Stantec Consulting Corporation
12034 134th Court NE, Suite 102
Redmond, WA 98052
Tel: (425) 298-1000
Fax: (425) 298-1020

Quarterly Groundwater Monitoring Report - Third Quarter 2009
ConocoPhillips Service Station No. 256380 (RM&R #1571)
Washington State Department of Ecology Facility No. 11191596
200 South 36th Street
Bellingham, Washington 98225

Stantec Project No.:
212301495

Submitted to:
Ms. Donna Musa
Toxics Cleanup Program
Washington State Department of Ecology
3190 160th Avenue SE
Bellevue, WA 98008-5452

Submitted by:
Stantec Consulting Corporation
12034 134th Court NE, Suite 102
Redmond, WA 98052

Prepared on behalf of:
ConocoPhillips Company

November 16, 2009

Dear Ms. Musa:

Stantec Consulting Corporation (Stantec) is pleased to present this quarterly groundwater monitoring report to the Washington State Department of Ecology (DOE) Toxics Cleanup Program (TCP) on behalf of the ConocoPhillips Company (ConocoPhillips). This report describes the results of groundwater monitoring activities performed by Stantec during the third quarter of 2009 (the reporting period) at ConocoPhillips Facility No. 256380 (RM&R #1571; DOE Facility No. 11191596) located at 200 South 36th Street in Bellingham, Washington (the Site).

GROUNDWATER MONITORING ACTIVITIES

Groundwater monitoring activities during the reporting period were performed on September 29, 2009. Groundwater monitoring activities were performed in accordance with Stantec's protocols for groundwater monitoring events (see Appendix A).

Eight groundwater monitoring wells (MW-1 through MW-8) were gauged and sampled. These activities are described below.

Monitoring Well Gauging

Eight groundwater monitoring wells were gauged: MW-1 through MW-8. 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 5.53 feet (MW-5) to 9.38 feet (MW-2) 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. On August 20, 2009, Otak, Inc. surveyed the locations of major aboveground features at the Site and the locations and elevations (TOC and ground surface) of groundwater monitoring wells at the Site. Historic groundwater gauging data and gauging data from the reporting period are summarized in Table 1. The groundwater elevations for the current reporting period were calculated using the new TOC elevations. Historic groundwater elevations were based on historic TOC elevations and have not been recalculated using the new TOC elevations. Well locations and groundwater flow direction are shown on Figure 1. Based on these data, the water table at the Site may suggest an elevation ridge that transects northeast to southwest through the southeastern portion of the Site. Groundwater flow directions appear to be directed generally to the north in the western portion of the Site and to the south-southeast in the southeastern portion of the Site. The groundwater gradient in the western portion of the Site is calculated as 0.0034 to 0.0086 feet per foot (ft/ft) and in the southeastern portion of the Site is calculated as 0.0058 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 (Appendix B). Purged groundwater and rinsate/decontamination water were stored at the Site in a Department of Transportation (DOT)-approved, steel drum pending laboratory characterization and offsite 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 a certified 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) gasoline range organics (TPH-G) using DOE Northwest Method NWTPH-Gx; and,
- TPH diesel range organics (TPH-D) and TPH oil range organics (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 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 and BTEX for the reporting period and the three previous reporting periods are illustrated on Figure 2.

A summary of the analytical results exceeding Model Toxics Control Act (MTCA) Method A cleanup levels is provided below. Analytical results not described below did not exceed MTCA Method A cleanup levels.

- TPH-D was detected in MW-7 at a concentration of 839 micrograms per liter (µg/L), which exceeded the MTCA Method A cleanup level of 500 µg/L.
- TPH-O was detected in MW-7 at a concentration of 566 micrograms per liter (µg/L), which exceeded the MTCA Method A cleanup level of 500 µg/L.

This data appears consistent with data reported from the third quarter of 2008. It appears likely that seasonal fluctuations in the water table at the Site result in seasonal fluctuations in the detected concentrations of petroleum hydrocarbons in groundwater.

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 that were identified during chemical analysis. It does not appear as though QA/QC concerns were identified in the analytical report.

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

Concentrations of TPH-D and TPH-O in MW-7 (only) exceeded their respective MTCA Method A cleanup levels. This data appears consistent with data reported from the third quarter of

2008. It appears likely that seasonal fluctuations in the water table at the Site result in seasonal fluctuations in the detected concentrations of petroleum hydrocarbons in groundwater. No other exceedances of MTCA Method A cleanup levels were observed for any of the constituents analyzed at any of the sampling locations during the reporting period.

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.

Prepared by:

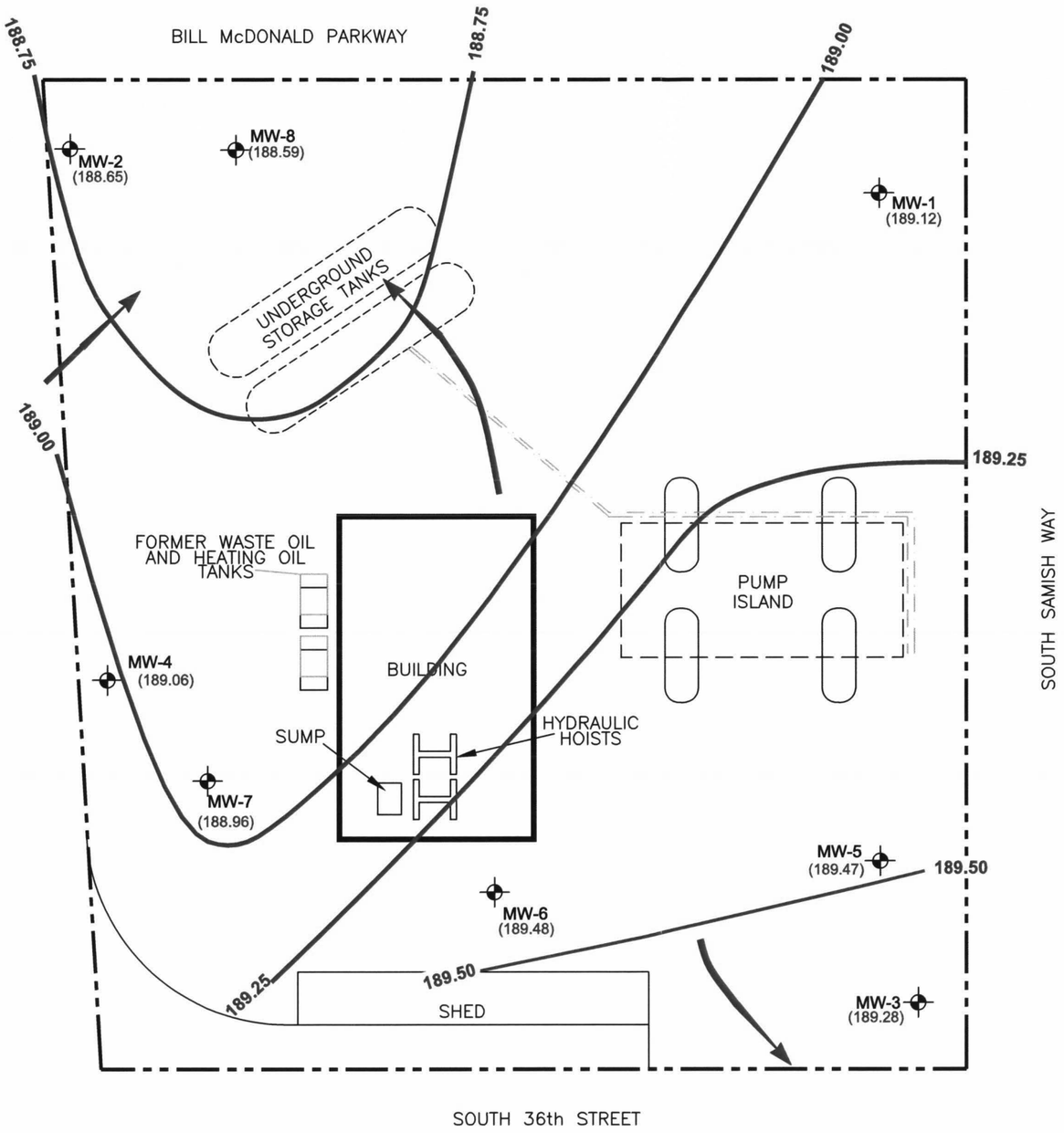
Andrea Donnell
Geologic Staff

Reviewed by:

Mark Trewartha, R.G.
Senior Hydrogeologist

ATTACHMENTS

FIGURES



LEGEND

MW-1 — MONITORING WELL LOCATION AND ID

SITE BOUNDARY

GROUNDWATER

(189.12) GROUNDWATER ELEVATION (FEET)

INFERRED GROUNDWATER FLOW DIRECTION

189.00 GROUNDWATER ELEVATION CONTOUR (FEET)

NOTES:

1). ALL LOCATIONS ARE APPROXIMATE.

