Tosco 6380 - Bellingham Release 471259

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Quarterly Groundwater Monitoring Report - Third Quarter 2010
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.:
212302382

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

September 20, 2010

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 2010 (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 August 3, 2010. Groundwater monitoring activities were performed in accordance with Stantec's protocols for groundwater monitoring events (see Appendix A).

Eight groundwater monitoring wells were gauged and sampled (MW-1 through MW-8). 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 5.31 feet (MW-5) to 8.93 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. Historic groundwater gauging data and gauging data from the reporting period are summarized in Table 1. Well locations and groundwater flow direction are shown on Figure 1. Based on these data, the water table at the Site is relatively flat. Groundwater flow direction appears to be divergent. Based on measured groundwater elevations at MW-3 and MW-5, there appears to be a southeasterly flow component in the southeast corner of the Site, possibly due to influences from subsurface utilities or other structures associated with the adjoining roadway. Across the remainder of the Site, the groundwater flow direction is generally to the northwest at an approximate gradient of 0.006 feet per foot (ft/ft).

Monitoring Well Purging

Wells intended to be sampled were purged after gauging. Groundwater was purged from the wells using low-flow methods, which included using a peristaltic pump and dedicated

polyethylene tubing. Water quality parameters were measured during purging and recorded on field data sheets (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) 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.

Analytical results did not exceed Model Toxics Control Act (MTCA) Method A cleanup levels for any of the analyses performed during the reporting period. The TPH-D concentration in MW-7 dropped significantly from the last quarter's results. This is the lowest concentration of TPH-D

in MW-7 since sampling began in January, 2006. The remaining results during this reporting period are generally consistent with the results from other recent groundwater monitoring events.

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. Potential QA/QC concerns were identified on pages 12 and 13 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.

CONCLUSIONS

No exceedances of MTCA Method A cleanup levels were reported for any of the constituents analyzed at any of the locations sampled during the reporting period. The results during this reporting period are generally consistent with the results from other recent groundwater monitoring events.

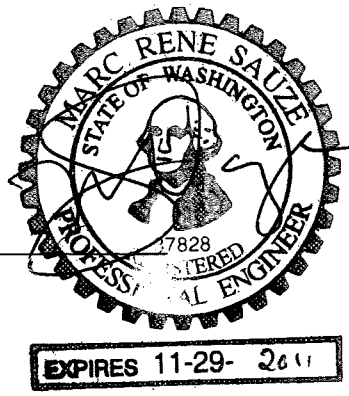
LIMITATIONS AND CERTIFICATIONS

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 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 investigations. No other warranties, expressed or implied are made by Stantec.

Prepared by:

Amanda Thompson, E.I.T.
Staff Engineer

Reviewed by:

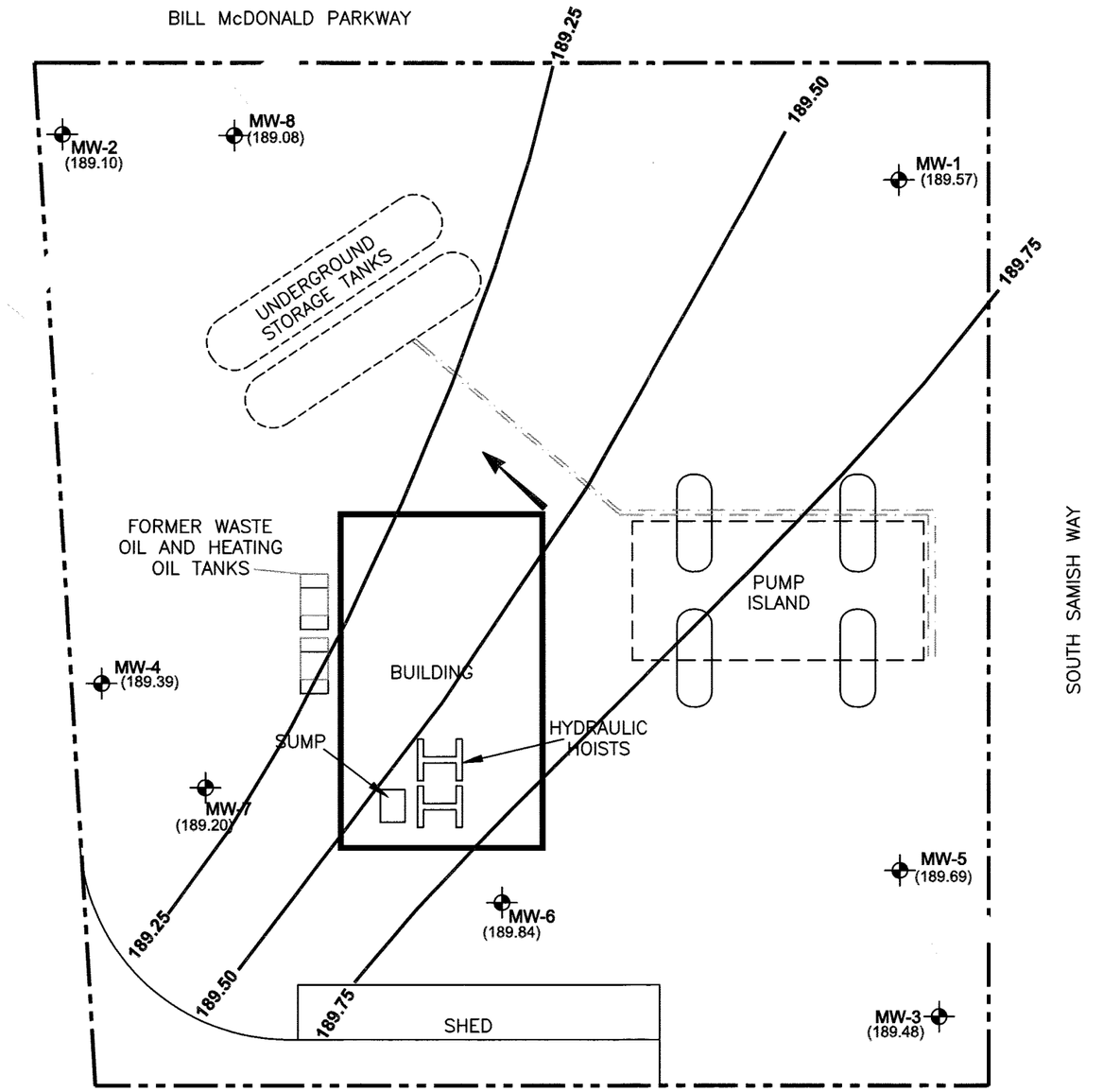


Marc Sauze, P.E.
Senior Engineer

ATTACHMENTS

Table 1	Cumulative Summary of Groundwater Elevations and Sample Analytical Results
Figure 1	Site Plan with Groundwater Elevations (August 3, 2010)
Figure 2	Site Plan with Analytical Results (August 3, 2010)
Appendix A	Field and Laboratory Procedures
Appendix B	Field Data Sheets
Appendix C	Certified Laboratory Analytical Report and Chain-of-Custody Documentation

FIGURES



LEGEND

MW-1 — MONITORING WELL LOCATION AND ID

SITE BOUNDARY

GROUNDWATER

(190.63) GROUNDWATER ELEVATION (FEET)

INFERRED GROUNDWATER FLOW DIRECTION

189.00 — GROUNDWATER ELEVATION CONTOUR (FEET)

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

NOTES:

1). ALL LOCATIONS ARE APPROXIMATE.

