NW1290

release 1855
unocal #5028
Blaine

DATE: March 27, 2006

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DEPT OF ECOLOGY

ConocoPhillips

GROUNDWATER MONITORING REPORT

Site No.: 255028 Address: 247 D Street, Blaine, Washington
ConocoPhillips Site Manager: Kipp W. Eckert
Consultant / Contact Person: SECOR International Inc. / Marc Sauze
Primary Agency/Regulatory ID No.: Washington State Department of Ecology / Site ID No. 8472
SECOR Project No: 01CP.05028.08

WORK PERFORMED THIS QUARTER(S) [3rd - 2005]:

- On December 14, 2005, SECOR personnel monitored seven (MW-1 through MW-4 and MW-6 through MW-8) and purged and sampled six (MW-2A through MW-4 and MW-6 through MW-8) of the existing network of eight groundwater monitoring wells (MW-1 through MW-8). Depth to water was recorded in MW-1 but no sample was collected because the well has not historically contained detectable concentrations of petroleum hydrocarbons and halogenated volatile organic compounds (HVOCs). MW-5 was not monitored because it could not be located and has not been monitored since August 12, 1999.

- Groundwater samples were collected using a peristaltic pump, with dedicated polyethylene tubing in the well casing and a new section of silicon tubing in the pump head. Complete groundwater purging and sampling procedures are provided in Attachment B.

- Samples were submitted to Lancaster Laboratories for analysis of gasoline range hydrocarbon (TPH-g) per Ecology Method NWTPH-Gx, diesel (TPH-d) and motor-oil (TPH-o) range hydrocarbons per Ecology Method NWTPH-Dx modified with an acid/silica gel cleanup; benzene, toluene, ethylbenzene, and total xylenes (BTEX), per United States Environmental Protection Agency (USEPA) Method 8021 and volatile organic compounds (VOCs) per USEPA Method 5035/8260B. The laboratory report is presented in Attachment A.

WORK PROPOSED FOR NEXT QUARTER [1st - 2006]:

- Measure depth to water of seven (MW-1 through MW-4 and MW-6 through MW-8) and purge and sample six (MW-2A, MW-3, MW-4 and MW-6 through MW-8) groundwater monitoring wells. Submit groundwater samples for analysis for NWTPH-Gx, NWTPH-Dx, BTEX, Methyl tert-butyl ether (MTBE) and VOCs.

DATA SUMMARY THIS QUARTER:

Frequency of Sampling Events:	Quarterly	(3/05,6/05,9/05,12/05)
Depth to Groundwater:	2.60 ft (MW-7) to 3.85 ft (MW-6)	(Measured Feet Below Top of Well Casing)
Groundwater Gradient:	West-Southwest	(Inferred Flow Direction)
	0.07 feet per foot	(Approximate Magnitude)
Maximum TPH-G Concentrations:	69 µg/L (MW-6)	(ppb / well ID)
Maximum TPH-D Concentrations:	None Detected	
Maximum TPH-O Concentrations:	200 µg/L (MW-6)	
Maximum Benzene Concentration:	0.3 µg/L (MW-3)	
Maximum TCE Concentration:	5 µg/L (MW-8)	
Maximum 1,2-DCA Concentration:	None Detected	
Maximum Vinyl Chloride Concentration:	4 µg/L (MW-8)	
Measurable Free Product Detected:	No	(Yes - ID well(s)/No)
Free Product Recovered This Quarter:	None	(Gallons)

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Cumulative Free Product Recovered to Date:	None	(Gallons)
Water Wells or Surface Waters w/in 2,000 ft:	No Water Wells Identified Semiahmoo Bay	(Type)
Radius and Respective Direction From Site:	1,000 ft, West	(Distance & Direction)
Current Remedial Action:	NA	(SVE/AS/P&T/NA etc.)
Permits for Discharge:	None	(NPDES, POTW, etc.)

DISCUSSION:

- The inferred groundwater direction at the site is to the southwest. MW-7 was not used in flow determinations because the elevation appears to be anomalously low.
- The groundwater samples were received by Lancaster Laboratories on September 17, 2005. Based on a review of the laboratory reports, it appears that the submitted water samples were analyzed within the specified holding times and that Lancaster followed their appropriate quality assurance/quality control (QA/QC) procedures during analysis.
- Gasoline range hydrocarbons (TPH-g) were detected at concentrations greater than the laboratory reporting limits (RLs) but less than the Model Toxics Control Act Method A Cleanup Levels for groundwater (MTCA A) in the sample collected from MW-6 at 69 micrograms per liter (µg/L). No gasoline range hydrocarbons were detected at concentrations greater than the RLs in any other groundwater samples collected this quarter.
- Diesel range hydrocarbons (TPH-d) were not detected at concentrations greater than the RLs in any of the groundwater samples collected this quarter.
- Heavy-oil-range hydrocarbons (TPH-o) were detected at concentrations greater than the RLs but less than MTCA A in the groundwater sample collected from MW-6 at 200 µg/L. TPH-o was not detected at concentrations greater than the RLs in any other groundwater samples collected this quarter.
- Methyl Tertiary-Butyl Ether (MTBE) was detected at a concentration greater than MTCA A in the groundwater sample collected from MW-8 at 40 µg/L. MTBE was also detected at concentrations above the RLs for samples collected from MW-2A and MW-3 at 0.4 µg/L and 8.2 µg/L, respectively.
- Benzene was detected at concentrations greater than the RLs but less than MTCA A in the groundwater sample collected from MW-3 at 0.3 µg/L. Benzene was not detected at concentrations greater than the RLs in any other groundwater samples collected this quarter.
- Toluene was detected at concentrations greater than the RLs but less than MTCA A in the groundwater sample collected from MW-6 at 1.6 µg/L. Toluene was not detected at concentrations greater than the RLs in any other groundwater samples collected this quarter.
- Ethylbenzene was detected at concentrations greater than the RLs but less than MTCA A in the groundwater sample collected from MW-6 at 0.5 µg/L. Ethylbenzene was not detected at concentrations greater than the RLs in any other groundwater samples collected this quarter.
- Trichloroethene (TCE) was detected at concentrations greater than MTCA A in the groundwater sample collected from MW-8 at 5 µg/L. TCE was also detected at concentrations above the RLs but less than MTCA A in groundwater sample collected from MW-7 at 2 µg/L.
- Cis-1,2-Dichloroethene (1,2-DCE) was detected at concentrations greater than the RLs in the groundwater samples collected from MW-4, MW-7, and MW-8 at 14 µg/L, 3 µg/L, and 32 µg/L, respectively. No cleanup level is currently established for 1,2-DCE under MTCA A.
- Vinyl Chloride (VC) was detected at concentrations greater than MTCA A in the groundwater sample collected from MW-8 at 4 µg/L.

- One drum containing approximately 20 gallons of purge water was labeled and left on site.

ATTACHMENTS:

Figure 1: Site Location Map
Figure 2: Site Plan with Groundwater Elevations (12/14/05)
Figure 3: Site Plan with Analytical Results (03/03/05 – 12/14/05)
Table 1: Summary of Groundwater Elevations and Sample Analytical Results
Attachment A: Laboratory Analytical Report and Chain-of-Custody Record
Attachment B: SECOR Monitoring Well Gauging, Purging and Sampling Procedures; Groundwater Monitoring Field Data Records

Prepared By:

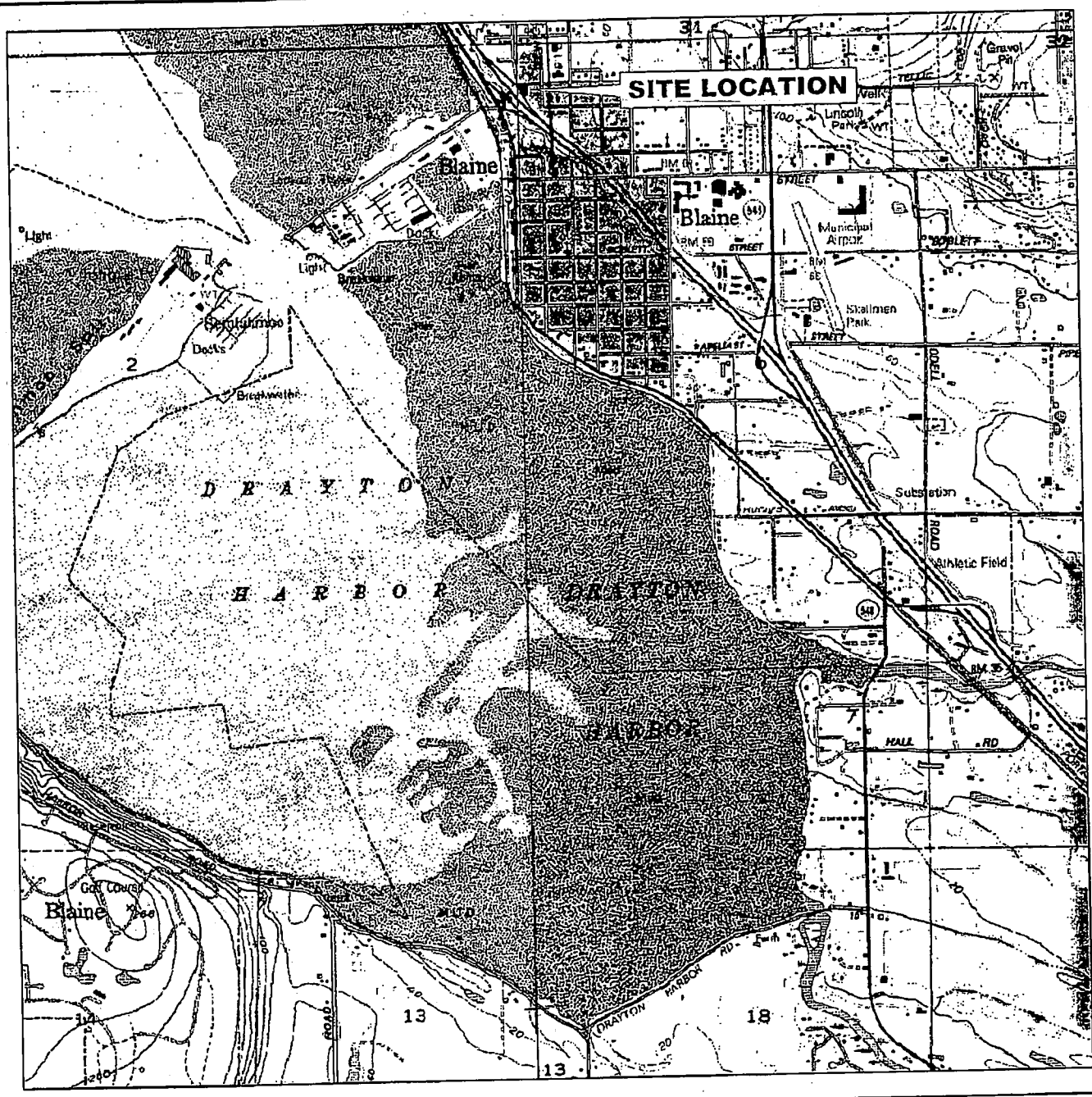
Meredith Redmon
Staff Scientist

Reviewed By:

Gregory McCormick, L.G.
Associate Geologist

cc: Washington State Department of Ecology, Northwest Regional Office
Meuchadim of Washington LP, Property Owner

MR/MS/bjw



North

WASHINGTON

1 1/2 0 1

SCALE (MILES)

1000 0 1000 2000 3000 4000 5000 6000 7000

SCALE (FEET)

REFERENCE: USGS 7.5 MINUTE QUADRANGLE; BLAINE, WASHINGTON; 1952

SECOR 12034 134th COURT, SUITE 102 REDMOND, WASHINGTON PHONE: (425) 372-1600 FAX: (425) 372-1650	PREPARED FOR: ConocoPhillips FACILITY NO 255028 247 D STREET BLAINE, WASHINGTON		SITE LOCATION MAP	FIGURE: 1
	JOB NUMBER: 01CP.05028.08	DRAWN BY: S. SIMMONS	CHECKED BY:	APPROVED BY:	DATE: 2/2/06

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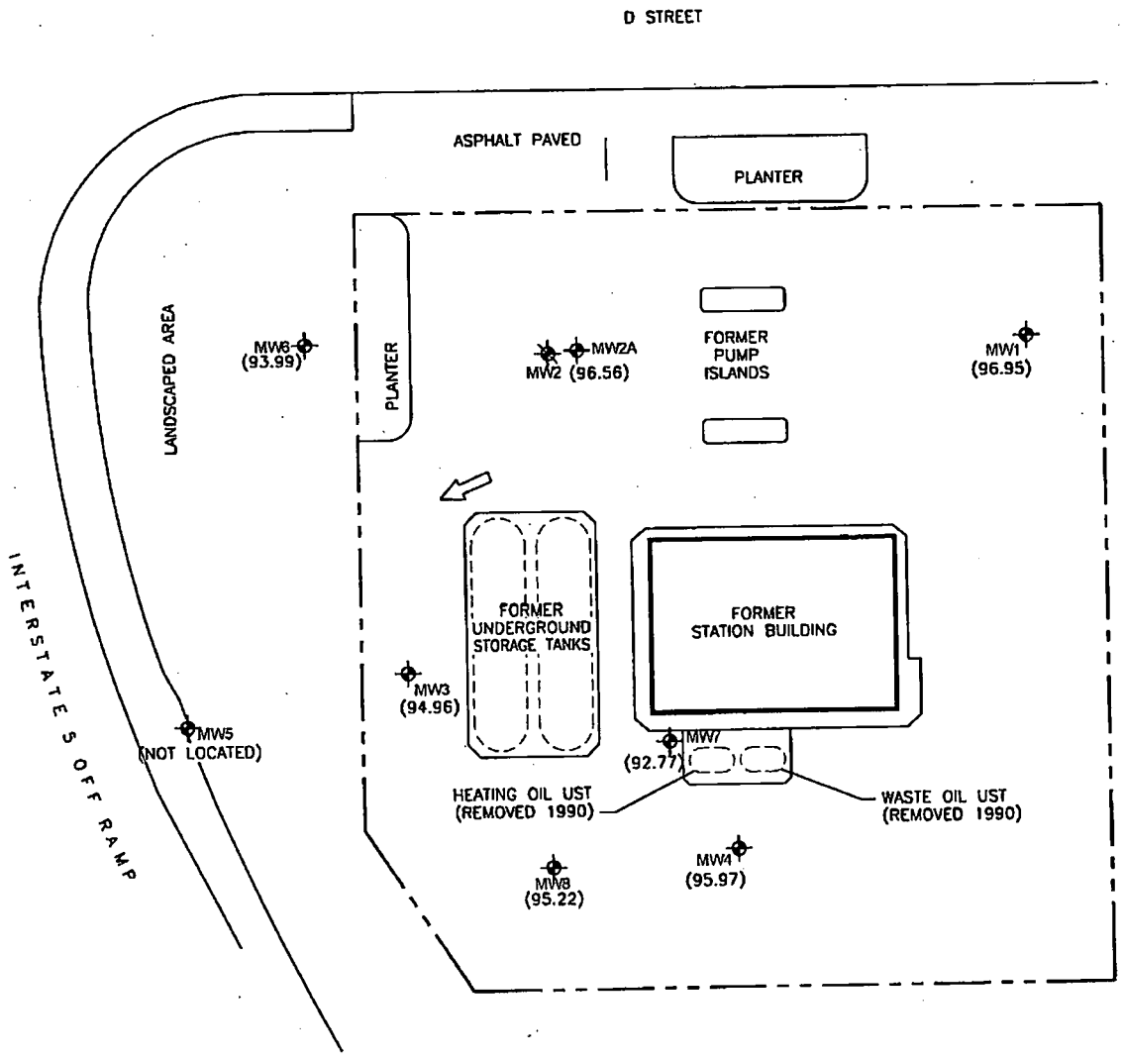

LEGEND

- SITE BOUNDARY
- MONITORING WELL LOCATION
- ABANDONED MONITORING WELL LOCATION

GROUNDWATER

(120.00) GROUNDWATER ELEVATION

INDICATES APPARENT GROUNDWATER FLOW DIRECTION

NOTES:

1). ALL LOCATIONS ARE APPROXIMATE.

North

0 30 60

APPROXIMATE SCALE (FEET)

SOURCE:
BASE MAP FROM; ENVIRONMENTAL RESOLUTIONS, INC. (ERI) TITLED GROUNDWATER SAMPLE ANALYSIS MAP- 06/09/03, PLATE 1, DATED 07/14/03, PROJECT NO. 31017. CADD FILE 31017.13.DWG

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PREPARED FOR:
ConocoPhillips
FACILITY NO. 255028
247 D STREET
BLAINE, WASHINGTON

SITE PLAN WITH GROUNDWATER ELEVATIONS (12/14/05)

FIGURE: 2

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
01CP.05028.08	S. SIMMONS			2/2/06