2). CONTOUR INTERVAL = 0.25 FEET

North

0 20 40

APPROXIMATE SCALE (FEET)

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) 298-1000 FAX: (425) 298-1020

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

SITE PLAN WITH GROUNDWATER ELEVATIONS (SEPTEMBER 29, 2009)

FIGURE: 1

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
212301495 (01571)	DJH	TP	JT	11/5/09

FILEPATH:K:\1-CLIENTS\ConocoPhillips\01CP\1571-Bellingham(6380)-212301495\3Q09\6380-2009-3Q.dwg|dheller|Nov 06, 2009 at 14:47|Layout: F1-GWE (3Q09)

MW-8	12/10/08	3/31/09	6/17/09	9/29/09
TPH-G	<50	<50.0	<50.0	<50.0
TPH-D	<29	<82	<78	88.5
TPH-O	180	<410	<390	<388
B	<0.5	<1.0	<1.0	<1.0
T	<0.7	<1.0	<1.0	<1.0
E	<0.8	<1.0	<1.0	<1.0
X	<0.8	<1.0	<3.0	<3.0

MW-2	12/10/08	3/31/09	6/17/09	9/29/09
TPH-G	--	<50	<50.0	<50.0
TPH-D	--	<800	<78	<77.7
TPH-O	--	<1,000	<390	<388
B	--	<0.5	<1.0	<1.0
T	--	<0.7	<1.0	<1.0
E	--	<0.8	<1.0	<1.0
X	--	<0.8	<3.0	<3.0

MW-1	12/10/08	3/31/09	6/17/09	9/29/09
TPH-G	<50	<50.0	<50.0	<50.0
TPH-D	<29	<83	<78	<77.7
TPH-O	<69	<420	<390	<388
B	<0.5	<1.0	<1.0	<1.0
T	<0.7	<1.0	<1.0	<1.0
E	<0.8	<1.0	<1.0	<1.0
X	<0.8	<1.0	<3.0	<3.0

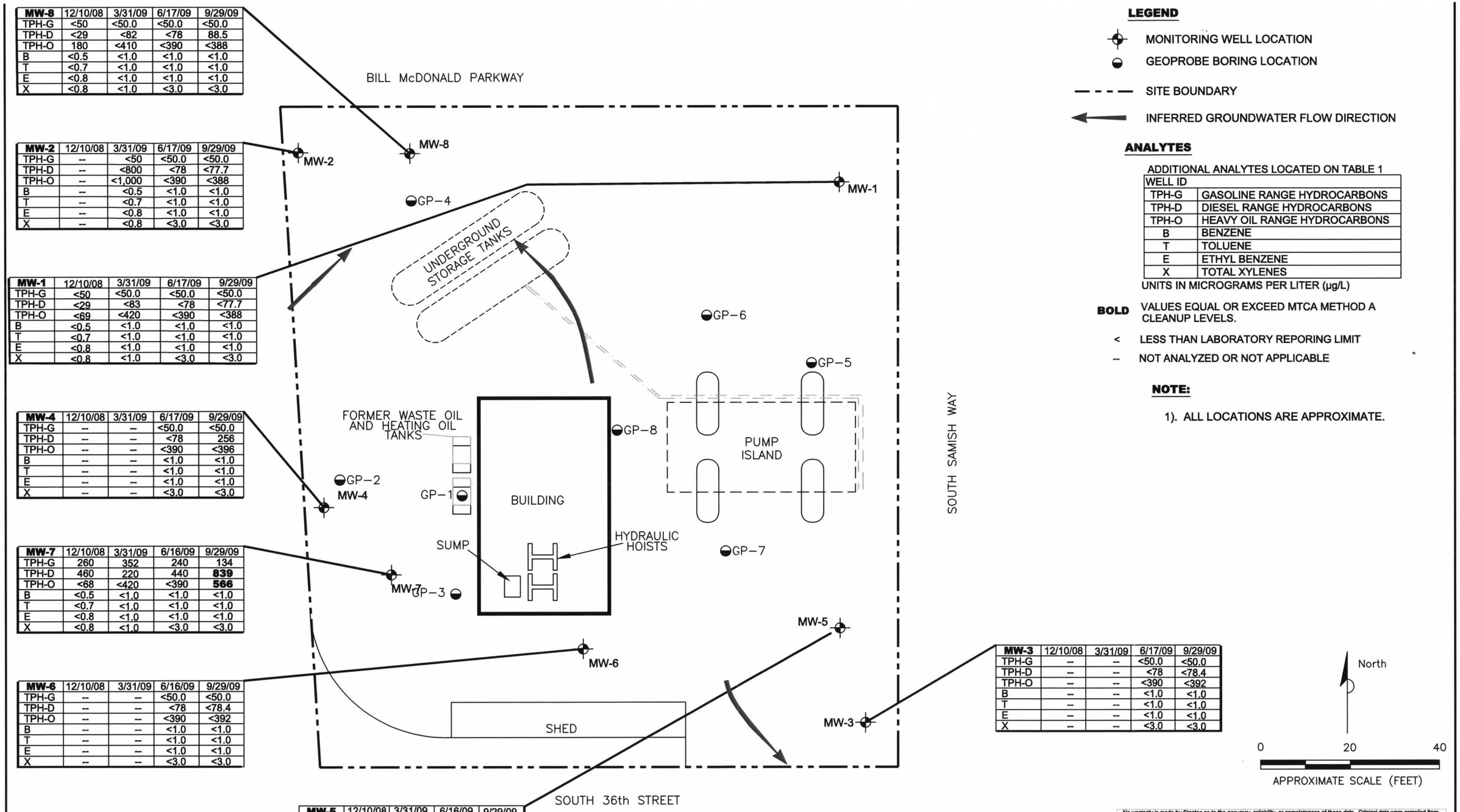
MW-4	12/10/08	3/31/09	6/17/09	9/29/09
TPH-G	--	--	<50.0	<50.0
TPH-D	--	--	<78	256
TPH-O	--	--	<390	<396
B	--	--	<1.0	<1.0
T	--	--	<1.0	<1.0
E	--	--	<1.0	<1.0
X	--	--	<3.0	<3.0

MW-7	12/10/08	3/31/09	6/16/09	9/29/09
TPH-G	260	352	240	134
TPH-D	460	220	440	**839**
TPH-O	<68	<420	<390	**566**
B	<0.5	<1.0	<1.0	<1.0
T	<0.7	<1.0	<1.0	<1.0
E	<0.8	<1.0	<1.0	<1.0
X	<0.8	<1.0	<3.0	<3.0

MW-6	12/10/08	3/31/09	6/16/09	9/29/09
TPH-G	--	--	<50.0	<50.0
TPH-D	--	--	<78	<78.4
TPH-O	--	--	<390	<392
B	--	--	<1.0	<1.0
T	--	--	<1.0	<1.0
E	--	--	<1.0	<1.0
X	--	--	<3.0	<3.0

MW-5	12/10/08	3/31/09	6/16/09	9/29/09
TPH-G	--	--	<50.0	<50.0
TPH-D	--	--	<78	183
TPH-O	--	--	<390	<386
B	--	--	<1.0	<1.0
T	--	--	<1.0	<1.0
E	--	--	<1.0	<1.0
X	--	--	<3.0	<3.0

MW-3	12/10/08	3/31/09	6/17/09	9/29/09
TPH-G	--	--	<50.0	<50.0
TPH-D	--	--	<78	<78.4
TPH-O	--	--	<390	<392
B	--	--	<1.0	<1.0
T	--	--	<1.0	<1.0
E	--	--	<1.0	<1.0
X	--	--	<3.0	<3.0



LEGEND

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

ANALYTES

ADDITIONAL ANALYTES LOCATED ON TABLE 1

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

UNITS IN MICROGRAMS PER LITER (µg/L)

BOLD VALUES EQUAL OR EXCEED MTCA METHOD A CLEANUP LEVELS.

< LESS THAN LABORATORY REPORING LIMIT

-- NOT ANALYZED OR NOT APPLICABLE

NOTE:

1). ALL LOCATIONS ARE APPROXIMATE.

North

0 20 40

APPROXIMATE SCALE (FEET)

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

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

SITE PLAN WITH ANALYTICAL RESULTS (SEPTEMBER 29, 2009)

FIGURE: **2**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
212301495 (01571)	DJH	TP	JT	11/5/09

FILEPATH:K:\1-CLIENTS\ConocoPhillips\01CP\1571-Bellingham(6380)-212301495\3Q09\6380-2009-3Q.dwg|dheller|Nov 09, 2009 at 13:30|Layout: F2-GWA (3Q09)

TABLE

TABLE 1
HISTORICAL GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS
ConocoPhillips Facility No. 256380
200 South 36th Street
Bellingham, Washington

Well Name	Sample Date	Elevation Data (feet)			Total Petroleum Hydrocarbons			Aromatic Hydrocarbons							Lead	
TOC Elevation		Depth to Water	LPH	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)	EDC (µg/L)	EDB (µg/L)	Total Pb (µg/L)	Dissolved Pb (µg/L)
MW1	03/11/99	4.96	--	93.53	<50	<250	<750[e]	<0.500	<0.500	<0.500	<1.00	--	--	--	2.41	--
98.49	05/25/99	5.33	--	93.16	<50.0	<250	<750[e]	<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[e]	<0.500	<0.500	<0.500	<1.00	--	--	--	6.18	--
	02/10/00	6.10	--	92.39	<50.0	<250	<750[e]	<0.500	<0.500	<0.500	<1.00	--	--	--	1.75	--
	02/02/01	5.17	--	93.32	<50.0	588	<750[e]	**12.4**	1.02	1.10	2.77	--	--	--	--	<1.00
	02/08/02	5.77	--	92.72	**838**	**1,600**	<500	**128**	2.15	85.4	6.55	--	--	--	7.70	<1.00
	09/20/02	6.27	--	92.22	197	**1,320**	<588[e]	1.82	<0.500	33.0	<1.00	--	--	--	<1.00	--
	12/04/02	7.05	--	91.44	373	511	<568[e]	**106**	1.32	1.39	5.41	--	--	--	4.65	--
	03/05/03	5.70	--	92.79	168	<250	<500	**28.3**	1.70	3.55	5.87	--	--	--	4.90	--
	06/10/03	5.92	--	92.57	400	<250	<500	**36.9**	2.43	30.5	6.97	--	--	--	**17.1**	--
	09/03/03	6.30	--	92.19	258	301	<588[e]	1.91	3.22	4.30	5.25	--	--	--	8.72	--
	12/12/03	5.530	--	92.960	204	**700**	304	2.45	<0.500	<0.500	<1.500	--	--	--	<5.0	--
	03/24/04	6.11	--	92.38	163	<126	<251	**12.6**	<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[e]	<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[c]	<500[c]	<0.5	<0.7	<0.8	<0.8	0.6	--	--	--	--
	03/05/08	5.34	--	93.15	<50[d]	<800[b,c,e]	<1,000[b,c,e]	**11**	<0.7	<0.8	<0.8	1	--	--	--	--
	06/11/08	5.34	0.00	93.15	<50	<800[b,c,e]	<1,000[b,c,e]	**10**	<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	--	--	--	--
	12/10/08	5.62	0.00	92.87	<50	<29	<69	<0.5	<0.7	<0.8	<0.8	--	--	--	--	--
	03/31/09	5.55	0.00	92.94	<50.0	<83	<420	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--
	06/17/09	5.80	0.00	92.69	<50.0	<78	<390	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<0.010	<1.0	<1.0
195.79	09/29/09	6.67	0.00	189.12	<50.0	<77.7	<388	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--