2). CONTOUR INTERVAL = 0.25 FEET

3). GROUNDWATER GRADIENT = 0.006 FT/FT

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

SITE PLAN WITH GROUNDWATER ELEVATIONS (AUGUST 3, 2010)

FIGURE: 1

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
212302382	DJH	AT	CG	8/17/10

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MW-8	12/9/09	2/26/10	6/4/10	8/3/10
TPH-G	57.9	<50.0	<50.0	<50.0
TPH-D	112	136	99	<76.9
TPH-O	<385	496	<392	<385
B	<1.0	<1.0	3.8	3.0
T	<1.0	<1.0	<1.0	<1.0
E	<1.0	<1.0	<1.0	<1.0
X	<3.0	<3.0	<3.0	<3.0

MW-2	12/9/09	2/26/10	6/4/10	8/3/10
TPH-G	--	--	--	<50.0
TPH-D	--	--	--	<77.7
TPH-O	--	--	--	<388
B	--	--	--	<1.0
T	--	--	--	<1.0
E	--	--	--	<1.0
X	--	--	--	<3.0

MW-1	12/9/09	2/26/10	6/4/10	8/3/10
TPH-G	--	<50.0	<50.0	<50.0
TPH-D	--	<77.7	187	<76.9
TPH-O	--	<388	<392	<385
B	--	4.4	<1.0	<1.0
T	--	1.5	<1.0	<1.0
E	--	<1.0	<1.0	<1.0
X	--	7.2	<3.0	<3.0

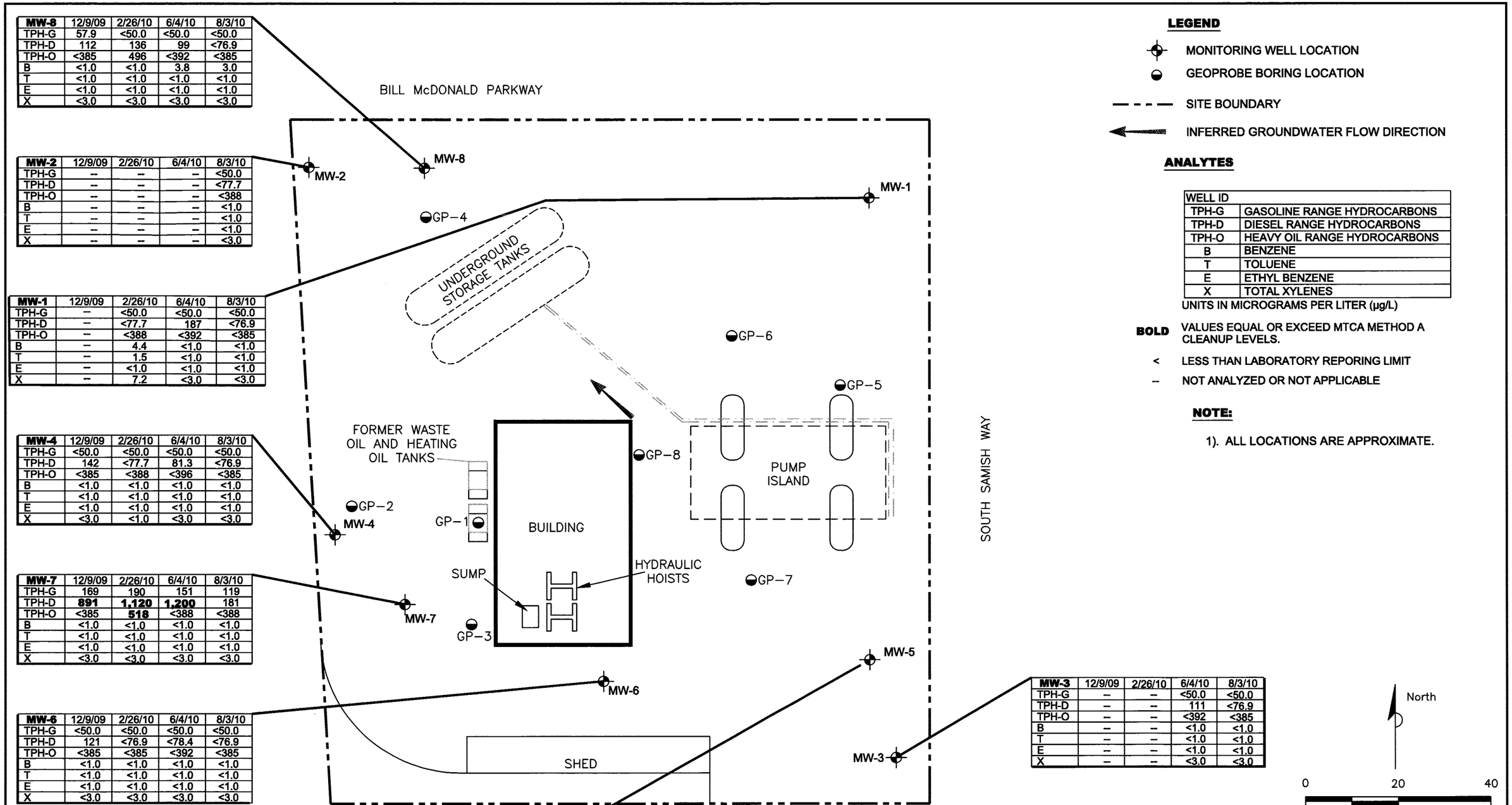
MW-4	12/9/09	2/26/10	6/4/10	8/3/10
TPH-G	<50.0	<50.0	<50.0	<50.0
TPH-D	142	<77.7	81.3	<76.9
TPH-O	<385	<388	<396	<385
B	<1.0	<1.0	<1.0	<1.0
T	<1.0	<1.0	<1.0	<1.0
E	<1.0	<1.0	<1.0	<1.0
X	<3.0	<1.0	<3.0	<3.0

MW-7	12/9/09	2/26/10	6/4/10	8/3/10
TPH-G	169	190	151	119
TPH-D	**891**	**1,120**	**1,200**	181
TPH-O	<385	**518**	<388	<388
B	<1.0	<1.0	<1.0	<1.0
T	<1.0	<1.0	<1.0	<1.0
E	<1.0	<1.0	<1.0	<1.0
X	<3.0	<3.0	<3.0	<3.0

MW-6	12/9/09	2/26/10	6/4/10	8/3/10
TPH-G	<50.0	<50.0	<50.0	<50.0
TPH-D	121	<76.9	<78.4	<76.9
TPH-O	<385	<385	<392	<385
B	<1.0	<1.0	<1.0	<1.0
T	<1.0	<1.0	<1.0	<1.0
E	<1.0	<1.0	<1.0	<1.0
X	<3.0	<3.0	<3.0	<3.0

MW-5	12/9/09	2/26/10	6/4/10	8/3/10
TPH-G	--	63.1	--	141
TPH-D	--	93.6	--	<76.9
TPH-O	--	<385	--	<385
B	--	<1.0	--	<1.0
T	--	<1.0	--	<1.0
E	--	<1.0	--	<1.0
X	--	<3.0	--	<3.0

MW-3	12/9/09	2/26/10	6/4/10	8/3/10
TPH-G	--	--	<50.0	<50.0
TPH-D	--	--	111	<76.9
TPH-O	--	--	<392	<385
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

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 (AUGUST 3, 2010)

FIGURE: **2**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
212302382	DJH	AT	CG	8/17/10

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TABLE

TABLE 1
CULMULATIVE SUMMARY OF 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	–	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	–	93.19	<50	<77	<96	<0.5	<0.7	<0.8	<0.8	1	–	–	–	–
	12/10/08	5.62	–	92.87	<50	<29	<69	<0.5	<0.7	<0.8	<0.8	–	–	–	–	–
	03/31/09	5.55	–	92.94	<50.0	<83	<420	<1.0	<1.0	<1.0	<1.0	<1.0	–	–	–	–
	06/17/09	5.80	–	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	–	189.12	<50.0	<77.7	<388	<1.0	<1.0	<1.0	<3.0	<1.0	–	–	–	–
	12/09/09	6.00	–	189.79	Not part of the sampling schedule this reporting period.								–	–	–	–
	02/26/10	5.33	–	190.46	<50.0	<77.7	<388	4.4	1.5	<1.0	7.2	–	–	–	–	–
	06/04/10	5.16	–	190.63	<50.0	187	<392	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–
	08/03/10	6.22	–	189.57	<50.0	<76.9	<385	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–

