UNOCAL 0355

SECOR

SECOR INTERNATIONAL INCORPORATED

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Seattle

LUST 2180

COPY

DATE: October 19, 2007

UST # 8421

ConocoPhillips

GROUNDWATER MONITORING REPORT

RECEIVED

OCT 29 2007

DEPT. OF ECOLOGY
TCP-NWRO

Site No.: 5753 Address: 159 Denny Way, Seattle, WA

ConocoPhillips Site Manager: Michael Noll (RM&R 2857)

Consultant / Contact Person: SECOR International Inc. / Alice Larsen

Primary Agency/Regulatory ID No.: Washington State Department of Ecology

SECOR Project No: 01CP.02857.01

WORK PERFORMED THIS QUARTER [3rd- 2007]:

- On August 8, 2007, SECOR personnel monitored five wells (MW-D, MW-E, MW-F, MW-G, and MW-I), and purged, and sampled four wells (MW-E, MW-F, MW-G, and MW-I) of the existing network of five groundwater monitoring wells. Well MW-D was not sampled due to insufficient water.

- 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 hydrocarbons (TPH-g) per Northwest Method NWTPH-Gx; diesel range (TPH-d) and heavy oil range (TPH-o) hydrocarbons per Northwest Method NWTPH-Dx modified with an acid/silica gel cleanup; and benzene, toluene, ethylbenzene, total xylenes (BTEX) and methyl tert-butyl ether (MTBE) per United States Environmental Protection Agency (USEPA) Method 8260B.

WORK PROPOSED FOR NEXT QUARTER [4th-2007]:

- Measure depth to water, purge, and sample five groundwater monitoring wells (MW-D, MW-E, MW-F, MW-G, and MW-I). Submit groundwater samples for analysis for NWTPH-Gx, NWTPH-Dx, BTEX, and MTBE.

DATA SUMMARY THIS QUARTER:

Frequency of Sampling Events:	Quarterly	(2/07, 5/07, 8/07, 11/07)
Depth to Groundwater:	19.52 ft. to (MW-D)	(Measured Feet Below Top of
	43.39 ft. (MW-I)	Well Casing/Well ID)
Groundwater Gradient:	Northwest	(Direction)
	0.17 feet per foot	(Magnitude)
Maximum TPH-G Concentrations:	14,000 µg/L (MW-F)	(ppb / well ID)
Maximum TPH-D Concentrations:	1,500 µg/L (MW-F)	(ppb / well ID)
Maximum TPH-O Concentrations:	None Detected	(ppb / well ID)
Maximum Benzene Concentrations:	1,300 µg/L (MW-F)	(ppb / well ID)
Measurable Free Product Detected:	No	(Yes - ID well(s)/No)
Free Product Recovered This Quarter:	None	(Gallons)
Cumulative Free Product Recovered to Date:	None	(Gallons)
Water Wells or	No Known Water Wells	(Type)
Surface Waters w/in 2,000 ft:	Puget Sound	
Radius and Respective	1,000 ft	(Respective Distance
Direction From Site:	Southwest	& Direction)
Current Remedial Action:	Site Excavation by Others	(SVE/AS/P&T/MNA etc.)
Permits for Discharge:	None	(NPDES, POTW, etc.)

360 356 4657

DISCUSSION:

- The groundwater samples were received at Lancaster Laboratories on August 9, 2007. 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 quality assurance/quality control (QA/QC) procedures during analysis.

- TPH-g was detected at concentrations greater than the Model Toxics Control Act (MTCA) Method A cleanup level in the groundwater samples collected from wells MW-F and MW-I (14,000 micrograms per liter [µg/L] and 2,200 µg/L, respectively). TPH-g was not detected at concentrations greater than the laboratory reporting limits (RLs) in any of the remaining groundwater samples collected this quarter.

- TPH-d was detected at a concentration greater than the MTCA Method A cleanup level in the groundwater sample collected from well MW-F (1,500 µg/L). TPH-d was detected at concentrations greater than the RLs, but less than the MTCA Method A cleanup level, in the groundwater samples collected from wells MW-E and MW-I (120 µg/L and 190 µg/L, respectively). TPH-d was not detected at concentrations greater than the RLs in any of the remaining groundwater samples collected this quarter.

- TPH-o was not detected at concentrations greater than the RLs in any of the groundwater samples collected this quarter.

- Benzene was detected at concentrations greater than the MTCA Method A cleanup level in the groundwater samples collected from wells MW-F and MW-I (1,300 µg/L and 380 µg/L, respectively). Benzene was not detected at concentrations greater than the RLs in any of the remaining groundwater samples collected this quarter.

- Toluene was detected at a concentration greater than the MTCA Method A cleanup level in the groundwater sample collected from well MW-F (1,100 µg/L). Toluene was detected at a concentration greater than the RL, but less than the MTCA Method A cleanup level, in the groundwater sample collected from well MW-I (5 µg/L). Toluene was not detected at a concentration greater than RLs in any of the remaining groundwater samples collected this quarter.

- Ethylbenzene was detected at concentrations greater than the RLs, but less than the MTCA Method A cleanup level, in the groundwater samples collected from wells MW-F and MW-I (210 µg/L and 61 µg/L, respectively). Ethylbenzene was not detected at concentrations greater than the RLs in any of the remaining groundwater samples collected this quarter.

- Total xylenes were detected at a concentration greater than the MTCA Method A cleanup level in the groundwater sample collected from well MW-F (1,200 µg/L). Total xylenes were detected at a concentration greater than the RL, but less than the MTCA Method A cleanup level, in the groundwater sample collected from well MW-I (58 µg/L). Total xylenes were not detected at concentrations greater than the RLs in any of the remaining groundwater samples collected this quarter.

- MTBE was detected at concentrations greater than the RLs, but less than the MTCA Method A cleanup level, in the groundwater samples collected from wells MW-F, MW-G, and MW-I (2 µg/L, 2 µg/L, and 0.7 µg/L, respectively). MTBE was not detected at concentrations greater than the RLs in any of the remaining groundwater samples collected this quarter.

- Groundwater monitoring trends and results are consistent with past results.

- No drums were left on site.

