



**CONOCOPHILLIPS COMPANY  
GROUNDWATER MONITORING REPORT**

December 7, 2004

Site No.: 255353 Site Address: 600 Westlake Avenue, Seattle, Washington  
ConocoPhillips Site Manager: Kipp Eckert  
Consultant/Contact Person: Delta Environmental Consultants, Inc. – Eric Larsen  
Primary Agency/Regulatory ID No.: Washington DOE Northwest Region

**WORK PERFORMED THIS QUARTER [Third - 2004]**

- Measured depth to water in one unidentified well and 15 monitoring wells (SMW-3, MW-32A, MW-33 through MW-37, MW-40, MW-43, MW-45, MW-47, and MW-50 through MW-53).
- Purged and sampled groundwater from 15 monitoring wells (SMW-3, MW-32A, MW-33 through MW-37, MW-40, MW-43, MW-45, MW-47, and MW-50 through MW-53) on September 29, 2004.
- Analyzed groundwater samples for total petroleum hydrocarbons as gasoline (TPH-G) using Northwest Method NWTPH-Gx, TPH as diesel and heavy oil (TPH-D and TPH-O) using Northwest Method NWTPH-Dx, and benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8260B.

**WORK PROPOSED FOR NEXT QUARTER [Fourth - 2004]**

- Measure depth to water in 11 monitoring wells (MW-32A, MW-33, MW-34, MW-35, MW-37, MW-40, MW-45, MW-50, MW-51, MW-52, and MW-53).
- Purge and sample groundwater from 11 monitoring wells (MW-32A, MW-33, MW-34, MW-35, MW-37, MW-40, MW-45, MW-50, MW-51, MW-52, and MW-53).
- Analyze groundwater samples for TPH-G using Northwest Method NWTPH-Gx, TPH-D and TPH-O using Northwest Method NWTPH-Dx, and BTEX using EPA Method 8260B.
- Repair damaged well monuments and surface seals and fix associated tripping hazards.
- Next sampling event is scheduled for December 2004.

**SUMMARY**

Frequency of Sampling Events:	<u>Quarterly</u> (Quarterly, etc.)
Approximate Depth to Groundwater:	<u>9.20 – 12.60</u> (Measured Feet)
Groundwater Gradient:	<u>Multi-Directional</u> (Direction)
	<u>Varies</u> (ft/ft)
Maximum Benzene Concentration:	<u>92 (MW-50)</u> (ppb)
Measurable Free Product Detected:	<u>None</u> (Yes - ID well(s)/No)
Free Product Recovered This Quarter:	<u>None</u> (gallons)
Cumulative Free Product Recovered to Date:	<u>43,632</u> (gallons)
Water Wells or Surface Waters w/in a 2000'	<u>Lake Union</u>
Radius and Respective Direction:	<u>400 ft North</u> (Distance and Direction)
Current Remedial Action:	<u>AS/SVE</u> (SVE/AS/P&T/DVE/ Product Removal/Bio/etc.)
Permits for Discharge:	<u>PSAPCA No. 8905</u> (NPDES, POTW, etc.)



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**DISCUSSION**

- Delta personnel observed that Monitoring Well MW-3 had been paved over with concrete when a new dumpster enclosure was installed at the site. Therefore, MW-3 could not be accessed for monitoring during this event.
- Delta was unable to access Monitoring Well MW-38 due to street upgrade activities on Terry Avenue North. The well appeared to be covered with gravel and could not be located during this monitoring event.
- No measurable free product was present in any of the wells monitored during this event. However, a sheen was observed on the groundwater from Well MW-40.
- Delta observed water bubbling up in Wells MW-32A and MW-33 during this event. Groundwater elevations in these wells and in MW-34 and MW-37 are relatively higher with respect to other wells located on- and off-site. Mounding groundwater and observed bubbling conditions are apparently due to the effects of the deep air sparge system currently operating at the site.
- TPH-G was detected above the laboratory reporting limit in groundwater samples collected from Wells SMW-3, MW-32A, MW-33, MW-34, MW-35, MW-37, MW-40, MW-43, MW-45, MW-47, and MW-50 through MW-53, at concentrations ranging from 56 ppb (SMW-3) to 3,600 ppb (MW-50).
- TPH-D was detected above the laboratory reporting limit in groundwater samples collected from Wells MW-33, MW-34, MW-35, MW-37, MW-40, MW-47, MW-50, and MW-53 at concentrations ranging from 248 ppb (MW-35) to 32,800 ppb (MW-40).
- TPH-O was detected above the laboratory reporting limit in groundwater samples collected from Wells MW-40 and MW-47 at concentrations of 219,000 ppb and 735 ppb, respectively.
- Benzene was detected above the laboratory reporting limit in groundwater samples collected from Wells MW-32A, MW-33, MW-34, MW-35, MW-36, MW-43, MW-50, MW-52, and MW-53, at concentrations ranging from 0.50 ppb (MW-35) to 92 ppb (MW-50).
- Toluene was detected above the laboratory reporting limit in groundwater samples collected from Wells MW-32A, MW-33, MW-45, and MW-50 at concentrations ranging from 1.5 ppb (MW-45) to 62 ppb (MW-50).
- Ethylbenzene was detected above the laboratory reporting limit in groundwater samples collected from Wells MW-32A, MW-33, MW-34, MW-35, MW-37, MW-45, MW-50, MW-52, and MW-53 at concentrations ranging from 0.62 ppb (MW-45) to 100 ppb (MW-50).
- Total xylenes were detected above the laboratory reporting limit in groundwater samples collected from MW-32A, MW-33, MW-34, MW-35, MW-37, MW-45, MW-50, MW-52 and MW-53 at concentrations ranging from 2.1 ppb (MW-35) to 520 ppb (MW-50).
- TPH and BTEX concentrations have decreased significantly with respect to historical levels in Wells MW-32A, MW-33, MW-35, MW-37, MW-45, MW-50, MW-51, MW-52, and MW-53. Additionally, free product previously observed in Wells MW-33 and MW-37 has not been observed in the wells since 2002.



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- TPH-D and TPH-O concentrations in MW-40 were significantly higher during this event than reported concentrations from previous events. This well is typically sampled on a semi-annual basis during first and third quarters of the year. However, due to the unusual increase in TPH-D and TPH-O concentrations in the well, Delta will monitor groundwater from MW-40 during the fourth quarter event for 2004. Well integrity and surface seals will also be checked to see if impacts may be a result of surface sources.

### LIMITATIONS

The services described in this report were performed in accordance with generally accepted professional consulting principles and practices. No other warranty, either express or implied, is made. These services were performed in accordance with terms established with our client. This report is solely for the use of our client and reliance on any part of this report by a third party is at such party's sole risk.

Delta appreciates the opportunity to provide environmental services for ConocoPhillips Company. Please call if you have any questions regarding the contents of this report.

Sincerely,

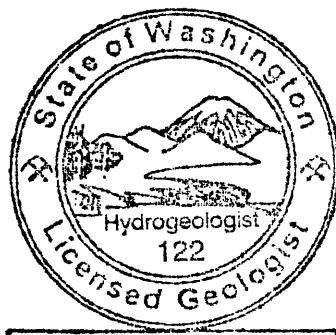
DELTA ENVIRONMENTAL CONSULTANTS, INC.

*Tena Seeds*

Tena Seeds, E.I.T.  
Project Engineer

*[Signature]*

Eric Larsen, L.H.G.  
Senior Geologist



Eric Bruce Larsen

### ATTACHMENTS

- Table 1 – Analytical Results and Groundwater Elevations
- Figure 1 – Site Map with Groundwater Elevations and Petroleum Hydrocarbon and BTEX Concentrations
- Laboratory Analytical Report and Chain-of-Custody Documentation
- Groundwater Sampling Procedures and Field Sheets

cc: LUST Coordinator, Washington State Dept. of Ecology – Northwest Regional Office, Bellevue, WA

**TABLE 1**  
**ANALYTICAL RESULTS AND GROUNDWATER ELEVATIONS**  
 ConocoPhillips Site No. 255353  
 600 Westlake Avenue N.  
 Seattle, Washington

Sample I.D.	Sample TOC	TPH-Gasoline (µg/l)	TPH-Diesel (µg/l)	TPH-Oil (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	DO (mg/l)	DTW (feet)	SPH (feet)	GWE (feet)
<b>SMW-3</b>	03/31/99 <sup>2</sup>	<50.0	360	<750	<0.500	<0.500	0.53	4.97	--	9.01	0.00	--
-- <sup>1</sup>	06/30/99 <sup>2</sup>	<50.0	639	<750	<0.500	0.61	<0.500	1.32	--	9.55	0.00	--
	12/08/99 <sup>2</sup>	<50.0	<484	<1,450	<0.500	<0.500	<0.500	<1.00	--	8.75	0.00	--
	06/20/00 <sup>2</sup>	<50.0	<250	<750	<0.500	0.59	<0.500	1.86	--	8.89	0.00	--
	12/19/00	--	--	--	--	--	--	--	--	NM	NM	--
	06/15/01 <sup>2</sup>	<50.0	368	<866	<0.500	<0.500	<0.500	<1.00	--	7.23	0.00	--
	06/26/01	--	--	--	--	--	--	--	--	NM	NM	--
	09/07/01 <sup>2</sup>	<50.0	385	<571	<0.500	<0.500	<0.500	<1.00	--	9.19	0.00	--
	10/10/01	--	--	--	--	--	--	--	--	NM	NM	--
	12/28/01	<50.0	1,160	<500	<0.500	0.902	<0.500	2.78	--	8.89	0.00	--
	03/08/02	--	--	--	--	--	--	--	--	NM	NM	--
	06/24/02	--	--	--	--	--	--	--	--	NM	NM	--
	09/26/02	<100	<250	<500	1.83	<2.00	<1.00	<1.50	--	10.32	0.00	--
	12/12/02	--	--	--	--	--	--	--	--	NM	NM	--
	03/13/03	<50.0	<250	<500	<0.500	<0.500	<0.500	<1.00	--	10.99	0.00	--
	06/12/03	--	--	--	--	--	--	--	--	NM	NM	--
	09/19/03	<50.0	<287	<575	<0.500	<0.500	<0.500	<1.00	--	11.00	0.00	--
	01/14/04	--	--	--	--	--	--	--	--	NM	NM	--
	03/30/04	<100	<119	<238	<1	<1	<1	<2	2.10	10.42	0.00	--
	06/22/04	--	--	--	--	--	--	--	--	NM	NM	--
	09/29/04	56	<242	<483	<0.50	<0.50	<0.50	<1.0	0.1	11.67	0.00	--
<b>MW-3</b>	10/10/01	14,100	4,060	1,990	1,070	<25.0	1,040	292	--	10.11	0.00	--
-- <sup>1</sup>	12/28/01	3,340	1,810	<500	92.6	4.62	146	51.2	--	9.61	0.00	--
	03/08/02	--	--	--	--	--	--	--	--	NM	NM	--
	06/24/02	--	--	--	--	--	--	--	--	NM	NM	--
	09/26/02 <sup>3</sup>	10,500	1,820	<500	326	14.0	685	447	--	10.96	0.00	--
	12/12/02	--	--	--	--	--	--	--	--	NM	NM	--
	03/13/03	17,200	1,440	<595	86.6	38.1	434	798	--	7.87	0.00	--
	06/12/03	--	--	--	--	--	--	--	--	NM	NM	--
	09/19/03	--	--	--	--	--	--	--	--	NM	NM	--
	01/14/04	--	--	--	--	--	--	--	--	NM	NM	--
	03/30/04	3,040	1,950	<285	57.1	<5	24.3	23.57	0.79	9.90	0.00	--
	06/22/04	--	--	--	--	--	--	--	--	NM	NM	--
	09/29/04	Paved over with concrete							--	NM	NM	--