TABLE 1
CULMULATIVE SUMMARY OF 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	–	92.49	<50	<76[b]	<95[b]	<0.5	<0.5	<0.5	<0.5	<0.5	–	–	–	–
	09/10/08	8.80	–	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	–	92.84	–	–	–	–	–	–	–	–	–	–	–	–
	06/17/09	8.53	–	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	–	188.65	<50.0	<77.7	<388	<1.0	<1.0	<1.0	<3.0	<1.0	–	–	–	–
	12/09/09	7.99	–	190.04	Not part of the sampling schedule this reporting period.								–	–	–	–
	02/26/10	8.10	–	189.93	Not part of the sampling schedule this reporting period.								–	–	–	–
	06/04/10	7.76	–	190.27	Not part of the sampling schedule this reporting period.								–	–	–	–
	08/03/10	8.93	–	189.10	<50.0	<77.7	<388	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–

TABLE 1
CULMULATIVE SUMMARY OF 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	–	92.73	<50	100[b]	**560**[b]	<0.5	<0.5	<0.5	<0.5	<0.5	–	–	–	–
	09/10/08	5.30	–	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	–	92.94	–	–	–	–	–	–	–	–	–	–	–	–
	06/17/09	5.57	–	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	–	189.28	<50.0	<78.4	<392	<1.0	<1.0	<1.0	<3.0	<1.0	–	–	–	–
	12/09/09	5.06	–	190.13	Not part of the sampling schedule this reporting period.								–	–	–	–
	02/26/10	5.02	–	190.17	Not part of the sampling schedule this reporting period.								–	–	–	–
	06/04/10	4.91	–	190.28	<50.0	111	<392	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–
	08/03/10	5.71	–	189.48	<50.0	<76.9	<385	<1.0	<1.0	<1.0	<3.0	–				

TABLE 1
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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[a]	<0.500	<0.500	<0.500	<1.00	–	–	–	**29.0**	–
99.44	05/25/99	6.62	–	92.82	<50.0	<250	<750[a]	<0.500	<0.500	<0.500	<1.00	–	–	–	–	–
	08/12/99	7.31	–	92.13	<50.0	<250	<750[a]	<0.500	<0.500	<0.500	<1.00	–	–	–	–	–
	12/07/99	6.37	–	93.07	<50.0	<250	<750[a]	<0.500	<0.500	<0.500	<1.00	–	–	–	10.2	–
	02/10/00	6.48	–	92.96	<50.0	<250	<750[a]	<0.500	<0.500	<0.500	<1.00	–	–	–	**23.6**	–
	02/02/01	6.37	–	93.07	<50.0	<250	<750[a]	<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[a]	<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[a]	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[a]	<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	–	93.42	<50	<75[b]	<94[b]	<0.5	<0.5	<0.5	<0.5	<0.5	–	–	–	–
	09/10/08	6.85	–	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	–	93.27	–	–	–	–	–	–	–	–	–	–	–	–
	06/16/09	7.09	–	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	–	189.06	<50.0	256	<396	<1.0	<1.0	<1.0	<3.0	<1.0	–	–	–	–
	12/09/09	6.53	–	190.24	<50.0	142	<385	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–
	2/26/2010	6.39	–	190.38	<50.0	<77.7	<388	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–
	6/4/2010	6.19	–	190.58	<50.0	81.3	<396	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–
	8/3/2010	7.38	–	189.39	<50.0	<76.9	<385	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–

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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	–	–	–	–
	12/09/09	4.33	0.00	190.67	Not part of the sampling schedule this reporting period.								–	–	–	–
	02/26/10	4.52	0.00	190.48	63.1	93.6	<385	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–
	06/04/10	4.82	0.00	190.18	Not part of the sampling schedule this reporting period.								–	–	–	–
	08/03/10	5.31	0.00	189.69	141	<76.9	<385	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–
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	–	–	–	–
	12/09/09	5.87	0.00	190.65	<50.0	121	<385	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–
	02/26/10	5.91	0.00	190.61	<50.0	<76.9	<385	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–
	06/04/10	5.69	0.00	190.83	<50.0	<78.4	<392	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–
	08/03/10	6.68	0.00	189.84	<50.0	<76.9	<385	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–

TABLE 1
CULMULATIVE SUMMARY OF 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-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	–	–	–	–
	12/09/09	6.97	0.00	189.96	169	891	<385	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–
	02/26/10	6.74	0.00	190.19	190	1,120	518	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–
	06/04/10	6.50	0.00	190.43	151	1,200	<388	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–
	08/03/10	7.73	0.00	189.20	119	181	<388	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–
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	–	–	–	–
	12/09/09	7.40	0.00	190.08	57.9	112	<385	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–
	02/26/10	7.40	0.00	190.08	<50.0	136	496	<1.0	<1.0	<1.0	<3.0	–	–	–	–	–
	06/04/10	7.18	0.00	190.30	<50.0	99	<392	3.8	<1.0	<1.0	<3.0	–	–	–	–	–
	08/03/10	8.40	0.00	189.08	<50.0	<76.9	<385	3.0	<1.0	<1.0	<3.0	–	–	–	–	–
MTCA Method A Cleanup Levels					1000/800[a]	500	500	5	1000	700	1000	20	5	0.01	15	15

TABLE 1
CULMULATIVE SUMMARY OF 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)

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 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.

[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
CP 256380 (RM&R 01571) Bellingham, Washington

Name(s) D. Rate Date: 08/03/10 Time of Arrival Call-In: 0800

Arrival Time: 0300 Departure Time: 0930 Time of Departure Call-In 0900

Who did you call? I. Parise

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. Station

DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

0300 Arrive on job site. Don appropriate P.P.E. Set-up decon. Station. Perform tailgate safety meeting. Purchase ice.
0310 Initiate gauging of physical measurements at 8 gwm wells prior to 3Q10 GWM sample procedures
0420 Complete gauging procedures & initiate 3Q10 GWM sample procedures.
0830 Complete 3Q10 GWM sample procedures. Decon. Equipment and release purge water / decon. rinsates into staged drum. Label drum.
0845 Pack sample coolers & load Equipment into truck
0900 Call-in to office. Check-out with site-contact
0910 Complete daily documentation.
0930 Depart job site.
1100 Drop-off samples at lab.

08/03/10

Stantec Consulting Corporation

HYDROLOGIC DATA SHEET

Gauge Date: 08/03/10 **Project Name:** CP RM&R 1571 Bellingham

Field Technician: David Reitz **Project Number:** 212302382

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.	0330	—	6.22	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.	0310	—	8.93	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.	0340	—	5.71	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.	0350	—	7.38	20.40	Y	N	Y	
MW-5		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0320	—	5.31	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.	0400	—	6.68	13.80	Y	N	Y	
MW-7		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	0420	—	7.73	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.	0410	—	8.40	17.50	Y	N	Y	

STANTEC Consulting Corporation

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 212302382 PURGED BY: D. Reitz WELL I.D.: MW-1

CLIENT NAME: C.O.P. SAMPLED BY: D. Reitz SAMPLE I.D.: MW-1

LOCATION: 200 S. 36th St. Bellingham, WA.

DATE PURGED 08/03/10 START (2400hr) 0525 END (2400hr) 0550

DATE SAMPLED 08/03/10 SAMPLE TIME (2400hr) 0540 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) = 22.80

DEPTH TO WATER (feet) = 6.22

WATER COLUMN HEIGHT (feet) = 16.58 ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (mL)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
08/03/10	0530	500	19.7	0.073	6.03	Cldy
	0533	500	19.8	0.069	6.05	Cldy
	0536	500	20.5	0.069	6.04	Clr
↓	0539	500	20.8	0.069	6.04	Clr
					08/03/10	

Calculated Variance of Final Three Samples: 0.10 0 0.01

Acceptable Variance Limits: ≤ 10% ≤ 3% ≤ 0.1

DEPTH TO PURGE INTAKE DURING PURGE: 18.00 SAMPLE DTW: 6.54

ANTICIPATED PURGE INTAKE DEPTH: 18.00 ANALYSES: TPH-G, TPH-D, BTEX by 8260B

SAMPLE VESSEL / PRESERVATIVE: ____

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 #: 212302382 PURGED BY: D. Reitz WELL I.D.: MW-2

CLIENT NAME: C.O.P. SAMPLED BY: D. Reitz SAMPLE I.D.: MW-2

LOCATION: 200 S. 36th St. Bellingham, WA.