TABLE 1
HISTORICAL GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS
ConocoPhillips Facility No. 256380
200 South 36th Street
Bellingham, Washington

Well Name		Elevation Data (feet)			Total Petroleum Hydrocarbons			Aromatic Hydrocarbons							Lead	
TOC Elevation	Sample Date	Depth to Water	LPH	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)	EDC (µg/L)	EDB (µg/L)	Total Pb (µg/L)	Dissolved Pb (µg/L)
MW2	03/11/99	7.93	--	92.81	<50	<250	<750[e]	<0.500	<0.500	<0.500	<1.00	--	--	--	**162**	--
100.74	05/25/99	8.18	--	92.56	<50.0	<250	<750[e]	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	08/12/99	8.94	--	91.80	<50.0	281	<750[e]	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	12/07/99	8.04	--	92.70	<50.0	<250	<750[e]	<0.500	<0.500	<0.500	<1.00	--	--	--	**17.0**	--
	02/10/00	8.32	--	92.42	<50.0	<250	<750[e]	<0.500	<0.500	<0.500	<1.00	--	--	--	**49.1**	--
	02/02/01	6.40	--	94.34	<50.0	<250	<750[e]	<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	--	--	--	**40.6**	<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	--	--	--	**19.8**	--
	06/10/03	8.56	--	92.18	<50.0	<284	<568[e]	<0.500	1.36	<0.500	2.53	--	--	--	**40.1**	--
	09/03/03	9.13	--	91.61	<80.0	<298	<595[e]	0.829	1.25	0.519	2.49	--	--	--	**33.3**	--
	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	--	--	--	**21.3**	
	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[e]	<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[c,e]	<1,000[c,e]	<0.5	<0.7	<0.8	<0.8	<0.5	--	--	--	--
	06/11/08	8.25	0.00	92.49	<50	<76[b]	<95[b]	<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	--	--	--	--
	12/10/08	Removed from sampling event this quarter.			--	--	--	--	--	--	--	--	--	--	--	--
	03/31/09	7.90	0.00	92.84	--	--	--	--	--	--	--	--	--	--	--	--
	06/17/09	8.53	0.00	92.21	<50.0	<78	<390	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<0.010	<1.0	<1.0
198.03	09/29/09	9.38	0.00	188.65	<50.0	<77.7	<388	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--

TABLE 1
HISTORICAL GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS
ConocoPhillips Facility No. 256380
200 South 36th Street
Bellingham, Washington

Well Name		Elevation Data (feet)			Total Petroleum Hydrocarbons			Aromatic Hydrocarbons							Lead	
TOC Elevation	Sample Date	Depth to Water	LPH	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)	EDC (µg/L)	EDB (µg/L)	Total Pb (µg/L)	Dissolved Pb (µg/L)
MW3	03/11/99	4.93	--	92.91	<50	<250	<750[a]	<0.500	<0.500	<0.500	<1.00	--	--	--	6.35	--
97.84	05/25/99	5.19	--	92.65	210	383	<750[a]	<0.500	<0.500	3.04	3.93	--	--	--	--	--
	08/12/99	5.70	--	92.14	56.3	<250	<750[a]	<0.500	<0.500	0.732	1.84	--	--	--	--	--
	12/07/99	5.03	--	92.81	94.7	<250	<750[a]	<0.500	0.598	<0.500	<1.00	--	--	--	4.40	--
	02/10/00	4.92	--	92.92	<50.0	<250	<750[a]	<0.500	<0.500	<0.500	<1.00	--	--	--	**17.6**	--
	02/02/01	4.76	--	93.08	63.0	413	<750[a]	<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	--	--	--	**22.3**	<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	--	--	--	**20.0**	--
	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[a]	<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[b]	**560[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	--	--	--	--
	12/10/08	Removed from sampling event this quarter.			--	--	--	--	--	--	--	--	--	--	--	--
	03/31/09	4.90	0.00	92.94	--	--	--	--	--	--	--	--	--	--	--	--
	06/17/09	5.57	0.00	92.27	<50.0	<78	<390	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<0.010	<1.0	<1.0
195.19	09/29/09	5.91	0.00	189.28	<50.0	<78.4	<392	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--

TABLE 1
HISTORICAL GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS
ConocoPhillips Facility No. 256380
200 South 36th Street
Bellingham, Washington

Well Name		Elevation Data (feet)			Total Petroleum Hydrocarbons			Aromatic Hydrocarbons							Lead	
TOC Elevation	Sample Date	Depth to Water	LPH	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)	EDC (µg/L)	EDB (µg/L)	Total Pb (µg/L)	Dissolved Pb (µg/L)
MW4	03/11/99	6.39	--	93.05	<50	<250	<750[e]	<0.500	<0.500	<0.500	<1.00	--	--	--	**29.0**	--
99.44	05/25/99	6.62	--	92.82	<50.0	<250	<750[e]	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	08/12/99	7.31	--	92.13	<50.0	<250	<750[e]	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	12/07/99	6.37	--	93.07	<50.0	<250	<750[e]	<0.500	<0.500	<0.500	<1.00	--	--	--	10.2	--
	02/10/00	6.48	--	92.96	<50.0	<250	<750[e]	<0.500	<0.500	<0.500	<1.00	--	--	--	**23.6**	--
	02/02/01	6.37	--	93.07	<50.0	<250	<750[e]	<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[e]	<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[e]	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[e]	<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[b]	<94[b]	<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	--	--	--	--
	12/10/08	Removed from sampling event this quarter.			--	--	--	--	--	--	--	--	--	--	--	--
	03/31/09	6.17	0.00	93.27	--	--	--	--	--	--	--	--	--	--	--	--
	06/16/09	7.09	0.00	92.35	<50.0	<78	<390	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<0.010	<1.0	<1.0
196.77	09/29/09	7.71	0.00	189.06	<50.0	256	<396	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--

TABLE 1
HISTORICAL GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS
ConocoPhillips Facility No. 256380
200 South 36th Street
Bellingham, Washington

Well Name		Elevation Data (feet)			Total Petroleum Hydrocarbons			Aromatic Hydrocarbons							Lead	
TOC Elevation	Sample Date	Depth to Water	LPH	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)	EDC (µg/L)	EDB (µg/L)	Total Pb (µg/L)	Dissolved Pb (µg/L)
MW-5	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	**13**	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	99	<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	--	--	--	--
	12/10/08	Removed from sampling event this quarter.			--	--		--	--	--	--	--	--	--	--	--
	03/31/09	4.45	0.00	96.69	--	--	--	--	--	--	--	--	--	--	--	--
	06/16/09	4.80	0.00	96.34	<50.0	<78	<390	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<0.010	<1.0	<1.0
195.00	09/29/09	5.53	0.00	189.47	<50.0	183	<386	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--
MW-6	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	--	--	--	--
	12/10/08	Removed from sampling event this quarter.			--	--		--	--	--	--	--	--	--	--	--
	03/31/09	5.75	0.00	93.99	--	--	--	--	--	--	--	--	--	--	--	--
	06/16/09	6.50	0.00	93.24	<50.0	<78	<390	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<0.010	<1.0	<1.0
196.52	09/29/09	7.04	0.00	189.48	<50.0	<78.4	<392	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--
MW-7	1/11/2006	6.07	--	93.57	160	**780**[b]	<94[b]	<0.2	<0.2	<0.2	<0.6	2.5	--	--	<8.4	--
99.64	3/10/2006	6.71	--	92.93	140	**540**	<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	**870**	<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	**1,000**	160	<0.5	<0.7	<0.8	<0.8	0.8	--	--	--	--
	12/03/07	4.97	--	94.67	400	**970**	140	<0.5	<0.7	<0.8	<0.8	<0.5	--	--	--	--
	03/05/08	6.47	--	93.17	240	**930**	100	<0.5	<0.7	<0.8	<0.8	<0.5	--	--	--	--
	06/11/08	6.13	0.00	93.51	240	**1,300**	**860**	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	09/10/08	7.20	0.00	92.44	250	**580**	<97	<0.5	<0.7	<0.8	<0.8	<0.5	--	--	--	--
	12/10/08	6.88	0.00	92.76	260	460	<68	<0.5	<0.7	<0.8	<0.8	--	--	--	--	--
	03/31/09	6.62	0.00	93.02	352	220	<420	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--
	06/16/09	7.49	0.00	92.15	240	440	<390	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<0.010	<1.0	<1.0
196.93	09/29/09	7.97	0.00	188.96	134	**839**	**566**	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--