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**ANALYTICAL RESULTS AND GROUNDWATER ELEVATIONS**  
 ConocoPhillips Site No. 255353  
 600 Westlake Avenue N.  
 Seattle, Washington

Sample I.D.	Sample Date	TPH-Gasoline (µg/l)	TPH-Diesel (µg/l)	TPH-Oil (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	DO (mg/l)	DTW (feet)	SPH (feet)	GWE (feet)
<b>MW-32A</b>	03/31/99	--	--	--	--	--	--	--	--	10.47	0.00	10.23
20.70	06/30/99	--	--	--	--	--	--	--	--	9.60	0.00	11.10
	12/08/99	--	--	--	--	--	--	--	--	11.07	0.00	9.63
	06/20/00	--	--	--	--	--	--	--	--	11.40	0.00	9.30
	12/19/00 <sup>2</sup>	7,010	1,740	<750	4,430	136	438	182	--	10.90	0.00	9.80
	06/15/01 <sup>2</sup>	13,700	2,810	<846	2,370	11.2	272	31.1	--	11.31	0.00	9.39
	06/26/01 <sup>2</sup>	15,500	1,620	<750	8,780	1,110	1,230	1,020	--	11.85	0.00	8.85
	09/07/01 <sup>2</sup>	17,100	4,220	822	5,870	19.9	684	110	--	10.81	0.00	9.89
	10/10/01	--	--	--	--	--	--	--	--	NM	NM	--
	12/28/01	12,200	4,260	711	3,570	180	537	393	--	11.29	0.00	9.41
	03/08/02	16,400	4,140	769	4,900	142	619	247	--	11.49	0.00	9.21
	06/24/02	6,850	2,040	577	2,820	7.43	221	59.1	--	11.56	0.00	9.14
	09/26/02 <sup>3</sup>	6,580	3,740	670	1,930	31.4	204	89.7	--	12.88	0.00	7.82
	12/12/02	6,750	3,530	528	1,450	55.6	229	283	--	12.72	0.00	7.98
	03/13/03	13,000	2,550	<581	1,990	222	419	806	--	10.95	0.00	9.75
	06/12/03	17,400	2,730	<500	4,830	200	745	262	--	11.92	0.00	8.78
	09/19/03	1,420	<294	<588	64.2	42.7	7.49	135	--	12.67	0.00	8.03
	01/14/04	1,580	316	<253	28.9	4.13	13.1	32.5	3.1	11.33	0.00	9.37
	03/30/04	7,310	838	<276	18.3	<10	209	122	2.43	12.39	0.00	8.31
	06/22/04	3,330	1,470	381	149	<10	72.5	43.8	0.5	12.62	0.00	8.08
	09/29/04	330	<242	<484	13	1.6	3.7	39	6.1	9.20	0.00	11.50
<b>MW-33</b>	03/31/99	--	--	--	--	--	--	--	--	10.38	0.00	10.37
20.75	06/30/99	--	--	--	--	--	--	--	--	9.52	0.00	11.23
	12/08/99	--	--	--	--	--	--	--	--	10.97	0.00	9.78
	06/20/00	--	--	--	--	--	--	--	--	11.33	0.00	9.42
	12/19/00	Inaccessible							--	NM	NM	--
	06/15/01	LPH Present							--	12.72	2.50	10.03
	06/26/01	--	--	--	--	--	--	--	--	NM	NM	--
	09/07/01	LPH Present							--	NM	0.30	--
	10/10/01	--	--	--	--	--	--	--	--	NM	NM	--
	12/28/01	141,000	25,200	2,680	5,360	32,500	3,410	22,700	--	11.21	0.00	9.54
	03/08/02	126,000	31,400	3,420	2,660	21,600	3,420	24,800	--	11.37	0.00	9.38
	06/24/02	205,000	51,700	14,000	1,510	14,200	3,770	28,900	--	11.36	0.00	9.39
	09/26/02	LPH Present							--	12.45	0.10	8.38
	12/12/02	--	--	--	--	--	--	--	--	12.34	0.00	8.41
	03/13/03	--	--	--	--	--	--	--	--	10.59	0.00	10.16
	06/12/03	30,900	4,170	<562	396	526	474	3,890	--	11.65	Sheen	9.10
	09/19/03	125	<291	<581	0.704	<0.500	<0.500	4.30	--	6.70	0.00	14.05
	01/14/04	524	<135	<271	17	3.7	7.65	31	0.6	12.03	0.00	8.72
	03/30/04	2,680	725	<256	218	14.7	53.2	150.4	1.72	12.49	0.00	8.26
	06/22/04	3,500	1,330	443	197	12.1	99.2	217.3	1.2	12.66	0.00	8.09
	09/29/04	290	290	<511	12	1.9	5.6	22	7.2	9.60	0.00	11.15



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Sample I.D.	Sample Date	TPH-Gasoline (µg/l)	TPH-Diesel (µg/l)	TPH-Oil (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	DO (mg/l)	DTW (feet)	SPH (feet)	GWE (feet)
<b>MW-36</b>	03/31/99 <sup>2</sup>	<50.0	321	<750	0.759	<0.500	<0.500	<1.00	--	8.96	0.00	8.84
17.80	06/30/99 <sup>2</sup>	<50.0	<250	<750	1.29	<0.500	<0.500	<1.00	--	8.44	0.00	9.36
	12/08/99 <sup>2</sup>	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	--	10.05	0.00	7.75
	06/20/00 <sup>2</sup>	172	<250	<750	<0.500	0.583	1.78	11.1	--	8.47	0.00	9.33
	12/19/00 <sup>2</sup>	106	<250	<750	0.529	1.51	1.08	7.14	--	9.50	0.00	8.30
	06/15/01 <sup>2</sup>	<50.0	298	<750	0.691	0.648	0.530	1.53	--	8.00	0.00	9.80
	06/26/01	--	--	--	--	--	--	--	--	NM	NM	--
	09/07/01 <sup>2</sup>	<50.0	<250	<500	0.897	<0.500	<0.500	<1.00	--	8.70	0.00	9.10
	10/10/01	--	--	--	--	--	--	--	--	NM	NM	--
	12/28/01	<50.0	387	<500	0.773	0.748	<0.500	1.78	--	9.57	0.00	8.23
	03/08/02	--	--	--	--	--	--	--	--	NM	NM	--
	06/24/02	--	--	--	--	--	--	--	--	NM	NM	--
	09/26/02	<100	<250	<500	0.735	<2.00	<1.00	<1.50	--	10.16	0.00	7.64
	12/12/02	--	--	--	--	--	--	--	--	NM	NM	--
	03/13/03	<50.0	<250	<500	0.830	<0.500	<0.500	<1.00	--	9.34	0.00	8.46
	06/12/03	--	--	--	--	--	--	--	--	NM	NM	--
	09/19/03	<50.0	<287	<575	1.44	0.561	<0.500	<1.00	--	10.23	0.00	7.57
	01/14/04	--	--	--	--	--	--	--	--	NM	NM	--
	03/30/04	<100	<133	<267	<1	<1	<1	<2	1.10	9.46	0.00	8.34
	06/22/04	--	--	--	--	--	--	--	--	NM	NM	--
	09/29/04	<50	<250	<500	0.90	<0.50	<0.50	<1.0	0.8	9.78	0.00	8.02
<b>MW-37</b>	03/31/99	LPH Present							--	NM	Trace	--
21.01	06/30/99	LPH Present							--	DRY	0.30	--
	12/08/99	--	--	--	--	--	--	--	--	11.11	--	9.90
	06/20/00	--	--	--	--	--	--	--	--	11.50	--	9.51
	12/19/00	LPH Present							--	11.50	0.50	9.91
	06/15/01 <sup>2</sup>	LPH Present							--	11.35	0.03	9.68
	06/26/01	--	--	--	--	--	--	--	--	NM	NM	--
	09/07/01 <sup>2</sup>	159,000	22,100	14,600	3,420	12,600	4,440	27,000	--	11.43	0.00	9.58
	10/10/01	--	--	--	--	--	--	--	--	NM	NM	--
	12/28/01 <sup>2</sup>	LPH Present							--	11.00	0.20	10.17
	03/08/02	LPH Present							--	11.61	0.40	9.72
	06/24/02	Inaccessible							--	NM	NM	--
	09/26/02	--	--	--	--	--	--	--	--	12.38	0.00	8.63
	12/12/02	--	--	--	--	--	--	--	--	12.35	0.00	8.66
	03/13/03	--	--	--	--	--	--	--	--	11.10	0.00	9.91
	06/12/03	1,450	474	<568	22.9	43.2	15.8	85.5	--	11.61	0.00	9.40
	09/19/03	141	<298	<595	<0.500	<0.500	<0.500	1.01	--	11.95	0.00	9.06
	01/14/04	471	<127	<255	4.56	<0.5	9.01	27.75	0.5	12.12	0.00	8.89
	03/30/04	572	180	<281	5.77	<1	<1	1.53	1.50	12.73	0.00	8.28
	06/22/04	737	487	294	3.26	3.66	1.46	14.25	1.0	12.29	0.00	8.72
	09/29/04	190	419	<496	<0.50	<0.50	0.67	1.3	2.0	10.89	0.00	10.12

**TABLE 1**  
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ConocoPhillips Site No. 255353  
600 Westlake Avenue N.  
Seattle, Washington

