



RELEASE # 324012  
MINIT LUBE 1102  
LYNNWOOD  
UST #

April 17, 2008

Mr. John Bails  
Washington State Department of Ecology  
Northwest Regional Office  
3190 160th Avenue SE  
Bellevue, Washington 98008-5452

RECEIVED

APR 25 2008

DEPT. OF ECOLOGY  
TCP-NWR/O

Re: **Groundwater Monitoring Report – First Quarter 2008**  
Former Jiffy Lube No. 2068  
6808 196<sup>th</sup> Street SW  
Lynnwood, Washington  
SAP Code 171152  
Incident No. 97605410  
Ecology ID No. 27496218

Dear Mr. Bails:

Conestoga-Rovers & Associates, Inc. (CRA) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell).

If you have questions regarding this report, please contact Brian Peters at (425) 212-5106.

Sincerely,  
**Conestoga-Rovers & Associates, Inc.**

Brian Peters, LG  
Project Manager



BRIAN C. PETERS

cc: Mr. Dave Kremer, Shell Oil Products US, 20945 S. Wilmington Ave., Carson, CA 90810  
Mr. Rick Megenity, Strickland Corporation, P.O. Box 1004, Everett, WA 98206

## GROUNDWATER MONITORING REPORT – FIRST QUARTER 2008

Site Address	<u>6808 196<sup>th</sup> Street SW, Lynnwood</u>
Site Use	<u>Former Jiffy Lube</u>
Shell Project Manager	<u>Dave Kremer</u>
Consultant and Contact Person	<u>CRA, Brian Peters</u>
Lead Agency and Contact	<u>WDOE, John Bails</u>
Ecology ID No.	<u>27496218</u>
Shell SAP Code	<u>171152</u>
Shell Incident No.	<u>97605410</u>
Date of Most Recent Agency Correspondence	<u>No agency correspondence on record</u>

### Current Quarter's Activities

1. Blaine Tech Services, Inc. (Blaine) gauged and sampled wells according to the established monitoring program for this site.
2. CRA prepared a vicinity map (Figure 1) and a groundwater elevation contour and chemical concentration map (Figure 2). CRA prepared Tables 1 and 2 summarizing groundwater monitoring data and the laboratory analytical results. Field forms and the laboratory analytical report are included as Attachments A and B, respectively.

### Current Quarter's Findings

Groundwater Flow Direction	<u>South southwest</u>
Hydraulic Gradient	<u>0.02 feet/foot</u>
Depth to Water	<u>7.32 to 10.52 feet below top of well casing</u>

### Proposed Activities for Next Quarter

1. Blaine will gauge and sample wells during the first month of the third quarter of 2008, according to the established monitoring program for this site.
2. The site will be monitored monthly to gauge separate phase hydrocarbon (SPH) in the wells. SPH will be removed from wells containing measurable SPH.

## Discussion

Wells MW-1 through MW-10 were gauged for the depth of water on January 10, 2008. All site wells were sampled except MW-3, MW-4 and MW-5, which contained SPH. Groundwater sample collected from well MW-1 contained total petroleum hydrocarbons (TPH) in the gasoline range (TPH-G), and benzene, toluene, ethylbenzene and total xylenes (BTEX) above the Washington State Department of Ecology Model Toxics Control Act (MTCA) Method A cleanup levels. Groundwater sample collected from well MW-2 contained concentrations of TPH-G and benzene above MTCA Method A cleanup levels. Groundwater sample collected from well MW-7 contained benzene concentration exceeding MTCA Method A cleanup level. Groundwater sample from well MW-8 contained concentrations of TPH-G and TPH in diesel range (TPH-D), and all BTEX constituents above MTCA Method A cleanup levels. Groundwater collected from well MW-10 contained concentrations of TPH-G, benzene and ethylbenzene exceeding MTCA Method A cleanup levels.. All other detected analytes were below MTCA cleanup levels. Wells MW-3, MW-4 and MW-5 were monitored for thickness of SPH and SPH was manually removed and containerized on a weekly basis in the first month of this quarter, then on a monthly basis.

- Figures:           1 - Vicinity Map  
                      2 - Groundwater Contour and Chemical Concentration Map
- Tables:            1 - Summary of Groundwater Monitoring Data – BETX, MTBE, and Petroleum Hydrocarbons  
                      2 - Summary of Groundwater Monitoring Data – Oxygenates
- Attachments:    A - Blaine Tech Services, Inc. - Field Forms  
                      B - Laboratory Analysis Report

I:\Everett.Shell\WA Shell Sites\6808 196th Street SW Lynnwood\QMRS\Reports\1q08\1q08qm.doc