ATTACHMENTS:

Figure 1: Site Location Map
Figure 2: Site Plan with Groundwater Elevations (08/08/07)
Figure 3: Site Plan with Analytical Results (08/08/07)

Table 1: Summary of Groundwater Elevations and Sample Analytical Results

Attachment A: Laboratory Analytical Report and Chain-of-Custody Record
Attachment B: SECOR Groundwater Monitoring Gauging, Purging, and Sampling Procedures; Groundwater Monitoring Field Data Records
Attachment C: Limitations and Certifications for Non-Phase I Reports

Prepared By:

Tammy Parise
Staff Geologist

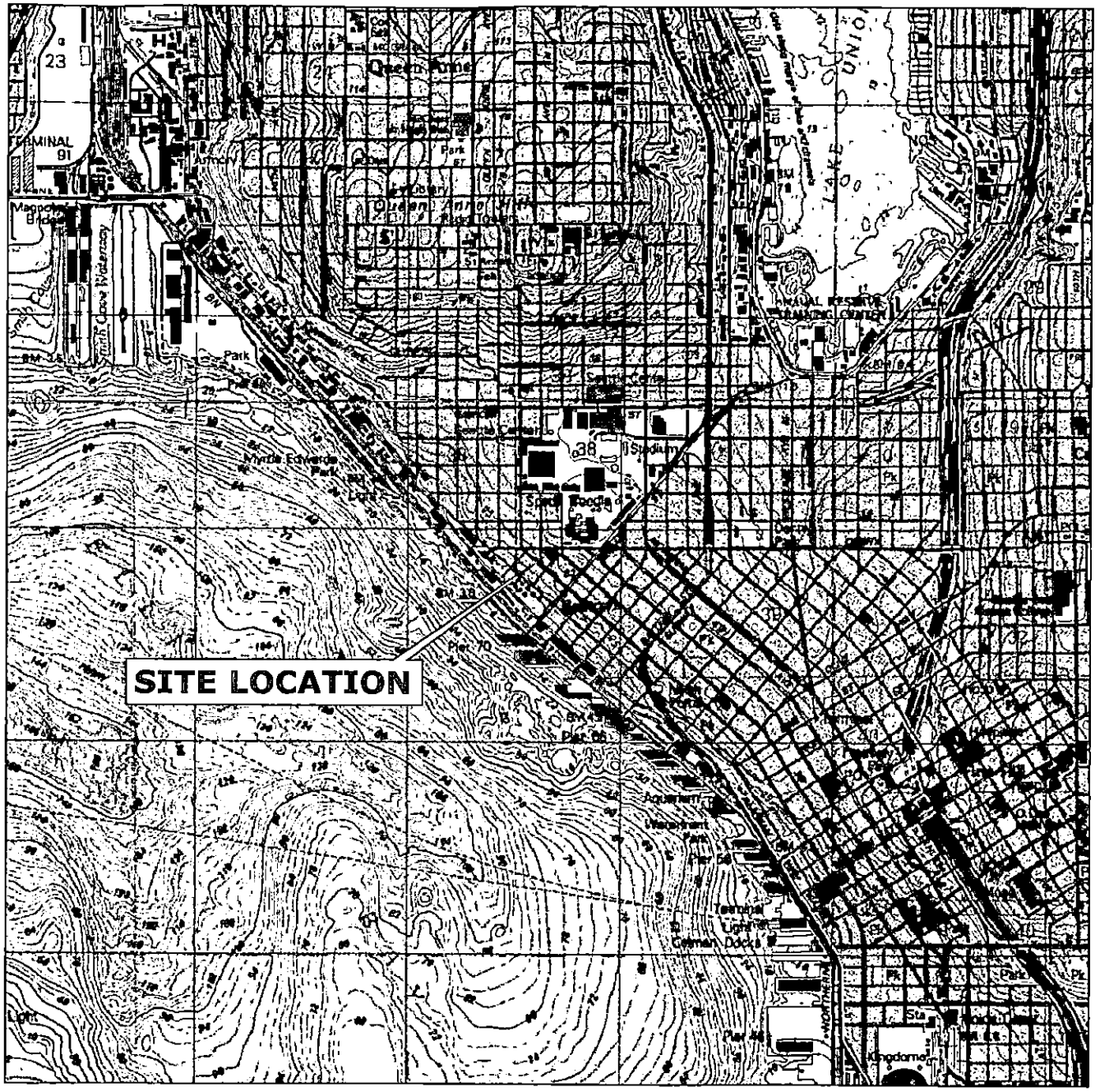
Reviewed By:

Mark Trewartha, R.G.
Senior Project Hydrogeologist

TP/MT:dc

cc: LUST Coordinator, Washington Department of Ecology – Bellevue, WA
Richard Brackett, Norcon Builders
Steven Smith, The Fortune Group

FIGURES



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; SEATTLE SOUTH, WASHINGTON; 1978