Sample I.D.	Sample Date	TPH-Gasoline (µg/l)	TPH-Diesel (µg/l)	TPH-Oil (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	DO (mg/l)	DTW (feet)	SPH (feet)	GWE (feet)
<b>MW-38</b>	03/31/99	--	--	--	--	--	--	--	--	NM	NM	--
16.52	06/30/99	--	--	--	--	--	--	--	--	NM	NM	--
	12/08/99	--	--	--	--	--	--	--	--	NM	NM	--
	06/20/00	--	--	--	--	--	--	--	--	NM	NM	--
	12/19/00	--	--	--	--	--	--	--	--	NM	NM	--
	06/15/01	--	--	--	--	--	--	--	--	NM	NM	--
	06/26/01	--	--	--	--	--	--	--	--	NM	NM	--
	09/07/01	--	--	--	--	--	--	--	--	NM	NM	--
	10/10/01	--	--	--	--	--	--	--	--	NM	NM	--
	12/28/01	<50.0	403	<500	0.636	1.33	0.554	2.59	--	8.96	0.00	7.56
	03/08/02	--	--	--	--	--	--	--	--	NM	NM	--
	06/24/02	--	--	--	--	--	--	--	--	NM	NM	--
	09/26/02 <sup>3</sup>	<100	282	<500	0.743	<2.00	<1.00	<1.50	--	8.87	0.00	7.65
	12/12/02	--	--	--	--	--	--	--	--	NM	NM	--
	03/13/03	<50.0	<250	<500	<0.500	<0.500	<0.500	<1.00	--	7.84	0.00	8.68
	06/12/03	--	--	--	--	--	--	--	--	NM	NM	--
	09/19/03	<50.0	<250	<500	0.704	1.42	0.722	3.72	--	8.90	0.00	7.62
	01/14/04	--	--	--	--	--	--	--	--	NM	NM	--
	03/30/04	<100	<133	<266	<1	<1	<1	<2	0.90	8.09	0.00	8.43
	06/22/04	--	--	--	--	--	--	--	--	NM	NM	--
	09/29/04	Unable to locate due to road construction activities							--	NM	NM	--
<b>MW-40</b>	03/31/99	--	--	--	--	--	--	--	--	NM	NM	--
20.89	06/30/99	--	--	--	--	--	--	--	--	NM	NM	--
	12/08/99	--	--	--	--	--	--	--	--	NM	NM	--
	06/20/00	--	--	--	--	--	--	--	--	NM	NM	--
	12/09/00	--	--	--	--	--	--	--	--	NM	NM	--
	12/19/00	--	--	--	--	--	--	--	--	NM	NM	--
	06/15/01	--	--	--	--	--	--	--	--	NM	NM	--
	06/26/01	--	--	--	--	--	--	--	--	NM	NM	--
	09/07/01	--	--	--	--	--	--	--	--	NM	NM	--
	10/10/01	--	--	--	--	--	--	--	--	NM	NM	--
	12/28/01	449	4,000	5,090	2.12	2.19	1.38	3.88	--	10.75	0.00	10.14
	03/08/02	--	--	--	--	--	--	--	--	NM	NM	--
	06/24/02	--	--	--	--	--	--	--	--	NM	NM	--
	09/26/02	331	2,810	3,470	1.92	<2.00	<1.00	<1.50	--	12.69	0.00	8.20
	12/12/02	--	--	--	--	--	--	--	--	NM	NM	--
	03/13/03	509	2,010	2,010	<0.500	<0.500	0.630	1.77	--	11.30	0.00	9.59
	06/12/03	--	--	--	--	--	--	--	--	NM	NM	--
	09/19/03	259	393	1,120	2.64	3.01	1.39	6.77	--	12.46	0.00	8.43
	01/14/04	--	--	--	--	--	--	--	--	NM	NM	--
	03/30/04	627	863	3,360	3.69	<1	<1	<2	1.71	11.55	sheen	9.34
	06/22/04	--	--	--	--	--	--	--	--	NM	NM	--
	09/29/04	390	32,800	219,000	<0.50	<0.50	<0.50	<1.0	1.4	12.03	sheen	8.86

**TABLE 1**  
**ANALYTICAL RESULTS AND GROUNDWATER ELEVATIONS**  
ConocoPhillips Site No. 255353  
600 Westlake Avenue N.  
Seattle, Washington

Sample I.D.	Sample Date	TPH-Gasoline (µg/l)	TPH-Diesel (µg/l)	TPH-Oil (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	DO (mg/l)	DTW (feet)	SPH (feet)	GWE (feet)
<b>MW-42</b>	03/31/99	--	--	--	--	--	--	--	--	9.00	0.00	11.34
20.34	06/30/99	--	--	--	--	--	--	--	--	8.60	0.00	11.74
	12/08/99	--	--	--	--	--	--	--	--	8.00	0.00	12.34
	06/20/00	--	--	--	--	--	--	--	--	NM	NM	--
	12/19/00	--	--	--	--	--	--	--	--	NM	NM	--
	06/15/01	--	--	--	--	--	--	--	--	9.41	0.00	10.93
	06/26/01	--	--	--	--	--	--	--	--	NM	NM	--
	09/07/01	--	--	--	--	--	--	--	--	9.66	0.00	10.68
	10/10/01	--	--	--	--	--	--	--	--	NM	NM	--
	12/28/01	--	--	--	--	--	--	--	--	10.28	0.00	10.06
	03/08/02	--	--	--	--	--	--	--	--	9.75	0.00	10.59
	06/24/02	--	--	--	--	--	--	--	--	NM	NM	--
	09/26/02	--	--	--	--	--	--	--	--	10.81	0.00	9.53
	12/12/02	--	--	--	--	--	--	--	--	10.89	0.00	9.45
	03/13/03	--	--	--	--	--	--	--	--	9.77	0.00	10.57
	06/12/03	Monitoring Discontinued							--	NM	NM	--
<b>MW-43</b>	03/31/99 <sup>2</sup>	<50.0	267	<750	9.84	<0.500	0.782	2.47	--	10.97	0.00	10.07
21.04	06/30/99 <sup>2</sup>	146	253	<750	28.2	7.47	2.95	17.5	--	9.97	0.00	11.07
	12/08/99 <sup>2</sup>	<50.0	<250	<750	20.5	<0.500	<0.500	<1.00	--	11.06	0.00	9.98
	06/20/00 <sup>2</sup>	<50.0	<250	<750	3.79	<0.500	<0.500	<1.00	--	11.40	0.00	9.64
	12/19/00 <sup>2</sup>	55.9	253	<749	2.97	0.948	0.730	4.78	--	11.40	0.00	9.64
	06/15/01 <sup>2</sup>	<50.0	405	<750	0.670	<0.500	<0.500	1.22	--	11.32	0.00	9.72
	06/26/01	--	--	--	--	--	--	--	--	NM	NM	--
	09/07/01 <sup>2</sup>	<50.0	<293	<587	<0.500	<0.500	<0.500	<1.00	--	11.46	0.00	9.58
	10/10/01	--	--	--	--	--	--	--	--	NM	NM	--
	12/28/01	52	487	<500	5.61	1.18	0.558	3.34	--	11.17	0.00	9.87
	03/08/02	--	--	--	--	--	--	--	--	NM	NM	--
	06/24/02	--	--	--	--	--	--	--	--	NM	NM	--
	09/26/02 <sup>3</sup>	<100	303.00	<500	0.669	<2.00	<1.00	<1.50	--	12.28	0.00	8.76
	12/12/02	--	--	--	--	--	--	--	--	NM	NM	--
	03/13/03	<50.0	<321	<641	0.883	<0.500	<0.500	<1.00	--	11.20	0.00	9.84
	06/12/03	--	--	--	--	--	--	--	--	NM	NM	--
	09/19/03	<50.0	<291	<581	1.76	<0.500	<0.500	<1.00	--	12.37	0.00	8.67
	01/14/04	--	--	--	--	--	--	--	--	NM	NM	--
	03/30/04	<100	<129	<258	<1	<1	<1	<2	1.76	11.95	0.00	9.09
	06/22/04	--	--	--	--	--	--	--	--	NM	NM	--
	09/29/04	180	<249	<499	3.6	<0.50	<0.50	<1.0	0.1	12.00	0.00	9.04

**TABLE 1**  
**ANALYTICAL RESULTS AND GROUNDWATER ELEVATIONS**  
ConocoPhillips Site No. 255353  
600 Westlake Avenue N.  
Seattle, Washington

Sample I.D.	Sample Date	TPH-Gasoline (µg/l)	TPH-Diesel (µg/l)	TPH-Oil (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	DO (mg/l)	DTW (feet)	SPH (feet)	GWE (feet)
<b>MW-44</b>	03/31/99 <sup>2</sup>	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	--	8.18	0.00	10.55
18.73	06/30/99 <sup>2</sup>	<50.0	393	<750	<0.500	0.619	<0.500	1.21	--	8.03	0.00	10.70
	12/08/99 <sup>2</sup>	<50.0	281	<750	<0.500	<0.500	<0.500	<1.00	--	8.52	0.00	10.21
	06/20/00 <sup>2</sup>	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	--	9.53	0.00	9.20
	12/19/00 <sup>2</sup>	301	330	<750	<0.500	1.64	2.76	22.1	--	9.20	0.00	9.53
	06/15/01 <sup>2</sup>	<50.0	468	<841	<0.500	<0.500	<0.500	<1.00	--	8.44	0.00	10.29
	06/26/01	--	--	--	--	--	--	--	--	NM	NM	--
	09/07/01 <sup>2</sup>	10,300	4,250	849	1,050	6.97	945	51.0	--	9.48	0.00	9.25
	10/10/01	--	--	--	--	--	--	--	--	NM	NM	--
	12/28/01	90.6	823	<500	10.9	1.40	0.644	4.04	--	9.31	0.00	9.42
	03/08/02	--	--	--	--	--	--	--	--	NM	NM	--
	06/24/02	--	--	--	--	--	--	--	--	NM	NM	--
	09/26/02 <sup>3</sup>	<100	1,600	569	14.2	<2.00	<1.00	<1.50	--	10.79	0.00	7.94
	12/12/02	--	--	--	--	--	--	--	--	NM	NM	--
	03/13/03	196	347	<575	26.8	<0.500	<0.500	<1.00	--	11.58	0.00	7.15
	06/12/03	--	--	--	--	--	--	--	--	NM	NM	--
	09/19/03	156	<301	<602	20.2	0.997	<0.500	2.61	--	10.97	0.00	7.76
	01/14/04	--	--	--	--	--	--	--	--	NM	NM	--
	03/30/04	<100	<134	<268	<1	<1	<1	<2	1.90	10.01	0.00	8.72
	06/22/04	--	--	--	--	--	--	--	--	NM	NM	--
	09/29/04	--	--	--	--	--	--	--	--	NM	NM	--
<b>MW-45</b>	09/07/01 <sup>2</sup>	<50.0	375	<606	<0.500	<0.500	<0.500	<1.00	--	9.80	0.00	--
-- <sup>1</sup>	10/10/01	--	--	--	--	--	--	--	--	NM	NM	--
	12/28/01	17,300	2,210	597	2,130	73.4	1,330	2,970	--	9.03	0.00	--
	03/08/02	15,500	2,380	686	2,090	38.4	1,190	1,650	--	9.12	0.00	--
	06/24/02	5,100	1,920	761	1,330	6.39	451	235	--	9.00	0.00	--
	09/26/02 <sup>3</sup>	2,420	1,190	547	394	3.41	204	106	--	10.20	0.00	--
	12/12/02	Obstructed by vehicle							--	NM	NM	--
	03/13/03	3,590	2,050	<500	219	133	99.4	368	--	8.05	0.00	--
	06/12/03	10,700	1,470	<575	1,350	10.8	954	631	--	9.16	0.00	--
	09/19/03	583	<298	<595	1.93	2.25	5.65	38.6	--	10.68	0.00	--
	01/14/04	360	<118	<236	4.97	<0.5	2.48	1.01	0.4	10.12	0.00	--
	03/30/04	303	234	<240	<1	<1	<1	<2	0.84	10.19	0.00	--
	06/22/04	151	365	358	<1	<1	<1	<2	0.7	10.34	0.00	--
	09/29/04	270	<251	<503	<0.50	1.5	0.62	7.3	0.9	10.40	0.00	--

**TABLE 1**  
**ANALYTICAL RESULTS AND GROUNDWATER ELEVATIONS**  
 ConocoPhillips Site No. 255353  
 600 Westlake Avenue N.  
 Seattle, Washington