TABLE 1
HISTORICAL GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS
ConocoPhillips Facility No. 256380
200 South 36th Street
Bellingham, Washington

Well Name		Elevation Data (feet)			Total Petroleum Hydrocarbons			Aromatic Hydrocarbons							Lead	
TOC Elevation	Sample Date	Depth to Water	LPH	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)	EDC (µg/L)	EDB (µg/L)	Total Pb (µg/L)	Dissolved Pb (µg/L)
MW-8	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	**860**	<0.5	<0.7	<0.8	<0.8	<0.5	--	--	--	--
	06/11/08	7.22	0.00	95.48	<50[d]	240	**1,000**	<0.5[d]	0.7[d]	<0.5[d]	<0.5[d]	<0.5[d]	--	--	--	--
	09/10/08	8.20	0.00	94.50	<50	<79	<99	<0.5	<0.7	<0.8	<0.8	<0.5	--	--	--	--
	12/10/08	7.55	0.00	95.15	<50	<29	180	<0.5	<0.7	<0.8	<0.8	--	--	--	--	--
	03/31/09	7.10	0.00	95.60	<50.0	<82	<410	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--
	06/17/09	8.00	0.00	94.70	<50.0	<78	<390	<1.0	<1.0	<1.0	<3.0	<1.0	2.8	<0.010	1.3	<1.0
197.48	09/29/09	8.89	0.00	188.59	<50.0	88.5	<388	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--
MTCA Method A Cleanup Levels					**1000/800[a]**	**500**	**500**	**5**	**1000**	**700**	**1000**	**20**	**5**	**0.01**	**15**	**15**

NOTES:
TOC = Top of Casing in feet
All concentrations are in micrograms per liter (µg/L) (ppb).
Wellhead elevations in feet were taken from prior consultant's reports.
LPH = Liquid phase hydrocarbon
DTW = Depth to water in feet below top of casing
GW Elev. = Groundwater elevation in feet 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.
EDC = 1,2-Dichloroethane by EPA Method 8260B.
EDB = 1,2-Dibromoethane by EPA Method 8011.
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.
[a] Concentration 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.
Data collected before 12/12/03 are taken from prior consultants.
[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

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
3Q09 - CP 256380 (RM&R 01571) Bellingham, Washington

Name(s) D. Reitz Date: 09/29/09 Time of Arrival Call-In: 0800

Arrival Time: 0700 Departure Time: 1430 Time of Departure Call-In 1400

Who did you call? C. Gdak

DRUM INVENTORY

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

HEALTH AND SAFETY ASSESSMENT

Don P.P.E.
Review HASP & J.S.A.
Set-up Decon.

DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

0700 Arrive on site. Purchase ice. Check in with site-contact
0710 Don p.p.e. & perform tailgate safety meeting.
Set-up decon. station.
0730 Initiate gauging of physical measurements at 8 gwm wells prior to 3Q09 GWM sample procedures.
0800 Call in to office.
0840 Complete gauging procedures & initiate 3Q09 GWM sample procedures at 8 wells.
1315 Complete 3Q09 GWM sample procedures. Decon. Equipment & release purge water/decon. rinsates into staged drum. Label drum.
1330 Pack sample coolers & load Equipment into trucks.
1350 Check-out with site-contact & call into office.
1400 Complete daily documentation
1430 Depart job site.

Stantec Consulting Corporation

HYDROLOGIC DATA SHEET

Gauge Date: 09/29/09 **Project Name:** CP RM&R 1571 Bellingham

Field Technician: David Reitz **Project Number:** 212301495

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 X N___

Wells checked for product and gauged prior to commencement of bailing or purging the wells Y X 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.	0820	—	6.67	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.	0830	—	9.38	20.90	Y	N	Y	
MW-3		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0810	—	5.91	21.00	Y	N	Y	
MW-4		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0730	—	7.71	21.50	Y	N	Y	
MW-5		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0740	—	5.53	13.70	Y	N	Y	
MW-6		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0750	—	7.04	13.90	Y	N	Y	
MW-7		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0800	—	7.97	18.20	Y	N	Y	
MW-8		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0840	—	8.89	17.70	Y	N	Y	

STANTEC Consulting Corporation

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 212301495 PURGED BY: D. Rosta WELL I.D.: MW-4

CLIENT NAME: Conoco Phillips SAMPLED BY: D. Rosta SAMPLE I.D.: MW-4

LOCATION: Bellingham, Wa.

DATE PURGED 09/29/09 START (2400hr) 0845 END (2400hr) 0910

DATE SAMPLED 09/29/09 SAMPLE TIME (2400hr) 0900 LOW-FLOW USED X

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X (0.64) 3" ____ (1.44) 4" ____ (2.45) 5" ____ (3.86) 6" ____ (5.68) 8" ____ (9.84) Other ____ ( )

Casing Volume: (liters per foot)

DEPTH TO BOTTOM (feet) = 21.50

DEPTH TO WATER (feet) = 7.71

WATER COLUMN HEIGHT (feet) = 13.79 ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (L)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
09/29/09	0850	500	14.38	0.864	5.83	Clr
"	0853	500	14.56	0.859	5.91	Clr
"	0856	500	15.04	0.856	5.94	Clr
"	0859	500	14.85	0.853	5.96	Clr
					09/29/09	
Calculated Variance of Final Three Samples:			0.48	0.006	0.05	
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1	

DEPTH TO PURGE INTAKE DURING PURGE: 17.00 SAMPLE DTW: 7.89

ANTICIPATED PURGE INTAKE DEPTH: 17.00 ANALYSES: TPH-G, TPH-D, BTEX & MTBE by 8260B; EDB, EDC, total and dissolved lead

SAMPLE VESSEL / PRESERVATIVE: Glass / HCL

PURGING EQUIPMENT: Horiba Water Meter; Peristaltic pump / Interface probe

SAMPLING EQUIPMENT: Peristaltic pump

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?: yes

WELL INTEGRITY: Fair WELL TAG: yes LOCK#: yes

REMARKS: ____

SIGNATURE: ____

STANTEC Consulting Corporation

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 212301495 PURGED BY: D. Reitz WELL I.D.: MW-5

CLIENT NAME: Conoco Phillips SAMPLED BY: D. Reitz SAMPLE I.D.: MW-5

LOCATION: Bellingham, WA.

DATE PURGED 09/29/09 START (2400hr) 0915 END (2400hr) 0945

DATE SAMPLED 09/29/09 SAMPLE TIME (2400hr) 0930 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) = 13.70

DEPTH TO WATER (feet) = 5.53

WATER COLUMN HEIGHT (feet) = 8.17 ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (L)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
09/29/09	0920	500	18.18	0.199	5.94	Clr
	0923	500	18.52	0.195	5.98	Clr
	0926	500	18.46	0.193	6.00	Clr
	0929	500	18.55	0.194	6.00	Clr
						09/29/09
Calculated Variance of Final Three Samples:			0.09	0.002	0.02	
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1	

DEPTH TO PURGE INTAKE DURING PURGE: 8.00 SAMPLE DTW: 6.02

ANTICIPATED PURGE INTAKE DEPTH: 8.00 ANALYSES: TPH-G, TPH-D, BTEX & MTBE by 8260B
EDB, EDC, total and dissolved lead

SAMPLE VESSEL / PRESERVATIVE: Glass / HCL

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Horiba Water Meter Peristaltic pump Interface probe	Peristaltic pump

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?: yes

WELL INTEGRITY: Fair WELL TAG: yes LOCK#: yes

REMARKS: ____

SIGNATURE: ____

STANTEC Consulting Corporation

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 212301495 PURGED BY: D. Reitz WELL I.D.: MW-6

CLIENT NAME: Conoco Phillips SAMPLED BY: D Reitz SAMPLE I.D.: MW-6

LOCATION: Bellingham, WA.

DATE PURGED 09/29/09 START (2400hr) 0950 END (2400hr) 1020

DATE SAMPLED 09/29/09 SAMPLE TIME (2400hr) 1005 LOW-FLOW USED X

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X (0.64) 3" ____ (1.44) 4" ____ (2.45) 5" ____ (3.86) 6" ____ (5.68) 8" ____ (9.84) Other ____ ( )

Casing Volume: (liters per foot)

DEPTH TO BOTTOM (feet) = 13.90

DEPTH TO WATER (feet) = 7.04

WATER COLUMN HEIGHT (feet) = 6.86 ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (L)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
09/29/09	0955	800	16.28	0.104	6.15	Clr
"	0958	500	16.27	0.105	6.12	Clr
"	1001	500	16.19	0.107	6.11	Clr
"	1004	500	16.03	0.108	6.10	Clr
					09/29/09	
Calculated Variance of Final Three Samples:			0.24	0.003	0.02	
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1	

DEPTH TO PURGE INTAKE DURING PURGE: 9.00 SAMPLE DTW: 7.28

ANTICIPATED PURGE INTAKE DEPTH: 9.00 ANALYSES: TPH-G, TPH-D, BTEX & MTBE by 8260B; EDB, EDC, total and dissolved lead

SAMPLE VESSEL / PRESERVATIVE: Glass / HCL

PURGING EQUIPMENT: Horiba Water Meter; Peristaltic pump; Interface probe

SAMPLING EQUIPMENT: Peristaltic pump

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?: yes

WELL INTEGRITY: Fair WELL TAG: yes LOCK#: yes

REMARKS: ____

SIGNATURE: [signature]

STANTEC Consulting Corporation

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 212301495 PURGED BY: D. Reitz WELL I.D.: MW-7

CLIENT NAME: Conoco Phillips SAMPLED BY: D. Reitz SAMPLE I.D.: MW-7

LOCATION: Bellingham, WA.