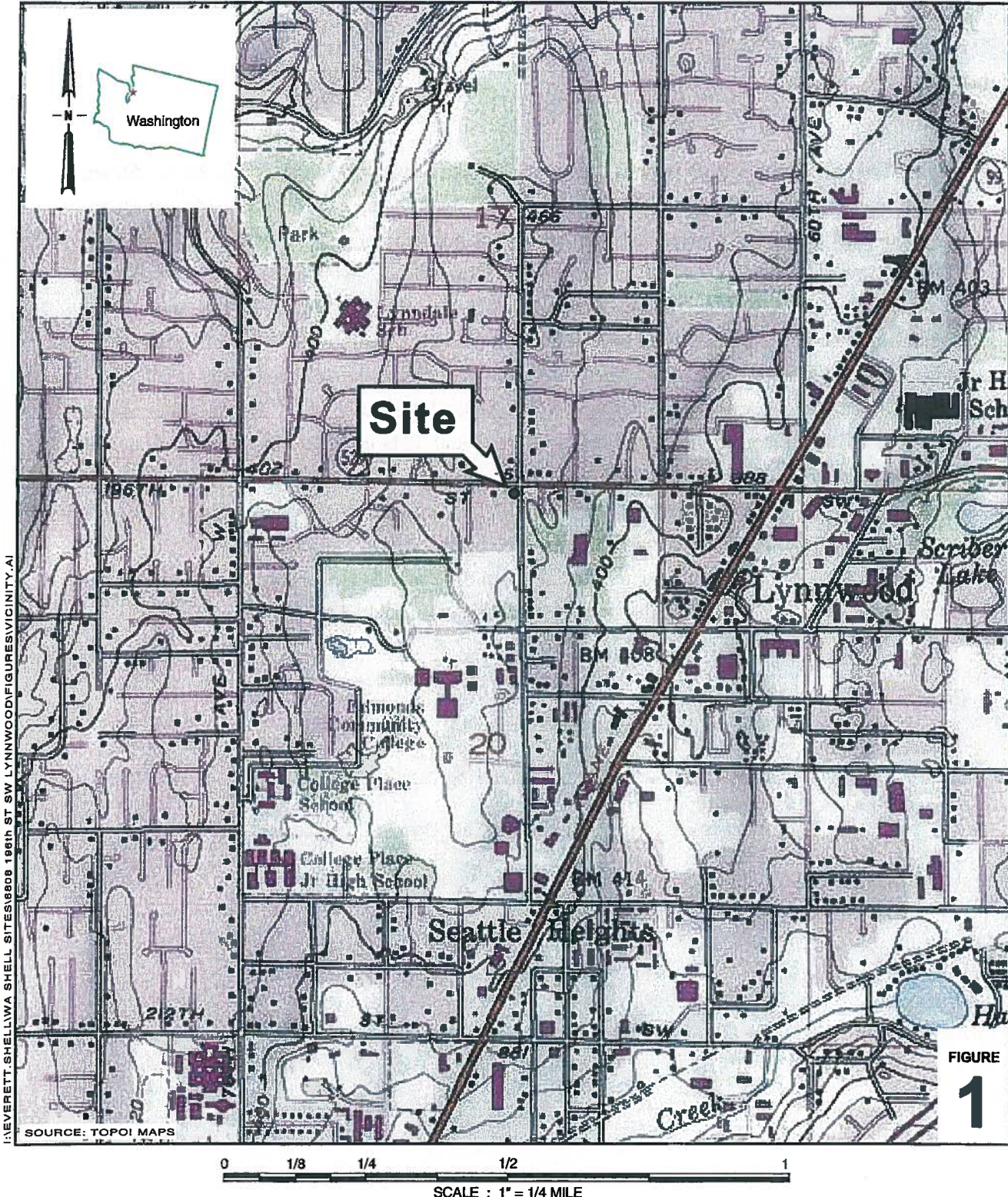


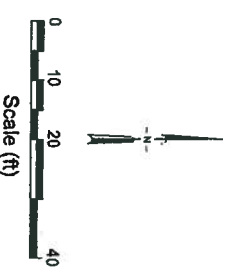
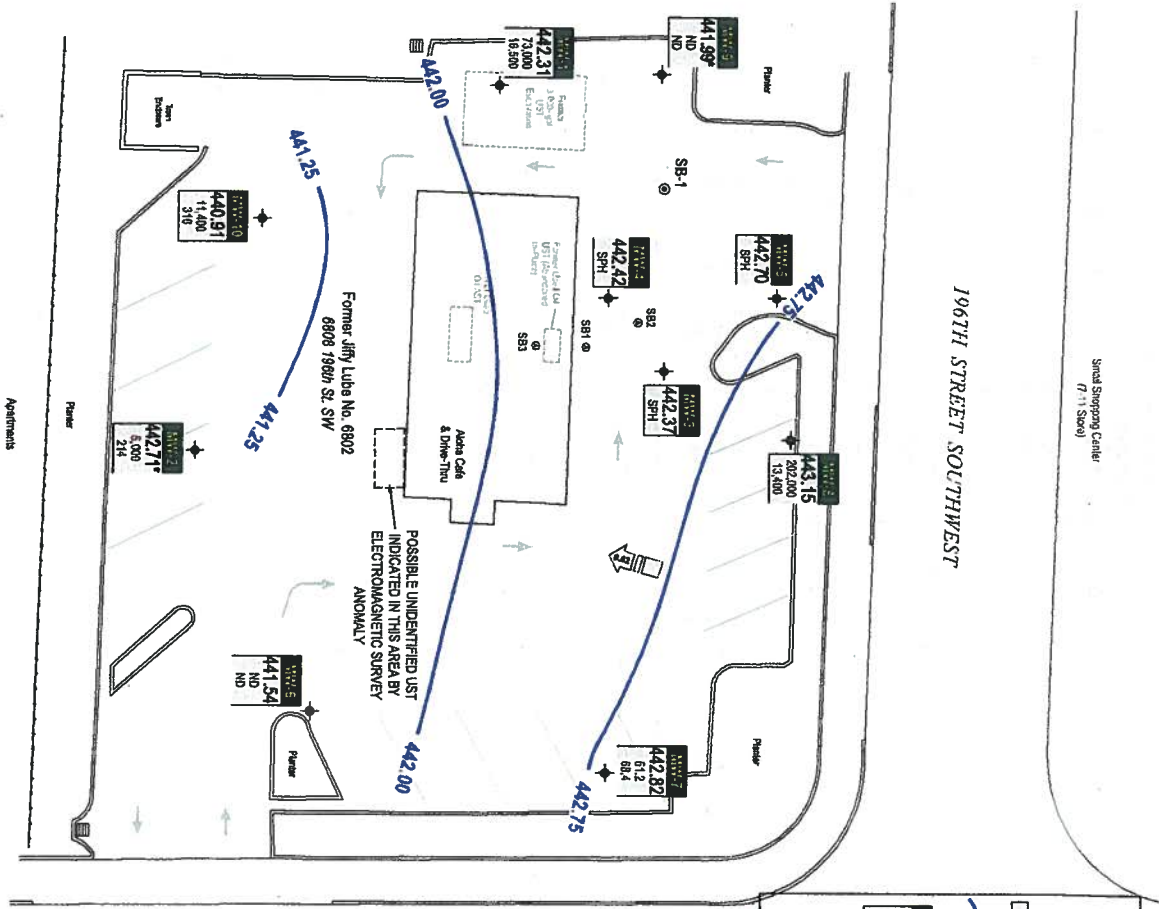
FIGURE  
**1**