Sample I.D.	Sample Date	TPH-Gasoline (µg/l)	TPH-Diesel (µg/l)	TPH-Oil (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	DO (mg/l)	DTW (feet)	SPH (feet)	GWE (feet)
<b>MW-46</b>	03/31/99	--	--	--	--	--	--	--	--	NM	NM	--
16.91	06/30/99	--	--	--	--	--	--	--	--	NM	NM	--
	12/08/99	--	--	--	--	--	--	--	--	NM	NM	--
	06/20/00	--	--	--	--	--	--	--	--	NM	NM	--
	12/19/00	226	277	<750	<0.500	2.18	2.53	18.0	--	12.70	0.00	4.21
	06/15/01 <sup>2</sup>	<50.0	295	<750	<0.500	<0.500	<0.500	1.39	--	7.19	0.00	9.72
	06/26/01	--	--	--	--	--	--	--	--	NM	NM	--
	09/07/01	--	--	--	--	--	--	--	--	NM	NM	--
	10/10/01	--	--	--	--	--	--	--	--	NM	NM	--
	12/28/01	Covered by asphalt							--	NM	NM	--
	03/08/02	--	--	--	--	--	--	--	--	NM	NM	--
	06/24/02	--	--	--	--	--	--	--	--	NM	NM	--
	09/26/02	Unable to locate							--	NM	NM	--
	12/12/02	--	--	--	--	--	--	--	--	NM	NM	--
	03/13/03	Covered by asphalt							--	NM	NM	--
	06/12/03	--	--	--	--	--	--	--	--	NM	NM	--
	09/19/03	Covered by asphalt							--	NM	NM	--
	01/14/04	Monitoring Discontinued							--	NM	NM	--
<b>MW-47</b>	03/31/99	--	--	--	--	--	--	--	--	9.65	0.00	10.18
19.83	06/30/99	--	--	--	--	--	--	--	--	NM	NM	--
	12/08/99	--	--	--	--	--	--	--	--	NM	NM	--
	06/20/00 <sup>2</sup>	<50.0	<250	<750	<1.30	<0.500	<0.500	<1.00	--	10.94	0.00	8.89
	12/19/00 <sup>2</sup>	1,310	357	<750	<0.500	6.10	10.6	77.3	--	11.20	0.00	8.63
	06/15/01	<50.0	591	<952	0.709	0.504	<0.500	1.18	--	10.98	0.00	8.85
	06/26/01	--	--	--	--	--	--	--	--	NM	NM	--
	09/07/01 <sup>2</sup>	<50.0	356	<500	<0.500	<0.500	<0.500	<1.00	--	11.14	0.00	8.69
	10/10/01	--	--	--	--	--	--	--	--	NM	NM	--
	12/28/01	181	542	<500	7.64	1.49	4.79	37.8	--	10.90	0.00	8.93
	03/08/02	--	--	--	--	--	--	--	--	NM	NM	--
	06/24/02	--	--	--	--	--	--	--	--	NM	NM	--
	09/26/02 <sup>3</sup>	106	747	<500	2.36	<2.00	<1.00	<1.50	--	11.85	0.00	7.98
	12/12/02	--	--	--	--	--	--	--	--	NM	NM	--
	03/13/03	75.5	<284	<568	<0.500	<0.500	<0.500	<1.00	--	10.91	0.00	8.92
	06/12/03	--	--	--	--	--	--	--	--	NM	NM	--
	09/19/03	76.8	<294	<588	3.41	<0.500	<0.500	1.14	--	12.05	0.00	7.78
	01/14/04	--	--	--	--	--	--	--	--	NM	NM	--
	03/30/04	272	262	980	<1	<1	<1	<2	1.21	11.81	0.00	8.02
	06/22/04	--	--	--	--	--	--	--	--	NM	NM	--
	09/29/04	200	329	735	<0.50	<0.50	<0.50	<1.0	0.2	11.87	0.00	7.96

**TABLE 1**  
**ANALYTICAL RESULTS AND GROUNDWATER ELEVATIONS**  
ConocoPhillips Site No. 255353  
600 Westlake Avenue N.  
Seattle, Washington

Sample I.D.	Sample Date	TPH-Gasoline (µg/l)	TPH-Diesel (µg/l)	TPH-Oil (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	DO (mg/l)	DTW (feet)	SPH (feet)	GWE (feet)
<b>MW-50</b>	10/10/01	8,970	2,200	<606	674	221	382	779	--	11.11	0.00	--
-- <sup>1</sup>	12/28/01	23,200	3,460	<500	1,630	3,690	991	4,480	--	10.45	0.00	--
	03/08/02	Obstructed by vehicle							--	NM	NM	--
	06/24/02	8,290	1,970	556	414	23	314	2,010	--	10.84	0.00	--
	09/26/02	Obstructed by vehicle							--	NM	NM	--
	12/12/02	Obstructed by vehicle							--	NM	NM	--
	03/13/03	12,200	1,810	<588	733	127	523	1,100	--	9.93	0.00	--
	06/12/03	6,450	1,740	<500	448	13.7	299	286	--	11.27	0.00	--
	09/19/03	4,440	<250	<500	51.7	315	26.1	462	--	12.05	0.00	--
	01/14/04	29,700	1,970	<258	308	502	312	6,180	4.1	11.81	0.00	--
	03/30/04	3,330	867	<241	21.8	<5	21.9	226.4	1.69	11.65	0.00	--
	06/22/04	2,130	874	<237	14.2	2.4	27.9	85.11	1.1	11.79	0.00	--
	09/29/04	3,600	1,330	<502	92	62	100	520	0.2	11.71	0.00	--
<b>MW-51</b>	10/10/01	671	11,700	2,150	10.1	10.4	7.75	16.6	--	11.68	0.00	--
-- <sup>1</sup>	12/28/01	631	2,170	3,100	37.0	75.6	30.4	81.2	--	11.20	0.00	--
	03/08/02	102	2,350	1,610	6.22	5.89	3.84	10.4	--	11.38	0.00	--
	06/24/02	57.7	2,650	1,730	1.28	1.42	0.699	2.51	--	11.60	0.00	--
	09/26/02 <sup>3</sup>	<100	1,660	875	0.848	<2.00	<1.00	<1.50	--	12.18	0.00	--
	12/12/02	<50.0	2,050	781	<0.500	<0.500	<0.500	<1.00	--	12.28	0.00	--
	03/13/03	<50.0	693	<625	<0.500	<0.500	<0.500	<1.00	--	11.05	0.00	--
	06/12/03	--	--	--	--	--	--	--	--	NM	NM	--
	09/19/03	52.4	<250	<500	1.47	1.81	0.544	3.59	--	12.42	0.00	--
	01/14/04	73.5	<139	<278	<0.25	0.804	<0.5	<1	0.4	11.79	0.00	--
	03/30/04	<100	404	401	<1	<1	<1	<2	1.56	12.22	0.00	--
	06/22/04	104	129	<237	<1	<1	<1	<2	1.2	12.10	0.00	--
	09/29/04	150	<242	<484	<0.50	<0.50	<0.50	<1.0	1.4	12.20	0.00	--
<b>MW-52</b>	10/10/01	13,400	1,460	<582	1,150	<10.0	827	793	--	10.79	0.00	--
-- <sup>1</sup>	12/28/01	7,900	1,690	595	634	5.87	509	479	--	10.22	0.00	--
	03/08/02	10,100	2,790	<602	814	6.30	602	387	--	10.42	0.00	--
	06/24/02	9,820	2,810	640	1,250	<25.0	757	448	--	10.58	0.00	--
	09/26/02 <sup>3</sup>	6,600	3,530	<500	943	21.7	600	284	--	11.51	0.00	--
	12/12/02	1,170	7,350	638	120	0.822	73.9	7.30	--	11.61	0.00	--
	03/13/03	4,540	1,530	<568	272	52.7	236	210	--	9.59	0.00	--
	06/12/03	--	--	--	--	--	--	--	--	NM	NM	--
	09/19/03	Obstructed by vehicle							--	NM	NM	--
	01/14/04	905	<126	<252	16.6	0.532	39.6	2.45	0.3	11.00	0.00	--
	03/30/04	738	462	<253	16.8	<1	18.4	24.66	1.31	11.47	0.00	--
	06/22/04	1,600	593	<248	161	<10	70.1	<20	1.5	11.50	0.00	--
	09/29/04	290	<253	<507	4.9	<0.50	4.8	2.3	0.3	11.45	0.00	--

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

ConocoPhillips Site No. 255353  
600 Westlake Avenue N.  
Seattle, Washington

Sample I.D.	Sample Date	TPH-Gasoline (µg/l)	TPH-Diesel (µg/l)	TPH-Oil (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	DO (mg/l)	DTW (feet)	SPH (feet)	GWE (feet)
<b>MW-53</b>	03/13/03	14,000	1,030	<625	398	143	501	1,170	--	11.17	0.00	--
-- <sup>1</sup>	06/12/03	9,700	1,370	<500	553	197	431	1,270	--	12.05	0.00	--
	09/19/03	1,470	<250	<500	29.3	6.61	28.5	111	--	12.85	0.00	--
	01/14/04	2,770	181	<264	173	3.79	91.7	127.1	0.4	11.70	0.00	--
	03/30/04	3,580	686	<237	257	49.7	125	204.8	1.28	12.26	0.00	--
	06/22/04	4,820	750	<240	363	85.2	188	425	1.1	12.23	0.00	--
	09/29/04	240	311	<509	1.9	<0.50	1.4	6.7	1.9	12.60	0.00	--

**Notes:**

µg/l = micrograms per liter

TOC = Top of casing elevation, provided by previous consultants

DTW = Depth to water

SPH = Separate-phase hydrocarbon thickness

GWE = Groundwater table elevation relative to DTW data; corrected for SPH where applicable using a specific gravity of 0.80

<n = Below the detection limit

-- = Not analyzed, sampled, or reported

NM = Not Measured

TPH as Gasoline - Analysis by Northwest Method NWTPH-Gx

TPH as Diesel and Oil - Analysis by Northwest Method NWTPH-Dx

BTEX Compounds - Analysis by EPA Method 8020A, 8021B or 8260B

<sup>1</sup> Top of casing elevations for SM-W3, MW-3, MW-45, and MW-50 through MW-53 have not been established.

<sup>2</sup> Well was not purged prior to sample collection.

<sup>3</sup> TPH-D & TPH-O did not resemble chromatogram used for quantitation.

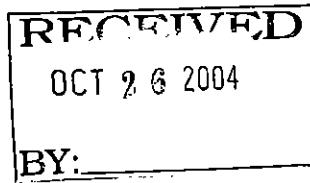


**LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY  
DOCUMENTATION**

Quarterly Groundwater Sampling  
ConocoPhillips Site No. 255353

SEVERN  
TRENT

STL



STL Seattle  
5755 8<sup>th</sup> Street East  
Tacoma, WA 98424

Tel: 253 922 2310  
Fax: 253 922 5047  
[www.stl-inc.com](http://www.stl-inc.com)

TRANSMITTAL MEMORANDUM

DATE: October 22, 2004

TO: Eric Larsen  
Delta Environmental  
17720 NE 65th Street Ste 201  
Redmond, WA 98052

PROJECT: WA25-535-1 / 255353 Seattle 600 Westlake Ave N,

REPORT NUMBER: 123995

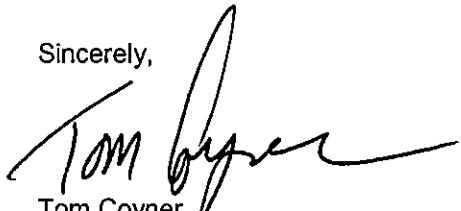
TOTAL NUMBER OF PAGES: 43

Enclosed are the test results for fifteen samples received at STL Seattle on October 1, 2004.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers and analytical narrative when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (253) 922-2310.

Sincerely,



Tom Coyner  
Project Manager

---

STL Seattle is a part of Severn Trent Laboratories, Inc.

