### 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: TPH by NWTPH-Dx(water) w/SiGel  
 Batch number: 082590038A  
 Orthoterphenyl

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5466925	102
5466926	87
5466927	97
5466928	95
5466929	100
Blank	97
DUP	94
LCS	103

---

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.

## Quality Control Summary

Client Name: ConocoPhillips  
Reported: 09/23/08 at 04:49 PM

Group Number: 1109815

### Surrogate Quality Control

Analysis Name: TPH by NWTPH-Dx(water) w/SiGel  
Batch number: 082600009A  
Orthoterphenyl

5466930	92
5466931	88
5466932	80
Blank	86
LCS	90
LCSD	98

Limits: 50-150

Analysis Name: TPH by NWTPH-Gx waters  
Batch number: 08263C20A  
Trifluorotoluene-F

5466925	82
5466926	80
5466927	83
5466928	83
Blank	81
LCS	122
LCSD	126
MS	96

Limits: 63-135

Analysis Name: TPH by NWTPH-Gx waters  
Batch number: 08266A20A  
Trifluorotoluene-F

5466929	94
5466930	81
5466931	87
5466932	85
Blank	81
LCS	119
LCSD	121
MS	120
MSD	118

Limits: 63-135

Analysis Name: GC/MS Volatiles  
Batch number: L082611AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5466931	97	96	94	89
5466932	96	95	98	87
Blank	97	94	95	86
LCS	97	91	98	92
MS	97	92	98	91
MSD	97	95	99	92

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

Analysis Name: GC/MS Volatiles

\*- 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: ConocoPhillips  
Reported: 09/23/08 at 04:49 PM

Group Number: 1109815

### Surrogate Quality Control

Batch number: L082622AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5466933	97	94	95	87
Blank	97	94	95	88
LCS	97	93	97	91
MS	98	96	98	91
MSD	98	93	98	91
Limits:	80-116	77-113	80-113	78-113

Analysis Name: GC/MS Volatiles  
Batch number: T082592AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5466925	93	89	100	103
5466926	94	88	100	102
5466927	94	89	100	103
5466928	93	88	99	101
5466929	92	89	101	103
5466930	93	89	101	101
Blank	94	91	99	101
LCS	93	92	100	102
MS	93	89	102	102
MSD	93	92	99	103
Limits:	80-116	77-113	80-113	78-113

\*- Outside of specification

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





## Lancaster Laboratories Explanation of Symbols and Abbreviations

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

<b>N.D.</b>	none detected	<b>BMQL</b>	Below Minimum Quantitation Level
<b>TNTC</b>	Too Numerous To Count	<b>MPN</b>	Most Probable Number
<b>IU</b>	International Units	<b>CP Units</b>	cobalt-chloroplatinate units
<b>umhos/cm</b>	micromhos/cm	<b>NTU</b>	nephelometric turbidity units
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>Cal</b>	(diet) calories	<b>lb.</b>	pound(s)
<b>meq</b>	milliequivalents	<b>kg</b>	kilogram(s)
<b>g</b>	gram(s)	<b>mg</b>	milligram(s)
<b>ug</b>	microgram(s)	<b>l</b>	liter(s)
<b>ml</b>	milliliter(s)	<b>ul</b>	microliter(s)
<b>m3</b>	cubic meter(s)	<b>fib &gt;5 um/ml</b>	fibers greater than 5 microns in length per ml
<b>&lt;</b>	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
<b>&gt;</b>	greater than		
<b>ppm</b>	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.		
<b>ppb</b>	parts per billion		
<b>Dry weight basis</b>	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.		

U.S. EPA data qualifiers:

Organic Qualifiers	Inorganic Qualifiers
<b>A</b> TIC is a possible aldol-condensation product	<b>B</b> Value is <CRDL, but ≥IDL
<b>B</b> Analyte was also detected in the blank	<b>E</b> Estimated due to interference
<b>C</b> Pesticide result confirmed by GC/MS	<b>M</b> Duplicate injection precision not met
<b>D</b> Compound quantitated on a diluted sample	<b>N</b> Spike amount not within control limits
<b>E</b> Concentration exceeds the calibration range of the instrument	<b>S</b> Method of standard additions (MSA) used for calculation
<b>J</b> Estimated value	<b>U</b> Compound was not detected
<b>N</b> Presumptive evidence of a compound (TICs only)	<b>W</b> Post digestion spike out of control limits
<b>P</b> Concentration difference between primary and confirmation columns >25%	<b>*</b> Duplicate analysis not within control limits
<b>U</b> Compound was not detected	<b>+</b> Correlation coefficient for MSA <0.995
<b>X,Y,Z</b> Defined in case narrative	

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

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.

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