**Jiffy Lube No. 2069**  
 6808 196th Street Southwest  
 Lynnwood, Washington



**Vicinity Map**

Sheet 1  
1-hour  
Change



**EXPLANATION**

- MW-1 Monitoring well location
- SB-1 Soil boring location (Cambria, 2006)
- 391 Soil boring location (older)
- Groundwater flow direction and gradient
- Groundwater elevation contour, in feet above mean sea level (msl)
- Well designation
- WELL: Groundwater elevation, in feet above msl
- ELEV: TPHg and benzene concentrations
- TPHg: are in micrograms per liter
- Benzene: are in micrograms per liter

Notes:

- ND = Not detected
- SPH = Separate-phase hydrocarbons present, well not sampled
- \* = Data anomalous, not used for contouring

FIGURE 2

Jiffy Lube No. 2068  
6808 196th Street Southwest  
Lynnwood, Washington



Groundwater Contour and  
Chemical Concentration Map  
January 10, 2008

**TABLE 1**  
**SUMMARY OF GROUNDWATER MONITORING DATA**  
**BETX, MTBE, AND PETROLEUM HYDROCARBONS**  
 6808 196TH STREET SW  
 LYNNWOOD, WASHINGTON

Well Number	Date	TOC (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	SPH Thickness (feet)	B (µg/L)	E (µg/L)	T (µg/L)	X (µg/L)	Gasoline-range Hydrocarbons (µg/L)	Diesel Range Hydrocarbons (µg/L)	Heavy Oil Range Hydrocarbons (µg/L)	MTBE (µg/L)
MWV-1	12/28/06	451.74	9.75	441.99	0.00	---	---	---	---	---	---	---	---
MWV-1	12/29/06	451.74	9.57	442.17	0.00	9,190	1,090	2,140	4,100	42,100	<255	<510	---
MWV-1	02/15/07	451.74	10.10	441.64	0.00	9,230	938	1,840	3,710	41,200	<269	<538	<5.00
MWV-1	04/06/07	451.74	10.71	441.03	0.00	7,450	718	732	2,310	30,200	<258	<515	---
MWV-1	07/09/07	451.74	10.78	440.96	0.00	---	---	---	---	---	---	---	---
MWV-1	07/28/07	451.74	11.01	440.73	0.00	2,400	131	32.4	190	5,850	<258	<515	---
MWV-1	10/01/07	451.74	13.98	437.76	0.00	6,270	653	196	1,340	23,900	1,540 f,g	<105	---
MWV-1	01/10/08	451.74	9.43	442.31	0.00	16,500	1,610	4,010	6,790	73,000	<243	<485	---
MWV-2	12/28/06	450.59	7.26	443.33	0.00	---	---	---	---	---	---	---	---
MWV-2	12/29/06	450.59	7.35	443.24	0.00	21.7	55.1	6.75	9.91	2,640	<253	<505	---
MWV-2	02/15/07	450.59	8.03	442.56	0.00	2.06	4.36	<0.500	<1.00	249	<278	<556	<5.00
MWV-2	04/06/07	450.59	8.50	442.09	0.00	1.83	2.61	0.518	<1.00	180	<258	<515	---
MWV-2	07/09/07	450.59	8.62	441.97	0.00	---	---	---	---	---	---	---	---
MWV-2	07/28/07	450.59	8.96	441.63	0.00	66.1	137	7.86	20.4	3,200	<255	<510	---
MWV-2	10/01/07	450.59	12.54	438.05	0.00	175	331	13.7	47.4	3,980	1,080 g,h	<105	---
MWV-2	01/10/08	450.59	7.88	442.71	0.00	214	502	9.85	71.0	5,000	<243	<485	---
MWV-3	12/28/06	451.69	8.45	443.24	0.00	---	---	---	---	---	---	---	---
MWV-3	12/29/06	451.69	8.51	443.18	0.00	28,500	2,950	29,200	15,900	171,000	608	<510	---
MWV-3	02/15/07	451.69	9.09	442.60	0.00	29,200	3,140	37,400	18,600	263,000 a, b	2,580 c	<2,750	<500
MWV-3	04/06/07	451.69	9.66	442.03	0.00	26,600	2,850	37,500	16,800	214,000	867 c	<495	---
MWV-3	07/09/07	451.69	9.81	441.88	0.00	---	---	---	---	---	---	---	---
MWV-3	07/28/07	451.69	10.13	441.56	0.00	28,600	2,810	37,400	12,800	248,000	8,340 e	<5,050	---
MWV-3	10/01/07	451.69	13.96	437.73	0.00	29,300	3,260	35,200	19,300	252,000	185,000 g,h	<10,500	---
MWV-3	01/10/08	451.69	9.34	442.37 d	0.02	NOT SAMPLED	NOT SAMPLED - SPH PRESENT	NOT SAMPLED	---	---	---	---	---
MWV-3	01/14/08	451.69	9.06	442.63	0.00	---	---	---	---	---	---	---	---
MWV-3	01/21/08	451.69	8.27	443.42	0.00	---	---	---	---	---	---	---	---
MWV-3	02/26/08	451.69	8.40	443.30 d	0.01	---	---	---	---	---	---	---	---
MWV-4	12/28/06	452.01	9.41	442.60	0.00	---	---	---	---	---	---	---	---
MWV-4	12/29/06	452.01	9.36	442.65	0.00	32,400	3,200	39,700	18,800	207,000	1,810	<510	---
MWV-4	02/15/07	452.01	9.96	442.05	0.00	31,500 a, b	2,990 a, b	40,500 a, b	18,100 a, b	253,000 a, b	72,100 c	<50,000	<500
MWV-4	04/06/07	452.01	10.41	441.63 d	0.04	NOT SAMPLED	NOT SAMPLED - SPH PRESENT	NOT SAMPLED	---	---	---	---	---
MWV-4	07/09/07	452.01	10.47	441.56 d	0.03	---	---	---	---	---	---	---	---
MWV-4	07/28/07	452.01	10.81	441.23 d	0.04	NOT SAMPLED	NOT SAMPLED - SPH PRESENT	NOT SAMPLED	---	---	---	---	---
MWV-4	10/01/07	452.01	14.24	437.87 d	0.13	NOT SAMPLED	NOT SAMPLED - SPH PRESENT	NOT SAMPLED	---	---	---	---	---
MWV-4	11/12/07	452.01	13.83	438.31 d	0.16	---	---	---	---	---	---	---	---
MWV-4	11/20/07	452.01	13.68	438.44 d	0.14	---	---	---	---	---	---	---	---
MWV-4	11/26/07	452.01	13.52	438.58 d	0.11	---	---	---	---	---	---	---	---