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

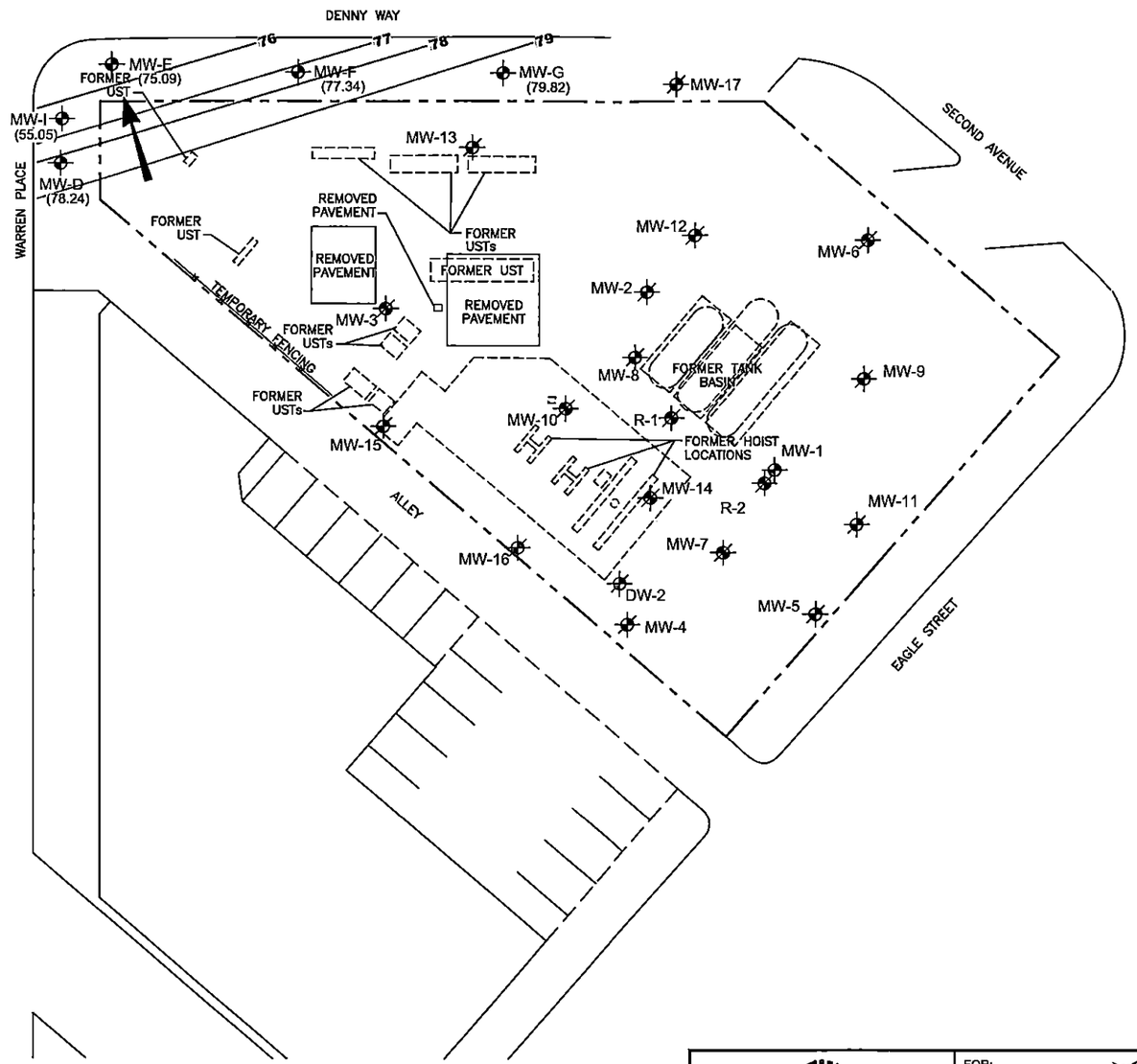
FOR: ConocoPhillips
FACILITY NO 2705753 (RM & R 2857)
159 DENNY WAY
SEATTLE, WASHINGTON

SITE LOCATION MAP

FIGURE: **1**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
01CP.02857.01	S. SIMMONS	MT	AL	07/03/07

Q:\CADD-26\OTHER OFFICE CAD\Redmond\CONOCO\ConocoPhillips 5753\DWG\5753 -.dwg modified by jresendiz on Jul 03, 2007 - 11:58



LEGEND

- SITE BOUNDARY
- MONITORING WELL LOCATION
- ABANDONDED OR DESTROYED MONITORING WELL LOCATION
- (79.82) GROUNDWATER ELEVATION
- 80 GROUNDWATER ELEVATION CONTOUR
- INFERRED GROUNDWATER FLOW DIRECTION

NOTES

MW-I NOT USED FOR CONTOURING BECAUSE IT IS SCREENED IN THE LOWER (DEEPER) AQUIFIER (36-51 FEET).

North

0 30 60

APPROXIMATE SCALE (FEET)

SOURCE:
BASE MAP FROM: ENVIRONMENTAL RESOLUTIONS, INC. (ERI), GROUNDWATER SAMPLE ANALYSIS MAP– 07/23/03, PLATE 1, DATED 08/15/03, PROJECT NO. 31021, CADD FILE 31021.13.DWG

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FOR: ConocoPhillips
FACILITY NO 5753 (RM & R 2857)
159 DENNY WAY
SEATTLE, WASHINGTON

SITE PLAN WITH GROUNDWATER ELEVATIONS (8/8/07)

FIGURE: **2**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
01CP.02857.01	JCR	DC	MT	9/7/07

Q:\CADD-26\OTHER OFFICE CAD\001-Redmond\Conoco Phillips\5753\DWG\5753 - 2007_.dwg modified by jresendiz on Sep 14, 2007 - 15:04

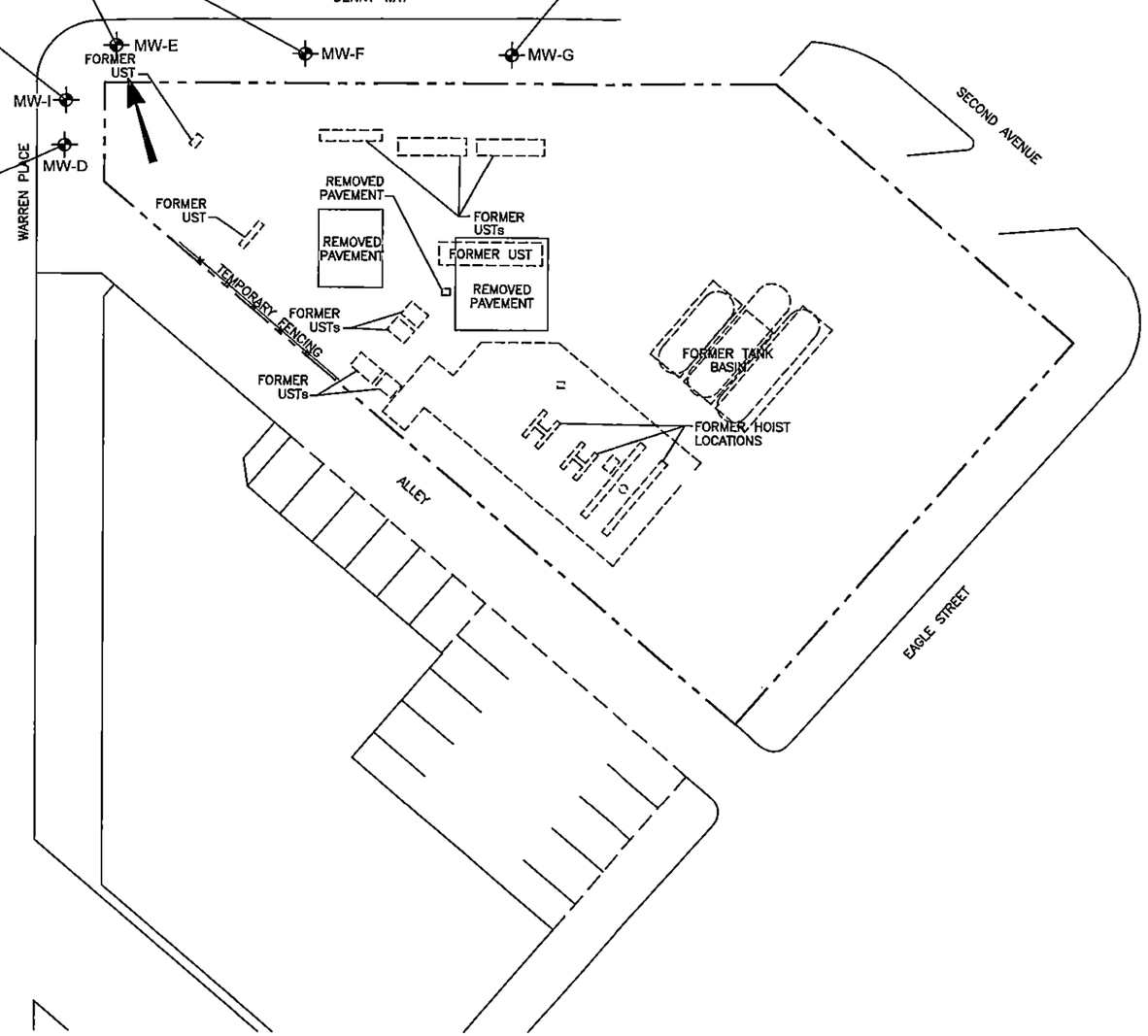
MW-E				µg/L
DATE	12/4/06	2/2/07	5/2/07	8/8/07
TPHg	<48	--	**	<50
TPHd	<75	--	**	120
TPHo	<94	--	**	<96
B	<0.5	--	**	<0.5
T	<0.7	--	**	<0.7
E	<0.8	--	**	<0.8
X	<0.8	--	**	<0.8
MTBE	<0.5	--	**	<0.5