DATE PURGED 08/03/10 START (2400hr) 0425 END (2400hr) 0450

DATE SAMPLED 08/03/10 SAMPLE TIME (2400hr) 0440 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) = 20.80

DEPTH TO WATER (feet) = 8.93

WATER COLUMN HEIGHT (feet) = 11.87

ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME mL (L)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
08/03/10	0430	800	20.4	0.067	6.12	Clr
↓	0433	500	18.4	0.063	6.08	Clr
	0436	500	18.6	0.062	6.07	Clr
↓	0439	500	18.8	0.062	6.08	Clr
				[signature]	08/03/10	
Calculated Variance of Final Three Samples:			0.4	0.001	0.01	
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1	

DEPTH TO PURGE INTAKE DURING PURGE: 16.00 SAMPLE DTW: 9.01

ANTICIPATED PURGE INTAKE DEPTH: 16.00 ANALYSES: TPH-G, TPH-D, BTEX by 8260B

SAMPLE VESSEL / PRESERVATIVE: ____

PURGING EQUIPMENT: Horiba water meter, Peri-staltic pump, Interface probe

SAMPLING EQUIPMENT: Peri-staltic 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 #: 212302382 PURGED BY: D. Reitz WELL I.D.: MW-3

CLIENT NAME: C.O.P. SAMPLED BY: D Reitz SAMPLE I.D.: MW-3

LOCATION: 200 S. 36th St. Bellingham, WA

DATE PURGED 08/03/10 START (2400hr) 0555 END (2400hr) 0620

DATE SAMPLED 08/03/10 SAMPLE TIME (2400hr) 0610 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) = 21.00

DEPTH TO WATER (feet) = 5.71

WATER COLUMN HEIGHT (feet) = 15.29 ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (mL)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
08/03/10	0600	500	16.8	0.089	6.12	Clr
	0603	500	17.1	0.088	6.13	Clr
	0606	500	17.2	0.088	6.13	Clr
	0609	500	17.1	0.088	6.13	Clr
					08/	03/10

Calculated Variance of Final Three Samples: 0.1 0

Acceptable Variance Limits: ≤ 10% ≤ 3% ≤ 0.1

DEPTH TO PURGE INTAKE DURING PURGE: 17.00 SAMPLE DTW: 5.77

ANTICIPATED PURGE INTAKE DEPTH: 17.00 ANALYSES: TPH-G, TPH-D, BTEX by 8260B

SAMPLE VESSEL / PRESERVATIVE: ____

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: D. Reitz

STANTEC Consulting Corporation

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 212302382 PURGED BY: D. Reitz WELL I.D.: MW-4

CLIENT NAME: C. O. P. SAMPLED BY: D. Reitz SAMPLE I.D.: MW-4

LOCATION: 200 S. 36th St. Bellingham, WA.

DATE PURGED 08/03/10 START (2400hr) 0625 END (2400hr) 0650

DATE SAMPLED 08/03/10 SAMPLE TIME (2400hr) 0640 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) = 20.40

DEPTH TO WATER (feet) = 7.38

WATER COLUMN HEIGHT (feet) = 13.02 ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (L)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
08/03/10	0636	500	16.3	0.079	6.04	Clr
"	0633	500	16.7	0.079	6.03	Clr
"	0636	500	17.0	0.079	6.03	Clr
"	0639	500	17.1	0.079	6.03	Clr

08/03/10

Calculated Variance of Final Three Samples: 0.4 Ø Ø

Acceptable Variance Limits: ≤ 10% ≤ 3% ≤ 0.1

DEPTH TO PURGE INTAKE DURING PURGE: 16.00 SAMPLE DTW: 7.51

ANTICIPATED PURGE INTAKE DEPTH: 16.00 ANALYSES: TPH-G, TPH-D, BTEX by 8260B

SAMPLE VESSEL / PRESERVATIVE: ____

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 #: 212302382 PURGED BY: D. Ritz WELL I.D.: MW-5

CLIENT NAME: C. O. P. SAMPLED BY: D. Ritz SAMPLE I.D.: MW-5

LOCATION: 200 S. 36th St. Bellingham, WA.

DATE PURGED 08/03/10 START (2400hr) 0455 END (2400hr) 0520

DATE SAMPLED 08/03/10 SAMPLE TIME (2400hr) 0510 LOW-FLOW USED X

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

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

DEPTH TO BOTTOM (feet) = 13.70

DEPTH TO WATER (feet) = 5.31

WATER COLUMN HEIGHT (feet) = 8.39 ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (L)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
08/03/10	0500	500	21.1	0.011	6.05	Clr.
	0503	500	21.6	0.011	6.03	Clr
	0506	500	21.9	0.011	6.04	Clr.
	0509	500	21.9	0.011	6.04	Clr

08/03/10

	TEMP.	CONDUCTIVITY	pH
Calculated Variance of Final Three Samples:	0.3	0	0.01
Acceptable Variance Limits:	≤ 10%	≤ 3%	≤ 0.1

DEPTH TO PURGE INTAKE DURING PURGE: 9.00 SAMPLE DTW: 5.70

ANTICIPATED PURGE INTAKE DEPTH: 9.00 ANALYSES: TPH-G, TPH-D, BTEX by 8260B

SAMPLE VESSEL / PRESERVATIVE: ____

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 #: 212302382 PURGED BY: D. Reitz WELL I.D.: MW-6

CLIENT NAME: C.O.P. SAMPLED BY: D. Reitz SAMPLE I.D.: MW-6

LOCATION: 200 S. 36th St. Bellingham, WA.

DATE PURGED 08/03/10 START (2400hr) 0655 END (2400hr) 0720

DATE SAMPLED 08/03/10 SAMPLE TIME (2400hr) 0710 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) = 6.68

WATER COLUMN HEIGHT (feet) = 7.12 ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (mL)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
08/03/10	0700	500	18.0	0.084	6.18	Clr
	0703	500	18.6	0.083	6.16	Clr
	0706	500	19.0	0.083	6.17	Clr
	0709	500	18.8	0.083	6.17	Clr
					08/03/10	
Calculated Variance of Final Three Samples:			0.4	0	0.01	
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1	

DEPTH TO PURGE INTAKE DURING PURGE: 9.00 SAMPLE DTW: 6.86

ANTICIPATED PURGE INTAKE DEPTH: 9.00 ANALYSES: TPH-G, TPH-D, BTEX by 8260B

SAMPLE VESSEL / PRESERVATIVE: ____

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 #: 212302382 PURGED BY: D. Reitz WELL I.D.: MW-7

CLIENT NAME: C.O.P. SAMPLED BY: D. Reitz SAMPLE I.D.: MW-7

LOCATION: 200 S. 36th St. Bellingham, WA.

DATE PURGED 08/03/10 START (2400hr) 0800 END (2400hr) 0830

DATE SAMPLED 08/03/10 SAMPLE TIME (2400hr) 0815 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) = 18.20

DEPTH TO WATER (feet) = 7.73

WATER COLUMN HEIGHT (feet) = 10.47 ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (mL)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
08/03/10	0805	500	17.4	0.083	6.15	Clr
	0808	500	17.9	0.083	6.13	Clr
	0811	500	18.6	0.082	6.14	Clr
	0814	500	18.4	0.083	6.14	Clr

08/03/10

Calculated Variance of Final Three Samples:	0.7	0.001	0.01
Acceptable Variance Limits:	≤ 10%	≤ 3%	≤ 0.1

DEPTH TO PURGE INTAKE DURING PURGE: 13.00 SAMPLE DTW: 7.89

ANTICIPATED PURGE INTAKE DEPTH: 13.00 ANALYSES: TPH-G, TPH-D, BTEX by 8260B

SAMPLE VESSEL / PRESERVATIVE: ____

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 #: 212302382 PURGED BY: D. Reitz WELL I.D.: MW-8

CLIENT NAME: C.O.P SAMPLED BY: D. Reitz SAMPLE I.D.: MW-8

LOCATION: 200 S. 36th St. Bellingham, WA.