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# STL Seattle

Sample Identification:

<u>Lab. No.</u>	<u>Client ID</u>	<u>Date/Time Sampled</u>	<u>Matrix</u>
123995-1	SMW-3	09-29-04 16:30	Liquid
123995-2	MW-32A	09-29-04 14:15	Liquid
123995-3	MW-33	09-29-04 12:50	Liquid
123995-4	MW-34	09-29-04 15:00	Liquid
123995-5	MW-35	09-29-04 14:30	Liquid
123995-6	MW-36	09-29-04 13:30	Liquid
123995-7	MW-37	09-29-04 10:20	Liquid
123995-8	MW-40	09-29-04 11:00	Liquid
123995-9	MW-43	09-29-04 15:25	Liquid
123995-10	MW-45	09-29-04 13:45	Liquid
123995-11	MW-47	09-29-04 13:10	Liquid
123995-12	MW-50	09-29-04 12:10	Liquid
123995-13	MW-51	09-29-04 11:55	Liquid
123995-14	MW-52	09-29-04 14:40	Liquid
123995-15	MW-53	09-29-04 15:55	Liquid

---

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# STL Seattle

Client Name:	Delta Environmental
Client ID:	SMW-3
Lab ID:	123995-01
Date Received:	10/1/2004
Date Prepared:	10/6/2004
Date Analyzed:	10/14/2004
% Solids	-
Dilution Factor	1

## Diesel and Motor Oil by NWTPH-Dx Modified with Silica Gel Cleanup

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	93.1		50	150

Analyte	Result (mg/L)	RL	Flags
#2 Diesel	ND	0.242	
Motor Oil	ND	0.483	

**Gas/BTEX Fuel Oxygenates by 8260B**

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.  
Tacoma, WA 98424  
Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	SMW-3	Lab ID:	2004-10-0164-1
Sampled:	09/29/2004 16:30	Extracted:	10/11/2004 18:21
Matrix:	Water	QC Batch#:	2004/10/11-2A-68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	56	50	ug/L	1.00	10/11/2004 18:21	g
Benzene	ND	0.50	ug/L	1.00	10/11/2004 18:21	
Toluene	ND	0.50	ug/L	1.00	10/11/2004 18:21	
Ethylbenzene	ND	0.50	ug/L	1.00	10/11/2004 18:21	
Total xylenes	ND	1.0	ug/L	1.00	10/11/2004 18:21	
<i>Surrogate(s)</i>						
1,2-Dichloroethane-d4	102.5	72-128	%	1.00	10/11/2004 18:21	
Toluene-d8	92.3	80-113	%	1.00	10/11/2004 18:21	



# STL Seattle

Client Name:	Delta Environmental
Client ID:	MW-32A
Lab ID:	123995-02
Date Received:	10/1/2004
Date Prepared:	10/6/2004
Date Analyzed:	10/14/2004
% Solids	-
Dilution Factor	1

## Diesel and Motor Oil by NWTPH-Dx Modified with Silica Gel Cleanup

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	93.2		50	150

Analyte	Result (mg/L)	RL	Flags
#2 Diesel	ND	0.242	
Motor Oil	ND	0.484	

**Gas/BTEX Fuel Oxygenates by 8260B**

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.  
Tacoma, WA 98424  
Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-32A	Lab ID:	2004-10-0164-2
Sampled:	09/29/2004 14:15	Extracted:	10/11/2004 19:18
Matrix:	Water	QC Batch#:	2004/10/11-2A.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	330	50	ug/L	1.00	10/11/2004 19:18	
Benzene	13	0.50	ug/L	1.00	10/11/2004 19:18	
Toluene	1.6	0.50	ug/L	1.00	10/11/2004 19:18	
Ethylbenzene	3.7	0.50	ug/L	1.00	10/11/2004 19:18	
Total xylenes	39	1.0	ug/L	1.00	10/11/2004 19:18	
<i>Surrogate(s)</i>						
1,2-Dichloroethane-d4	102.1	72-128	%	1.00	10/11/2004 19:18	
Toluene-d8	95.4	80-113	%	1.00	10/11/2004 19:18	



# STL Seattle

Client Name:	Delta Environmental
Client ID:	MW-33
Lab ID:	123995-03
Date Received:	10/1/2004
Date Prepared:	10/6/2004
Date Analyzed:	10/14/2004
% Solids	-
Dilution Factor	1

## Diesel and Motor Oil by NWTPH-Dx Modified with Silica Gel Cleanup

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	98.6		50	150

Analyte	Result (mg/L)	RL	Flags
#2 Diesel	0.29	0.255	X1
Motor Oil	ND	0.511	

X1 - Chromatogram suggests this might be overlap from gasoline range

## Gas/BTEX Fuel Oxygenates by 8260B

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.  
Tacoma, WA 98424  
Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

Prep(s):	5030B	Test(s):	8260FAB			
Sample ID:	MW-33	Lab ID:	2004-10-0164-3			
Sampled:	09/29/2004 12:50	Extracted:	10/11/2004 19:37			
Matrix:	Water	QC Batch#:	2004/10/11-2A68			
Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	290	50	ug/L	1.00	10/11/2004 19:37	
Benzene	12	0.50	ug/L	1.00	10/11/2004 19:37	
Toluene	1.9	0.50	ug/L	1.00	10/11/2004 19:37	
Ethylbenzene	5.6	0.50	ug/L	1.00	10/11/2004 19:37	
Total xylenes	22	1.0	ug/L	1.00	10/11/2004 19:37	
Surrogate(s)						
1,2-Dichloroethane-d4	98.0	72-128	%	1.00	10/11/2004 19:37	
Toluene-d8	91.9	80-113	%	1.00	10/11/2004 19:37	

Severn Trent Laboratories, Inc.

STL San Francisco • 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 • www.stl-inc.com • CA DHS ELAP# 2496

10/21/2004 10:35

Page 4 of 22



# STL Seattle

Client Name:	Delta Environmental
Client ID:	MW-34
Lab ID:	123995-04
Date Received:	10/1/2004
Date Prepared:	10/6/2004
Date Analyzed:	10/14/2004
% Solids	-
Dilution Factor	1

## Diesel and Motor Oil by NWTPH-Dx Modified with Silica Gel Cleanup

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	95.3		50	150

Analyte	Result (mg/L)	RL	Flags
#2 Diesel	0.306	0.253	X1
Motor Oil	ND	0.505	

X1 - Chromatogram suggests this might be overlap from gasoline range

600000

## Gas/BTEX Fuel Oxygenates by 8260B

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.

Tacoma, WA 98424

Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

Prep(s): 5030B

Test(s): 8260FAB

Sample ID: MW-34

Lab ID: 2004-10-0164 - 4

Sampled: 09/29/2004 15:00

Extracted: 10/11/2004 19:56

Matrix: Water

QC Batch#: 2004/10/11/2A.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	310	50	ug/L	1.00	10/11/2004 19:56	
Benzene	10	0.50	ug/L	1.00	10/11/2004 19:56	
Toluene	ND	0.50	ug/L	1.00	10/11/2004 19:56	
Ethylbenzene	3.5	0.50	ug/L	1.00	10/11/2004 19:56	
Total xylenes	8.2	1.0	ug/L	1.00	10/11/2004 19:56	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	100.0	72-128	%	1.00	10/11/2004 19:56	
Toluene-d8	92.5	80-113	%	1.00	10/11/2004 19:56	

# STL Seattle

Client Name: Delta Environmental  
Client ID: MW-35  
Lab ID: 123995-05  
Date Received: 10/1/2004  
Date Prepared: 10/6/2004  
Date Analyzed: 10/14/2004  
% Solids -  
Dilution Factor 1

## Diesel and Motor Oil by NWTPH-Dx Modified with Silica Gel Cleanup

Surrogate o-terphenyl	% Recovery 104	Flags	Recovery Limits	
			Low 50	High 150
Analyte #2 Diesel Motor Oil	Result (mg/L) 0.248 ND	RL 0.244 0.487	Flags X1	

X1 - Chromatogram suggests this might be overlap from gasoline range

## Gas/BTEX Fuel Oxygenates by 8260B

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.

Tacoma, WA 98424

Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

Prep(s):	5030B	Test(s):	8260FAB			
Sample ID:	MW-35	Lab ID:	2004-10-0164-5			
Sampled:	09/29/2004 14:30	Extracted:	10/11/2004 20:16			
Matrix:	Water	QC Batch#:	2004/10/11-2A:68			
Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	250	50	ug/L	1.00	10/11/2004 20:16	
Benzene	0.50	0.50	ug/L	1.00	10/11/2004 20:16	
Toluene	ND	0.50	ug/L	1.00	10/11/2004 20:16	
Ethylbenzene	1.1	0.50	ug/L	1.00	10/11/2004 20:16	
Total xylenes	2.1	1.0	ug/L	1.00	10/11/2004 20:16	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	106.6	72-128	%	1.00	10/11/2004 20:16	
Toluene-d8	95.8	80-113	%	1.00	10/11/2004 20:16	

# STL Seattle

Client Name:	Delta Environmental
Client ID:	MW-36
Lab ID:	123995-06
Date Received:	10/1/2004
Date Prepared:	10/6/2004
Date Analyzed:	10/14/2004
% Solids	-
Dilution Factor	1

## Diesel and Motor Oil by NWTPH-Dx Modified with Silica Gel Cleanup

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	88.3		50	150

Analyte	Result (mg/L)	RL	Flags
#2 Diesel	ND	0.25	
Motor Oil	ND	0.5	

## Gas/BTEX Fuel Oxygenates by 8260B

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.

Tacoma, WA 98424

Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

Prep(s):	5080B	Test(s):	8260FAB
Sample ID:	MW-36	Lab ID:	2004-10-0164-6
Sampled:	09/29/2004 13:30	Extracted:	10/11/2004 20:35
Matrix:	Water	QC Batch#:	2004/10/11/24/68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	10/11/2004 20:35	
Benzene	0.90	0.50	ug/L	1.00	10/11/2004 20:35	
Toluene	ND	0.50	ug/L	1.00	10/11/2004 20:35	
Ethylbenzene	ND	0.50	ug/L	1.00	10/11/2004 20:35	
Total xylenes	ND	1.0	ug/L	1.00	10/11/2004 20:35	
<i>Surrogate(s)</i>						
1,2-Dichloroethane-d4	103.6	72-128	%	1.00	10/11/2004 20:35	
Toluene-d8	93.2	80-113	%	1.00	10/11/2004 20:35	

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10/21/2004 10:35

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# STL Seattle

Client Name:	Delta Environmental
Client ID:	MW-37
Lab ID:	123995-07
Date Received:	10/1/2004
Date Prepared:	10/6/2004
Date Analyzed:	10/14/2004
% Solids	-
Dilution Factor	1

## Diesel and Motor Oil by NWTPH-Dx Modified with Silica Gel Cleanup

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	100		50	150

Analyte	Result (mg/L)	RL	Flags
#2 Diesel	0.419	0.248	X1
Motor Oil	ND	0.496	

X1 - Chromatogram suggests this might be overlap from gasoline range

## Gas/BTEX Fuel Oxygenates by 8260B

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.  
Tacoma, WA 98424  
Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-37	Lab ID:	2004-10-0164-7
Sampled:	09/29/2004 10:20	Extracted:	10/11/2004 20:54
Matrix:	Water	QC Batch#:	2004/10/11/2A-68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	190	50	ug/L	1.00	10/11/2004 20:54	
Benzene	ND	0.50	ug/L	1.00	10/11/2004 20:54	
Toluene	ND	0.50	ug/L	1.00	10/11/2004 20:54	
Ethylbenzene	0.67	0.50	ug/L	1.00	10/11/2004 20:54	
Total xylenes	1.3	1.0	ug/L	1.00	10/11/2004 20:54	
<i>Surrogate(s)</i>						
1,2-Dichloroethane-d4	111.5	72-128	%	1.00	10/11/2004 20:54	
Toluene-d8	93.8	80-113	%	1.00	10/11/2004 20:54	

# STL Seattle

Client Name:	Delta Environmental
Client ID:	MW-40
Lab ID:	123995-08
Date Received:	10/1/2004
Date Prepared:	10/6/2004
Date Analyzed:	10/14/2004
% Solids	-
Dilution Factor	10

## Diesel and Motor Oil by NWTPH-Dx Modified with Silica Gel Cleanup

Surrogate	% Recovery	Recovery Limits	
		Low	High
o-terphenyl	-	X8	50      150

Analyte	Result (mg/L)	RL	Flags
			X1
#2 Diesel	32.8	2.48	
Motor Oil	219	4.96	

X1 - Chromatogram suggests this might be overlap from motor oil range

## Gas/BTEX Fuel Oxygenates by 8260B

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.