MW-F				µg/L
DATE	12/4/06	2/2/07	5/2/07	8/8/07
TPHg	94,000	35,000	15,000	14,000
TPHd	1,200	3,100	1,900	1,500
TPHo	<190	<950	670	<190
B	2,800	1,000	940	1,300
T	9,700	1,300	540	1,100
E	1,600	300	110	210
X	8,800	4,100	1,200	1,200
MTBE	<5	4	2	2

MW-G				µg/L
DATE	12/4/06	2/2/07	5/2/07	8/8/07
TPHg	<48	<48	<50	<50
TPHd	<75	<76	<76	<77
TPHo	<94	<95	<95	<96
B	4	<0.5	<0.5	<0.5
T	<0.7	<0.7	<0.7	<0.7
E	<0.8	<0.8	<0.8	<0.8
X	<0.8	<0.8	<0.8	<0.8
MTBE	2	2	2	2

MW-I				µg/L
DATE	12/4/06	2/2/07	5/2/07	8/8/07
TPHg	3,600	3,600	2,200	2,200
TPHd	200	280	210	190
TPHo	190	<95	230	<96
B	840	660	570	380
T	18	13	7	5
E	130	120	110	61
X	230	180	100	58
MTBE	2	2	1	0.7

MW-D				µg/L
DATE	12/4/06	2/2/07	5/2/07	8/8/07
TPHg	<48	--	**	**
TPHd	<76	--	**	**
TPHo	<95	--	**	**
B	<0.5	--	**	**
T	<0.7	--	**	**
E	<0.8	--	**	**
X	<0.8	--	**	**
MTBE	<0.5	--	**	**



LEGEND

- SITE BOUNDARY
- MONITORING WELL LOCATION
- ABANDONDED OR DESTROYED MONITORING WELL LOCATION
- INFERRED GROUNDWATER FLOW DIRECTION

ANALYTES

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

UNITS IN MICROGRAMS PER LITER (µg/L)

ND NOT DETECTED AT OR ABOVE THE LABORATORY METHOD DETECTION LIMIT

-- NOT ANALYZED OR NOT APPLICABLE

** INSUFFICIENT WATER TO SAMPLE

< LESS THAN LABORATORY REPORTING LIMITS

NOTES

1). ALL LOCATIONS ARE APPROXIMATE

North

0 30 60

APPROXIMATE SCALE (FEET)

SOURCE:
BASE MAP FROM; ENVIRONMENTAL RESOLUTIONS, INC. (ERI), GROUNDWATER SAMPLE ANALYSIS MAP– 07/23/03, PLATE 1, DATED 08/15/03, PROJECT NO. 31021, CADD FILE 31021.13.DWG

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FOR: ConocoPhillips
FACILITY NO 5753 (RM & R 2857)
159 DENNY WAY
SEATTLE, WASHINGTON

SITE PLAN WITH ANALYTICAL RESULTS (8/8/07)

FIGURE: 3

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
01CP.02857.01	JCR	DC	MT	9/7/07

TABLE

TABLE 1
SUMMARY OF GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS
ConocoPhillips Site No. 5753 (RM&R 2857)
159 Denny Way
Seattle, Washington