DATE PURGED 08/03/10 START (2400hr) 0730 END (2400hr) 0755

DATE SAMPLED 08/03/10 SAMPLE TIME (2400hr) 0745 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) = 17.50

DEPTH TO WATER (feet) = 8.40

WATER COLUMN HEIGHT (feet) = 9.10

ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (mL)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
08/03/10	0735	500	18.2	0.089	6.24	Clr
	0738	500	18.9	0.090	6.20	Clr
	0741	500	19.4	0.091	6.18	Clr
	0744	500	19.6	0.092	6.20	Clr

08/03/10

	TEMP.	CONDUCTIVITY	pH
Calculated Variance of Final Three Samples:	0.7	0.002	0.02
Acceptable Variance Limits:	≤ 10%	≤ 3%	≤ 0.1

DEPTH TO PURGE INTAKE DURING PURGE: 12.00 SAMPLE DTW: 8.59

ANTICIPATED PURGE INTAKE DEPTH: 12.00 ANALYSES: TPH-G, TPH-D, BTEX by 8260B

SAMPLE VESSEL / PRESERVATIVE: ____

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]

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 #: 4512896507
ConocoPhillips AOC#: 01571

DATE: 08/03/10
PAGE: 1 of 1

SAMPLING COMPANY: STANTEC	Valid Value ID:	CONOCOPHILLIPS SITE NUMBER: AOC 01571	GLOBAL ID NO.:
ADDRESS: 12034 134th Court NE, Suite 102 Redmond, WA 98052		SITE ADDRESS (Street and City): 200 South 36th Street, Bellingham, WA 98225	ConocoPhillips Manager: Myron Smith
PROJECT CONTACT (Hardcopy or PDF Report to): Chris Gdak		EDF DELIVERABLE TO (RP or Designee):	PHONE NO.: / E-MAIL: / LAB USE ONLY:
TELEPHONE: (425) 298-1023	FAX: (425) 298-1020	E-MAIL: chris.gdak@stantec.com	
SAMPLER NAME(S) (Print): David Reitz		CONSULTANT PROJECT NUMBER: 212302382	

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 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 w/silica gel cleanup	BTEX by 8260B
		MW-1	08/03/10	0540	GW	7	X	X	X
		MW-2	"	0440	GW	7	X	X	X
		MW-3	"	0610	GW	7	X	X	X
		MW-4	"	0640	GW	7	X	X	X
		MW-5	"	0510	GW	7	X	X	X
		MW-6	"	0710	GW	7	X	X	X
		MW-7	"	0815	GW	7	X	X	X
		MW-8	"	0745	GW	7	X	X	X
		QCTB			DI	6	X		X

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

TEMPERATURE ON RECEIPT C°

40-mL VOAs, preserved with HCl

Relinquished by: (Signature)	Received by: (Signature)	Date: 08/03/10	Time: 1100
Relinquished by: (Signature)	Received by: (Signature) Jyothi Swamy	Date: 08/03/10	Time: 11:00
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

6/18/03 Revision

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

Pace Analytical®
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Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

August 12, 2010

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

RE: Project: 01571 - Bellingham
Pace Project No.: 254437

Dear Chris Gdak:
Enclosed are the analytical results for sample(s) received by the laboratory on August 03, 2010. 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,

Jenni Gross

Jennifer Gross

jennifer.gross@pacelabs.com
Project Manager

Enclosures

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

CERTIFICATIONS

Project: 01571 - Bellingham
Pace Project No.: 254437

Washington Certification IDs
940 South Harney Street, Seattle, WA 98108
Alaska CS Certification #: UST-025
Alaska Drinking Water VOC Certification #: WA01230
Alaska Drinking Water Micro Certification #: WA01230
California Certification #: 01153CA
Florida/NELAP Certification #: E87617
Oregon Certification #: WA200007
Washington Certification #: C1229

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SAMPLE ANALYTE COUNT

Project: 01571 - Bellingham
Pace Project No.: 254437

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
254437001	MW-1	NWTPH-Dx	ERB	4	PASI-S
		NWTPH-Gx	AY1	3	PASI-S
		EPA 5030B/8260	LNH	8	PASI-S
254437002	MW-2	NWTPH-Dx	ERB	4	PASI-S
		NWTPH-Gx	AY1	3	PASI-S
		EPA 5030B/8260	LNH	8	PASI-S
254437003	MW-3	NWTPH-Dx	ERB	4	PASI-S
		NWTPH-Gx	AY1	3	PASI-S
		EPA 5030B/8260	LNH	8	PASI-S
254437004	MW-4	NWTPH-Dx	ERB	4	PASI-S
		NWTPH-Gx	AY1	3	PASI-S
		EPA 5030B/8260	LNH	8	PASI-S
254437005	MW-5	NWTPH-Dx	ERB	4	PASI-S
		NWTPH-Gx	AY1	3	PASI-S
		EPA 5030B/8260	LNH	8	PASI-S
254437006	MW-6	NWTPH-Dx	ERB	4	PASI-S
		NWTPH-Gx	AY1	3	PASI-S
		EPA 5030B/8260	LNH	8	PASI-S
254437007	MW-7	NWTPH-Dx	ERB	4	PASI-S
		NWTPH-Gx	AY1	3	PASI-S
		EPA 5030B/8260	LNH	8	PASI-S
254437008	MW-8	NWTPH-Dx	ERB	4	PASI-S
		NWTPH-Gx	AY1	3	PASI-S
		EPA 5030B/8260	LNH	8	PASI-S
254437009	QCTB	NWTPH-Gx	AY1	3	PASI-S
		EPA 5030B/8260	LNH	8	PASI-S

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Seattle, WA 98108
(206)767-5060

ANALYTICAL RESULTS

Project: 01571 - Bellingham
Pace Project No.: 254437

Sample: MW-1 **Lab ID: 254437001** Collected: 08/03/10 05:40 Received: 08/03/10 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS SG	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range SG	ND	ug/L	76.9	1	08/06/10 09:00	08/10/10 01:09		
Motor Oil Range SG	ND	ug/L	385	1	08/06/10 09:00	08/10/10 01:09	64742-65-0	
n-Octacosane (S) SG	105	%	50-150	1	08/06/10 09:00	08/10/10 01:09	630-02-4	
o-Terphenyl (S) SG	96	%	50-150	1	08/06/10 09:00	08/10/10 01:09	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		08/03/10 21:16		
a,a,a-Trifluorotoluene (S)	96	%	50-150	1		08/03/10 21:16	98-08-8	
4-Bromofluorobenzene (S)	84	%	50-150	1		08/03/10 21:16	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		08/03/10 16:44	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		08/03/10 16:44	100-41-4	
Toluene	ND	ug/L	1.0	1		08/03/10 16:44	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		08/03/10 16:44	1330-20-7	
4-Bromofluorobenzene (S)	100	%	80-120	1		08/03/10 16:44	460-00-4	
Dibromofluoromethane (S)	110	%	80-122	1		08/03/10 16:44	1868-53-7	
1,2-Dichloroethane-d4 (S)	112	%	80-124	1		08/03/10 16:44	17060-07-0	
Toluene-d8 (S)	103	%	80-123	1		08/03/10 16:44	2037-26-5	