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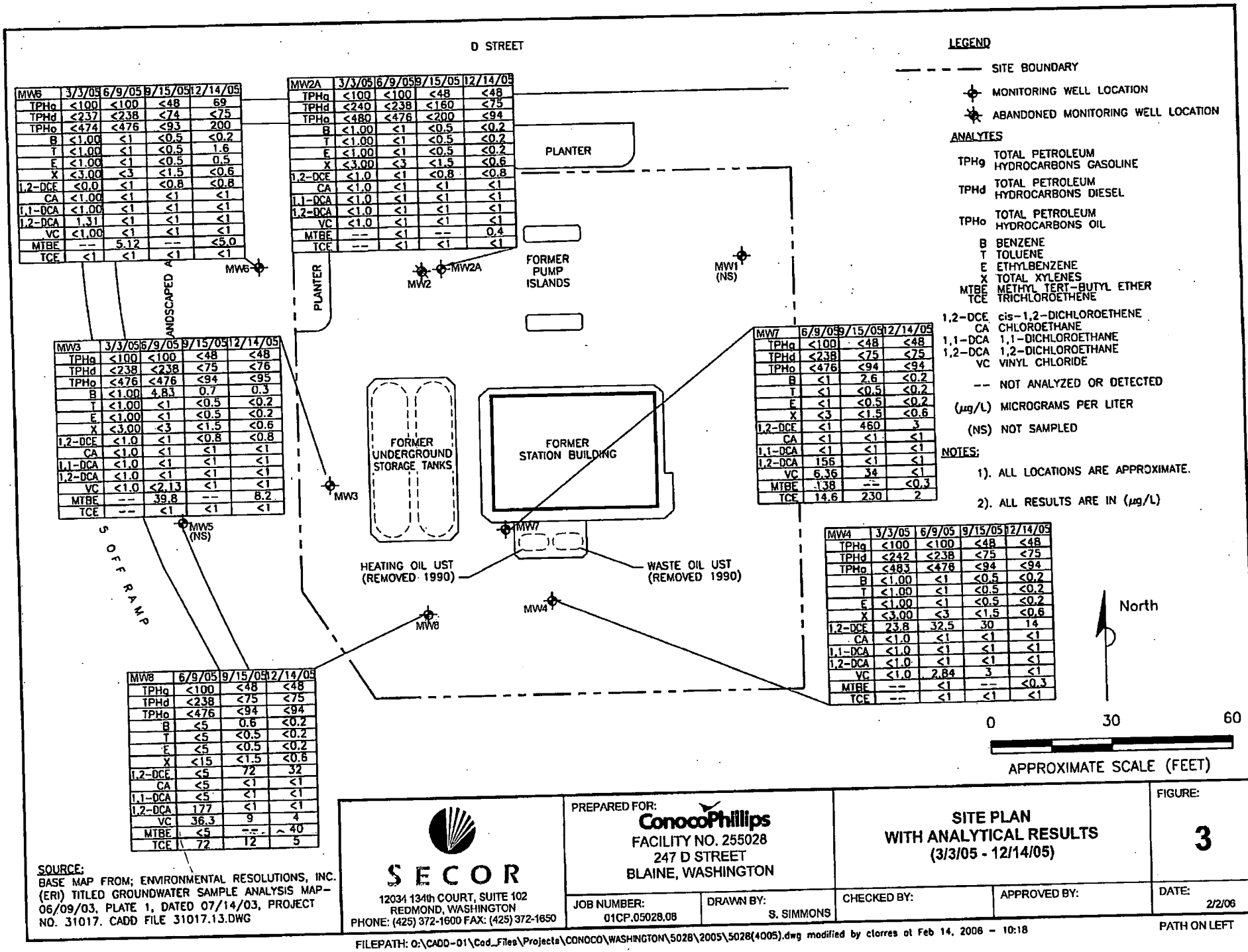

MW6	3/3/05	6/9/05	9/15/05	12/14/05
TPHg	<100	<100	<48	69
TPHd	<237	<238	<74	<75
TPHo	<474	<476	<93	200
B	<1.00	<1	<0.5	<0.2
T	<1.00	<1	<0.5	1.6
E	<1.00	<1	<0.5	0.5
X	<3.00	<3	<1.5	<0.6
1,2-DCE	<0.0	<1	<0.8	<0.8
CA	<1.00	<1	<1	<1
1,1-DCA	<1.00	<1	<1	<1
1,2-DCA	1.31	<1	<1	<1
VC	<1.00	<1	<1	<1
MTBE	--	5.12	--	<5.0
TCE	<1	<1	<1	<1

MW2A	3/3/05	6/9/05	9/15/05	12/14/05
TPHg	<100	<100	<48	<48
TPHd	<240	<238	<160	<75
TPHo	<480	<476	<200	<94
B	<1.00	<1	<0.5	<0.2
T	<1.00	<1	<0.5	<0.2
E	<1.00	<1	<0.5	<0.2
X	<3.00	<3	<1.5	<0.6
1,2-DCE	<1.0	<1	<0.8	<0.8
CA	<1.0	<1	<1	<1
1,1-DCA	<1.0	<1	<1	<1
1,2-DCA	<1.0	<1	<1	<1
VC	<1.0	<1	<1	<1
MTBE	--	<1	--	0.4
TCE	--	<1	<1	<1

MW3	3/3/05	6/9/05	9/15/05	12/14/05
TPHg	<100	<100	<48	<48
TPHd	<238	<238	<75	<76
TPHo	<476	<476	<94	<95
B	<1.00	4.83	0.7	0.3
T	<1.00	<1	<0.5	<0.2
E	<1.00	<1	<0.5	<0.2
X	<3.00	<3	<1.5	<0.6
1,2-DCE	<1.0	<1	<0.8	<0.8
CA	<1.0	<1	<1	<1
1,1-DCA	<1.0	<1	<1	<1
1,2-DCA	<1.0	<1	<1	<1
VC	<1.0	<2.13	<1	<1
MTBE	--	39.8	--	8.2
TCE	--	<1	<1	<1

MW7	6/9/05	9/15/05	12/14/05
TPHg	<100	<48	<48
TPHd	<238	<75	<75
TPHo	<476	<94	<94
B	<1	2.6	<0.2
T	<1	<0.5	<0.2
E	<1	<0.5	<0.2
X	<3	<1.5	<0.6
1,2-DCE	<1	460	3
CA	<1	<1	<1
1,1-DCA	<1	<1	<1
1,2-DCA	156	<1	<1
VC	6.36	34	<1
MTBE	.138	--	<0.3
TCE	14.6	230	2

MW4	3/3/05	6/9/05	9/15/05	12/14/05
TPHg	<100	<100	<48	<48
TPHd	<242	<238	<75	<75
TPHo	<483	<476	<94	<94
B	<1.00	<1	<0.5	<0.2
T	<1.00	<1	<0.5	<0.2
E	<1.00	<1	<0.5	<0.2
X	<3.00	<3	<1.5	<0.6
1,2-DCE	23.8	32.5	30	14
CA	<1.0	<1	<1	<1
1,1-DCA	<1.0	<1	<1	<1
1,2-DCA	<1.0	<1	<1	<1
VC	<1.0	2.84	3	<1
MTBE	--	<1	--	<0.3
TCE	--	<1	<1	<1

MW8	6/9/05	9/15/05	12/14/05
TPHg	<100	<48	<48
TPHd	<238	<75	<75
TPHo	<476	<94	<94
B	<5	0.6	<0.2
T	<5	<0.5	<0.2
E	<5	<0.5	<0.2
X	<15	<1.5	<0.6
1,2-DCE	<5	72	32
CA	<5	<1	<1
1,1-DCA	<5	<1	<1
1,2-DCA	177	<1	<1
VC	36.3	9	4
MTBE	<5	--	~40
TCE	72	12	5

SOURCE:
BASE MAP FROM; ENVIRONMENTAL RESOLUTIONS, INC. (ERI) TITLED GROUNDWATER SAMPLE ANALYSIS MAP- 06/09/03, PLATE 1, DATED 07/14/03, PROJECT NO. 31017. CADD FILE 31017.13.DWG

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PREPARED FOR:
ConocoPhillips
FACILITY NO. 255028
247 D STREET
BLAINE, WASHINGTON

SITE PLAN WITH ANALYTICAL RESULTS (3/3/05 - 12/14/05)

FIGURE: 3

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
01CP.05028.08	S. SIMMONS			2/2/06

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TABLES

TABLE 1
SUMMARY OF GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS
ConocoPhillips Facility No. 255028
247 D Street
Blaine, Washington