Well Name	Sample Date	Elevation Data		Total Petroleum Hydrocarbons			Aromatic Hydrocarbons				
		Depth to Water	GW Elevation	Gasoline Range	Diesel Range	Heavy Range	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-D	12/04/06	16.60	NE	<48	<76	<95	<0.5	<0.7	<0.8	<0.8	<0.5
NE	02/02/07	DRY	NE	--	--	--	--	--	--	--	--
	05/02/07	19.50	78.26	Insufficient water to sample		--	--	--	--	--	--
97.76	08/08/07	19.52	78.24	Insufficient water to sample		--	--	--	--	--	--
MW-E	12/04/06	21.26	77.92	<48	<75	<94	<0.5	<0.7	<0.8	<0.8	<0.5
NE	02/02/07	DRY	NE	Insufficient water to sample							
	05/02/07	24.59	74.59	Insufficient water to sample							
99.18	08/08/07	24.09	75.09	<50	120	<96	<0.5	<0.7	<0.8	<0.8	<0.5
MW-F	12/04/06	22.84	78.44	**94,000**	**1,200**	<190	**2,800**	**9,700**	**1,600**	**8,800**	<5
NE	02/02/07	24.41	76.87	**35,000**	**3,100**	<950	**1,000**	**1,300**	300	**4,100**	4
	05/02/07	24.90	76.38	**15,000**	**1,900**	**670**	**940**	540	110	**1,200**	2
101.28	08/08/07	23.94	77.34	**14,000**	**1,500**	<190	**1,300**	**1,100**	210	**1,200**	2
MW-G	12/04/06	20.31	82.59	<48	<75	<94	4	<0.7	<0.8	<0.8	2
NE	02/02/07	22.90	80.00	<48	<76	<95	<0.5	<0.7	<0.8	<0.8	2
	05/02/07	22.75	80.15	<50	<76	<95	<0.5	<0.7	<0.8	<0.8	2
102.9	08/08/07	23.08	79.82	<50	<77	<96	<0.5	<0.7	<0.8	<0.8	2
MW-I	12/04/06	45.51	52.93	**3,600**	200	190	**840**	18	130	230	2
NE	02/02/07	44.83	53.61	**3,600**	280	<95	**660**	13	120	180	2
	05/02/07	44.15	54.29	**2,200**	210	230	**570**	7	110	100	1
98.44	08/08/07	43.39	55.05	**2,200**	190	<96	**380**	5	61	58	0.7
MTCA Method A Cleanup Levels:				**1000/800[a]**	**500**	**500**	**5**	**1000**	**700**	**1000**	**20**

TABLE 1

SUMMARY OF GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS

ConocoPhillips Site No. 5753 (RM&R 2857)

159 Denny Way

Seattle, Washington

NOTES:

All concentrations are in µg/L (ppb).
Depth to water in feet below top of casing.
GW Elevation = Groundwater elevation relative to top of casing elevations.
TPH-g = Gasoline range hydrocarbons by Northwest Method NWTPH-Gx.
TPH-d and TPH-o = Diesel and heavy range organics, respectively, by Northwest Method NWTPH-Dx.
BTEX = Aromatic compounds by EPA Method 8260B.
MTBE=Methyl Tertiary Butyl Ether.
NE = Not Established.
-- = Not Analyzed or Sampled.
< = Less than the stated laboratory reporting limit.
[a] MTCA Method A Cleanup Levels for TPH-g are 1,000 µg/L when no benzene is present and 800 µg/L when benzene is present.
Bolded values meet or exceed MTCA Method A Cleanup Levels.

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
5528 NW Doane Ave.
Portland OR 97210

Prepared by:

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

SAMPLE GROUP

The sample group for this submittal is 1050705. Samples arrived at the laboratory on Thursday, August 09, 2007. The PO# for this group is 4507160761 and the release number is NOLL.

Client Description	Lancaster Labs Number
MW-G Grab Water Sample	5123848
MW-F Grab Water Sample	5123849
MW-E Grab Water Sample	5123850
MW-I Grab Water Sample	5123851
Trip Blank Water Sample	5123852

ELECTRONIC COPY TO	SECOR International	Attn: Alice Larsen
ELECTRONIC COPY TO	SECOR International	Attn: Meredith Redmon
ELECTRONIC COPY TO	SECOR International	Attn: Tammy Parise

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
Barbara A Weyandt at (717) 656-2300

Respectfully Submitted,

Christine Dulaney
Senior Specialist

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 5123848

MW-G Grab Water Sample
Site# 5753
159 Denny Way - Seattle, WA
Collected:08/08/2007 12:26 by MT

Account Number: 11817

Submitted: 08/09/2007 09:15
Reported: 08/13/2007 at 15:39
Discard: 09/13/2007

ConocoPhillips
5528 NW Doane Ave.
Portland OR 97210

DWS-G

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

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	08/11/2007 16:00	Glorines Suarez-Rivera	1
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	08/10/2007 16:04	Steven A Skiles	1
02300	GC/MS Volatiles	SW-846 8260B	1	08/10/2007 19:18	Lauren C Marzario	1
01146	GC VOA Water Prep	SW-846 5030B	1	08/10/2007 16:04	Steven A Skiles	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	08/10/2007 19:18	Lauren C Marzario	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	08/10/2007 14:00	Jessica Agosto	1

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 5123849

MW-F Grab Water Sample
Site# 5753
159 Denny Way - Seattle, WA
Collected:08/08/2007 11:42 by MT

Account Number: 11817

Submitted: 08/09/2007 09:15
Reported: 08/13/2007 at 15:39
Discard: 09/13/2007

ConocoPhillips
5528 NW Doane Ave.
Portland OR 97210

DWS-F

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.	1,500.	150.	ug/l	2
02096	Heavy Range Organics	n.a.	N.D.	190.	ug/l	2
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	14,000.	250.	ug/l	5
02300	GC/MS Volatiles					
02010	Methyl Tertiary Butyl Ether	1634-04-4	2.	0.5	ug/l	1
05401	Benzene	71-43-2	1,300.	3.	ug/l	5
05407	Toluene	108-88-3	1,100.	4.	ug/l	5
05415	Ethylbenzene	100-41-4	210.	0.8	ug/l	1
06310	Xylene (Total)	1330-20-7	1,200.	4.	ug/l	5

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	08/13/2007 12:18	Glorines Suarez-Rivera	2
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	08/10/2007 16:33	Steven A Skiles	5
02300	GC/MS Volatiles	SW-846 8260B	1	08/10/2007 19:41	Lauren C Marzario	5
02300	GC/MS Volatiles	SW-846 8260B	1	08/10/2007 23:11	Lauren C Marzario	1
01146	GC VOA Water Prep	SW-846 5030B	1	08/10/2007 16:33	Steven A Skiles	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	08/10/2007 23:11	Lauren C Marzario	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	08/10/2007 19:41	Lauren C Marzario	5
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	08/10/2007 14:00	Jessica Agosto	1

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 5123849

MW-F Grab Water Sample
Site# 5753
159 Denny Way - Seattle, WA
Collected:08/08/2007 11:42 by MT

Account Number: 11817

Submitted: 08/09/2007 09:15
Reported: 08/13/2007 at 15:39
Discard: 09/13/2007

ConocoPhillips
5528 NW Doane Ave.
Portland OR 97210

DWS-F

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 5123850

MW-E Grab Water Sample
Site# 5753
159 Denny Way - Seattle, WA
Collected:08/08/2007 10:50 by MT