Sample: MW-2 **Lab ID: 254437002** Collected: 08/03/10 04:40 Received: 08/03/10 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS SG	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range SG	ND	ug/L	77.7	1	08/06/10 09:00	08/10/10 01:26		
Motor Oil Range SG	ND	ug/L	388	1	08/06/10 09:00	08/10/10 01:26	64742-65-0	
n-Octacosane (S) SG	105	%	50-150	1	08/06/10 09:00	08/10/10 01:26	630-02-4	
o-Terphenyl (S) SG	89	%	50-150	1	08/06/10 09:00	08/10/10 01:26	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		08/03/10 22:28		
a,a,a-Trifluorotoluene (S)	101	%	50-150	1		08/03/10 22:28	98-08-8	
4-Bromofluorobenzene (S)	95	%	50-150	1		08/03/10 22:28	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		08/03/10 17:07	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		08/03/10 17:07	100-41-4	
Toluene	ND	ug/L	1.0	1		08/03/10 17:07	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		08/03/10 17:07	1330-20-7	
4-Bromofluorobenzene (S)	99	%	80-120	1		08/03/10 17:07	460-00-4	
Dibromofluoromethane (S)	114	%	80-122	1		08/03/10 17:07	1868-53-7	
1,2-Dichloroethane-d4 (S)	110	%	80-124	1		08/03/10 17:07	17060-07-0	
Toluene-d8 (S)	106	%	80-123	1		08/03/10 17:07	2037-26-5	

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ANALYTICAL RESULTS

Project: 01571 - Bellingham
Pace Project No.: 254437

Sample: MW-3 **Lab ID: 254437003** Collected: 08/03/10 06:10 Received: 08/03/10 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS SG	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range SG	ND	ug/L	76.9	1	08/06/10 09:00	08/10/10 01:42		
Motor Oil Range SG	ND	ug/L	385	1	08/06/10 09:00	08/10/10 01:42	64742-65-0	
n-Octacosane (S) SG	104	%	50-150	1	08/06/10 09:00	08/10/10 01:42	630-02-4	
o-Terphenyl (S) SG	93	%	50-150	1	08/06/10 09:00	08/10/10 01:42	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		08/03/10 22:52		
a,a,a-Trifluorotoluene (S)	97	%	50-150	1		08/03/10 22:52	98-08-8	
4-Bromofluorobenzene (S)	92	%	50-150	1		08/03/10 22:52	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		08/03/10 17:29	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		08/03/10 17:29	100-41-4	
Toluene	ND	ug/L	1.0	1		08/03/10 17:29	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		08/03/10 17:29	1330-20-7	
4-Bromofluorobenzene (S)	100	%	80-120	1		08/03/10 17:29	460-00-4	
Dibromofluoromethane (S)	111	%	80-122	1		08/03/10 17:29	1868-53-7	
1,2-Dichloroethane-d4 (S)	109	%	80-124	1		08/03/10 17:29	17060-07-0	
Toluene-d8 (S)	105	%	80-123	1		08/03/10 17:29	2037-26-5	

Sample: MW-4 **Lab ID: 254437004** Collected: 08/03/10 06:40 Received: 08/03/10 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS SG	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range SG	ND	ug/L	76.9	1	08/06/10 09:00	08/10/10 01:58		
Motor Oil Range SG	ND	ug/L	385	1	08/06/10 09:00	08/10/10 01:58	64742-65-0	
n-Octacosane (S) SG	103	%	50-150	1	08/06/10 09:00	08/10/10 01:58	630-02-4	
o-Terphenyl (S) SG	93	%	50-150	1	08/06/10 09:00	08/10/10 01:58	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		08/03/10 23:15		
a,a,a-Trifluorotoluene (S)	97	%	50-150	1		08/03/10 23:15	98-08-8	
4-Bromofluorobenzene (S)	94	%	50-150	1		08/03/10 23:15	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		08/03/10 17:52	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		08/03/10 17:52	100-41-4	
Toluene	ND	ug/L	1.0	1		08/03/10 17:52	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		08/03/10 17:52	1330-20-7	
4-Bromofluorobenzene (S)	97	%	80-120	1		08/03/10 17:52	460-00-4	
Dibromofluoromethane (S)	114	%	80-122	1		08/03/10 17:52	1868-53-7	
1,2-Dichloroethane-d4 (S)	109	%	80-124	1		08/03/10 17:52	17060-07-0	
Toluene-d8 (S)	101	%	80-123	1		08/03/10 17:52	2037-26-5	

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ANALYTICAL RESULTS

Project: 01571 - Bellingham
Pace Project No.: 254437

Sample: MW-5 **Lab ID: 254437005** Collected: 08/03/10 05:10 Received: 08/03/10 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS SG	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range SG	ND	ug/L	76.9	1	08/06/10 09:00	08/10/10 02:14		
Motor Oil Range SG	ND	ug/L	385	1	08/06/10 09:00	08/10/10 02:14	64742-65-0	
n-Octacosane (S) SG	94	%	50-150	1	08/06/10 09:00	08/10/10 02:14	630-02-4	
o-Terphenyl (S) SG	87	%	50-150	1	08/06/10 09:00	08/10/10 02:14	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**141**	ug/L	50.0	1		08/03/10 23:39		
a,a,a-Trifluorotoluene (S)	102	%	50-150	1		08/03/10 23:39	98-08-8	
4-Bromofluorobenzene (S)	93	%	50-150	1		08/03/10 23:39	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		08/03/10 18:14	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		08/03/10 18:14	100-41-4	
Toluene	ND	ug/L	1.0	1		08/03/10 18:14	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		08/03/10 18:14	1330-20-7	
4-Bromofluorobenzene (S)	96	%	80-120	1		08/03/10 18:14	460-00-4	
Dibromofluoromethane (S)	116	%	80-122	1		08/03/10 18:14	1868-53-7	
1,2-Dichloroethane-d4 (S)	110	%	80-124	1		08/03/10 18:14	17060-07-0	
Toluene-d8 (S)	104	%	80-123	1		08/03/10 18:14	2037-26-5	

Sample: MW-6 **Lab ID: 254437006** Collected: 08/03/10 07:10 Received: 08/03/10 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS SG	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range SG	ND	ug/L	76.9	1	08/06/10 09:00	08/10/10 03:02		
Motor Oil Range SG	ND	ug/L	385	1	08/06/10 09:00	08/10/10 03:02	64742-65-0	
n-Octacosane (S) SG	102	%	50-150	1	08/06/10 09:00	08/10/10 03:02	630-02-4	
o-Terphenyl (S) SG	94	%	50-150	1	08/06/10 09:00	08/10/10 03:02	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		08/04/10 00:03		
a,a,a-Trifluorotoluene (S)	97	%	50-150	1		08/04/10 00:03	98-08-8	
4-Bromofluorobenzene (S)	86	%	50-150	1		08/04/10 00:03	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		08/03/10 18:36	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		08/03/10 18:36	100-41-4	
Toluene	ND	ug/L	1.0	1		08/03/10 18:36	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		08/03/10 18:36	1330-20-7	
4-Bromofluorobenzene (S)	92	%	80-120	1		08/03/10 18:36	460-00-4	
Dibromofluoromethane (S)	110	%	80-122	1		08/03/10 18:36	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	80-124	1		08/03/10 18:36	17060-07-0	
Toluene-d8 (S)	99	%	80-123	1		08/03/10 18:36	2037-26-5	