Well Name TOC Elevation	Sample Date	DTW	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X	TCE	1,2-DCE	CA	1,1-DCA	1,2-DCA	VC	MTBE
MW1 100.42	03/03/05	3.38	97.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/09/05	3.57	96.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/15/05	6.22	94.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/14/05	3.47	96.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW2 98.49	Destroyed																
MW2A 99.17	03/03/05	3.03	96.14	<100	<240	<480	<1.00	<1.00	<1.00	<3.00	*	<1.0	<1.0	<1.0	<1.0	<1.0	--
	06/09/05	3.15	96.02	<100	<238	<476	<1	<1	<1	<3	<1	<1	<1	<1	<1	<1	<1
	09/15/05	4.78	94.41	<48	<160	<200	<0.5	<0.5	<0.5	<1.5	<1	<0.8	<1	<1	<1	<1	--
	12/14/05	2.81	96.56	<48	<75	<95	<0.2	<0.2	<0.2	<0.6	<1	<0.8	<1	<1	<1	<1	0.4
MW3 98.57	03/03/05	1.98	96.59	<100	<238	<476	<1.00	<1.00	<1.00	<3.00	*	<1.0	<1.0	<1.0	<1.0	<1.0	--
	06/09/05	2.91	95.66	<100	<238	<476	4.83	<1	<1	<3	<1	<1	<1	<1	<1	2.13	39.8
	09/15/05	5.87	92.70	<48	<75	<94	0.7	<0.5	<0.5	<1.5	<1	<0.8	<1	<1	<1	<1	--
	12/14/05	3.61	94.96	<48	<76	<95	0.3	<0.2	<0.2	<0.6	<1	<0.8	<1	<1	<1	<1	8.2
MW4 99.53	03/03/05	4.57	94.96	<100	<242	<483	<1.00	<1.00	<1.00	<3.00	*	23.8	<1.0	<1.0	<1.0	<1.0	--
	06/09/05	3.83	95.70	<100	<238	<476	<1	<1	<1	<3	<1	32.5	<1	<1	<1	2.84	<1
	09/15/05	6.67	92.86	<48	<75	<94	<0.5	<0.5	<0.5	<1.5	<1	30	<1	<1	<1	3	--
	12/14/05	3.56	95.97	<48	<75	<94	<0.2	<0.2	<0.2	<0.6	<1	14	<1	<1	<1	<1	<0.3
MW5 92.96	08/12/99	Unable to Locate Since 8/12/99															
MW6 97.84	03/03/05	4.64	93.20	<100	<237	<474	<1.00	<1.00	<1.00	<3.00	*	<1.0	<1.0	<1.0	1.31	<1.0	--
	06/09/05	4.96	92.88	<100	<238	<476	<1	<1	<1	<3	<1	<1	<1	<1	<1	<1	5.12
	09/15/05	6.50	91.34	<48	<74	<93	<0.5	<0.5	<0.5	<1.5	<1	<0.8	<1	<1	<1	<1	--
	12/14/05	3.85	93.99	69	<75	200	<0.2	1.8	0.5	<0.6	<1	<0.8	<1	<1	<1	<1	<5.0[1]
MW7 95.37	06/09/05	3.16	NM	<100	<238	<476	<1	<1	<1	<3	14.6	<1	<1	<1	156	6.36	138
	9/15/2005[1]	4.82	90.55	<48	<75	<94	2.6	<0.5	<0.6	<1.5	230	460	<1	<1	<1	34	--
	12/14/05	2.80	92.77	<48	<75	<94	<0.2	<0.2	<0.2	<0.6	2	3	<1	<1	<1	<1	<0.3
MW8 99.05	06/09/05	4.31	NM	<100	<238	<476	<5	<5	<5	<15	72	<5	<5	<5	177	36.3	<5
	09/15/05	6.22	92.83	<48	<75	<94	0.6	<0.5	<0.5	<1.5	12	72	<1	<1	<1	9	--
	12/14/05	3.83	95.22	<48	<75	<94	<1.0	<0.2	<0.2	<0.6	8	32	<1	<1	<1	4	40[1]
MTCA Method A Cleanup Level				1000/800[2]	500	500	5	1000	700	1000	5	NA	NA	NA	5	0.2	20

EXPLANATION:
All concentrations are in ug/L (ppb).
TOC = Top of casing. Wellhead elevations were taken from prior consultant's reports.
DTW = Depth to water in feet below top of casing
GW Elev. = Groundwater elevation relative to top of casing elevations
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

1,2-DCE = Cis-1,2-Dichloroethene; CA = Chloroethane; 1,1-DCA = 1,1-Dichloroethane; 1,2-DCA = 1,2-Dichloroethane; VC = Vinyl Chloride;TCE=Trichloroethene;MTBE=Methyl Tert-Butyl Ether
1,2-DCE, CA, 1,1-DCA, 1,2-DCA, TCE, Chloroethane and VC by EPA 8010B (modified) or EPA 8260B; refer to lab reports
BTEX = Aromatic compounds by EPA Method 8020, EPA 8021B or 8260B; refer to official laboratory reports
* TCE not reported prior to 6/9/05. Data may be available in previous reports.

< = Less than the stated laboratory reporting limit
NM = Not Measured; NA = Not Applicable;
ND = Not Detected above the laboratory reporting limit; -- = Not Analyzed or Sampled
Bolded values equal or exceed MTCA Method A Cleanup Levels.
[2] 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
[1] 1,1-dichloroethene and trans-1,2-dichloroethene both detected in this sample at a concentrations of 3 ug/L.

ATTACHMENT A
LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY RECORD

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

Analysis Report

ANALYTICAL RESULTS

Prepared for:

ConocoPhillips c/o Shaw Env.
19909 120th Ave. NE
Suite 101
Bothell WA 98011

206-706-2341

Prepared by:

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

SAMPLE GROUP

The sample group for this submittal is 971472. Samples arrived at the laboratory on Friday, December 16, 2005. The PO# for this group is 1344SEC008 and the release number is ECKERT.

Client Description	Lancaster Labs Number
MW-2A Grab Water Sample	4672293
MW-3 Grab Water Sample	4672294
MW-4 Grab Water Sample	4672295
MW-6 Grab Water Sample	4672296
MW-7 Grab Water Sample	4672297
MW-8 Grab Water Sample	4672298
Trip Blank Water Sample	4672299

1 COPY TO	SECOR International	Attn: August Welch
1 COPY TO	SECOR International	Attn: Meredith Redmon

Lancaster Laboratories

Analysis Report

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

Questions? Contact your Client Services Representative
Teresa L Cunningham at (717) 656-2300

Respectfully Submitted,

Jenifer E. Hess
Manager

Lancaster Laboratories

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

Analysis Report

Lancaster Laboratories Sample No. WW 4672293

MW-2A Grab Water Sample
Site# 1344 (255028)
247 D St-Blaine, WA
Collected:12/14/2005 13:40 by MD

Account Number: 11817

ConocoPhillips c/o Shaw Env.
19909 120th Ave. NE
Suite 101
Bothell WA 98011

Submitted: 12/16/2005 09:55
Reported: 12/23/2005 at 13:20
Discard: 01/23/2006

DSB2A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	75.	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	94.	ug/l	1
08214	BTEX, MTBE (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00780	Methyl tert-Butyl Ether	1634-04-4	0.4	0.3	ug/l	1
08274	TPH by NWTPH-Gx waters					
01648	TPH by NWTPH-Gx waters	n.a.	N.D.	48.	ug/l	1
05382	Volatiles by 8260 Full Scan					
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05389	Trichlorofluoromethane	75-69-4	N.D.	2.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	N.D.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1

Lancaster Laboratories Sample No. WW 4672293

MW-2A Grab Water Sample
Site# 1344 (255028)
247 D St-Blaine, WA
Collected:12/14/2005 13:40 by MD

Account Number: 11817

Submitted: 12/16/2005 09:55
Reported: 12/23/2005 at 13:20
Discard: 01/23/2006

ConocoPhillips c/o Shaw Env.
19909 120th Ave. NE
Suite 101
Bothell WA 98011

DSB2A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
05432	1,3-Dichlorobenzene	541-73-1	N.D.	1.	ug/l	1
05433	1,4-Dichlorobenzene	106-46-7	N.D.	1.	ug/l	1
05435	1,2-Dichlorobenzene	95-50-1	N.D.	1.	ug/l	1
08202	Volatiles 8260 full scan cont					
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
08203	Freon 113	76-13-1	N.D.	2.	ug/l	1

State of Washington Lab Certification No. C259

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	12/20/2005 20:44	Matthew E Barton	1
08214	BTEX, MTBE (8021)	SW-846 8021B	1	12/19/2005 19:02	Martha L Seidel	1
08274	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	12/19/2005 19:02	Martha L Seidel	1
05382	Volatiles by 8260 Full Scan	SW-846 8260B	1	12/20/2005 14:20	Seth J Good	1
08202	Volatiles 8260 full scan cont	SW-846 8260B	1	12/20/2005 14:20	Seth J Good	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/19/2005 19:02	Martha L Seidel	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	12/20/2005 14:20	Seth J Good	n.a.
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	12/20/2005 02:30	Sherry L Morrow	1

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Analysis Report

Lancaster Laboratories Sample No. WW 4672294

MW-3 Grab Water Sample
Site# 1344 (255028)
247 D St-Blaine, WA
Collected:12/14/2005 13:10 by MD

Account Number: 11817

Submitted: 12/16/2005 09:55
Reported: 12/23/2005 at 13:20
Discard: 01/23/2006

ConocoPhillips c/o Shaw Env.
19909 120th Ave. NE
Suite 101
Bothell WA 98011

DSB03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	76.	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	95.	ug/l	1
08214	BTEX, MTBE (8021)					
00776	Benzene	71-43-2	[illegible]	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00780	Methyl tert-Butyl Ether	1634-04-4	8.2	0.3	ug/l	1
08274	TPH by NWTPH-Gx waters					
01648	TPH by NWTPH-Gx waters	n.a.	N.D.	48.	ug/l	1
05382	Volatiles by 8260 Full Scan					
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05389	Trichlorofluoromethane	75-69-4	N.D.	2.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.6	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	N.D.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1

Lancaster Laboratories Sample No. WW 4672294

MW-3 Grab Water Sample
Site# 1344 (255028)
247 D St-Blaine, WA
Collected:12/14/2005 13:10 by MD

Submitted: 12/16/2005 09:55
Reported: 12/23/2005 at 13:20
Discard: 01/23/2006

Account Number: 11817

ConocoPhillips c/o Shaw Env.
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DSB03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
05432	1,3-Dichlorobenzene	541-73-1	N.D.	1.	ug/l	1
05433	1,4-Dichlorobenzene	106-46-7	N.D.	1.	ug/l	1
05435	1,2-Dichlorobenzene	95-50-1	N.D.	1.	ug/l	1
08202	Volatiles 8260 full scan cont					
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
08203	Freon 113	76-13-1	N.D.	2.	ug/l	1