**TABLE 1**  
**SUMMARY OF GROUNDWATER MONITORING DATA**  
**BETX, MTBE, AND PETROLEUM HYDROCARBONS**  
 6808 196TH STREET SW  
 LYNNWOOD, WASHINGTON

Well Number	Date	TOC (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	SPH Thickness (feet)	B (µg/L)	E (µg/L)	T (µg/L)	X (µg/L)	Gasoline-range Hydrocarbons (µg/L)	Diesel Range Hydrocarbons (µg/L)	Heavy Oil Range Hydrocarbons (µg/L)	MTBE (µg/L)
MW-4	12/08/07	452.01	12.87	439.22 d	0.10	---	---	---	---	---	---	---	---
MW-4	12/14/08	452.01	12.41	439.66 d	0.07	---	---	---	---	---	---	---	---
MW-4	12/19/07	452.01	12.33	439.72 d	0.05	---	---	---	---	---	---	---	---
MW-4	12/28/07	452.01	12.24	439.80 d	0.04	---	---	---	---	---	---	---	---
MW-4	01/10/08	452.01	9.61	442.42 d	0.03	NOT SAMPLED	SPH PRESENT	---	---	---	---	---	---
MW-4	01/14/08	452.01	9.23	442.80 d	0.02	---	---	---	---	---	---	---	---
MW-4	01/21/08	452.01	8.07	443.96 d	0.03	---	---	---	---	---	---	---	---
MW-4	02/26/08	452.01	9.03	443.00 d	0.03	---	---	---	---	---	---	---	---
MW-5	12/28/06	451.38	8.11	443.27	---	7.220	2.280	24.400	13.200	122,000	603	<515	---
MW-5	12/29/06	451.38	8.17	443.21	---	12,800 a, b	6,000 a, b	43,600 a, b	40,700 a, b	771,000 a, b	49,200 c	<5,000	<500
MW-5	02/15/07	451.38	8.49	442.89	---	NOT SAMPLED	SPH PRESENT	---	---	---	---	---	---
MW-5	04/06/07	451.38	9.08	442.32 d	0.03	---	---	---	---	---	---	---	---
MW-5	07/09/07	451.38	9.19	442.21 d	0.03	---	---	---	---	---	---	---	---
MW-5	07/28/07	451.38	9.58	441.83 d	0.04	NOT SAMPLED	SPH PRESENT	---	---	---	---	---	---
MW-5	10/01/07	451.38	13.16	438.28 d	0.08	NOT SAMPLED	SPH PRESENT	---	---	---	---	---	---
MW-5	11/12/07	451.38	12.74	438.69 d	0.06	---	---	---	---	---	---	---	---
MW-5	11/20/07	451.38	12.55	438.89 d	0.08	---	---	---	---	---	---	---	---
MW-5	11/26/07	451.38	12.48	438.95 d	0.06	---	---	---	---	---	---	---	---
MW-5	12/05/07	451.38	11.74	439.72 d	0.10	---	---	---	---	---	---	---	---
MW-5	12/14/07	451.38	11.53	439.90 d	0.06	---	---	---	---	---	---	---	---
MW-5	12/19/07	451.38	11.41	440.00 d	0.04	---	---	---	---	---	---	---	---
MW-5	12/28/07	451.38	11.29	440.12 d	0.04	---	---	---	---	---	---	---	---
MW-5	01/10/08	451.38	8.70	442.70 d	0.02	NOT SAMPLED	SPH PRESENT	---	---	---	---	---	---
MW-5	01/14/08	451.38	8.70	442.68	0.00	---	---	---	---	---	---	---	---
MW-5	01/21/08	451.38	8.00	443.54 d	0.20	---	---	---	---	---	---	---	---
MW-5	02/26/08	451.38	8.02	443.50 d	0.17	---	---	---	---	---	---	---	---
MW-6	07/09/07	449.40	8.33	441.07	0.00	---	---	---	---	---	---	---	---
MW-6	07/28/07	449.40	8.61	440.79	0.00	<0.500	<0.500	1.25	<1.00	52.4	<253	<505	---
MW-6	10/01/07	449.40	12.22	437.18	0.00	<1.00	<1.00	<1.00	<3.00	<250	<105	<105	---
MW-6	01/10/08	449.40	7.86	441.54	0.00	<0.500	<0.500	<0.500	<3.00	<50.0	<250	<500	---
MW-7	07/09/07	450.14	7.81	442.33	0.00	---	---	---	---	---	---	---	---
MW-7	07/28/07	450.14	8.03	442.11	0.00	<0.500	<0.500	<0.500	<1.00	<50.0	<253	<495	---
MW-7	10/01/07	450.14	11.71	438.43	0.00	1.78	<1.00	<1.00	<3.00	<250	<111	<111	---
MW-7	01/10/08	450.14	7.32	442.82	0.00	68.4	79.7	1.26	110	51.2	<250	<500	---
MW-8	07/09/07	451.31	8.63	442.68	0.00	---	---	---	---	---	---	---	---
MW-8	07/28/07	451.31	8.97	442.34	0.00	20.500	3.550	43.600	23.000	266,000	8,580 e	<5,210	---
MW-8	10/01/07	451.31	12.58	438.73	0.00	18,000	2,250	32,000	14,900	181,000	6,540 g, i	<1,110	---
MW-8	01/10/08	451.31	8.16	443.15	0.00	13,400	2,200	29,600	14,000	202,000	9,190 c	<4,850	---