Account Number: 11817

Submitted: 08/09/2007 09:15
Reported: 08/13/2007 at 15:39
Discard: 09/13/2007

ConocoPhillips
5528 NW Doane Ave.
Portland OR 97210

DWS-E

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.	120.	76.	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	96.	ug/l	1
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	N.D.	50.	ug/l	1
02300	GC/MS Volatiles					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	08/11/2007 16:39	Glorines Suarez-Rivera	1
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	08/10/2007 17:02	Steven A Skiles	1
02300	GC/MS Volatiles	SW-846 8260B	1	08/10/2007 20:28	Lauren C Marzario	1
01146	GC VOA Water Prep	SW-846 5030B	1	08/10/2007 17:02	Steven A Skiles	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	08/10/2007 20:28	Lauren C Marzario	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	08/10/2007 14:00	Jessica Agosto	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5123851

MW-I Grab Water Sample
Site# 5753
159 Denny Way - Seattle, WA
Collected:08/08/2007 10:06 by MT

Account Number: 11817

Submitted: 08/09/2007 09:15
Reported: 08/13/2007 at 15:39
Discard: 09/13/2007

ConocoPhillips
5528 NW Doane Ave.
Portland OR 97210

DWS-I

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.	190.	77.	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	96.	ug/l	1
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	2,200.	50.	ug/l	1
02300	GC/MS Volatiles					
02010	Methyl Tertiary Butyl Ether	1634-04-4	0.7	0.5	ug/l	1
05401	Benzene	71-43-2	380.	5.	ug/l	10
05407	Toluene	108-88-3	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	61.	0.8	ug/l	1
06310	Xylene (Total)	1330-20-7	58.	0.8	ug/l	1

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	08/11/2007 16:59	Glorines Suarez-Rivera	1
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	08/10/2007 17:32	Steven A Skiles	1
02300	GC/MS Volatiles	SW-846 8260B	1	08/10/2007 20:51	Lauren C Marzario	1
02300	GC/MS Volatiles	SW-846 8260B	1	08/10/2007 21:14	Lauren C Marzario	10
01146	GC VOA Water Prep	SW-846 5030B	1	08/10/2007 17:32	Steven A Skiles	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	08/10/2007 20:51	Lauren C Marzario	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	08/10/2007 21:14	Lauren C Marzario	10
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	08/10/2007 14:00	Jessica Agosto	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5123851

MW-I Grab Water Sample
Site# 5753
159 Denny Way - Seattle, WA
Collected:08/08/2007 10:06 by MT

Account Number: 11817

Submitted: 08/09/2007 09:15
Reported: 08/13/2007 at 15:39
Discard: 09/13/2007

ConocoPhillips
5528 NW Doane Ave.
Portland OR 97210

DWS-I

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 5123852

Trip Blank Water Sample
Site# 5753
159 Denny Way - Seattle, WA
Collected:08/08/2007

Account Number: 11817

Submitted: 08/09/2007 09:15
Reported: 08/13/2007 at 15:39
Discard: 09/13/2007

ConocoPhillips
5528 NW Doane Ave.
Portland OR 97210

DWSTB

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

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	08/10/2007 15:34	Steven A Skiles	1
02300	GC/MS Volatiles	SW-846 8260B	1	08/10/2007 21:37	Lauren C Marzario	1
01146	GC VOA Water Prep	SW-846 5030B	1	08/10/2007 15:34	Steven A Skiles	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	08/10/2007 21:37	Lauren C Marzario	1

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Analysis Report

Quality Control Summary

Client Name: ConocoPhillips Group Number: 1050705
Reported: 08/13/07 at 03:39 PM

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: 072220010A	Sample number(s): 5123848-5123851							
Diesel Range Organics	N.D.	80.	ug/l	79	80	61-106	2	20
Heavy Range Organics	N.D.	100.	ug/l					
Batch number: 07222A07A	Sample number(s): 5123848-5123852							
TPH by NWTPH-Gx waters	N.D.	50.	ug/l	93	93	75-135	0	30
Batch number: N072212AB	Sample number(s): 5123848-5123852							
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	99	99	73-119	1	30
Benzene	N.D.	0.5	ug/l	101	101	78-119	0	30
Toluene	N.D.	0.7	ug/l	100	101	85-115	0	30
Ethylbenzene	N.D.	0.8	ug/l	99	100	82-119	1	30
Xylene (Total)	N.D.	0.8	ug/l	98	99	83-113	1	30

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 07222A07A	Sample number(s): 5123848-5123852 UNSPK: 5123848								
TPH by NWTPH-Gx waters	111		63-154						
Batch number: N072212AB	Sample number(s): 5123848-5123852 UNSPK: P123790								
Methyl Tertiary Butyl Ether	102		69-127						
Benzene	107		83-128						
Toluene	106		83-127						
Ethylbenzene	106		82-129						
Xylene (Total)	103		82-130						

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TPH by NWTPH-Dx(water) w/SiGel
Batch number: 072220010A

	Orthoterphenyl
5123848	101
5123849	91

*- 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
Group Number: 1050705
Reported: 08/13/07 at 03:39 PM

Surrogate Quality Control

5123850	108
5123851	105
Blank	94
LCS	112
LCSD	114
Limits:	50-150

Analysis Name: TPH by NWTPH-Gx waters
Batch number: 07222A07A

	Trifluorotoluene-F
5123848	91
5123849	95
5123850	88
5123851	99
5123852	90
Blank	90
LCS	95
LCSD	95
MS	97
Limits:	63-135

Analysis Name: UST-Unleaded Waters by 8260B
Batch number: N072212AB

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5123848	98	99	100	95
5123849	95	95	101	100
5123850	98	98	101	95
5123851	98	97	104	96
5123852	98	98	100	94
Blank	97	97	100	94
LCS	99	101	103	97
LCSD	98	98	102	97
MS	99	101	102	98
Limits:	80-116	77-113	80-113	78-113

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

ConocoPhillips Analysis Request/Chain of Custody

Lancaster Laboratories

For Lancaster Labs Use ONLY Acct. #: 11817 Group #: 1050705 Sample#: 5123848-52 SCR#:

005594

Site #: 5FCB AOC#:

Site City: SEATTLE State: WA

Enfos PO#: 4507160701

ConocoPhillips PM: MIKE NOLL

Samplers Name: MATT TOLLER

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

Preservation Codes

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

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Potable	NPDES	Water	Oil	Air	TPH-G	BTEX 8260 B	MTBE 8260 B	TPH-D w/ Silica gel cleanup	Remarks
MW-G	4/6/07	12:26									H	H	H	H	
MW-F		11:42													
MW-E		10:50													
MW-I		10:06													
G POSS MISSING LABEL															