Tacoma, WA 98424

Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

Prep(s): 5030B

Test(s): 8260FAB

Sample ID: MW-40

Lab ID: 2004-10-0164-8

Sampled: 09/29/2004 11:00

Extracted: 10/11/2004 21:13

Matrix: Water

QC Batch#: 200410/11-2A-68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	390	50	ug/L	1.00	10/11/2004 21:13	
Benzene	ND	0.50	ug/L	1.00	10/11/2004 21:13	
Toluene	ND	0.50	ug/L	1.00	10/11/2004 21:13	
Ethylbenzene	ND	0.50	ug/L	1.00	10/11/2004 21:13	
Total xylenes	ND	1.0	ug/L	1.00	10/11/2004 21:13	
<i>Surrogate(s)</i>						
1,2-Dichloroethane-d4	109.3	72-128	%	1.00	10/11/2004 21:13	
Toluene-d8	102.2	80-113	%	1.00	10/11/2004 21:13	

# STL Seattle

Client Name:	Delta Environmental
Client ID:	MW-43
Lab ID:	123995-09
Date Received:	10/1/2004
Date Prepared:	10/6/2004
Date Analyzed:	10/14/2004
% Solids	-
Dilution Factor	1

## Diesel and Motor Oil by NWTPH-Dx Modified with Silica Gel Cleanup

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	104		50	150

Analyte	Result (mg/L)	RL	Flags
#2 Diesel	ND	0.249	
Motor Oil	ND	0.499	

## Gas/BTEX Fuel Oxygenates by 8260B

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.  
Tacoma, WA 98424  
Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-43	Lab ID:	2004-10-0164-9
Sampled:	09/29/2004 15:25	Extracted:	10/11/2004 21:32
Matrix:	Water	QC Batch#:	2004/MO/11-2A/68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	180	50	ug/L	1.00	10/11/2004 21:32	dp
Benzene	3.6	0.50	ug/L	1.00	10/11/2004 21:32	
Toluene	ND	0.50	ug/L	1.00	10/11/2004 21:32	
Ethylbenzene	ND	0.50	ug/L	1.00	10/11/2004 21:32	
Total xylenes	ND	1.0	ug/L	1.00	10/11/2004 21:32	
<i>Surrogate(s)</i>						
1,2-Dichloroethane-d4	110.3	72-128	%	1.00	10/11/2004 21:32	
Toluene-d8	100.9	80-113	%	1.00	10/11/2004 21:32	

# STL Seattle

Client Name:	Delta Environmental
Client ID:	MW-45
Lab ID:	123995-10
Date Received:	10/1/2004
Date Prepared:	10/6/2004
Date Analyzed:	10/14/2004
% Solids	-
Dilution Factor	1

## Diesel and Motor Oil by NWTPH-Dx Modified with Silica Gel Cleanup

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
$\alpha$ -terphenyl	95.2		50	150

Analyte	Result (mg/L)	RL	Flags
#2 Diesel	ND	0.251	
Motor Oil	ND	0.503	

**Gas/BTEX Fuel Oxygenates by 8260B**

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.  
Tacoma, WA 98424  
Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-45	Lab ID:	2004-10-0164-10
Sampled:	09/29/2004 13:45	Extracted:	10/11/2004 21:51
Matrix:	Water	QC Batch#:	2004/10/11-2A-68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	270	50	ug/L	1.00	10/11/2004 21:51	
Benzene	ND	0.50	ug/L	1.00	10/11/2004 21:51	
Toluene	1.5	0.50	ug/L	1.00	10/11/2004 21:51	
Ethylbenzene	0.62	0.50	ug/L	1.00	10/11/2004 21:51	
Total xylenes	7.3	1.0	ug/L	1.00	10/11/2004 21:51	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	111.8	72-128	%	1.00	10/11/2004 21:51	
Toluene-d8	96.8	80-113	%	1.00	10/11/2004 21:51	

# STL Seattle

Client Name:	Delta Environmental
Client ID:	MW-47
Lab ID:	123995-11
Date Received:	10/1/2004
Date Prepared:	10/6/2004
Date Analyzed:	10/14/2004
% Solids	-
Dilution Factor	1

## Diesel and Motor Oil by NWTPh-Dx Modified with Silica Gel Cleanup

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	86.6		50	150

Analyte	Result (mg/L)	RL	Flags
#2 Diesel	0.329	0.248	X1
Motor Oil	0.735	0.496	X2

X1 - Chromatogram suggests this might be overlap from motor oil range

**Gas/BTEX Fuel Oxygenates by 8260B**

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.

Tacoma, WA 98424

Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

Prep(s):	5030B	Test(s):	8260FAB			
Sample ID:	MW-47	Lab ID:	2004-10-0164 - 11			
Sampled:	09/29/2004 13:10	Extracted:	10/11/2004 22:10			
Matrix:	Water	QC Batch#:	2004/10/11-2A.68			
Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	200	50	ug/L	1.00	10/11/2004 22:10	
Benzene	ND	0.50	ug/L	1.00	10/11/2004 22:10	
Toluene	ND	0.50	ug/L	1.00	10/11/2004 22:10	
Ethylbenzene	ND	0.50	ug/L	1.00	10/11/2004 22:10	
Total xylenes	ND	1.0	ug/L	1.00	10/11/2004 22:10	
Surrogate(s)						
1,2-Dichloroethane-d4	102.6	72-128	%	1.00	10/11/2004 22:10	
Toluene-d8	94.9	80-113	%	1.00	10/11/2004 22:10	

# STL Seattle

Client Name:	Delta Environmental
Client ID:	MW-50
Lab ID:	123995-12
Date Received:	10/1/2004
Date Prepared:	10/6/2004
Date Analyzed:	10/14/2004
% Solids	-
Dilution Factor	1

## Diesel and Motor Oil by NWTPH-Dx Modified with Silica Gel Cleanup

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	96.2		50	150

Analyte	Result (mg/L)	RL	Flags
#2 Diesel	1.33	0.251	X1
Motor Oil	ND	0.502	

X1 - Chromatogram suggests this might be overlap from motor oil range

## Gas/BTEX Fuel Oxygenates by 8260B

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.

Tacoma, WA 98424

Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-50	Lab ID:	2004-10-0164-12
Sampled:	09/29/2004 12:10	Extracted:	10/13/2004 16:20
Matrix:	Water	QC Batch#:	2004/10/13-1B-68
Analysis Flag: o ( See Legend and Note Section )			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	3600	500	ug/L	10.00	10/13/2004 16:20	
Benzene	92	5.0	ug/L	10.00	10/13/2004 16:20	
Toluene	62	5.0	ug/L	10.00	10/13/2004 16:20	
Ethylbenzene	100	5.0	ug/L	10.00	10/13/2004 16:20	
Total xylenes	520	10	ug/L	10.00	10/13/2004 16:20	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	108.4	72-128	%	10.00	10/13/2004 16:20	
Toluene-d8	107.5	80-113	%	10.00	10/13/2004 16:20	

# STL Seattle

Client Name:	Delta Environmental
Client ID:	MW-51
Lab ID:	123995-13
Date Received:	10/1/2004
Date Prepared:	10/6/2004
Date Analyzed:	10/14/2004
% Solids	-
Dilution Factor	1

## Diesel and Motor Oil by NWTPH-Dx Modified with Silica Gel Cleanup

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	86.8		50	150
<b>Analyte</b>	<b>Result (mg/L)</b>	<b>RL</b>	<b>Flags</b>	
#2 Diesel	ND	0.242		
Motor Oil	ND	0.484		

## Gas/BTEX Fuel Oxygenates by 8260B

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.

Tacoma, WA 98424

Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-51	Lab ID:	2004-10-0164-13
Sampled:	09/29/2004 11:55	Extracted:	10/11/2004 22:48
Matrix:	Water	QC Batch#:	2004/10/11-2A.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	150	50	ug/L	1.00	10/11/2004 22:48	
Benzene	ND	0.50	ug/L	1.00	10/11/2004 22:48	
Toluene	ND	0.50	ug/L	1.00	10/11/2004 22:48	
Ethylbenzene	ND	0.50	ug/L	1.00	10/11/2004 22:48	
Total xylenes	ND	1.0	ug/L	1.00	10/11/2004 22:48	
<i>Surrogate(s)</i>						
1,2-Dichloroethane-d4	103.3	72-128	%	1.00	10/11/2004 22:48	
Toluene-d8	94.9	80-113	%	1.00	10/11/2004 22:48	

# STL Seattle

Client Name:	Delta Environmental
Client ID:	MW-52
Lab ID:	123995-14
Date Received:	10/1/2004
Date Prepared:	10/6/2004
Date Analyzed:	10/14/2004
% Solids	-
Dilution Factor	1

## Diesel and Motor Oil by NWTPH-Dx Modified with Silica Gel Cleanup

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	91.1		50	150

Analyte	Result (mg/L)	RL	Flags
#2 Diesel	ND	0.253	
Motor Oil	ND	0.507	

## Gas/BTEX Fuel Oxygenates by 8260B

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.

Tacoma, WA 98424

Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

Prep(s): 5030B

Test(s): 8260FAB

Sample ID: MW-52

Lab ID: 2004-10-0164-14

Sampled: 10/09/2004 14:40

Extracted: 10/11/2004 23:07

Matrix: Water

QC Batch#: 2004/10/11/2A.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	290	50	ug/L	1.00	10/11/2004 23:07	
Benzene	4.9	0.50	ug/L	1.00	10/11/2004 23:07	
Toluene	ND	0.50	ug/L	1.00	10/11/2004 23:07	
Ethylbenzene	4.8	0.50	ug/L	1.00	10/11/2004 23:07	
Total xylenes	2.3	1.0	ug/L	1.00	10/11/2004 23:07	
<i>Surrogate(s)</i>						
1,2-Dichloroethane-d4	102.7	72-128	%	1.00	10/11/2004 23:07	
Toluene-d8	99.4	80-113	%	1.00	10/11/2004 23:07	

# STL Seattle

Client Name:	Delta Environmental
Client ID:	MW-53
Lab ID:	123995-15
Date Received:	10/1/2004
Date Prepared:	10/6/2004
Date Analyzed:	10/14/2004
% Solids	-
Dilution Factor	1

## Diesel and Motor Oil by NWTPH-Dx Modified with Silica Gel Cleanup

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	84.4		50	150

Analyte	Result (mg/L)	RL	Flags
#2 Diesel	0.311	0.254	X1
Motor Oil	ND	0.509	

X1 - Chromatogram suggests this might be overlap from motor oil range

## Gas/BTEX Fuel Oxygenates by 8260B

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.