**TABLE 1**  
**SUMMARY OF GROUNDWATER MONITORING DATA**  
**BETX, MTBE, AND PETROLEUM HYDROCARBONS**  
 6808 196TH STREET SW  
 LYNNWOOD, WASHINGTON

Well Number	Date	TOC (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	SPH Thickness (feet)	B (µg/L)	E (µg/L)	T (µg/L)	X (µg/L)	Gasoline-range Hydrocarbons (µg/L)	Diesel Range Hydrocarbons (µg/L)	Heavy Oil Range Hydrocarbons (µg/L)	MTBE (µg/L)
MW-9	07/09/07	451.75	10.83	440.92	0.00	—	—	—	—	—	—	—	—
MW-9	07/28/07	451.75	11.02	440.73	0.00	<0.500	<0.500	<0.500	<1.00	<50.0	<248	<495	—
MW-9	10/01/07	451.75	14.07	437.68	0.00	5.52	<1.00	<1.00	<3.00	299	174 f.g	<111	—
MW-9	01/10/08	451.75	9.76	441.99	0.00	<0.500	<0.500	<0.500	<3.00	<50.0	<238	<476	—
MW-10	07/09/07	451.43	12.44	438.99	0.00	—	—	—	—	—	—	—	—
MW-10	07/28/07	451.43	12.77	438.66	0.00	299	237	179	615	6,570	307 c	<505	—
MW-10	10/01/07	451.43	14.87	436.56	0.00	1,510	1,210	1,220	2,650	27,100	1,820 g,i	<556	—
MW-10	01/10/08	451.43	10.52	440.91	0.00	316	842	237	604	11,400	<248	<495	—
<b>MTCA Method A Cleanup Level</b>													
						<b>5</b>	<b>700</b>	<b>1,000</b>	<b>1,000</b>	<b>800</b>	<b>500</b>	<b>500</b>	<b>20</b>

**Abbreviations and Notes:**

- Well locations are shown in Figure 2.
- TOC = Top of Casing.
- SPH = Separate Phase Hydrocarbons
- Depth to water from top of well casing.
- B = benzene, E = ethylbenzene, T = toluene, X = total xylenes. Analyzed using EPA Method 8021B.
- Gasoline-range hydrocarbons analyzed using NWTPH-Gx.
- Diesel and heavy-oil range hydrocarbons analyzed using NWTPH-Dx with acidistia gel clean-up
- MTBE = Methyl Tertiary butyl ether. By Method 8260B.
- µg/L = micrograms per liter
- MTCA = Model Toxics Control Act
- a = Due to multiple re-shots required for re-analysis, the aliquot of sample analyzed on the instrument was taken from a VOA vial containing headspace.
- b = Sample container contained headspace.
- c = Results in the diesel organics range are primarily due to overlap from a gasoline-range product.
- d = Groundwater elevation formula adjusted for the presence of SPH; (TOC - DTW)+ (SPHT\*0.80)
- e = Hydrocarbon pattern most closely resembles a blend of gasoline and diesel.
- f = The primary contamination elutes between C8 and C28, which is in the diesel range.
- g = The contamination did not match any standard in our library.
- h = The primary contamination elutes between C8 and C14, which is in the mineral spirits range.
- i = The primary contamination elutes between C8 and C16, which is in the kerosene range.



**TABLE 2**  
**SUMMARY OF GROUNDWATER MONITORING DATA**  
**OXYGENATES**  
6808 196TH STREET SW  
LYNNWOOD, WASHINGTON

Well Number	Date	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)
MW-1	02/15/07	<1.00	54.6	<1.00	<1.00
MW-2	02/15/07	<1.00	<50.0	<1.00	<1.00
MW-3	02/15/07	<100	<5,000	<100	<100
MW-4	02/15/07	<100	<5,000	<100	<100
MW-5	02/15/07	<100	<5,000	<100	<100

**Abbreviations and Notes:**

Well locations are shown in Figure 2.

TAME = Tertiary-amyl methyl ether analyzed by EPA Method 8260B

TBA = Tertiary-butanol analyzed by EPA Method 8260B

DIPE = Di-isopropyl ether analyzed by EPA Method 8260B

ETBE = Ethyl tertiary-butyl ether analyzed by EPA Method 8260B

µg/L = micrograms per liter



**Attachment A**

**Blaine Tech Services, Inc.  
Field Forms**

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>080226-SW</u>	Site: <u>97605410</u>
Sampler: <u>SL</u>	Date: <u>2/26/08</u>
Well I.D.: <u>MW-3</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>      </u>	Depth to Water (DTW): <u>8.40</u>
Depth to Free Product: <u>8.39</u>	Thickness of Free Product (feet): <u>      </u>
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: <del>Bailer</del> <del>Disposable Bailer</del> <del>Positive Air Displacement</del> <del>Electric Submersible</del>	<del>Water</del> <del>Peristaltic</del> <del>Extraction Pump</del> Other: <u>      </u>	Sampling Method: <del>Bailer</del> <del>Disposable Bailer</del> <del>Extraction Port</del> <del>Dedicated Tubing</del> Other: <u>      </u>
--	--	---

_____ (Gals.) X _____ = _____ Gals.   Case Volume            Specified Volumes            Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
						<u>removed &lt; 5ml STH + 1/8 gal H<sub>2</sub>O</u>