DATE PURGED 09/29/09 START (2400hr) 1025 END (2400hr) 1055

DATE SAMPLED 09/29/09 SAMPLE TIME (2400hr) 1040 LOW-FLOW USED X

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X (0.64) 3" ____ (1.44) 4" ____ (2.45) 5" ____ (3.86) 6" ____ (5.68) 8" ____ (9.84) Other ____ ( )

Casing Volume: (liters per foot)

DEPTH TO BOTTOM (feet) = 18.20

DEPTH TO WATER (feet) = 7.97

WATER COLUMN HEIGHT (feet) = 10.23 ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (L)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
09/29/09	1030	800	16.63	0.115	6.04	Clr
	1033	500	16.62	0.113	6.04	Clr
	1036	500	16.35	0.111	6.04	Clr
	1039	500	16.45	0.110	6.04	Clr
Calculated Variance of Final Three Samples:			0.27	0.003	0	
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1	

09/29/09

DEPTH TO PURGE INTAKE DURING PURGE: 14.00 SAMPLE DTW: 8.20

ANTICIPATED PURGE INTAKE DEPTH: 14.00 ANALYSES: TPH-G, TPH-D, BTEX & MTBE by 8260B; EDB, EDC, total and dissolved lead

SAMPLE VESSEL / PRESERVATIVE: Glass / HCl

PURGING EQUIPMENT: Horiba Water Meter, Peristaltic pump, Interface probe

SAMPLING EQUIPMENT: Peristaltic pump

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?: yes

WELL INTEGRITY: Fair WELL TAG: yes LOCK#: yes

REMARKS: ____

SIGNATURE: ____

STANTEC Consulting Corporation

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 212301495 PURGED BY: D. Reitz WELL I.D.: MW-3

CLIENT NAME: Conoco Phillips SAMPLED BY: D. Reitz SAMPLE I.D.: MW-3

LOCATION: Bellingham, WA.

DATE PURGED 09/29/09 START (2400hr) 1100 END (2400hr) 1130

DATE SAMPLED 09/29/09 SAMPLE TIME (2400hr) 1115 LOW-FLOW USED X

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X (0.64) 3" ____ (1.44) 4" ____ (2.45) 5" ____ (3.86) 6" ____ (5.68) 8" ____ (9.84) Other ____ ( )

Casing Volume: (liters per foot)

DEPTH TO BOTTOM (feet) = 21.00

DEPTH TO WATER (feet) = 5.91

WATER COLUMN HEIGHT (feet) = 15.09

ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (ML)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
09/29/09	1105	800	14.53	0.111	6.19	Clr
↓	1108	500	14.57	0.110	6.19	Clr
	1111	500	14.58	0.113	6.20	Clr
	1114	500	14.82	0.111	6.20	Clr

09/29/09

	TEMP.	CONDUCTIVITY	pH
Calculated Variance of Final Three Samples:	0.25	0.003	0.01
Acceptable Variance Limits:	≤ 10%	≤ 3%	≤ 0.1

DEPTH TO PURGE INTAKE DURING PURGE: 17.00 SAMPLE DTW: 5.97

ANTICIPATED PURGE INTAKE DEPTH: 17.00 ANALYSES: TPH-G, TPH-D, BTEX & MTBE by 8260B; EDB, EDC, total and dissolved lead

SAMPLE VESSEL / PRESERVATIVE: Glass / HCL

PURGING EQUIPMENT: Horiba Water Meter, Peristaltic pump, Interface probe

SAMPLING EQUIPMENT: Peristaltic pump

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?: 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 #: 212301495 PURGED BY: D. Retz WELL I.D.: MW-1
CLIENT NAME: Conoco Phillips SAMPLED BY: D. Retz SAMPLE I.D.: MW-1
LOCATION: Bellingham, WA.

DATE PURGED 09/29/09 START (2400hr) 1135 END (2400hr) 1205
DATE SAMPLED 09/29/09 SAMPLE TIME (2400hr) 1150 LOW-FLOW USED X
SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X (0.64) 3" ____ (1.44) 4" ____ (2.45) 5" ____ (3.86) 6" ____ (5.68) 8" ____ (9.84) Other ____ ( )
Casing Volume: (liters per foot)

DEPTH TO BOTTOM (feet) = 22.80
DEPTH TO WATER (feet) = 6.67
WATER COLUMN HEIGHT (feet) = 16.13
ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (ML)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
09/29/09	1140	800	16.91	0.106	6.16	Clr
↓	1143	500	17.15	0.102	6.09	Clr
↓	1146	500	17.13	0.100	6.09	Clr
↓	1149	500	17.00	0.103	6.08	Clr
					09/29/09	
Calculated Variance of Final Three Samples:			0.15	0.003	0.01	
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1	

DEPTH TO PURGE INTAKE DURING PURGE: 18.00 SAMPLE DTW: 7.37

ANTICIPATED PURGE INTAKE DEPTH: 18.00 ANALYSES: TPH-G, TPH-D, BTEX & MTBE by 8260B
EDB, EDC, total and dissolved lead

SAMPLE VESSEL / PRESERVATIVE: Glass / HCL

PURGING EQUIPMENT: Horiba Water Meter, Peristaltic pump, Interface probe
SAMPLING EQUIPMENT: Peristaltic pump

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?: yes
WELL INTEGRITY: Fair WELL TAG: yes LOCK#: yes

REMARKS:

SIGNATURE: [signature]

STANTEC Consulting Corporation

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 212301495 PURGED BY: D. Reitz WELL I.D.: MW(1)-2

CLIENT NAME: Conoco Phillips SAMPLED BY: D. Reitz SAMPLE I.D.: MW-2

LOCATION: Bellingham, WA.

DATE PURGED 09/29/09 START (2400hr) 1210 END (2400hr) 1240

DATE SAMPLED 09/29/09 SAMPLE TIME (2400hr) 1225 LOW-FLOW USED X

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X (0.64) 3" ____ (1.44) 4" ____ (2.45) 5" ____ (3.86) 6" ____ (5.68) 8" ____ (9.84) Other ____ ( )

Casing Volume: (liters per foot)

DEPTH TO BOTTOM (feet) = 20.90

DEPTH TO WATER (feet) = 9.38

WATER COLUMN HEIGHT (feet) = 11.52 ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (L)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
09/29/09	1215	500	16.23	0.101	6.14	Clr
	1218	500	16.44	0.090	6.13	Clr
	1221	500	16.32	0.091	6.13	Clr
	1224	500	16.21	0.092	6.14	Clr
					09/29/09	
Calculated Variance of Final Three Samples:			0.23	0.002	0.01	
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1	

DEPTH TO PURGE INTAKE DURING PURGE: 16.00 SAMPLE DTW: 9.58

ANTICIPATED PURGE INTAKE DEPTH: 16.00 ANALYSES: TPH-G, TPH-D, BTEX & MTBE by 8260B; EDB, EDC, total and dissolved lead

SAMPLE VESSEL / PRESERVATIVE: Glass / HCl

PURGING EQUIPMENT: Horiba Water Meter; Peristaltic pump; Interface probe

SAMPLING EQUIPMENT: Peristaltic pump

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?: YES

WELL INTEGRITY: Fair WELL TAG: YES LOCK#: YES

REMARKS: ____

SIGNATURE: ____

STANTEC Consulting Corporation

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 212301495 PURGED BY: D. Reitz WELL I.D.: MW-8

CLIENT NAME: Conoco Phillips SAMPLED BY: D. Reitz SAMPLE I.D.: MW-8

LOCATION: Bellingham, WA.

DATE PURGED 09/29/09 START (2400hr) 1240 END (2400hr) 1315

DATE SAMPLED 09/29/09 SAMPLE TIME (2400hr) 1255 LOW-FLOW USED X

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X (0.64) 3" ____ (1.44) 4" ____ (2.45) 5" ____ (3.86) 6" ____ (5.68) 8" ____ (9.84) Other ____ ( )

Casing Volume: (liters per foot)

DEPTH TO BOTTOM (feet) = 17.70

DEPTH TO WATER (feet) = 8.89

WATER COLUMN HEIGHT (feet) = 8.81 ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (L)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
09/29/09	1245	800	18.56	0.167	6.20	Clr
	1249	500	18.82	0.160	6.22	Clr
	1251	500	18.74	0.157	6.22	Clr
	1254	500	18.69	0.155	6.22	Clr
					09/29/09	
Calculated Variance of Final Three Samples:			0.13	0.005	0	
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1	

DEPTH TO PURGE INTAKE DURING PURGE: 12.00 SAMPLE DTW: 9.14

ANTICIPATED PURGE INTAKE DEPTH: 12.00 ANALYSES: TPH-G, TPH-D, BTEX & MTBE by 8260B
EDB, EDC, total and dissolved lead

SAMPLE VESSEL / PRESERVATIVE: Glass / HCl

PURGING EQUIPMENT: Horiba Water Meter
Peristaltic pump Interface probe

SAMPLING EQUIPMENT: Peristaltic pump

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?: yes

WELL INTEGRITY: Fair WELL TAG: yes LOCK#: yes

REMARKS: ____

SIGNATURE: ____

Chain Of Custody Record

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

INVOICE REMITTANCE ADDRESS:
Stantec
Attn: Chris Gdak
12034 134th Court NE, Suite 102
Redmond, WA 98052