State of Washington Lab Certification No. C259

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	12/20/2005 21:08	Matthew E Barton	1
08214	BTEX, MTBE (8021)	SW-846 8021B	1	12/19/2005 19:32	Martha L Seidel	1
08274	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	12/19/2005 19:32	Martha L Seidel	1
05382	Volatiles by 8260 Full Scan	SW-846 8260B	1	12/21/2005 13:45	Parker D Lindstrom	1
08202	Volatiles 8260 full scan cont	SW-846 8260B	1	12/21/2005 13:45	Parker D Lindstrom	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/19/2005 19:32	Martha L Seidel	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	12/21/2005 13:45	Parker D Lindstrom	n.a.
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	12/20/2005 02:30	Sherry L Morrow	1

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Analysis Report

Lancaster Laboratories Sample No. WW 4672295

MW-4 Grab Water Sample
Site# 1344 (255028)
247 D St-Blaine, WA
Collected:12/14/2005 10:38 by MD

Account Number: 11817

Submitted: 12/16/2005 09:55
Reported: 12/23/2005 at 13:20
Discard: 01/23/2006

ConocoPhillips c/o Shaw Env.
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DSB04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	75.	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	94.	ug/l	1
08214	BTEX, MTBE (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00780	Methyl tert-Butyl Ether	1634-04-4	N.D.	0.3	ug/l	1
08274	TPH by NWTPH-Gx waters					
01648	TPH by NWTPH-Gx waters	n.a.	N.D.	48.	ug/l	1
05382	Volatiles by 8260 Full Scan					
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05389	Trichlorofluoromethane	75-69-4	N.D.	2.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	14.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	N.D.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1

Lancaster Laboratories Sample No. WW 4672295

MW-4 Grab Water Sample
Site# 1344 (255028)
247 D St-Blaine, WA
Collected:12/14/2005 10:38 by MD

Account Number: 11817

Submitted: 12/16/2005 09:55
Reported: 12/23/2005 at 13:20
Discard: 01/23/2006

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DSB04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
05432	1,3-Dichlorobenzene	541-73-1	N.D.	1.	ug/l	1
05433	1,4-Dichlorobenzene	106-46-7	N.D.	1.	ug/l	1
05435	1,2-Dichlorobenzene	95-50-1	N.D.	1.	ug/l	1
08202	Volatiles 8260 full scan cont					
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
08203	Freon 113	76-13-1	N.D.	2.	ug/l	1

State of Washington Lab Certification No. C259

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	12/20/2005 21:32	Matthew E Barton	1
08214	BTEX, MTBE (8021)	SW-846 8021B	1	12/19/2005 20:03	Martha L Seidel	1
08274	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	12/19/2005 20:03	Martha L Seidel	1
05382	Volatiles by 8260 Full Scan	SW-846 8260B	1	12/21/2005 14:08	Parker D Lindstrom	1
08202	Volatiles 8260 full scan cont	SW-846 8260B	1	12/21/2005 14:08	Parker D Lindstrom	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/19/2005 20:03	Martha L Seidel	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	12/21/2005 14:08	Parker D Lindstrom	n.a.
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	12/20/2005 02:30	Sherry L Morrow	1

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Analysis Report

Lancaster Laboratories Sample No. WW 4672296

MW-6 Grab Water Sample
Site# 1344 (255028)
247 D St-Blaine, WA
Collected:12/14/2005 14:12 by MD

Account Number: 11817

ConocoPhillips c/o Shaw Env.
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Suite 101
Bothell WA 98011

Submitted: 12/16/2005 09:55
Reported: 12/23/2005 at 13:20
Discard: 01/23/2006

DSB06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	75.	ug/l	1
02096	Heavy Range Organics	n.a.	200	94.	ug/l	1
08214	BTEX, MTBE (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	1.5	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	0.5	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00780	Methyl tert-Butyl Ether	1634-04-4	N.D.	5.0	ug/l	1
	Due to the presence of an interferent near its retention time, the normal reporting limit was not attained for MTBE. The presence or concentration of this compound cannot be determined due to the presence of this interferent.					
08274	TPH by NWTPH-Gx waters					
01648	TPH by NWTPH-Gx waters	n.a.	69	48.	ug/l	1
05382	Volatiles by 8260 Full Scan					
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05389	Trichlorofluoromethane	75-69-4	N.D.	2.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	N.D.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1

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Analysis Report

Lancaster Laboratories Sample No. WW 4672296

MW-6 Grab Water Sample
Site# 1344 (255028)
247 D St-Blaine, WA
Collected:12/14/2005 14:12 by MD

Account Number: 11817

Submitted: 12/16/2005 09:55
Reported: 12/23/2005 at 13:20
Discard: 01/23/2006

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Bothell WA 98011

DSB06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
05432	1,3-Dichlorobenzene	541-73-1	N.D.	1.	ug/l	1
05433	1,4-Dichlorobenzene	106-46-7	N.D.	1.	ug/l	1
05435	1,2-Dichlorobenzene	95-50-1	N.D.	1.	ug/l	1
08202	Volatiles 8260 full scan cont					
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
08203	Freon 113	76-13-1	N.D.	2.	ug/l	1

State of Washington Lab Certification No. C259

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	12/20/2005 21:56	Matthew E Barton	1
08214	BTEX, MTBE (8021)	SW-846 8021B	1	12/19/2005 22:03	Martha L Seidel	1
08274	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	12/19/2005 22:03	Martha L Seidel	1
05382	Volatiles by 8260 Full Scan	SW-846 8260B	1	12/21/2005 14:30	Parker D Lindstrom	1
08202	Volatiles 8260 full scan cont	SW-846 8260B	1	12/21/2005 14:30	Parker D Lindstrom	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/19/2005 22:03	Martha L Seidel	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	12/21/2005 14:30	Parker D Lindstrom	n.a.
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	12/20/2005 02:30	Sherry L Morrow	1

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Analysis Report

Lancaster Laboratories Sample No. WW 4672297

MW-7 Grab Water Sample
Site# 1344 (255028)
247 D St-Blaine, WA
Collected:12/14/2005 11:45 by MD

Account Number: 11817

Submitted: 12/16/2005 09:55
Reported: 12/23/2005 at 13:20
Discard: 01/23/2006

ConocoPhillips c/o Shaw Env.
19909 120th Ave. NE
Suite 101
Bothell WA 98011

DSB07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	75.	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	94.	ug/l	1
08214	BTEX, MTBE (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00780	Methyl tert-Butyl Ether	1634-04-4	N.D.	0.3	ug/l	1
08274	TPH by NWTPH-Gx waters					
01648	TPH by NWTPH-Gx waters	n.a.	N.D.	48.	ug/l	1
05382	Volatiles by 8260 Full Scan					
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05389	Trichlorofluoromethane	75-69-4	N.D.	2.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	[illegible]	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	[illegible]	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1

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Analysis Report

Lancaster Laboratories Sample No. WW 4672297

MW-7 Grab Water Sample
Site# 1344 (255028)
247 D St-Blaine, WA
Collected:12/14/2005 11:45 by MD

Account Number: 11817

ConocoPhillips c/o Shaw Env.
19909 120th Ave. NE
Suite 101
Bothell WA 98011

Submitted: 12/16/2005 09:55
Reported: 12/23/2005 at 13:20
Discard: 01/23/2006

DSB07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
05432	1,3-Dichlorobenzene	541-73-1	N.D.	1.	ug/l	1
05433	1,4-Dichlorobenzene	106-46-7	N.D.	1.	ug/l	1
05435	1,2-Dichlorobenzene	95-50-1	N.D.	1.	ug/l	1
08202	Volatiles 8260 full scan cont					
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
08203	Freon 113	76-13-1	N.D.	2.	ug/l	1

State of Washington Lab Certification No. C259

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	12/20/2005 22:20	Matthew E Barton	1
08214	BTEX, MTBE (8021)	SW-846 8021B	1	12/19/2005 22:34	Martha L Seidel	1
08274	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	12/19/2005 22:34	Martha L Seidel	1
05382	Volatiles by 8260 Full Scan	SW-846 8260B	1	12/21/2005 14:53	Parker D Lindstrom	1
08202	Volatiles 8260 full scan cont	SW-846 8260B	1	12/21/2005 14:53	Parker D Lindstrom	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/19/2005 22:34	Martha L Seidel	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	12/21/2005 14:53	Parker D Lindstrom	n.a.
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	12/20/2005 02:30	Sherry L Morrow	1

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Analysis Report

Lancaster Laboratories Sample No. WW 4672298

MW-8 Grab Water Sample
Site# 1344 (255028)
247 D St-Blaine, WA
Collected:12/14/2005 11:17 by MD