Did well dewater? Yes No	Gallons actually evacuated: _____
Sampling Date: _____	Sampling Time: _____
Sample I.D.: _____	Depth to Water: _____
Laboratory: STL SPL Other _____	
Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: _____	
EB I.D. (if applicable): _____ @ _____	Duplicate I.D. (if applicable): _____
Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: _____	
D.O. (if req'd): Pre-purge: _____ mg/L	Post-purge: _____ mg/L
O.R.P. (if req'd): Pre-purge: _____ mV	Post-purge: _____ mV

WELL GAUGING DATA

Project # 090726-93 Date 2/26/08 Client Shell

Site 6808 176th St. SW Lynnwood

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or <u>490</u>	Notes
MW-3	1414	2	✓	8.39	0.01		8.40	—	↓	
MW-4	1404	2	✓	9.00	0.03		9.03	—		
MW-5	1354	2	✓	7.85	0.17		8.02	—		

### SHELL WELL MONITORING DATA SHEET

BTS #: <u>080226-SW</u>	Site: <u>97605410</u>
Sampler: <u>SL</u>	Date: <u>2/26/08</u>
Well I.D.: <u>MW-4</u>	Well Diameter <u>2</u> 3 4 6 8
Total Well Depth (TD): <u>      </u>	Depth to Water (DTW): <u>9.03</u>
Depth to Free Product: <u>9.00</u>	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method:  Bailer       Disposable Bailer       Positive Air Displacement       Electric Submersible

Waterria  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method:  Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

Other: \_\_\_\_\_

_____ (Gals.) X _____ = _____ Gals. 1 Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
	<u>removed</u>		<u>5ml SPL +</u>		<u>1/2 gal</u>	<u>H<sub>2</sub>O</u>

Did well dewater?    Yes    No      Gallons actually evacuated: \_\_\_\_\_

Sampling Date: \_\_\_\_\_      Sampling Time: \_\_\_\_\_      Depth to Water: \_\_\_\_\_

Sample I.D.: \_\_\_\_\_      Laboratory: STL    SPL    Other \_\_\_\_\_

Analyzed for:    TPH-G    BTEX    MTBE    TPH-D    Oxy's    1,2-DCA    EDB    Other: \_\_\_\_\_

EB I.D. (if applicable): \_\_\_\_\_ @ \_\_\_\_\_ Time      Duplicate I.D. (if applicable): \_\_\_\_\_

Analyzed for:    TPH-G    BTEX    MTBE    TPH-D    Oxy's    1,2-DCA    EDB    Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

### SHELL WELL MONITORING DATA SHEET

BTS #: <u>080226-SW</u>	Site: <u>97605410</u>
Sampler: <u>SL</u>	Date: <u>2/26/08</u>
Well I.D.: <u>MW-5</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>—</u>	Depth to Water (DTW): <u>8.02</u>
Depth to Free Product: <u>7.85</u>	Thickness of Free Product (feet): <u>0.17</u>
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method:  Bailer  Disposable Bailer  Positive Air Displacement  Electric Submersible

Watera  Peristaltic  Extraction Pump  Other \_\_\_\_\_

Sampling Method:  Bailer  Disposable Bailer  Extraction Port  Dedicated Tubing

Other: \_\_\_\_\_

\_\_\_\_\_ (Gals.) X \_\_\_\_\_ = \_\_\_\_\_ Gals.

1 Case Volume      Specified Volumes      Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
						<u>removed ~50ml SPH + 1/4 gal H<sub>2</sub>O</u>

Did well dewater?    Yes    No      Gallons actually evacuated: \_\_\_\_\_

Sampling Date: \_\_\_\_\_      Sampling Time: \_\_\_\_\_      Depth to Water: \_\_\_\_\_

Sample I.D.: \_\_\_\_\_      Laboratory:    STL    SPL    Other \_\_\_\_\_

Analyzed for:    TPH-G    BTEX    MTBE    TPH-D    Oxy's    1,2-DCA    EDB    Other: \_\_\_\_\_

EB I.D. (if applicable): \_\_\_\_\_ @ \_\_\_\_\_ Time      Duplicate I.D. (if applicable): \_\_\_\_\_

Analyzed for:    TPH-G    BTEX    MTBE    TPH-D    Oxy's    1,2-DCA    EDB    Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

# WELLHEAD INSPECTION FORM

Client: Shell Site: 97605410 Date: 2/26/08  
 Job #: 080726543 Technician: SL Page: 1 of 1

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency										Notes <small>(list if cap or lock replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)</small>			
		Cap non-Functional	Lock non-Functional	Lock missing	Seals missing (list qty.)	Tubs stripped (list qty.)	Tubs broken (list qty.)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard		Below Grade	Other (explain in notes)	Well Not Inspected (explain in notes)
MW-3															labeled as MW-2
MW-4	X														
MW-5	X														