Purchase Order #

ConocoPhillips AOC#
01571

DATE: 09/29/09
PAGE: 1 of 1

SAMPLING COMPANY: STANTEC	Valid Value ID:	CONOCOPHILLIPS SITE NUMBER: AOC 01571
ADDRESS: 12034 134th Court NE, Suite 102 Redmond, WA 98052		SITE ADDRESS (Street and City): 200 South 36th Street, Bellingham, WA 98225
PROJECT CONTACT (Hardcopy or PDF Report to): Chris Gdak		
TELEPHONE: (425) 298-1023	FAX: (425) 298-1020	E-MAIL: chris.gdak@stantec.com
SAMPLER NAME(S) (Print): David Reitz	CONSULTANT PROJECT NUMBER: 212301495	

GLOBAL ID NO.:
ConocoPhillips Manager: Myron Smith
EDF DELIVERABLE TO (RP or Designee):
PHONE NO.:
E-MAIL:
LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
☑ 14 DAYS ☐ 7 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

SPECIAL INSTRUCTIONS OR NOTES:
CHECK BOX IF EDD IS NEEDED ☑

REQUESTED ANALYSES

FIELD NOTES:
Container/Preservative or PID Readings or Laboratory Notes

* Field Point name only required if different from Sample ID

LAB USE ONLY	Field Point Name	Sample ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	NWTPH-Gx	NWTPH-Dx	BTEX by 8260B	MTBE by 8260B
	MW-1	MW-1	09/29/09	1150	GW	7	X	X	X	X
	MW-2	MW-2	"	1225	GW	7	X	X	X	X
	MW-3	MW-3	"	1115	GW	7	X	X	X	X
	MW-4	MW-4	"	0980	GW	7	X	X	X	X
	MW-5	MW-5	"	0930	GW	7	X	X	X	X
	MW-6	MW-6	"	1005	GW	7	X	X	X	X
	MW-7	MW-7	"	1040	GW	7	X	X	X	X
	MW-8	MW-8	"	1255	GW	7	X	X	X	X
	QCTB	QCTB			DI	9	X		X	X

TEMPERATURE ON RECEIPT C°

40-mL VOAs, preserved with HCl

Relinquished by: (Signature)	Received by: (Signature)	Date: 09/30/09	Time: 1000
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

9/19/03 Revision

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

October 14, 2009

Chris Gdak
Stantec
12034 134th Ct NE, Suite 102
Redmond, WA 98052

RE: Project: 01571 - Bellingham
Pace Project No.: 252223

Dear Chris Gdak:
Enclosed are the analytical results for sample(s) received by the laboratory on September 30, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross

jennifer.gross@pacelabs.com
Project Manager

Enclosures

cc: Tammy Parise, COP_Stantec Washington

CERTIFICATIONS

Project: 01571 - Bellingham
Pace Project No.: 252223

Washington Certification IDs
Washington Certification #: C1229
Oregon Certification #: WA200007
Florida/NELAP Certification #: E87617
Alaska CS Certification #: UST-025
Alaska Drinking Water Micro Certification #: WA01230
Alaska Drinking Water VOC Certification #: WA01-09
California Certification #: 01153CA

SAMPLE ANALYTE COUNT

Project: 01571 - Bellingham
Pace Project No.: 252223

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
252223001	**MW-1**	EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Dx	KRK	4	PASI-S
		NWTPH-Gx	ATH	3	PASI-S
252223002	**MW-2**	EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Dx	KRK	4	PASI-S
		NWTPH-Gx	ATH	3	PASI-S
252223003	**MW-3**	EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Dx	KRK	4	PASI-S
		NWTPH-Gx	ATH	3	PASI-S
252223004	**MW-4**	EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Dx	KRK	4	PASI-S
		NWTPH-Gx	ATH	3	PASI-S
252223005	**MW-5**	EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Dx	KRK	4	PASI-S
		NWTPH-Gx	ATH	3	PASI-S
252223006	**MW-6**	EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Dx	KRK	4	PASI-S
		NWTPH-Gx	ATH	3	PASI-S
252223007	**MW-7**	EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Dx	KRK	4	PASI-S
		NWTPH-Gx	ATH	3	PASI-S
252223008	**MW-8**	EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Dx	KRK	4	PASI-S
		NWTPH-Gx	ATH	3	PASI-S
252223009	**QCTB**	EPA 5030B/8260	LPM	9	PASI-S
		NWTPH-Gx	ATH	3	PASI-S

ANALYTICAL RESULTS

Project: 01571 - Bellingham
Pace Project No.: 252223

Sample: MW-1 **Lab ID: 252223001** Collected: 09/29/09 11:50 Received: 09/30/09 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range	ND	ug/L	77.7	1	10/07/09 10:30	10/10/09 02:03		
Motor Oil Range	ND	ug/L	388	1	10/07/09 10:30	10/10/09 02:03	64742-65-0	
n-Octacosane (S)	115	%	50-150	1	10/07/09 10:30	10/10/09 02:03	630-02-4	
o-Terphenyl (S)	112	%	50-150	1	10/07/09 10:30	10/10/09 02:03	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		10/13/09 00:07		
a,a,a-Trifluorotoluene (S)	122	%	50-150	1		10/13/09 00:07	98-08-8	
4-Bromofluorobenzene (S)	110	%	50-150	1		10/13/09 00:07	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		10/08/09 13:06	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/08/09 13:06	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/08/09 13:06	1634-04-4	
Toluene	ND	ug/L	1.0	1		10/08/09 13:06	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/08/09 13:06	1330-20-7	
4-Bromofluorobenzene (S)	102	%	78-125	1		10/08/09 13:06	460-00-4	
Dibromofluoromethane (S)	94	%	87-118	1		10/08/09 13:06	1868-53-7	
1,2-Dichloroethane-d4 (S)	94	%	75-125	1		10/08/09 13:06	17060-07-0	
Toluene-d8 (S)	94	%	85-120	1		10/08/09 13:06	2037-26-5	

Sample: MW-2 **Lab ID: 252223002** Collected: 09/29/09 12:25 Received: 09/30/09 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range	ND	ug/L	77.7	1	10/07/09 10:30	10/10/09 02:21		
Motor Oil Range	ND	ug/L	388	1	10/07/09 10:30	10/10/09 02:21	64742-65-0	
n-Octacosane (S)	115	%	50-150	1	10/07/09 10:30	10/10/09 02:21	630-02-4	
o-Terphenyl (S)	113	%	50-150	1	10/07/09 10:30	10/10/09 02:21	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		10/13/09 01:17		
a,a,a-Trifluorotoluene (S)	121	%	50-150	1		10/13/09 01:17	98-08-8	
4-Bromofluorobenzene (S)	108	%	50-150	1		10/13/09 01:17	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		10/08/09 13:29	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/08/09 13:29	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/08/09 13:29	1634-04-4	
Toluene	ND	ug/L	1.0	1		10/08/09 13:29	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/08/09 13:29	1330-20-7	
4-Bromofluorobenzene (S)	99	%	78-125	1		10/08/09 13:29	460-00-4	
Dibromofluoromethane (S)	95	%	87-118	1		10/08/09 13:29	1868-53-7	
1,2-Dichloroethane-d4 (S)	95	%	75-125	1		10/08/09 13:29	17060-07-0	

ANALYTICAL RESULTS

Project: 01571 - Bellingham
Pace Project No.: 252223

Sample: MW-2 **Lab ID: 252223002** Collected: 09/29/09 12:25 Received: 09/30/09 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Toluene-d8 (S)	93	%	85-120	1		10/08/09 13:29	2037-26-5	

Sample: MW-3 **Lab ID: 252223003** Collected: 09/29/09 11:15 Received: 09/30/09 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range	ND	ug/L	78.4	1	10/07/09 10:30	10/10/09 02:39		
Motor Oil Range	ND	ug/L	392	1	10/07/09 10:30	10/10/09 02:39	64742-65-0	
n-Octacosane (S)	119	%	50-150	1	10/07/09 10:30	10/10/09 02:39	630-02-4	
o-Terphenyl (S)	113	%	50-150	1	10/07/09 10:30	10/10/09 02:39	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		10/13/09 01:41		
a,a,a-Trifluorotoluene (S)	114	%	50-150	1		10/13/09 01:41	98-08-8	
4-Bromofluorobenzene (S)	102	%	50-150	1		10/13/09 01:41	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		10/08/09 13:52	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/08/09 13:52	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/08/09 13:52	1634-04-4	
Toluene	ND	ug/L	1.0	1		10/08/09 13:52	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/08/09 13:52	1330-20-7	
4-Bromofluorobenzene (S)	98	%	78-125	1		10/08/09 13:52	460-00-4	
Dibromofluoromethane (S)	95	%	87-118	1		10/08/09 13:52	1868-53-7	
1,2-Dichloroethane-d4 (S)	95	%	75-125	1		10/08/09 13:52	17060-07-0	
Toluene-d8 (S)	94	%	85-120	1		10/08/09 13:52	2037-26-5	

Sample: MW-4 **Lab ID: 252223004** Collected: 09/29/09 09:00 Received: 09/30/09 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range	**256**	ug/L	79.2	1	10/07/09 10:30	10/10/09 02:57		
Motor Oil Range	ND	ug/L	396	1	10/07/09 10:30	10/10/09 02:57	64742-65-0	
n-Octacosane (S)	119	%	50-150	1	10/07/09 10:30	10/10/09 02:57	630-02-4	
o-Terphenyl (S)	114	%	50-150	1	10/07/09 10:30	10/10/09 02:57	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		10/13/09 02:04		
a,a,a-Trifluorotoluene (S)	124	%	50-150	1		10/13/09 02:04	98-08-8	
4-Bromofluorobenzene (S)	112	%	50-150	1		10/13/09 02:04	460-00-4	