Account Number: 11817

Submitted: 12/16/2005 09:55
Reported: 12/23/2005 at 13:20
Discard: 01/23/2006

ConocoPhillips c/o Shaw Env.
19909 120th Ave. NE
Suite 101
Bothell WA 98011

DSB08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	75.	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	94.	ug/l	1
08214	BTEX, MTBE (8021)					
00776	Benzene	71-43-2	N.D.	1.0	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00780	Methyl tert-Butyl Ether	1634-04-4	[illegible]	0.3	ug/l	1
	Due to the presence of an interferent near its retention time, the normal reporting limit was not attained for benzene. The presence or concentration of this compound cannot be determined due to the presence of this interferent.					
08274	TPH by NWTPH-Gx waters					
01648	TPH by NWTPH-Gx waters	n.a.	N.D.	48.	ug/l	1
05382	Volatiles by 8260 Full Scan					
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	[illegible]	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05389	Trichlorofluoromethane	75-69-4	N.D.	2.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	[illegible]	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	[illegible]	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1

Lancaster Laboratories Sample No. WW 4672298

MW-8 Grab Water Sample
Site# 1344 (255028)
247 D St-Blaine, WA
Collected:12/14/2005 11:17 by MD

Account Number: 11817

Submitted: 12/16/2005 09:55
Reported: 12/23/2005 at 13:20
Discard: 01/23/2006

ConocoPhillips c/o Shaw Env.
19909 120th Ave. NE
Suite 101
Bothell WA 98011

DSB08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
05432	1,3-Dichlorobenzene	541-73-1	N.D.	1.	ug/l	1
05433	1,4-Dichlorobenzene	106-46-7	N.D.	1.	ug/l	1
05435	1,2-Dichlorobenzene	95-50-1	N.D.	1.	ug/l	1
08202	Volatiles 8260 full scan cont					
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
08203	Freon 113	76-13-1	N.D.	2.	ug/l	1

State of Washington Lab Certification No. C259

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	12/20/2005 22:44	Matthew E Barton	1
08214	BTEX, MTBE (8021)	SW-846 8021B	1	12/19/2005 23:04	Martha L Seidel	1
08274	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	12/19/2005 23:04	Martha L Seidel	1
05382	Volatiles by 8260 Full Scan	SW-846 8260B	1	12/21/2005 15:16	Parker D Lindstrom	1
08202	Volatiles 8260 full scan cont	SW-846 8260B	1	12/21/2005 15:16	Parker D Lindstrom	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/19/2005 23:04	Martha L Seidel	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	12/21/2005 15:16	Parker D Lindstrom	n.a.
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	12/20/2005 02:30	Sherry L Morrow	1

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Analysis Report

Lancaster Laboratories Sample No. WW 4672299

Trip Blank Water Sample
Site# 1344 (255028)
247 D St-Blaine, WA
Collected: n.a.

Submitted: 12/16/2005 09:55
Reported: 12/23/2005 at 13:20
Discard: 01/23/2006

Account Number: 11817

ConocoPhillips c/o Shaw Env.
19909 120th Ave. NE
Suite 101
Bothell WA 98011

DSBTB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08214	BTEX, MTBE (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00780	Methyl tert-Butyl Ether	1634-04-4	N.D.	0.3	ug/l	1
08274	TPH by NWTPH-Gx waters					
01648	TPH by NWTPH-Gx waters	n.a.	N.D.	48.	ug/l	1

State of Washington Lab Certification No. C259

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08214	BTEX, MTBE (8021)	SW-846 8021B	1	12/19/2005 17:32	Martha L Seidel	1
08274	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	12/19/2005 17:32	Martha L Seidel	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/19/2005 17:32	Martha L Seidel	1

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Analysis Report

Quality Control Summary

Client Name: ConocoPhillips c/o Shaw Env.
Reported: 12/23/05 at 01:20 PM

Group Number: 971472

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 053530020A	Sample number(s): 4672293-4672298							
Diesel Range Organics	N.D.	0.080	mg/l	81	76	51-113	6	20
Heavy Range Organics	N.D.	0.10	mg/l					
Batch number: 05353A54A	Sample number(s): 4672293-4672299							
Benzene	N.D.	0.2	ug/l	103	97	86-119	6	30
Toluene	N.D.	0.2	ug/l	106	99	82-119	7	30
Ethylbenzene	N.D.	0.2	ug/l	106	100	81-119	6	30
Total Xylenes	N.D.	0.6	ug/l	108	102	82-120	6	30
Methyl tert-Butyl Ether	N.D.	0.3	ug/l	97	96	82-124	0	30
TPH by NWTPH-Gx waters	N.D.	48.	ug/l	88	90	70-130	2	30
Batch number: L053541AA	Sample number(s): 4672293							
Chloromethane	N.D.	1.	ug/l	88	88	66-139	0	30
Vinyl Chloride	N.D.	1.	ug/l	88	88	71-126	0	30
Bromomethane	N.D.	1.	ug/l	63	81	62-131	25	30
Chloroethane	N.D.	1.	ug/l	76	85	67-127	10	30
Trichlorofluoromethane	N.D.	2.	ug/l	90	89	70-148	1	30
1,1-Dichloroethene	N.D.	0.8	ug/l	92	93	79-130	0	30
Methylene Chloride	N.D.	2.	ug/l	92	92	85-120	0	30
trans-1,2-Dichloroethene	N.D.	0.8	ug/l	91	92	83-117	1	30
1,1-Dichloroethane	N.D.	1.	ug/l	94	93	83-127	1	30
cis-1,2-Dichloroethene	N.D.	0.8	ug/l	96	95	84-117	1	30
Chloroform	N.D.	0.8	ug/l	98	97	86-124	1	30
1,1,1-Trichloroethane	N.D.	0.8	ug/l	95	95	83-127	1	30
Carbon Tetrachloride	N.D.	1.	ug/l	93	94	77-130	0	30
1,2-Dichloroethane	N.D.	1.	ug/l	98	101	77-132	3	30
Trichloroethene	N.D.	1.	ug/l	94	93	87-117	1	30
1,2-Dichloropropane	N.D.	1.	ug/l	93	94	80-117	1	30
Bromodichloromethane	N.D.	1.	ug/l	95	96	83-121	1	30
1,1,2-Trichloroethane	N.D.	0.8	ug/l	98	100	86-113	3	30
Tetrachloroethene	N.D.	0.8	ug/l	90	91	74-125	1	30
Dibromochloromethane	N.D.	1.	ug/l	92	94	78-119	2	30
Chlorobenzene	N.D.	0.8	ug/l	96	96	85-115	1	30
Bromoform	N.D.	1.	ug/l	89	91	69-118	3	30
1,1,2,2-Tetrachloroethane	N.D.	1.	ug/l	104	107	72-119	2	30
1,3-Dichlorobenzene	N.D.	1.	ug/l	99	100	81-114	0	30
1,4-Dichlorobenzene	N.D.	1.	ug/l	97	99	84-116	2	30
1,2-Dichlorobenzene	N.D.	1.	ug/l	98	98	81-112	0	30
trans-1,3-Dichloropropene	N.D.	1.	ug/l	103	106	79-114	2	30
cis-1,3-Dichloropropene	N.D.	1.	ug/l	91	90	78-114	0	30
Freon 113	N.D.	2.	ug/l	79	83	73-140	5	30
Batch number: L053541AB	Sample number(s): 4672294-4672298							

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

Quality Control Summary

Client Name: ConocoPhillips c/o Shaw Env.

Group Number: 971472

Reported: 12/23/05 at 01:20 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloromethane	N.D.	1.	ug/l	88	88	66-139	0	30
Vinyl Chloride	N.D.	1.	ug/l	88	88	71-126	0	30
Bromomethane	N.D.	1.	ug/l	63	81	62-131	25	30
Chloroethane	N.D.	1.	ug/l	76	85	67-127	10	30
Trichlorofluoromethane	N.D.	2.	ug/l	90	89	70-148	1	30
1,1-Dichloroethene	N.D.	0.8	ug/l	92	93	79-130	0	30
Methylene Chloride	N.D.	2.	ug/l	92	92	85-120	0	30
trans-1,2-Dichloroethene	N.D.	0.8	ug/l	91	92	83-117	1	30
1,1-Dichloroethane	N.D.	1.	ug/l	94	93	83-127	1	30
cis-1,2-Dichloroethene	N.D.	0.8	ug/l	96	95	84-117	1	30
Chloroform	N.D.	0.8	ug/l	98	97	86-124	1	30
1,1,1-Trichloroethane	N.D.	0.8	ug/l	95	95	83-127	1	30
Carbon Tetrachloride	N.D.	1.	ug/l	93	94	77-130	0	30
1,2-Dichloroethane	N.D.	1.	ug/l	98	101	77-132	3	30
Trichloroethene	N.D.	1.	ug/l	94	93	87-117	1	30
1,2-Dichloropropane	N.D.	1.	ug/l	93	94	80-117	1	30
Bromodichloromethane	N.D.	1.	ug/l	95	96	83-121	1	30
1,1,2-Trichloroethane	N.D.	0.8	ug/l	98	100	86-113	3	30
Tetrachloroethene	N.D.	0.8	ug/l	90	91	74-125	1	30
Dibromochloromethane	N.D.	1.	ug/l	92	94	78-119	2	30
Chlorobenzene	N.D.	0.8	ug/l	96	96	85-115	1	30
Bromoform	N.D.	1.	ug/l	89	91	69-118	3	30
1,1,2,2-Tetrachloroethane	N.D.	1.	ug/l	104	107	72-119	2	30
1,3-Dichlorobenzene	N.D.	1.	ug/l	99	100	81-114	0	30
1,4-Dichlorobenzene	N.D.	1.	ug/l	97	99	84-116	2	30
1,2-Dichlorobenzene	N.D.	1.	ug/l	98	98	81-112	0	30
trans-1,3-Dichloropropene	N.D.	1.	ug/l	103	106	79-114	2	30
cis-1,3-Dichloropropene	N.D.	1.	ug/l	91	90	78-114	0	30
Freon 113	N.D.	2.	ug/l	79	83	73-140	5	30

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 05353A54A	Sample number(s): 4672293-4672299								
Benzene	106		78-131						
Toluene	111		78-129						
Ethylbenzene	111		75-133						
Total Xylenes	112		80-134						
Methyl tert-Butyl Ether	97		70-134						
TPH by NWTPH-Gx waters	89		63-154						
Batch number: L053541AA	Sample number(s): 4672293								
Chloromethane	96		69-155						
Vinyl Chloride	106		81-150						
Bromomethane	82		59-143						
Chloroethane	88		63-142						
Trichlorofluoromethane	122		77-177						
1,1-Dichloroethene	102		87-145						
Methylene Chloride	95		79-133						
trans-1,2-Dichloroethene	99		82-133						
1,1-Dichloroethane	105		85-135						

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: ConocoPhillips c/o Shaw Env.