Notes: \_\_\_\_\_



Order #	6808	Region Address	1964 S. SW Lynnwood	Work Order Number	080226-513	Date:	2/26/08
Problem Work Description:	Bris S. Lane page 3 well for split bar						
<input checked="" type="checkbox"/> SAFETY VEST <input checked="" type="checkbox"/> SAFETY GLASSES <input checked="" type="checkbox"/> SHOES A BOOTS <input checked="" type="checkbox"/> SAFETY GLASSES/OCCLUSIVES <input type="checkbox"/> HEARING PROTECTION <input type="checkbox"/> WELDING PPE <input type="checkbox"/> RESPIRATOR <input type="checkbox"/> OTHER							
Work documentation in quotations Lifting: <input type="checkbox"/> No lift required      Medium Lift: <input type="checkbox"/> Medium Lift, <input type="checkbox"/> No lift required      Heavy Lift: <input type="checkbox"/> Heavy Lift required & appropriate check list completed (see below) Example of Lifting/ Medium Lift: <input type="checkbox"/> Work at height: in or over on open site - on closed shed/ no OSHA present <input type="checkbox"/> Work in confined space (e.g. tank, manhole or deep manhole entry) <input type="checkbox"/> Touching or extension related to underground tank/ product line <input type="checkbox"/> Hot work with use of product or vapor (e.g. fire) <input type="checkbox"/> Hot work with use of product or vapor (e.g. fire) <input type="checkbox"/> Heavy lifting <input type="checkbox"/> LDD system engaging, installation or maintenance							
This form must be completed for each job and updated and re-signed if circumstances change or additional hazards identified.							
<b>SIGN IN</b> Contracting representative name: S. Lane Signature: <i>S. Lane</i> Date: <i>2/26</i> Title: <i>INACTIVE SITE</i>				<b>SIGN OUT</b> Contracting representative name: <i>S. Lane</i> Signature: <i>S. Lane</i> Date: <i>2/26</i> Title: <i>INACTIVE SITE</i>			
GENERAL SAFETY CHECKS: <input type="checkbox"/> Has the work area been laid out and safe? <input type="checkbox"/> Are all personnel aware of status of work including remaining hazards? <input type="checkbox"/> Are drawings or equipment documented and commensurate? <input type="checkbox"/> All incidents, near incidents, unsafe situations reported? <input type="checkbox"/> Other:							

UNIT 1: THE HISTORY OF THE UNITED STATES

1.1	1776	Declaration of Independence
1.2	1787	Constitution
1.3	1791	Bill of Rights
1.4	1800	Jefferson's Presidency
1.5	1820	Missouri Compromise
1.6	1850	Compromise of 1850
1.7	1860	Lincoln's Presidency
1.8	1863	Emancipation Proclamation
1.9	1865	13th Amendment
1.10	1870	Reconstruction

The following table shows the dates of the major events in the history of the United States. The dates are given in the first column, and the events are given in the second column.

Year	Event
1776	Declaration of Independence
1787	Constitution
1791	Bill of Rights
1800	Jefferson's Presidency
1820	Missouri Compromise
1850	Compromise of 1850
1860	Lincoln's Presidency
1863	Emancipation Proclamation
1865	13th Amendment
1870	Reconstruction

The following table shows the dates of the major events in the history of the United States. The dates are given in the first column, and the events are given in the second column.

### SHELL WELL MONITORING DATA SHEET

BTS #: <u>080121-BM1</u>	Site: <u>97605410</u>
Sampler: <u>BM</u>	Date: <u>1/21/08</u>
Well I.D.: <u>11/5</u>	Well Diameter: <u>(2)</u> 3 4 6 8 <u>   </u>
Total Well Depth (TD): <u>   </u>	Depth to Water (DTW): <u>8.00</u>
Depth to Free Product: <u>7.80</u>	Thickness of Free Product (feet): <u>0.20</u>
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd):            YSI            HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

- |  |  |   |
|--|--|---|
| Purge Method: Bailer<br>Disposable Bailer<br>Positive Air Displacement<br>Electric Submersible | Waterra<br>Peristaltic<br>Extraction Pump<br>Other _____ | Sampling Method: Bailer<br>Disposable Bailer<br>Extraction Port<br>Dedicated Tubing<br>Other: _____ |
|--|--|---|

_____ (Gals.) X _____ = _____ Gals.   Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	Gals. Removed	Observations
						<i>Remaind approx 20 ml SPH + 1 gal H<sub>2</sub>O</i>

Did well dewater? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Gallons actually evacuated: _____	
Sampling Date: _____	Sampling Time: _____	Depth to Water: _____	
Sample I.D.: _____	Laboratory:    STL    SPL    Other _____		
Analyzed for:    TPH-G    BTEX    MTBE    TPH-D    Oxy's    1,2-DCA    EDB    Other: _____			
EB I.D. (if applicable): _____ @ _____ Time	Duplicate I.D. (if applicable): _____		
Analyzed for:    TPH-G    BTEX    MTBE    TPH-D    Oxy's    1,2-DCA    EDB    Other: _____			
D.O. (if req'd):	Pre-purge: _____	mg/L	Post-purge: _____ mg/L
O.R.P. (if req'd):	Pre-purge: _____	mV	Post-purge: _____ mV

### SHELL WELL MONITORING DATA SHEET

BTS #: <u>080121-BM1</u>	Site: <u>97605410</u>
Sampler: <u>BM</u>	Date: <u>1/21/08</u>
Well I.D.: <u>HW-4</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>—</u>	Depth to Water (DTW): <u>8.87</u>
Depth to Free Product: <u>8.84</u>	Thickness of Free Product (feet): <u>0.03</u>
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): <u>YSI</u> <u>HACH</u>
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method:  Bailer  Disposable Bailer  Positive Air Displacement  Electric Submersible

Water:  Peristaltic  Extraction Pump  Other \_\_\_\_\_

Sampling Method:  Bailer  Disposable Bailer  Extraction Port  Dedicated Tubing

Other: \_\_\_\_\_

_____ (Gals.) X _____ = _____ Gals.   Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
						<u>Removal approx 5 ml SPH + 1/4 gal H<sub>2</sub>O</u>

Did well dewater?  Yes  No      Gallons actually evacuated: \_\_\_\_\_

Sampling Date: \_\_\_\_\_ Sampling Time: \_\_\_\_\_ Depth to Water: \_\_\_\_\_

Sample I.D.: \_\_\_\_\_ Laboratory: STL SPL Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

EB I.D. (if applicable): \_\_\_\_\_ @ \_\_\_\_\_ Time      Duplicate I.D. (if applicable): \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

### SHELL WELL MONITORING DATA SHEET

BTS #: 080121-BM1	Site: 97605410
Sampler: BM	Date: 1/21/08
Well I.D.: MW-3	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): _____	Depth to Water (DTW): 8.27
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method:  Bailer                                       Waterra  
 Disposable Bailer                                       Peristaltic  
 Positive Air Displacement                                       Extraction Pump  
 Electric Submersible                                       Other \_\_\_\_\_