ANALYTICAL RESULTS

Project: 01571 - Bellingham
Pace Project No.: 252223

Sample: MW-4 **Lab ID: 252223004** Collected: 09/29/09 09:00 Received: 09/30/09 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		10/08/09 14:14	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/08/09 14:14	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/08/09 14:14	1634-04-4	
Toluene	ND	ug/L	1.0	1		10/08/09 14:14	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/08/09 14:14	1330-20-7	
4-Bromofluorobenzene (S)	101	%	78-125	1		10/08/09 14:14	460-00-4	
Dibromofluoromethane (S)	96	%	87-118	1		10/08/09 14:14	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	75-125	1		10/08/09 14:14	17060-07-0	
Toluene-d8 (S)	91	%	85-120	1		10/08/09 14:14	2037-26-5	

Sample: MW-5 **Lab ID: 252223005** Collected: 09/29/09 09:30 Received: 09/30/09 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range	**183**	ug/L	77.3	1	10/07/09 10:30	10/10/09 03:15		
Motor Oil Range	ND	ug/L	386	1	10/07/09 10:30	10/10/09 03:15	64742-65-0	
n-Octacosane (S)	114	%	50-150	1	10/07/09 10:30	10/10/09 03:15	630-02-4	
o-Terphenyl (S)	114	%	50-150	1	10/07/09 10:30	10/10/09 03:15	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		10/13/09 02:28		
a,a,a-Trifluorotoluene (S)	118	%	50-150	1		10/13/09 02:28	98-08-8	
4-Bromofluorobenzene (S)	109	%	50-150	1		10/13/09 02:28	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		10/08/09 14:37	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/08/09 14:37	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/08/09 14:37	1634-04-4	
Toluene	ND	ug/L	1.0	1		10/08/09 14:37	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/08/09 14:37	1330-20-7	
4-Bromofluorobenzene (S)	104	%	78-125	1		10/08/09 14:37	460-00-4	
Dibromofluoromethane (S)	97	%	87-118	1		10/08/09 14:37	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	75-125	1		10/08/09 14:37	17060-07-0	
Toluene-d8 (S)	96	%	85-120	1		10/08/09 14:37	2037-26-5	

Sample: MW-6 **Lab ID: 252223006** Collected: 09/29/09 10:05 Received: 09/30/09 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range	ND	ug/L	78.4	1	10/07/09 10:30	10/10/09 03:33		
Motor Oil Range	ND	ug/L	392	1	10/07/09 10:30	10/10/09 03:33	64742-65-0	
n-Octacosane (S)	110	%	50-150	1	10/07/09 10:30	10/10/09 03:33	630-02-4	

ANALYTICAL RESULTS

Project: 01571 - Bellingham
Pace Project No.: 252223

Sample: MW-6 **Lab ID: 252223006** Collected: 09/29/09 10:05 Received: 09/30/09 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
o-Terphenyl (S)	109	%	50-150	1	10/07/09 10:30	10/10/09 03:33	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		10/13/09 02:51		
a,a,a-Trifluorotoluene (S)	105	%	50-150	1		10/13/09 02:51	98-08-8	
4-Bromofluorobenzene (S)	96	%	50-150	1		10/13/09 02:51	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		10/08/09 15:00	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/08/09 15:00	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/08/09 15:00	1634-04-4	
Toluene	ND	ug/L	1.0	1		10/08/09 15:00	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/08/09 15:00	1330-20-7	
4-Bromofluorobenzene (S)	102	%	78-125	1		10/08/09 15:00	460-00-4	
Dibromofluoromethane (S)	95	%	87-118	1		10/08/09 15:00	1868-53-7	
1,2-Dichloroethane-d4 (S)	94	%	75-125	1		10/08/09 15:00	17060-07-0	
Toluene-d8 (S)	94	%	85-120	1		10/08/09 15:00	2037-26-5	

Sample: MW-7 **Lab ID: 252223007** Collected: 09/29/09 10:40 Received: 09/30/09 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range	**839**	ug/L	76.9	1	10/07/09 10:30	10/10/09 03:51		
Motor Oil Range	**566**	ug/L	385	1	10/07/09 10:30	10/10/09 03:51	64742-65-0	
n-Octacosane (S)	121	%	50-150	1	10/07/09 10:30	10/10/09 03:51	630-02-4	
o-Terphenyl (S)	140	%	50-150	1	10/07/09 10:30	10/10/09 03:51	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**134**	ug/L	50.0	1		10/13/09 03:38		
a,a,a-Trifluorotoluene (S)	124	%	50-150	1		10/13/09 03:38	98-08-8	
4-Bromofluorobenzene (S)	115	%	50-150	1		10/13/09 03:38	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		10/08/09 15:22	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/08/09 15:22	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/08/09 15:22	1634-04-4	
Toluene	ND	ug/L	1.0	1		10/08/09 15:22	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/08/09 15:22	1330-20-7	
4-Bromofluorobenzene (S)	104	%	78-125	1		10/08/09 15:22	460-00-4	
Dibromofluoromethane (S)	94	%	87-118	1		10/08/09 15:22	1868-53-7	
1,2-Dichloroethane-d4 (S)	94	%	75-125	1		10/08/09 15:22	17060-07-0	
Toluene-d8 (S)	92	%	85-120	1		10/08/09 15:22	2037-26-5	

ANALYTICAL RESULTS

Project: 01571 - Bellingham
Pace Project No.: 252223

Sample: MW-8 **Lab ID: 252223008** Collected: 09/29/09 12:55 Received: 09/30/09 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range	**88.5**	ug/L	77.7	1	10/07/09 10:30	10/10/09 04:09		
Motor Oil Range	ND	ug/L	388	1	10/07/09 10:30	10/10/09 04:09	64742-65-0	
n-Octacosane (S)	121	%	50-150	1	10/07/09 10:30	10/10/09 04:09	630-02-4	
o-Terphenyl (S)	117	%	50-150	1	10/07/09 10:30	10/10/09 04:09	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		10/13/09 04:02		
a,a,a-Trifluorotoluene (S)	112	%	50-150	1		10/13/09 04:02	98-08-8	
4-Bromofluorobenzene (S)	100	%	50-150	1		10/13/09 04:02	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		10/08/09 15:45	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/08/09 15:45	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/08/09 15:45	1634-04-4	
Toluene	ND	ug/L	1.0	1		10/08/09 15:45	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/08/09 15:45	1330-20-7	
4-Bromofluorobenzene (S)	102	%	78-125	1		10/08/09 15:45	460-00-4	
Dibromofluoromethane (S)	94	%	87-118	1		10/08/09 15:45	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	75-125	1		10/08/09 15:45	17060-07-0	
Toluene-d8 (S)	93	%	85-120	1		10/08/09 15:45	2037-26-5	

Sample: QCTB **Lab ID: 252223009** Collected: 09/29/09 00:00 Received: 09/30/09 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		10/12/09 23:43		
a,a,a-Trifluorotoluene (S)	115	%	50-150	1		10/12/09 23:43	98-08-8	
4-Bromofluorobenzene (S)	103	%	50-150	1		10/12/09 23:43	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		10/08/09 11:36	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/08/09 11:36	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/08/09 11:36	1634-04-4	
Toluene	ND	ug/L	1.0	1		10/08/09 11:36	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/08/09 11:36	1330-20-7	
4-Bromofluorobenzene (S)	101	%	78-125	1		10/08/09 11:36	460-00-4	
Dibromofluoromethane (S)	94	%	87-118	1		10/08/09 11:36	1868-53-7	
1,2-Dichloroethane-d4 (S)	95	%	75-125	1		10/08/09 11:36	17060-07-0	
Toluene-d8 (S)	94	%	85-120	1		10/08/09 11:36	2037-26-5	

QUALITY CONTROL DATA

Project: 01571 - Bellingham
Pace Project No.: 252223

QC Batch: OEXT/1562 Analysis Method: NWTPH-Dx
QC Batch Method: EPA 3510 Analysis Description: NWTPH-Dx GCS
Associated Lab Samples: 252223001, 252223002, 252223003, 252223004, 252223005, 252223006, 252223007, 252223008

METHOD BLANK: 13080 Matrix: Water
Associated Lab Samples: 252223001, 252223002, 252223003, 252223004, 252223005, 252223006, 252223007, 252223008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range	ug/L	ND	80.0	10/09/09 23:40	
Motor Oil Range	ug/L	ND	400	10/09/09 23:40	
n-Octacosane (S)	%	116	50-150	10/09/09 23:40	
o-Terphenyl (S)	%	113	50-150	10/09/09 23:40	

LABORATORY CONTROL SAMPLE & LCSD: 13081 13082

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range	ug/L	5000	4580	4990	92	100	51-147	8	30	
Motor Oil Range	ug/L	5000	4940	5490	99	110	20-160	11	30	
n-Octacosane (S)	%				108	116	50-150			
o-Terphenyl (S)	%				110	119	50-150			

QUALITY CONTROL DATA

Project: 01571 - Bellingham
Pace Project No.: 252223

QC Batch: GCV/1273 Analysis Method: NWTPH-Gx
QC Batch Method: NWTPH-Gx Analysis Description: NWTPH-Gx GCV Water
Associated Lab Samples: 252223001, 252223002, 252223003, 252223004, 252223005, 252223006, 252223007, 252223008, 252223009