Tacoma, WA 98424

Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

Prep(s): 5030B

Test(s): 8260FAB

Sample ID: MW-53

Lab ID: 2004-10-0164-15

Sampled: 09/29/2004 15:55

Extracted: 10/11/2004 23:26

Matrix: Water

QC Batch #: 2004/10/11-2A-68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	240	50	ug/L	1.00	10/11/2004 23:26	
Benzene	1.9	0.50	ug/L	1.00	10/11/2004 23:26	
Toluene	ND	0.50	ug/L	1.00	10/11/2004 23:26	
Ethylbenzene	1.4	0.50	ug/L	1.00	10/11/2004 23:26	
Total xylenes	6.7	1.0	ug/L	1.00	10/11/2004 23:26	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	107.5	72-128	%	1.00	10/11/2004 23:26	
Toluene-d8	98.4	80-113	%	1.00	10/11/2004 23:26	

# STL Seattle

Lab ID: Method Blank - DW0680  
Date Received: -  
Date Prepared: 10/6/2004  
Date Analyzed: 10/14/2004  
% Solids -  
Dilution Factor 1

## Diesel and Motor Oil by NWTPH-Dx Modified with Silica Gel Cleanup

Surrogate o-terphenyl	% Recovery 100	Flags	Recovery Limits	
			Low 50	High 150

Analyte	Result (mg/L)	RL	Flags
#2 Diesel	ND	0.25	
Motor Oil	ND	0.5	

# STL Seattle

## Blank Spike/Blank Spike Duplicate Report

Lab ID: DW0680  
Date Prepared: 10/6/2004  
Date Analyzed: 10/14/2004  
QC Batch ID: DW0680

### Diesel and Motor Oil by NWTPH-Dx Modified with Silica Gel Cleanup

Compound Name	Blank Result (mg/L)	Spike Amount (mg/L)	BS Result (mg/L)	BS % Rec.	BSD Result (mg/L)	BSD % Rec.	RPD	Flag
#2 Diesel	0.053	5	5.37	106	5.4	107	0.94	
Motor Oil	0.074	5	5.56	110	5.56	110	0	

**Gas/BTEX Fuel Oxygenates by 8260B**

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.

Tacoma, WA 98424

Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260FAB

Method: Blank

QC Batch #: 2004/10/11-2A.68

MB: 2004/10/11-2A.68-053

Water

Date Extracted: 10/11/2004 16:53

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	10/11/2004 16:53	
Benzene	ND	0.5	ug/L	10/11/2004 16:53	
Toluene	ND	0.5	ug/L	10/11/2004 16:53	
Ethylbenzene	ND	0.5	ug/L	10/11/2004 16:53	
Total xylenes	ND	1.0	ug/L	10/11/2004 16:53	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	106.3	72-128	%	10/11/2004 16:53	
Toluene-d8	96.0	80-113	%	10/11/2004 16:53	

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10/21/2004 10:35

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

## Gas/BTEX Fuel Oxygenates by 8260B

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.

Tacoma, WA 98424

Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

## Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Method Blank

Water

QC Batch #: 2004/10/13-01-68

MB: 2004/10/13-01-68-044

Date Extracted: 10/13/2004 14:44

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	10/13/2004 14:44	
Benzene	ND	0.5	ug/L	10/13/2004 14:44	
Toluene	ND	0.5	ug/L	10/13/2004 14:44	
Ethylbenzene	ND	0.5	ug/L	10/13/2004 14:44	
Total xylenes	ND	1.0	ug/L	10/13/2004 14:44	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	113.4	72-128	%	10/13/2004 14:44	
Toluene-d8	101.8	80-113	%	10/13/2004 14:44	

**Gas/BTEX Fuel Oxygenates by 8260B**

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.

Tacoma, WA 98424

Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

**Batch QC Report**

Prep(s): 5080B

Test(s): 8260FAB

**Laboratory Control Spike****Water**

QC Batch #: 2004/10/11-2A-68

LCS: 2004/10/11-2A-68-015

Extracted: 10/11/2004

Analyzed: 10/11/2004 16:15

LCSD: 2004/10/11-2A-68-030

Extracted: 10/11/2004

Analyzed: 10/11/2004 17:30

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Ulmts %	Flags			
	LCS	LCSD		LCS	LCSD			Rec.	RPD	LCS	LCSD
Benzene	26.9	30.4	25	107.6	121.6	12.2	69-129	20			
Toluene	27.2	29.7	25	108.8	118.8	8.8	70-130	20			
<b>Surrogates(s)</b>											
1,2-Dichloroethane-d4	491	462	500	98.2	92.4		72-128				
Toluene-d8	498	481	500	99.6	96.2		80-113				

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STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

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10/21/2004 10:35

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**Gas/BTEX Fuel Oxygenates by 8260B**

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.

Tacoma, WA 98424

Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike****Water**

QC Batch # 2004/10/13-0168

LCS 2004/10/13-0168-030

Extracted: 10/13/2004

Analyzed: 10/13/2004 15:30

LCSD 2004/10/13-0168-025

Extracted: 10/13/2004

Analyzed: 10/13/2004 14:25

Compound	Conc.	ug/L	Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	25.5	24.3	25.0	102.0	97.2	4.8	69-129	20		
Toluene	23.6	23.5	25.0	94.4	94.0	0.4	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	479	492	500	95.8	98.4		72-128			
Toluene-d8	540	514	500	108.0	102.8		80-113			

## Gas/BTEX Fuel Oxygenates by 8260B

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.  
Tacoma, WA 98424  
Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

## Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Matrix Spike (MS / MSD):

Water

QC Batch #: 2004/10/11-2A:68

SMW:3 &gt;&gt; MS

Lab ID: 2004-10-0164-001

MS: 2004/10/11-2A:68-040

Extracted: 10/11/2004

Analyzed: 10/11/2004 18:40

MSD: 2004/10/11-2A:68-059

Extracted: 10/11/2004

Dilution: 1:00

Analyzed: 10/11/2004 18:59

Dilution: 1:00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Benzene	25.5	25.6	ND	25	102.0	102.4	0.4	69-129	20		
Toluene	23.2	22.6	ND	25	92.8	90.4	2.6	70-130	20		
<i>Surrogate(s)</i>											
1,2-Dichloroethane-d4	476	485		500	95.2	97.0		72-128			
Toluene-d8	482	470		500	96.4	94.0		80-113			

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stlinc.com \* CA DHS ELAP# 2496

10/21/2004 10:35

Page 21 of 22

**Gas/BTEX Fuel Oxygenates by 8260B**

STL Seattle

Attn.: Tom Coyner

5755 8th Street E.

Tacoma, WA 98424

Phone: (253) 922-2310 Fax: (253) 922-5047

Project: Conoco Phillips# 255353

Received: 10/05/2004 09:30

---

**Legend and Notes**

---

**Analysis Flag**

o

Reporting limits were raised due to high level of analyte present in the sample.

**Result Flag**

dp

Sample contains discrete peak in gasoline range.

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

**DATA QUALIFIERS AND ABBREVIATIONS**

- B1: This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- C1: Second column confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be < 40%.
- C2: Second column confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be > 40%. The higher result was reported unless anomalies were noted.
- C3: Second analysis confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be  $\leq$  30%.
- C4: Second analysis confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be > 30%. The original analysis was reported unless anomalies were noted.
- M: GC/MS confirmation was performed. The result derived from the original analysis was reported.
- D: The reported result for this analyte was calculated based on a secondary dilution factor.
- E: The concentration of this analyte exceeded the instrument calibration range and should be considered an estimated quantity.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- MCL: Maximum Contaminant Level
- MDL: Method Detection Limit
- RL: Reporting Limit
- N: See analytical narrative
- ND: Not Detected
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be \_\_\_\_\_.
- X2: Contaminant does not appear to be "typical" product.
- X3: Identification and quantitation of the analyte or surrogate was complicated by matrix interference.
- X4: RPD for duplicates was outside advisory QC limits. The sample was re-analyzed with similar results. The sample matrix may be nonhomogeneous.
- X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike recovery was not determined due to the required dilution.
- X6: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Sample was re-analyzed with similar results.
- X7: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Matrix interference may be indicated based on acceptable blank spike recovery and/or RPD.
- X7a: Recovery and/or RPD values for this spiked analyte outside advisory QC limits due to high concentration of the analyte in the original sample.
- X8: Surrogate recovery was not determined due to the required dilution.
- X9: Surrogate recovery outside advisory QC limits due to matrix interference.

**DATA QUALIFIERS AND ABBREVIATIONS**

- B1: This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- C1: Second column confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be < 40%.
- C2: Second column confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be > 40%. The higher result was reported unless anomalies were noted.
- C3: Second analysis confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be ≤ 30%.
- C4: Second analysis confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be > 30%. The original analysis was reported unless anomalies were noted.
- M: GC/MS confirmation was performed. The result derived from the original analysis was reported.
- D: The reported result for this analyte was calculated based on a secondary dilution factor.
- E: The concentration of this analyte exceeded the instrument calibration range and should be considered an estimated quantity.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.

MCL: Maximum Contaminant Level

MDL: Method Detection Limit

RL: Reporting Limit

N: See analytical narrative

ND: Not Detected

X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be \_\_\_\_\_.

X2: Contaminant does not appear to be "typical" product.

X3: Identification and quantitation of the analyte or surrogate was complicated by matrix interference.

X4: RPD for duplicates was outside advisory QC limits. The sample was re-analyzed with similar results. The sample matrix may be nonhomogeneous.

X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.

X5: Matrix spike recovery was not determined due to the required dilution.

X6: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Sample was re-analyzed with similar results.

X7: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Matrix interference may be indicated based on acceptable blank spike recovery and/or RPD.

X7a: Recovery and/or RPD values for this spiked analyte outside advisory QC limits due to high concentration of the analyte in the original sample.

X8: Surrogate recovery was not determined due to the required dilution.

X9: Surrogate recovery outside advisory QC limits due to matrix interference.

# STL Seattle

Client Name:	Delta Environmental
Client ID:	MW-40
Lab ID:	123995-08
Date Received:	10/1/2004
Date Prepared:	10/6/2004
Date Analyzed:	10/14/2004
% Solids	-
Dilution Factor	10

## Diesel and Motor Oil by NWTPH-Dx Modified with Silica Gel Cleanup

Surrogate o-terphenyl	% Recovery	Flags X8	Recovery Limits	
			Low 50	High 150

Analyte	Result (mg/L)	RL	Flags	
			X1	
#2 Diesel	32.8	2.48	X1	
Motor Oil	219	4.96		