Group Number: 971472

Reported: 12/23/05 at 01:20 PM

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
cis-1,2-Dichloroethene	101		83-126						
Chloroform	110		82-131						
1,1,1-Trichloroethane	115		81-142						
Carbon Tetrachloride	117		79-155						
1,2-Dichloroethane	116		70-143						
Trichloroethene	107		83-136						
1,2-Dichloropropane	98		83-129						
Bromodichloromethane	109		80-129						
1,1,2-Trichloroethane	101		77-125						
Tetrachloroethene	99		78-133						
Dibromochloromethane	98		82-119						
Chlorobenzene	104		83-120						
Bromoform	94		64-119						
1,1,2,2-Tetrachloroethane	104		69-128						
1,3-Dichlorobenzene	105		79-123						
1,4-Dichlorobenzene	103		81-122						
1,2-Dichlorobenzene	103		82-117						
trans-1,3-Dichloropropene	107		77-123						
cis-1,3-Dichloropropene	89		80-126						
Freon 113	105		73-166						
Batch number: L053541AB	Sample number(s): 4672294-4672298								
Chloromethane	96		69-155						
Vinyl Chloride	106		81-150						
Bromomethane	82		59-143						
Chloroethane	88		63-142						
Trichlorofluoromethane	122		77-177						
1,1-Dichloroethene	102		87-145						
Methylene Chloride	95		79-133						
trans-1,2-Dichloroethene	99		82-133						
1,1-Dichloroethane	105		85-135						
cis-1,2-Dichloroethene	101		83-126						
Chloroform	110		82-131						
1,1,1-Trichloroethane	115		81-142						
Carbon Tetrachloride	117		79-155						
1,2-Dichloroethane	116		70-143						
Trichloroethene	107		83-136						
1,2-Dichloropropane	98		83-129						
Bromodichloromethane	109		80-129						
1,1,2-Trichloroethane	101		77-125						
Tetrachloroethene	99		78-133						
Dibromochloromethane	98		82-119						
Chlorobenzene	104		83-120						
Bromoform	94		64-119						
1,1,2,2-Tetrachloroethane	104		69-128						
1,3-Dichlorobenzene	105		79-123						
1,4-Dichlorobenzene	103		81-122						
1,2-Dichlorobenzene	103		82-117						
trans-1,3-Dichloropropene	107		77-123						
cis-1,3-Dichloropropene	89		80-126						
Freon 113	105		73-166						

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: ConocoPhillips c/o Shaw Env. Group Number: 971472
Reported: 12/23/05 at 01:20 PM

Surrogate Quality Control

Analysis Name: TPH by NWTPH-Dx(water) w/SiGel
Batch number: 053530020A

	Orthoterphenyl
4672293	94
4672294	79
4672295	83
4672296	92
4672297	88
4672298	88
Blank	76
LCS	97
LCSD	90
Limits:	52-141

Analysis Name: BTEX, MTBE (8021)
Batch number: 05353A54A

	Trifluorotoluene-P	Trifluorotoluene-F
4672293	87	89
4672294	90	86
4672295	90	85
4672296	91	86
4672297	92	87
4672298	91	88
4672299	90	86
Blank	90	79
LCS	89	85
LCSD	90	84
MS	89	83
Limits:	69-129	63-135

Analysis Name: EPA SW846/8260 (water)
Batch number: L053541AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
4672293	105	97	101	94
Blank	104	97	101	94
LCS	98	95	107	101
LCSD	98	95	107	101
MS	102	95	106	105
Limits:	80-116	77-113	80-113	78-113

Analysis Name: EPA SW846/8260 (water)
Batch number: L053541AB

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
4672294	110	99	100	97
4672295	112	96	101	96
4672296	110	98	100	98
4672297	111	98	102	98
4672298	111	98	101	97
Blank	108	97	98	97
LCS	98	95	107	101

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

ATTACHMENT B
SECOR MONITORING WELL GAUGING, PURGING AND SAMPLING PROCEDURES;
GROUNDWATER MONITORING FIELD DATA RECORDS

SECOR 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.

SECOR

DAILY FIELD LOG

Page: 1 of 1
Date:

Client: ConocoPhillips | Site No: | Project No:

Scope of Work: x Quarter Monitoring/Sampling W/O #:

Describe Daily Activities:

Gauged 7 monitoring wells.
Purged 6 monitoring wells.
Sampled 6 monitoring wells.

Number of drums left on site: Added to existing drum

Field Notes:

915- MO onsite for GWM. Completed HASP and STAR.
930- gauged all wells.
1038- Sampled MW-4.
1117- Sampled MW-8.
1145- Sampled MW-7 ← Lunch from 1200-1300
1310- Sampled MW-3.
1340- Sampled MW-2A
1412- Sampled MW-6.

1445- MO exiting. OFFSITE

Arrived on Site: 915

Departed Site: 1445

Decontamination Procedures: 3-Stage (Alconox Wash, Tap Water Rinse, & Distilled Water Rinse)

Daily Health and Safety Log Completed?: Y

Utility Locations Checked?:

Important Conversations:

Important Changes in Scope of Work:

Weather Conditions: Sunny

Subcontractors On Site:

SECOR Personnel On Site: MO

Signed: Mark Dat

Date: 12-14-05

SECOR
GROUNDWATER SAMPLING FIELD DATA SHEET

SECOR PN: _____ DATE: 12-19-05 WELL NO. MW-4

FACILITY NAME: 5028 TEMPERATURE: 30's °F or °C

FIELD PERSONNEL: MD WEATHER: sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing/piezometer: 3.56 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches _____ FT. or IN.

C. Total Depth of well (TD) from top of casing/piezometer: 12.4 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): _____ FT. or IN.

E. Useful approximate **Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water _____ =	PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water _____ =	PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water _____ =	PV (Gal)

PURGING METHOD: Low flow DURATION: START 1028

OBSERVATIONS:

	Time	Turbidity	Color	ORP Sheen	pH	Temp. °F/°C	Conduct. S/cm	SWL
1st Volume:	1033			222	4.74	11.73	.357	4.19
2nd Volume:	1035			224	4.73	11.65	.355	4.19
3rd Volume:	1037	↓	↓	227	4.72	11.63	.354	4.25
4th Volume:	_____							
Addl. Volumes:	_____							

TOTAL VOLUME OF WATER PURGED FROM WELL: 25 g

PURGE WATER STORED/DISPOSED OF WHERE/HOW: Barreled onsite

SAMPLES COLLECTED: Depth to Water at time of sample collection: _____

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
~~1038~~ MW-4	1038	6 VOAs / 1 AMBER	HCl

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:

Original Water Column: _____ x 0.80 = _____

Collect sample when Depth to Water measures **Less than or equal to:**

SECOR
GROUNDWATER SAMPLING FIELD DATA SHEET

SECOR PN: _____ DATE: 12-19-05 WELL NO. MW-8

FACILITY NAME: 5028 TEMPERATURE: 30's °F or °C

FIELD PERSONNEL: MO WEATHER: Sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing/piezometer: 33.83 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches _____ FT. or IN.

C. Total Depth of well (TD) from top of casing/piezometer: 13 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): _____ FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water _____ =	_____ PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water _____ =	_____ PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water _____ =	_____ PV (Gal)

PURGING METHOD: Low flow DURATION: Start 1107

OBSERVATIONS:

	Time	Turbidity	Color	~~Sheen~~ ORP	pH	Temp.	Conduct.	SWL
1st Volume:	1112			-15	5.04	10.92	.914	4.01
2nd Volume:	1114			-3	5.02	10.87	.468	4.08
3rd Volume:	1116			3	5.01	10.80	.965	4.08
4th Volume:	_____	_____	_____	_____	_____	_____	_____	_____
Addl. Volumes:	_____	_____	_____	_____	_____	_____	_____	_____

TOTAL VOLUME OF WATER PURGED FROM WELL: 1.25 g

PURGE WATER STORED/DISPOSED OF WHERE/HOW: Barrelled onsite

SAMPLES COLLECTED: Depth to Water at time of sample collection: 4.08

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
1107 MW-8	1117	6 VOAs / 1 AMBER	HCl

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -(_____)
Collect sample when Depth to Water measures
Less than or equal to:

SECOR
GROUNDWATER SAMPLING FIELD DATA SHEET

SECOR PN: _____ DATE: 12-19-05 WELL NO. MW-7

FACILITY NAME: 5028 TEMPERATURE: 30's °F or °C

FIELD PERSONNEL: MD WEATHER: Sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing/piezometer: 2.60 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches _____ FT. or IN.