Consultant Information:
Office City: REDMOND State: WA
Project Manager: MONEDITH REDMOND
Phone Number: 425-377-1600 Fax: 372 1650
Email: MREDMOND@SECOR.COM

Turnaround Time Requested in Business Days (TAT) (Circle One):
STD. 5 day 48 hour 24 hour Other

Electronic Data Deliverables (Circle One) Yes / No Format

Reporting Requirements (Circle One)
Standard Reports/QC Summary Full Validation (LLI Type I)
NJ Regulatory NJ Reduced NY ASP-A NY ASP-B Other

Relinquished by:	Date	Time	Received by:	Date	Time
	4/6/07	4:50			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
				4/6/07	5:45

Relinquished by Commercial Carrier:
UPS FedEx Other

Temperature Upon Receipt 2.2 C°

Lancaster Laboratories
Explanation of Symbols and Abbreviations

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

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**fib >5 um/ml**	fibers greater than 5 microns in length per ml

< less than – The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quatitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike amount not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

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

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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ATTACHMENT B
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: 8/8/07

Client: ConocoPhillips	Site No: 2705753	Project No:

Scope of Work: x Quarter Monitoring/Sampling

Describe Daily Activities:

Gauged 5 monitoring wells.
Purged 4 monitoring wells.
Sampled 4 monitoring wells.

Number of drums left on site: 0

Field Notes:

07:30 ARRIVED ON-SITE CALL IN TO TAMMY PARISH
07:40 fill out HASP, PTW, SITE WALK WITH IN PPE.
07:49 COMPLETE PAPERWORK
08:00 SET-UP DOWN, DELINEATION, CREATE GATE WORK PLAN
08:10 INITIATE GAUGING OF WELLS
09:10 DECON EQUIPMENT
09:12 INITIATE SAMPLING

WELLS	DTW
MW-E	23.09
MW-F	23.94
MW-G	24.09
MW-I	23.34
MW-D	19.52

SAMPLE TIMES

09:40 MW-D HACH INS H_2O to rinse SAMPLE, had peristaltic / bailers used in attempt possibly unlabeled due to sudden rain check w/ lab
10:06 MW-I SAMPLE TAKEN USING Bailer,
10:50 MW-E SAMPLE TAKEN, using door equipment
11:42 MW-F SAMPLE TAKEN
12:24 MW-G

* DTW METER WAS DECON in BETWEEN WELLS

-1:00 DECON & leave site after call in to TAMMY P.

Arrived on Site: 7:30 AM
Departed Site: 1:00

Decontamination Procedures: 3-Stage (Alconox Wash, Tap Water Rinse, & Distilled Water Rinse)	
Daily Health and Safety Log Completed?: YES	Utility Locations Checked?: yes

Important Conversations: PTW, TRAFFIC BOTH PEDS & AUTO

Important Changes in Scope of Work:
~~Project~~

Weather Conditions: CLOUDY, LITE RAIN	Subcontractors On Site: -0

SECOR Personnel On Site:

Signed: _____ Date: _____

SECOR
GROUNDWATER SAMPLING FIELD DATA SHEET

SECOR PN: ENFOS PO# 4507160761 DATE: 8/8/07 WELL NO. MW-D

FACILITY NAME: 5753 TEMPERATURE: 55° (F) or °C

FIELD PERSONNEL: Tammy Parise WEATHER: Clouds

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing/piezometer: 19.52 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: _____ 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: 9:32 END: 9:47

OBSERVATIONS:	Time	Color	Turbidity	ORP	pH	DO	Temp.	Conduct.	SWL
1ST Volume:	9:37		0	PURGE					
2nd Volume:	9:40								
3rd Volume:	9:43								
4th Volume:									
Addl. Volumes:									

TOTAL VOLUME OF WATER PURGED FROM WELL: .25 gallons

PURGE WATER STORED/DISPOSED OF WHERE/HOW: Taken offsite

INSUFFICIENT H_2O TO TAKE Sample

SAMPLES COLLECTED: Depth to Water at time of sample collection: 19.52

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
0	0	6 voas/1 amber	HCl

COMMENTS:

Difficult to pull H_2O w/ Sampler. (Takes 5 min @ Low Flow Rate)

DUP @ Insufficient H_2O 9:55.

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: ENFOS PO# 4600015662 DATE: 6/8 WELL NO. MW-I

FACILITY NAME: ~~2693146~~ 2705753 TEMPERATURE: 60 °F or °C

FIELD PERSONNEL: ~~Tommy~~ Parise M. TOLEY WEATHER: CLOUDS/RAIN

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing/piezometer: 43.39 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: _____ 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: 10:00 END: 10:15

OBSERVATIONS:	Time	Color	Turbidity	ORP	pH	DO	Temp.	Conduct.	SWL
1ST Volume:									
2nd Volume:			0	PURGE					
3rd Volume:									
4th Volume:									
Addl. Volumes:									

TOTAL VOLUME OF WATER PURGED FROM WELL: .25 gallons

PURGE WATER STORED/DISPOSED OF WHERE/HOW: Taken offsite

SAMPLES COLLECTED: Depth to Water at time of sample collection: 43.39

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW-I	10:06	6 voas/1 amber	HCl

COMMENTS:

BAILER USED TO TAKE SAMPLES, ROOS MISS CASING DUE TO WEATHER

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: ENFOS PO# 4600015662 DATE: 8/26 WELL NO. MW-6

FACILITY NAME: ~~9603146~~ 270575 TEMPERATURE: 88 °F or °C

FIELD PERSONNEL: ~~Tommy~~ Parise M. TOLEY WEATHER: Lt Rain

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing/piezometer: 24.09 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: _____ 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: 10:37 END: 10:55

OBSERVATIONS:	Time	Color	Turbidity	ORP	pH	DO	Temp.	Conduct.	SWL
1ST Volume:	10:42	C	100	-210	7.02	11.04	17.74	.498	24.31
2nd Volume:	10:45	C	70	-208	7.03	10.89	17.63	.477	24.34
3rd Volume:	10:46	C	60	-206	7.10	10.85	17.55	.456	24.37
4th Volume:									
Addl. Volumes:									