METHOD BLANK: 13254 Matrix: Water
Associated Lab Samples: 252223001, 252223002, 252223003, 252223004, 252223005, 252223006, 252223007, 252223008, 252223009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	50.0	10/12/09 19:25	
4-Bromofluorobenzene (S)	%	107	50-150	10/12/09 19:25	
a,a,a-Trifluorotoluene (S)	%	121	50-150	10/12/09 19:25	

LABORATORY CONTROL SAMPLE: 13255

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	ug/L	500	581	116	50-163	
4-Bromofluorobenzene (S)	%			105	50-150	
a,a,a-Trifluorotoluene (S)	%			114	50-150	

SAMPLE DUPLICATE: 13337

Parameter	Units	252223001 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	ug/L	ND	14.9J		
4-Bromofluorobenzene (S)	%	110	99	10	
a,a,a-Trifluorotoluene (S)	%	122	112	8	

SAMPLE DUPLICATE: 13338

Parameter	Units	252223006 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	ug/L	ND	ND		
4-Bromofluorobenzene (S)	%	96	111	14	
a,a,a-Trifluorotoluene (S)	%	105	121	14	

QUALITY CONTROL DATA

Project: 01571 - Bellingham
Pace Project No.: 252223

QC Batch: MSV/1573 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 252223001, 252223002, 252223003, 252223004, 252223005, 252223006, 252223007, 252223008, 252223009

METHOD BLANK: 13152 Matrix: Water
Associated Lab Samples: 252223001, 252223002, 252223003, 252223004, 252223005, 252223006, 252223007, 252223008, 252223009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	10/08/09 09:15	
Ethylbenzene	ug/L	ND	1.0	10/08/09 09:15	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/08/09 09:15	
Toluene	ug/L	ND	1.0	10/08/09 09:15	
Xylene (Total)	ug/L	ND	3.0	10/08/09 09:15	
1,2-Dichloroethane-d4 (S)	%	95	75-125	10/08/09 09:15	
4-Bromofluorobenzene (S)	%	102	78-125	10/08/09 09:15	
Dibromofluoromethane (S)	%	94	87-118	10/08/09 09:15	
Toluene-d8 (S)	%	92	85-120	10/08/09 09:15	

LABORATORY CONTROL SAMPLE: 13153

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	21.3	106	75-124	
Ethylbenzene	ug/L	20	19.5	97	76-124	
Methyl-tert-butyl ether	ug/L	20	21.0	105	72-130	
Toluene	ug/L	20	18.0	90	75-124	
Xylene (Total)	ug/L	60	60.1	100	76-123	
1,2-Dichloroethane-d4 (S)	%			95	75-125	
4-Bromofluorobenzene (S)	%			102	78-125	
Dibromofluoromethane (S)	%			101	87-118	
Toluene-d8 (S)	%			89	85-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 13167 13168

Parameter	Units	252233006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzene	ug/L	ND	20	20	21.5	21.1	107	105	75-124	2	
Ethylbenzene	ug/L	ND	20	20	20.1	19.4	100	97	76-124	3	
Methyl-tert-butyl ether	ug/L	ND	20	20	21.4	21.2	107	106	72-130	.8	
Toluene	ug/L	ND	20	20	18.2	17.7	91	88	75-124	2	
Xylene (Total)	ug/L	ND	60	60	61.9	59.7	103	99	76-123	4	
1,2-Dichloroethane-d4 (S)	%						96	97	75-125		
4-Bromofluorobenzene (S)	%						102	102	78-125		
Dibromofluoromethane (S)	%						101	102	87-118		
Toluene-d8 (S)	%						88	87	85-120		

REPORT OF LABORATORY ANALYSIS

QUALIFIERS

Project: 01571 - Bellingham
Pace Project No.: 252223

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-S Pace Analytical Services - Seattle

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 01571 - Bellingham
Pace Project No.: 252223

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
252223001	**MW-1**	EPA 3510	OEXT/1562	NWTPH-Dx	GCSV/1275
252223002	**MW-2**	EPA 3510	OEXT/1562	NWTPH-Dx	GCSV/1275
252223003	**MW-3**	EPA 3510	OEXT/1562	NWTPH-Dx	GCSV/1275
252223004	**MW-4**	EPA 3510	OEXT/1562	NWTPH-Dx	GCSV/1275
252223005	**MW-5**	EPA 3510	OEXT/1562	NWTPH-Dx	GCSV/1275
252223006	**MW-6**	EPA 3510	OEXT/1562	NWTPH-Dx	GCSV/1275
252223007	**MW-7**	EPA 3510	OEXT/1562	NWTPH-Dx	GCSV/1275
252223008	**MW-8**	EPA 3510	OEXT/1562	NWTPH-Dx	GCSV/1275
252223001	**MW-1**	EPA 5030B/8260	MSV/1573		
252223002	**MW-2**	EPA 5030B/8260	MSV/1573		
252223003	**MW-3**	EPA 5030B/8260	MSV/1573		
252223004	**MW-4**	EPA 5030B/8260	MSV/1573		
252223005	**MW-5**	EPA 5030B/8260	MSV/1573		
252223006	**MW-6**	EPA 5030B/8260	MSV/1573		
252223007	**MW-7**	EPA 5030B/8260	MSV/1573		
252223008	**MW-8**	EPA 5030B/8260	MSV/1573		
252223009	**QCTB**	EPA 5030B/8260	MSV/1573		
252223001	**MW-1**	NWTPH-Gx	GCV/1273		
252223002	**MW-2**	NWTPH-Gx	GCV/1273		
252223003	**MW-3**	NWTPH-Gx	GCV/1273		
252223004	**MW-4**	NWTPH-Gx	GCV/1273		
252223005	**MW-5**	NWTPH-Gx	GCV/1273		
252223006	**MW-6**	NWTPH-Gx	GCV/1273		
252223007	**MW-7**	NWTPH-Gx	GCV/1273		
252223008	**MW-8**	NWTPH-Gx	GCV/1273		
252223009	**QCTB**	NWTPH-Gx	GCV/1273		

Chain Of Custody Record

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

INVOICE REMITTANCE ADDRESS:
Stantec
Attn: Chris Gdak
12034 134th Court NE, Suite 102
Redmond, WA 98052

Purchase Order #

ConocoPhillips AOC#
01571

DATE: 09/29/09
PAGE: 1 of 1

SAMPLING COMPANY: STANTEC	Valid Value ID:	CONOCOPHILLIPS SITE NUMBER: AOC 01571
ADDRESS: 12034 134th Court NE, Suite 102 Redmond, WA 98052		SITE ADDRESS (Street and City): 200 South 36th Street, Bellingham, WA 98225
PROJECT CONTACT (Hardcopy or PDF Report to): Chris Gdak		EDF DELIVERABLE TO (RP or Designee):
TELEPHONE: (425) 298-1023	FAX: (425) 298-1020	E-MAIL: chris.gdak@stantec.com
SAMPLER NAME(S) (Print): David Reitz	CONSULTANT PROJECT NUMBER: 212301495	

GLOBAL ID NO.:
ConocoPhillips Manager: Myron Smith
PHONE NO.:
E-MAIL:
LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
☑ 14 DAYS ☐ 7 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

SPECIAL INSTRUCTIONS OR NOTES:

CHECK BOX IF EDD IS NEEDED ☑

REQUESTED ANALYSES

FIELD NOTES:
Container/Preservative or PID Readings or Laboratory Notes

4.0, 1.9
TEMPERATURE ON RECEIPT C°

* Field Point name only required if different from Sample ID

LAB USE ONLY	Field Point Name	Sample ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	NWTPH-Gx	NWTPH-Dx	BTEX by 8260B	MTBE by 8260B													
	MW-1	MW-1	09/29/09	1150	GW	7	X	X	X	X		1(AG1H)0.5				4(VG9H)							
	MW-2	MW-2	"	1225	GW	7	X	X	X	X													
	MW-3	MW-3	"	1115	GW	7	X	X	X	X													
	MW-4	MW-4	"	0900	GW	7	X	X	X	X													
	MW-5	MW-5	"	0930	GW	7	X	X	X	X		1(AG1H)7.0											
	MW-6	MW-6	"	1005	GW	7	X	X	X	X		1(AG9H)0.5											
	MW-7	MW-7	"	1040	GW	7	X	X	X	X													
	MW-8	MW-8	"	1255	GW	7	X	X	X	X													
	QCTB	QCTB			DI	9	X		X	X						9(VG9H)							

252223

40-mL VOAs, preserved with HCl

Relinquished by: (Signature)	Received by: (Signature)	Date: 09/30/09	Time: 1000
Relinquished by: (Signature)	Received by: (Signature)	Date: 9/30/09	Time: 1230
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

8/15/03 Revision

Sample Condition Upon Receipt

Pace Analytical

Client Name: Stantec-WA

Project # 252223

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace Other _____

Optional
Proj. Due Date:
Proj. Name:

Tracking #: _____

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals Intact: ☑ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

Thermometer Used: Horiba 132013 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 4.0, 1.9 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: 10/11/09 AR

Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests 10/11/09 AR	☑Yes	☐No	☑N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: Water				
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	13. Samples 5 and 6 received with Neutral pH (Ambers) - adjusts hold time to 7 days - Analysts notified upon receipt.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☑No	☐N/A	Initial when completed / Lot # of added preservative
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes	☐No		
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☑No	☐N/A	15.
Trip Blank Present:	☑Yes	☐No	☐N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased): _____				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)