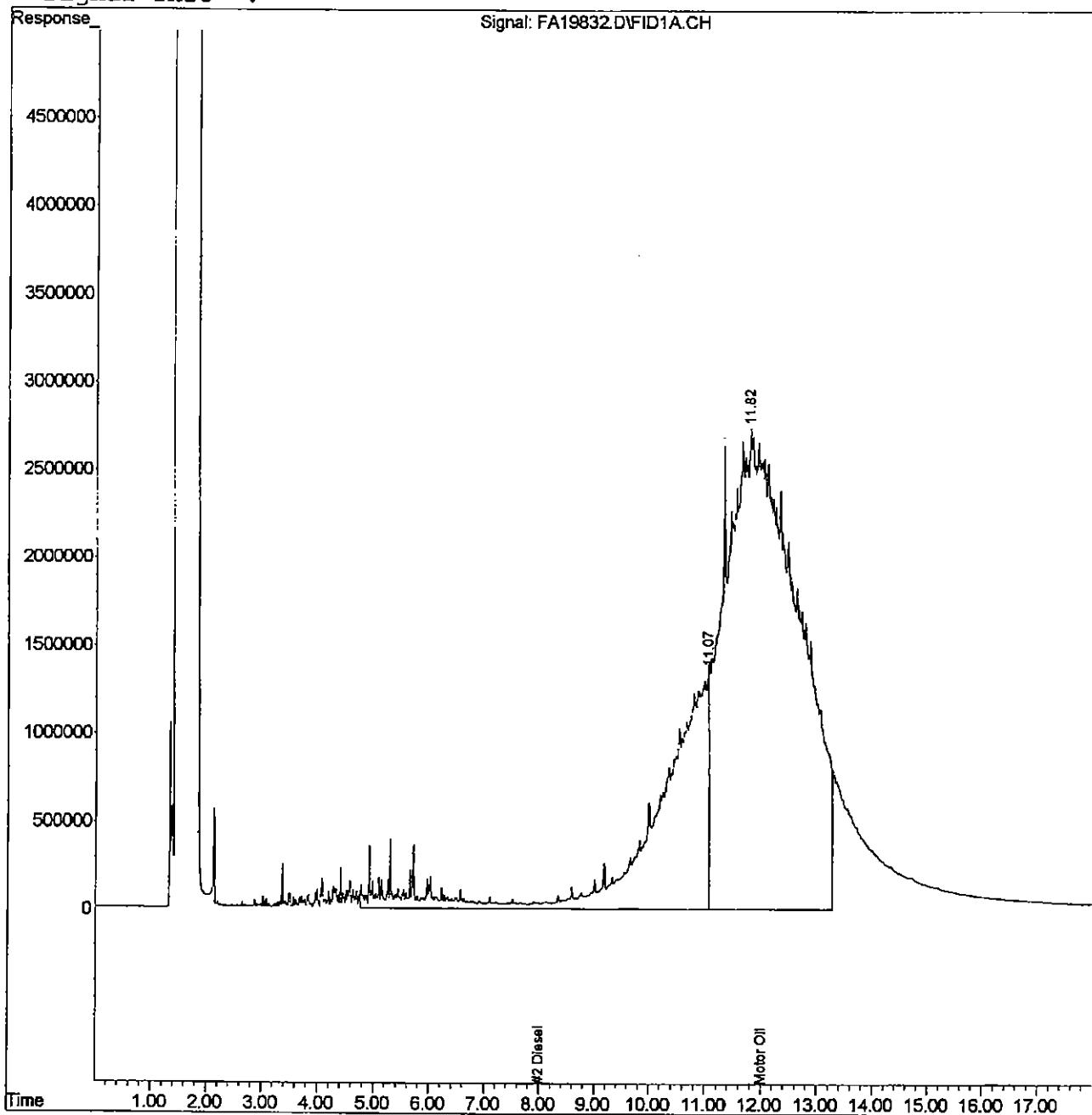
X1 - Chromatogram suggests this might be overlap from motor oil range

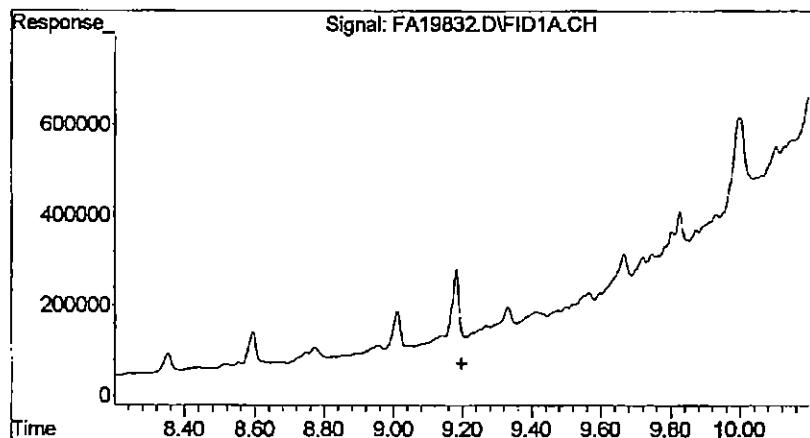
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Data File : E:\DATA\101404\_A\FA19832.D Vial: 17  
Acq On : 10-14-2004 03:31:24 PM Operator: RBF  
Sample : 123995-8 liquid & sio2 1:10 Inst : SEA013  
Misc : Multiplr: 1.00  
IntFile : EVENTS.E  
Quant Time: Oct 15 6:43 2004 Quant Results File: NWDF101104.RES

Quant Method : E:\METHODS\NWDF101104.M (Chemstation Integrator)  
Title : NWTPH-Dx Front (10/11/04)  
Last Update : Tue Oct 12 06:46:22 2004  
Response via : Multiple Level Calibration  
DataAcq Meth : FACQ.M

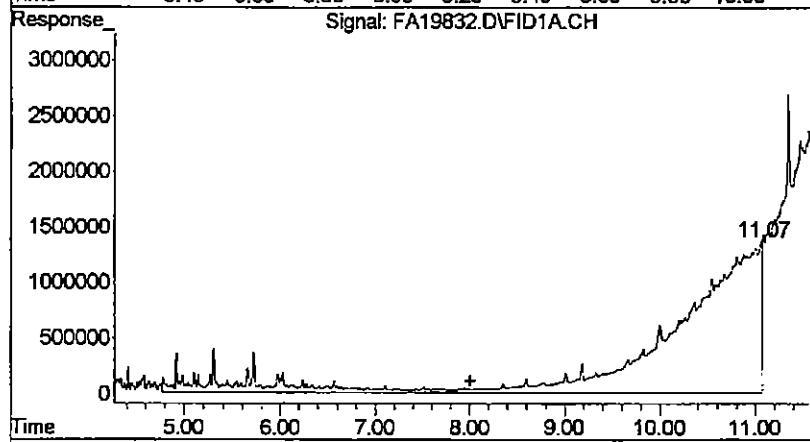
Volume Inj. :  
Signal Phase :  
Signal Info :





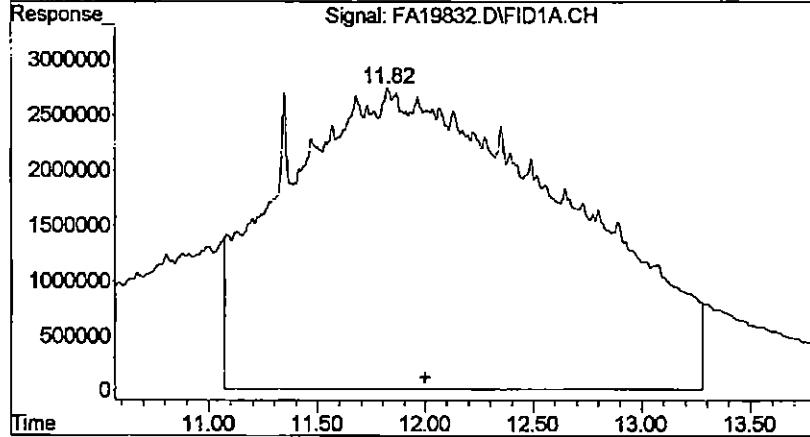
### #1 o-terphenyl (S)

R.T.: 0.000 min  
 Exp R.T. : 9.198 min  
 Response: 0  
 Conc: N.D.



### #2 #2 Diesel

R.T.: 8.000 min  
 Delta R.T.: 0.000 min  
 Response: 852530677  
 Conc: 661.99 ng/ul m



### #3 Motor Oil

R.T.: 12.000 min  
 Delta R.T.: 0.000 min  
 Response: 2507239132  
 Conc: 4424.46 ng/ul m

## **GROUNDWATER SAMPLING PROCEDURES AND FIELD SHEETS**

Quarterly Groundwater Sampling  
ConocoPhillips Site No. 255353

## **GROUNDWATER MONITORING AND SAMPLING**

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Before the sampling event, Delta measured depth to water in each groundwater monitoring well at the facility with an electronic water level meter. This information was recorded on waterproof field sheets. Groundwater elevations (GWE) were measured to an accuracy of 0.01 feet. Wells were sampled after purging three casing volumes of water from the well (or until dry). After the well had recharged to approximately 80% of static level, samples were collected using a disposable polyethylene bailer and placed in the appropriate laboratory-provided container. Samples were labeled, placed into ice filled coolers, logged onto chain-of-custody forms and transported to the laboratory.

**GROUNDWATER SAMPLING FIELD SHEET**

DELTA PROJECT NUMBER: WA25-535-1  
 SITE No./JOB No.: 255353 Seattle  
 SITE ADDRESS/LOCATION: 6000 Westlake Ave N  
 FIELD PERSONNEL: L. Brock, Collin

CLIENT: COP  
 PAGE 1 of 1  
 DATE: 9/29/04  
 WEATHER:

Well ID	Time	Well Diameter (in.)	Depth to Bottom (feet)	Depth to Water (feet)	Depth to LPH (feet)	LPH Thickness (feet)	Calc. Purge (gal)	Actual Purge (gal)	Purge Method (B/LF/P)	Dissolved Oxygen (mg/l)	Sample Appearance/Comments
MW-3	1630	2	16.60	11.67	—	—	2.5	2.75	B	0.1	—
MW-3	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
MW-3A	1415	2	24.20	9.20	—	—	7.7	8.0	6.1	Bubbles, DTW hard to read	[REDACTED]
MW-33	1250	2	24.90	9.60	—	—	7.8	8.0	7.2	Bubbles had trouble reading probe, DTW	[REDACTED]
MW-34	1500	2	25.15	11.38	—	—	7.0	7.25	0.4	—	[REDACTED]
MW-35	1430	4	22.60	11.77	—	—	5.6	5.75	0.1	—	[REDACTED]
MW-36	1330	2	18.30	9.78	—	—	4.3	4.5	0.8	—	[REDACTED]
MW-37	1020	2	19.22	10.89	—	—	4.3	4.5	2.0	needs new well cap	[REDACTED]
MW-38	—	—	—	—	—	—	—	—	—	unable to locate	buried under gravel
MW-40	1100	2	19.50	12.03	—	—	3.8	4.0	1.4	HCO, sheen	[REDACTED]
MW-43	1525	2	21.80	12.00	—	—	5.0	5.25	0.1	—	[REDACTED]
MW-44	—	—	—	—	—	—	—	—	—	in street, need traffic control	[REDACTED]
MW-45	1345	2	18.85	10.40	—	—	4.3	4.5	0.9	—	[REDACTED]
MW-47	1310	2	19.25	11.87	—	—	3.8	4.0	0.2	—	[REDACTED]
MW-50	1210	2	17.45	11.71	—	—	2.9	3.0	0.2	—	[REDACTED]
MW-51	1155	2	15.30	12.20	—	—	1.6	0.5	1.4	Purge dry @ 0.5 gall.	HCO
MW-52	1440	2	17.90	11.45	—	—	3.3	3.5	0.3	—	[REDACTED]
MW-53	1555	2	16.00	12.60	—	—	1.7	2.0	↓	1.9	—

System Instructions:	Remedial System On-Site (Y/N)?	Y	Comments:
	Operational Upon Arrival (Y/N)?	Y	Comments:
	Shut Down System 1 / 24 hours before gauging (Y/N)?	NA	Time/Date Downed: NA
	Re-Start System (Y/N)?	NA	Time/Date Restarted: NA
	Purge Method: Bailer	Comments:	

Purge Water Disposal Method:	<input checked="" type="checkbox"/> Treated through mobile carbon treatment unit and discharged on-site
	<input type="checkbox"/> Placed in drums on site
	<input type="checkbox"/> Transported off-site for treatment

No. of drums:

Facility/Location:

Measuring Device(s): DO, WLI

\* MW-3 paved over, in dumpster enclosure