TOTAL VOLUME OF WATER PURGED FROM WELL: .25 gallons

PURGE WATER STORED/DISPOSED OF WHERE/HOW: Taken offsite

SAMPLES COLLECTED: Depth to Water at time of sample collection: 24.37

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW-6	10:50	.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: ENFOS PO# 4600015662 DATE: 8/8 WELL NO. MW-F

FACILITY NAME: ~~2602146~~ 250575 TEMPERATURE: 54 °F or °C

FIELD PERSONNEL: ~~Tommy Parise~~ M. TOLLEY WEATHER: CLOUDS

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing/piezometer: 23.94 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: _____ 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: 11:28 END: 11:53

OBSERVATIONS:	Time	Color	Turbidity	ORP -144	pH	DO	Temp.	Conduct.	SWL
1ST Volume:	11:33	CLOUDY	250	-140	7.06	10.67	17.32	.435	24.54
2nd Volume:	11:36	CLOUDY	230	-149	7.06	10.52	17.56	.435	24.56
3rd Volume:	11:39	CLOUDY	200	-146	7.13	10.46	17.70	.430	24.57
4th Volume:									
Addl. Volumes:									

TOTAL VOLUME OF WATER PURGED FROM WELL: .25 gallons

PURGE WATER STORED/DISPOSED OF WHERE/HOW: Taken offsite

SAMPLES COLLECTED: Depth to Water at time of sample collection: 24.57 FT

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW-F	11:42	6 voas/1 amber	HCl

COMMENTS:

Took some time to fill H2O w/ Sampler

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: ENFOS PO# 4600015662 DATE: 8/8 WELL NO. MW-C

FACILITY NAME: ~~2602146~~ 240575 TEMPERATURE: 69 °F or °C

FIELD PERSONNEL: ~~Tamara Parise~~ M. TOLEY WEATHER: CLOUDY

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing/piezometer: 23.08 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: _____ 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: 12:12 END: 12:36

OBSERVATIONS:	Time	Color	Turbidity	ORP	pH	DO	Temp.	Conduct.	SWL
1ST Volume:	12:17	C	55	-50	7.85	12.29	17.56	.476	23.21
2nd Volume:	12:20	C	53	-53	7.98	11.31	17.62	.487	23.24
3rd Volume:	12:23	C	52	-53	8.02	10.95	17.55	.489	23.26
4th Volume:									
Addl. Volumes:									

TOTAL VOLUME OF WATER PURGED FROM WELL: .25 gallons

PURGE WATER STORED/DISPOSED OF WHERE/HOW: Taken offsite

SAMPLES COLLECTED: Depth to Water at time of sample collection: 23.26

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW-B	12:26	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:

ConocoPhillips Analysis Request/Chain of Custody

Lancaster Laboratories

For Lancaster Labs Use ONLY Acct. #: _____ Group # _____ Sample#: _____ SCR#: _____

005594

Site #: 5758 AOC#: _____

Site City: SEATTLE State: WA

Enfos PO# 4507160761

ConocoPhillips PM: MIKE NOLL

Samplers Name: MATT TOLLER

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Water	Potable	NPDES	Oil	Air	Analyses Requested / Preservation Codes	Remarks
MW-G	4/6/09	12:20										
MW-F		1:42										
MW-E		10:50										
MW-J		10:00										
2 FB												

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

Consultant Information:
Office City: SEATTLE State: WA
Project Manager: MEREDITH REDMAN
Phone Number: 425.372.1400 Fax: 372 1650
Email: MREDMAN@SECOR.COM

Electronic Data Deliverables (Circle One) Yes / No Format_____

Reporting Requirements (Circle One)
Standard Reports/QC Summary Full Validation (LLI Type I)
NJ Regulatory NJ Reduced NY ASP-A NY ASP-B Other_____

Turnaround Time Requested in Business Days (TAT) (Circle One):
STD. 5 day 48 hour 24 hour Other_____

Relinquished by:	Date	Time	Received by:	Date	Time
	4/6	4:50			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Relinquished by Commercial Carrier:
UPS_____ FedEx _____ Other_____

Temperature Upon Receipt _____ C°

Lancaster Laboratories

Sample Container Record

Order Number: 46384
Order Date: 07/23/2007
Page 1 of 1
Standard Frm#: 69200

Client: 11817
ConocoPhillips
5753 - Seattle, WA

Ship To:

SECOR International
12034 134th Court NE
Ste 102
Redmond, WA 98052
425-372-1600
Attn: Tammy Parise

Group: 1

Number of Sample Locations: 6

One complete set of bottles listed below must be filled for each of the 6 sample location(s).

QC type

Count	Code	Description	Preservative	Analysis Name	Hold Time
3	26	40 ml glass vial	HCl	TPH by NWTPH-Gx waters	14 days
1	29	1000 ml round amber glass	HCl	TPH by NWTPH-Dx(water) w/SiGel	14 days
3	38	40 ml glass vial (GC/MS)	HCl	GC/MS Volatiles	14 days

Group: 2

Number of Sample Locations: 1

Sample Description	QC type
Trip Blank	Trip Blank

Count	Code	Description	Preservative	Analysis Name	Hold Time
2	26	40 ml glass vial	HCl	TPH by NWTPH-Gx waters	14 days
2	38	40 ml glass vial (GC/MS)	HCl	GC/MS Volatiles	14 days

If you have any questions, please contact your Client Service Representative, Barbara Weyandt at (717) 656-2300 X 1576

Date Needed:	Shipping Method	This order is:
07/30/2007	2nd Day	Per your Request

ATTACHMENT C
LIMITATIONS AND CERTIFICATIONS FOR NON-PHASE I REPORTS

This report was prepared in accordance with the scope of work outlined in SECOR'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 SECOR. To the extent that this report is based on information provided to SECOR by third parties, SECOR may have made efforts to verify this third party information, but SECOR cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigation. No other warranties, expressed or implied are made by SECOR.

Prepared by:

Tammy Parise, Staff Geologist
Name
Title

Reviewed by:

Mark Trewartha, Senior Project Hydrogeologist
Name
Title

All information, conclusions, and recommendations provided by SECOR in this document regarding the site have been prepared under the supervision of, and reviewed by, the Licensed Professional whose signature appears below:

Licensed Approver:

Name: **Mark Trewartha, R.G.** **Signature:**

Date: 10/22/07