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ANALYTICAL RESULTS

Project: 01571 - Bellingham
Pace Project No.: 254437

Sample: MW-7 **Lab ID: 254437007** Collected: 08/03/10 08:15 Received: 08/03/10 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS SG	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range SG	**181**	ug/L	77.7	1	08/06/10 09:00	08/10/10 03:19		
Motor Oil Range SG	ND	ug/L	388	1	08/06/10 09:00	08/10/10 03:19	64742-65-0	
n-Octacosane (S) SG	107	%	50-150	1	08/06/10 09:00	08/10/10 03:19	630-02-4	
o-Terphenyl (S) SG	98	%	50-150	1	08/06/10 09:00	08/10/10 03:19	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	**119**	ug/L	50.0	1		08/04/10 00:27		
a,a,a-Trifluorotoluene (S)	96	%	50-150	1		08/04/10 00:27	98-08-8	
4-Bromofluorobenzene (S)	97	%	50-150	1		08/04/10 00:27	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		08/03/10 18:59	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		08/03/10 18:59	100-41-4	
Toluene	ND	ug/L	1.0	1		08/03/10 18:59	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		08/03/10 18:59	1330-20-7	
4-Bromofluorobenzene (S)	95	%	80-120	1		08/03/10 18:59	460-00-4	
Dibromofluoromethane (S)	112	%	80-122	1		08/03/10 18:59	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	80-124	1		08/03/10 18:59	17060-07-0	
Toluene-d8 (S)	105	%	80-123	1		08/03/10 18:59	2037-26-5	

Sample: MW-8 **Lab ID: 254437008** Collected: 08/03/10 07:45 Received: 08/03/10 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS SG	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Range SG	ND	ug/L	76.9	1	08/06/10 09:00	08/10/10 03:35		
Motor Oil Range SG	ND	ug/L	385	1	08/06/10 09:00	08/10/10 03:35	64742-65-0	
n-Octacosane (S) SG	96	%	50-150	1	08/06/10 09:00	08/10/10 03:35	630-02-4	
o-Terphenyl (S) SG	87	%	50-150	1	08/06/10 09:00	08/10/10 03:35	84-15-1	
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
Gasoline Range Organics	ND	ug/L	50.0	1		08/04/10 00:51		
a,a,a-Trifluorotoluene (S)	99	%	50-150	1		08/04/10 00:51	98-08-8	
4-Bromofluorobenzene (S)	94	%	50-150	1		08/04/10 00:51	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**3.0**	ug/L	1.0	1		08/03/10 19:21	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		08/03/10 19:21	100-41-4	
Toluene	ND	ug/L	1.0	1		08/03/10 19:21	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		08/03/10 19:21	1330-20-7	
4-Bromofluorobenzene (S)	95	%	80-120	1		08/03/10 19:21	460-00-4	
Dibromofluoromethane (S)	113	%	80-122	1		08/03/10 19:21	1868-53-7	
1,2-Dichloroethane-d4 (S)	109	%	80-124	1		08/03/10 19:21	17060-07-0	
Toluene-d8 (S)	105	%	80-123	1		08/03/10 19:21	2037-26-5	

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ANALYTICAL RESULTS

Project: 01571 - Bellingham
Pace Project No.: 254437

Sample: QCTB **Lab ID: 254437009** Collected: 08/03/10 00:00 Received: 08/03/10 11:00 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		08/03/10 19:41		
a,a,a-Trifluorotoluene (S)	103	%	50-150	1		08/03/10 19:41	98-08-8	
4-Bromofluorobenzene (S)	94	%	50-150	1		08/03/10 19:41	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		08/03/10 15:59	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		08/03/10 15:59	100-41-4	
Toluene	ND	ug/L	1.0	1		08/03/10 15:59	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		08/03/10 15:59	1330-20-7	
4-Bromofluorobenzene (S)	105	%	80-120	1		08/03/10 15:59	460-00-4	
Dibromofluoromethane (S)	113	%	80-122	1		08/03/10 15:59	1868-53-7	
1,2-Dichloroethane-d4 (S)	109	%	80-124	1		08/03/10 15:59	17060-07-0	
Toluene-d8 (S)	102	%	80-123	1		08/03/10 15:59	2037-26-5	

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QUALITY CONTROL DATA

Project: 01571 - Bellingham
Pace Project No.: 254437

QC Batch: OEXT/2453 Analysis Method: NWTPH-Dx
QC Batch Method: EPA 3510 Analysis Description: NWTPH-Dx GCS
Associated Lab Samples: 254437001, 254437002, 254437003, 254437004, 254437005, 254437006, 254437007, 254437008

METHOD BLANK: 35498 Matrix: Water
Associated Lab Samples: 254437001, 254437002, 254437003, 254437004, 254437005, 254437006, 254437007, 254437008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range SG	ug/L	ND	80.0	08/09/10 21:06	
Motor Oil Range SG	ug/L	ND	400	08/09/10 21:06	
n-Octacosane (S) SG	%	101	50-150	08/09/10 21:06	
o-Terphenyl (S) SG	%	91	50-150	08/09/10 21:06	

LABORATORY CONTROL SAMPLE & LCSD: 35499 35500

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range SG	ug/L	5000	4360	4170	87	83	51-147	4	30	
Motor Oil Range SG	ug/L	5000	4640	4570	93	91	20-160	2	30	
n-Octacosane (S) SG	%				105	102	50-150			
o-Terphenyl (S) SG	%				104	101	50-150			

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QUALITY CONTROL DATA

Project: 01571 - Bellingham
Pace Project No.: 254437

QC Batch: GCV/1731 Analysis Method: NWTPH-Gx
QC Batch Method: NWTPH-Gx Analysis Description: NWTPH-Gx GCV Water
Associated Lab Samples: 254437001, 254437002, 254437003, 254437004, 254437005, 254437006, 254437007, 254437008, 254437009

METHOD BLANK: 35377 Matrix: Water
Associated Lab Samples: 254437001, 254437002, 254437003, 254437004, 254437005, 254437006, 254437007, 254437008, 254437009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	50.0	08/03/10 18:30	
4-Bromofluorobenzene (S)	%	111	50-150	08/03/10 18:30	
a,a,a-Trifluorotoluene (S)	%	115	50-150	08/03/10 18:30	

LABORATORY CONTROL SAMPLE: 35378

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	ug/L	250	291	116	50-163	
4-Bromofluorobenzene (S)	%			111	50-150	
a,a,a-Trifluorotoluene (S)	%			114	50-150	

SAMPLE DUPLICATE: 35466

Parameter	Units	254415007 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	ug/L	ND	ND		
4-Bromofluorobenzene (S)	%	102	92	10	
a,a,a-Trifluorotoluene (S)	%	109	102	7	

SAMPLE DUPLICATE: 35467

Parameter	Units	254437001 Result	Dup Result	RPD	Qualifiers
Gasoline Range Organics	ug/L	ND	15.4J		
4-Bromofluorobenzene (S)	%	84	87	3	
a,a,a-Trifluorotoluene (S)	%	96	98	2	

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QUALITY CONTROL DATA

Project: 01571 - Bellingham
Pace Project No.: 254437

QC Batch: MSV/2808 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 254437001, 254437002, 254437003, 254437004, 254437005, 254437006, 254437007, 254437008, 254437009

METHOD BLANK: 35363 Matrix: Water
Associated Lab Samples: 254437001, 254437002, 254437003, 254437004, 254437005, 254437006, 254437007, 254437008, 254437009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	08/03/10 12:59	
Ethylbenzene	ug/L	ND	1.0	08/03/10 12:59	
Toluene	ug/L	ND	1.0	08/03/10 12:59	
Xylene (Total)	ug/L	ND	3.0	08/03/10 12:59	
1,2-Dichloroethane-d4 (S)	%	103	80-124	08/03/10 12:59	
4-Bromofluorobenzene (S)	%	98	80-120	08/03/10 12:59	
Dibromofluoromethane (S)	%	110	80-122	08/03/10 12:59	
Toluene-d8 (S)	%	100	80-123	08/03/10 12:59	

LABORATORY CONTROL SAMPLE & LCSD: 35364 35365

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	ug/L	20	19.3	18.0	97	90	75-124	7	30	
Ethylbenzene	ug/L	20	18.4	18.1	92	91	76-124	2	30	
Toluene	ug/L	20	18.0	17.9	90	89	75-124	.9	30	
Xylene (Total)	ug/L	60	60.3	58.3	100	97	76-123	3	30	
1,2-Dichloroethane-d4 (S)	%				105	109	80-124			
4-Bromofluorobenzene (S)	%				104	107	80-120			
Dibromofluoromethane (S)	%				116	109	80-122			
Toluene-d8 (S)	%				104	108	80-123			