C. Total Depth of well (TD) from top of casing/piezometer: 13 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): _____ FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water _____ =	_____ PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water _____ =	_____ PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water _____ =	_____ PV (Gal)

PURGING METHOD: Low flow DURATION: START 1135

OBSERVATIONS:

	Time	Turbidity	Color	Sheen	pH	Temp.	Conduct.	SWL
1st Volume:	1140	↓	↓	134	4.89	9.21	.552	2.60
2nd Volume:	1192	↓	↓	139	4.88	9.14	.553	2.60
3rd Volume:	1194	↓	↓	143	4.88	9.21	.553	2.61
4th Volume:	_____	_____	_____	_____	_____	_____	_____	_____
Addl. Volumes:	_____	_____	_____	_____	_____	_____	_____	_____

TOTAL VOLUME OF WATER PURGED FROM WELL: .25g

PURGE WATER STORED/DISPOSED OF WHERE/HOW: Barrel on site

SAMPLES COLLECTED: Depth to Water at time of sample collection: _____

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW-7	1145	6 VOAs | 1 AMBER	HCl

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:

Original Water Column: _____ x 0.80 = _____

Collect sample when Depth to Water measures **Less than or equal to:**

SECOR
GROUNDWATER SAMPLING FIELD DATA SHEET

SECOR PN: _____ DATE: 12-19-05 WELL NO. MW-3

FACILITY NAME: 5028 TEMPERATURE: 50's °F or °C

FIELD PERSONNEL: MJ WEATHER: Sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing/piezometer: 3.61 FT. or IN.

B. Thickness of Free Product, if present: ____ Inches _____ FT. or IN.

C. Total Depth of well (TD) from top of casing/piezometer: 12.6 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): _____ FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water ____ = ____	PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water ____ = ____	PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water ____ = ____	PV (Gal)

PURGING METHOD: Low Flow DURATION: Start : 1300

OBSERVATIONS:

	Time	Turbidity	Color	ORP ~~Sheen~~	pH	Temp.	Conduct.	SWL
1st Volume:	1305	↓	↓	98	5.01	11.83	.255	4.11
2nd Volume:	1307			100	4.98	11.66	.251	4.17
3rd Volume:	1309			103	4.97	11.65	.250	4.23
4th Volume:	____							
Addl. Volumes:	____							

TOTAL VOLUME OF WATER PURGED FROM WELL: .25g

PURGE WATER STORED/DISPOSED OF WHERE/HOW: Barrel onsite

SAMPLES COLLECTED: Depth to Water at time of sample collection: 4.23

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW-3	1310	6 vols / 1 amber	HCl

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = _____
Collect sample when Depth to Water measures
Less than or equal to:

SECOR
GROUNDWATER SAMPLING FIELD DATA SHEET

SECOR PN: _____ DATE: 12-14-05 WELL NO. MW-2A

FACILITY NAME: 5028 TEMPERATURE: 30's °F or °C

FIELD PERSONNEL: MD WEATHER: Sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing/piezometer: 2.61 FT. or IN.

B. Thickness of Free Product, if present: ~~———~~ Inches ~~##~~ FT. or IN.

C. Total Depth of well (TD) from top of casing/piezometer: 14.4 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): _____ FT. or IN.

E. Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water _____ =	_____ PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water _____ =	_____ PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water _____ =	_____ PV (Gal)

PURGING METHOD: Low Flow DURATION: START: 1330

OBSERVATIONS:

	Time	Turbidity	Color	~~Sheen~~ ORP	pH	Temp.	Conduct.	SWL
1st Volume:	1335	↓	↓	92	4.95	10.84	555	2.61
2nd Volume:	1337			91	4.98	10.69	555	2.61
3rd Volume:	1339			93	4.96	10.65	555	2.61
4th Volume:	_____							
Addl. Volumes:	_____							

TOTAL VOLUME OF WATER PURGED FROM WELL: 2.5 gl

PURGE WATER STORED/DISPOSED OF WHERE/HOW: Barrel onsite

SAMPLES COLLECTED: Depth to Water at time of sample collection: 2.61

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW-2A	1340	6 VOAs / 1 AMBER	HCl

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:

Original Water Column: _____ x 0.80 = _____ + (_____)

Collect sample when Depth to Water measures **Less than or equal to:**

SECOR
GROUNDWATER SAMPLING FIELD DATA SHEET

SECOR PN: _____ DATE: 12-14-05 WELL NO. MW-6

FACILITY NAME: 5026 TEMPERATURE: 303 °F or °C

FIELD PERSONNEL: MD WEATHER: Sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing/piezometer: 3.85 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches _____ FT. or IN.

C. Total Depth of well (TD) from top of casing/piezometer: 14.9 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): _____ FT. or IN.

E. Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water _____ =	_____ PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water _____ =	_____ PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water _____ =	_____ PV (Gal)

PURGING METHOD: Low flow DURATION: Start: 1402

OBSERVATIONS:

	Time	Turbidity	Color	~~Sheen~~ ORP	pH	Temp.	Conduct.	SWL
1st Volume:	1407	L	C	-94	5.15	12.08	.646	4.07
2nd Volume:	1409			-94	5.11	12.00	.436	4.17
3rd Volume:	1411			-95	5.10	11.88	.397	4.21
4th Volume:								
Addl. Volumes:								

TOTAL VOLUME OF WATER PURGED FROM WELL: .25 G

PURGE WATER STORED/DISPOSED OF WHERE/HOW: Barrelled ONSITE

SAMPLES COLLECTED: Depth to Water at time of sample collection: 4.21

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW-6	1412	6 VOAs / 1 AMBER	HCl

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = _____ - (_____)
Collect sample when Depth to Water measures
Less than or equal to:

SECOR

INTERNATIONAL INCORPORATED

MONITORING & SAMPLING LOG

Page 1 of 1

Project Name: ConocoPhillips Site # 5028

Project Number: 01CP.05028.08

SECOR Rep: ~~Meredith Redmon~~ MATT DAVIS

Checked by:

Date: 12-14-05 6/9/2006

No. of Monitoring Wells Gauge: 7

No. of Monitoring Wells Sampled: 6

MONITORING & SAMPLING EQUIPMENT / METHOD

Water Level Meter Type & ID: Solinist #

Purge Method:

Sampling Method: _____Teflon Bailer _____Disposable Bailer _____Other: Peristaltic with Dedicated Pump Tubing

Decontamination Method: _____Steam / High Pressure Wash _x_ 3 Stage (Alconox, Tap & DI rinse) _____Other:

MONITORING / SAMPLING DATA

Well I.D.	Previous Quarter DTW	Current DTW	Total Depth	Casing Diameter	Calc. 3 Well Volumes	Volumes Purged	Purge Start Time	Volumes Purged	Odor/Turb./Color	Sample Time	Comments
MW-1	3.57	3.47	12.5								
MW-2A	3.15	2.61	14.4								
MW-3	2.91	3.61	12.6								
MW-4	3.83	3.56	12.4								
MW-6	4.96	3.85	14.9								
MW-7	3.16	2.60	13								
MW-8	4.31	3.83	13								

SAMPLING INFORMATION

Container Types & Volumes	Filtered (Y/N)	Sample Preservatives	Analytical Parameters

ConocoPhillips Analysis Request/Chain of Custody

Lancaster Laboratories

002270

For Lancaster Laboratories use only

Acct. #: _____ Group # _____ Sample #: _____ SCR#: 22963

Site #: _____ WNO #: _____

Site Address: _____

ConocoPhillips PM: _____ Company Code: _____

Core Work Order#: _____ Total Lab Budget: _____

Consultant/Office: _____

Consultant Prj. Mgr: _____

Consultant Phone #: _____ Fax #: _____

Sampler _____

Sample Identification	Date Collected	Time Collected	Matrix: Grab	Composite	Soil	Potable ☐ NPDES ☐ Water	Oil ☐ Air ☐	Analyses Requested (List total number of containers in the box under each analysis.) Preservation Codes	Remarks

Preservative Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 O = Other

Turnaround Time Requested in Business Days (TAT) (please circle):
STD. TAT 5 day 48 hour
24 hour other _____

Reporting Requirements (please circle)
NJ Reduced NY ASP Cat. A Raw Data Diskette
NY ASP Cat. B Full Type I Other _____

Relinquished by:	Date	Time	Received by:	Date	Time
	12-5-05	1335			
Relinquished by:			Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by:		

Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____

Temperature Upon Receipt _____ C°

4531.01