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QUALIFIERS

Project: 01571 - Bellingham
Pace Project No.: 254437

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

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

LABORATORIES

PASI-S Pace Analytical Services - Seattle

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 01571 - Bellingham
Pace Project No.: 254437

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
254437001	MW-1	EPA 3510	OEXT/2453	NWTPH-Dx	GCSV/1775
254437002	MW-2	EPA 3510	OEXT/2453	NWTPH-Dx	GCSV/1775
254437003	MW-3	EPA 3510	OEXT/2453	NWTPH-Dx	GCSV/1775
254437004	MW-4	EPA 3510	OEXT/2453	NWTPH-Dx	GCSV/1775
254437005	MW-5	EPA 3510	OEXT/2453	NWTPH-Dx	GCSV/1775
254437006	MW-6	EPA 3510	OEXT/2453	NWTPH-Dx	GCSV/1775
254437007	MW-7	EPA 3510	OEXT/2453	NWTPH-Dx	GCSV/1775
254437008	MW-8	EPA 3510	OEXT/2453	NWTPH-Dx	GCSV/1775
254437001	MW-1	NWTPH-Gx	GCV/1731		
254437002	MW-2	NWTPH-Gx	GCV/1731		
254437003	MW-3	NWTPH-Gx	GCV/1731		
254437004	MW-4	NWTPH-Gx	GCV/1731		
254437005	MW-5	NWTPH-Gx	GCV/1731		
254437006	MW-6	NWTPH-Gx	GCV/1731		
254437007	MW-7	NWTPH-Gx	GCV/1731		
254437008	MW-8	NWTPH-Gx	GCV/1731		
254437009	QCTB	NWTPH-Gx	GCV/1731		
254437001	MW-1	EPA 5030B/8260	MSV/2808		
254437002	MW-2	EPA 5030B/8260	MSV/2808		
254437003	MW-3	EPA 5030B/8260	MSV/2808		
254437004	MW-4	EPA 5030B/8260	MSV/2808		
254437005	MW-5	EPA 5030B/8260	MSV/2808		
254437006	MW-6	EPA 5030B/8260	MSV/2808		
254437007	MW-7	EPA 5030B/8260	MSV/2808		
254437008	MW-8	EPA 5030B/8260	MSV/2808		
254437009	QCTB	EPA 5030B/8260	MSV/2808		

Sample Condition Upon Receipt

Pace Analytical

Client Name: Stantec Project # Bellingham WO# 254437

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

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No Seals intact: ☐ Yes ☐ No

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____ Temp. Blank (Yes) ____ No ____

Thermometer Used 132013 or (101731962) or 226099 **Type of Ice:** (Wet) Blue None ☑ Samples on ice, cooling process has begun

Cooler Temperature 2.1, 1.0 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing ≤ 6°C

Date and Initials of person examining contents: NJ 08/03/10

Comments:

Chain of Custody Present:	☑Yes	☐No	☐N/A
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A
Sufficient Volume:	☑Yes	☐No	☐N/A
Correct Containers Used:	☑Yes	☐No	☐N/A
-Pace Containers Used:	☑Yes	☐No	☐N/A
Containers Intact:	☑Yes	☐No	☐N/A
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A
Sample Labels match COC:	☑Yes	☐No	☐N/A
-Includes date/time/ID/Analysis Matrix: Water			
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A
Exceptions: VOA, coliform, TOC, O&G			
Samples checked for dechlorination:	☐Yes	☐No	☑N/A
Headspace in VOA Vials (>6mm):	☐Yes	☑No	☐N/A
3 Trip Blanks Present:	☑Yes	☐No	☐N/A
Trip Blank Custody Seals Present	☑Yes	☐No	☐N/A
Pace Trip Blank Lot # (if purchased): _____			

1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
Initial when completed	Lot # of added preservative
14.	
15.	
16.	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Jenny Gross **Date:** 8/3/10

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)

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 #: 4512896507
ConocoPhillips AOC#: 01571

DATE: 08/03/10
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SAMPLING COMPANY: STANTEC	Valid Value ID:	CONOCOPHILLIPS SITE NUMBER: AOC 01571	GLOBAL ID NO.:
ADDRESS: 12034 134th Court NE, Suite 102 Redmond, WA 98052		SITE ADDRESS (Street and City): 200 South 36th Street, Bellingham, WA 98225	ConocoPhillips Manager: Myron Smith
PROJECT CONTACT (Hardcopy or PDF Report to): Chris Gdak		EDF DELIVERABLE TO (RP or Designee):	PHONE NO.: / E-MAIL: / LAB USE ONLY: NOT 254437
TELEPHONE: (425) 298-1023	FAX: (425) 298-1020	E-MAIL: chris.gdak@stantec.com	
SAMPLER NAME(S) (Print): David Reitz	CONSULTANT PROJECT NUMBER: 212302382	REQUESTED ANALYSES	

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 ☑

* 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 w/silica gel cleanup	BTEX by 8260B
		MW-1	08/03/10	0540	GW	7	X	X	X
		MW-2	"	0440	GW	7	X	X	X
		MW-3	"	0610	GW	7	X	X	X
		MW-4	"	0640	GW	7	X	X	X
		MW-5	"	0510	GW	7	X	X	X
		MW-6	"	0710	GW	7	X	X	X
		MW-7	"	0815	GW	7	X	X	X
		MW-8	"	0745	GW	7	X	X	X
		QCTB			DI	6	X		X

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

TEMPERATURE ON RECEIPT C°: 2.1, 1.0

40-mL VOAs, preserved with HCl

Relinquished by: (Signature)	Received by: (Signature)	Date: 08/03/10	Time: 1100
Relinquished by: (Signature)	Received by: (Signature) Jyothi Swamy	Date: 08/03/10	Time: 11:00
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

9/19/03 Revision

Sample Container Count

CLIENT: Stantec WO#254437 Bellingham

Pace Analytical

COC PAGE 1 of 1

COC ID# _____

Sample Line Item	VG9H	AG1H	AG1U	BG1H	BP1U	BP2U	BP3U	BP2N	BP2S	WGFU	WGKU				Comments
1	6	1													
2	6	1													
3	6	1													
4	6	1													
5	6	1													
6	6	1													
7	6	1													
8	6	1													
9	6														
10															
11															
12															Trip Blank? yes

AG1H	1 liter HCL amber glass		BP2S	500mL H2SO4 plastic		JGFU	4oz unpreserved amber wide
AG1U	1liter unpreserved amber glass		BP2U	500mL unpreserved plastic		R	terra core kit
AG2S	500mL H2SO4 amber glass		BP2Z	500mL NaOH, Zn Ac		U	Summa Can
AG2U	500mL unpreserved amber glass		BP3C	250mL NaOH plastic		VG9H	40mL HCL clear vial
AG3S	250mL H2SO4 amber glass		BP3N	250mL HNO3 plastic		VG9T	40mL Na Thio. clear vial
BG1H	1 liter HCL clear glass		BP3S	250mL H2SO4 plastic		VG9U	40mL unpreserved clear vial
BG1U	1 liter unpreserved glass		BP3U	250mL unpreserved plastic		VG9W	40mL glass vial preweighted (EPA 5035)
BP1N	1 liter HNO3 plastic		DG9B	40mL Na Bisulfate amber vial		VSG	Headspace septa vial & HCL
BP1S	1 liter H2SO4 plastic		DG9H	40mL HCL amber voa vial		WGFU	4oz clear soil jar
BP1U	1 liter unpreserved plastic		DG9M	40mL MeOH clear vial		WGFX	4oz wide jar w/hexane wipe
BP1Z	1 liter NaOH, Zn, Ac		DG9T	40mL Na Thio amber vial		ZPLC	Ziploc Bag
BP2N	500mL HNO3 plastic		DG9U	40mL unpreserved amber vial			
BP2O	500mL NaOH plastic		1	Wipe/Swab			