Sampling Method:                                       Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
Other: \_\_\_\_\_

_____ (Gals.) X _____	=	_____ Gals.	
1 Case Volume		Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	Gals. Removed	Observations
						No SPH detected w/ I.P. or Disp. bailer

Did well dewater?	Yes	No	Gallons actually evacuated: _____
Sampling Date: _____	Sampling Time: _____	Depth to Water: _____	
Sample I.D.: _____	Laboratory: STL SPL Other _____		
Analyzed for: _____	TPH-G BTEX MTBE TPH-D Oxy's I,2-DCA EDB Other: _____		
EB I.D. (if applicable): _____	@ _____ Time	Duplicate I.D. (if applicable): _____	
Analyzed for: _____	TPH-G BTEX MTBE TPH-D Oxy's I,2-DCA EDB Other: _____		
D.O. (if req'd):	Pre-purge: _____	mg/L	Post-purge: _____ mg/L
O.R.P. (if req'd):	Pre-purge: _____	mV	Post-purge: _____ mV

### WELL GAUGING DATA

Project # 080121-BM1 Date 1/21/08 Client Shell

Site 6808 196th Lynnwood

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-3	1405	2	No SPH detected				8.27	—	TOC	
MW-4	1410	2		8.84	0.03		8.87	—	I	
MW-5	1410	2		7.80	0.20		8.00	—	I	

# WELLHEAD INSPECTION FORM

Client: Shell Site: 08008 19th St S.W. Lynnwood Date: 1/21/08  
Job #: 080121-BM1 Technician: BM Page \_\_\_ of \_\_\_

Well ID	Well Inspected - No Corrective Action Required	Check Indicate deficiency											Well Not Inspected (explain in notes)	Notes (if cap or lock replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)
		Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty.)	Tags stripped (list qty.)	Tags broken (list qty.)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade		
MW-3			X											labeled as MW-2
MW-4			X											
MW-5			X											

Notes: \_\_\_\_\_

SWATH WITH TOP-BOTTOM DATA

TIME	DEPTH	SWATH	DEPTH	SWATH
00:00	10	10	10	10
00:05	10	10	10	10
00:10	10	10	10	10
00:15	10	10	10	10
00:20	10	10	10	10
00:25	10	10	10	10
00:30	10	10	10	10
00:35	10	10	10	10
00:40	10	10	10	10
00:45	10	10	10	10
00:50	10	10	10	10
00:55	10	10	10	10
01:00	10	10	10	10

SWATH DATA FROM 00:00 TO 01:00  
 DEPTH: 10 METERS  
 SWATH: 10 METERS  
 DATA POINTS: 60

TIME	DEPTH	SWATH	DEPTH	SWATH
01:05	10	10	10	10
01:10	10	10	10	10
01:15	10	10	10	10
01:20	10	10	10	10
01:25	10	10	10	10
01:30	10	10	10	10
01:35	10	10	10	10
01:40	10	10	10	10
01:45	10	10	10	10
01:50	10	10	10	10
01:55	10	10	10	10
02:00	10	10	10	10

SWATH DATA FROM 01:05 TO 02:00  
 DEPTH: 10 METERS  
 SWATH: 10 METERS  
 DATA POINTS: 60



## SHELL WELL MONITORING DATA SHEET

BTS #: <u>080114-P44</u>	Site: <u>97605410</u>
Sampler: <u>D. Koskela</u>	Date: <u>1/14/08</u>
Well I.D.: <u>MW-5</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>—</u>	Depth to Water (DTW): <u>8.48</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(FVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible

Waterra  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method: Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other: \_\_\_\_\_

\_\_\_\_\_ (Gals.) X \_\_\_\_\_ = \_\_\_\_\_ Gals.  
 1 Case Volume      Specified Volumes      Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
						<u>No Product Detected</u>
						<u>Green / Odor</u>

Did well dewater?    Yes    No                      Gallons actually evacuated: \_\_\_\_\_

Sampling Date: N/A                      Sampling Time: \_\_\_\_\_                      Depth to Water: \_\_\_\_\_

Sample I.D.: \_\_\_\_\_                      Laboratory:    STL    SPL    Other \_\_\_\_\_

Analyzed for:    ~~TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other:~~

EB I.D. (if applicable): \_\_\_\_\_ @ \_\_\_\_\_ Time                      Duplicate I.D. (if applicable): \_\_\_\_\_

Analyzed for:    ~~TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other:~~

D.O. (if req'd):	Pre-purge:	_____ mg/L	Post-purge:	_____ mg/L
O.R.P. (if req'd):	Pre-purge:	_____ mV	Post-purge:	_____ mV

## SHELL WELL MONITORING DATA SHEET

BTS #: 080114-PW4	Site: 97605410
Sampler: D. Koskela	Date: 1/14/08
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8
Total Well Depth (TD): —	Depth to Water (DTW): 9.23
Depth to Free Product: 9.21	Thickness of Free Product (feet): 0.02
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible

Water  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method: Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other: \_\_\_\_\_

$\frac{\text{--- (Gals.)} \times \text{---}}{\text{Specified Volumes}} = \text{--- Gals.}$ Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
						Bailed 5PH
						Removed Approx 10mL

Did well dewater? Yes No      Gallons actually evacuated: \_\_\_\_\_

Sampling Date: N/A      Sampling Time: \_\_\_\_\_      Depth to Water: \_\_\_\_\_

Sample I.D.: \_\_\_\_\_      Laboratory: STL SPL Other \_\_\_\_\_

Analyzed for: ~~TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other:~~

EB I.D. (if applicable): @ \_\_\_\_\_      Duplicate I.D. (if applicable): \_\_\_\_\_

Analyzed for: ~~TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other:~~

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## SHELL WELL MONITORING DATA SHEET

BTS #: 080114-PL4	Site: 97605410
Sampler: D. Koskela	Date: 1/14/08
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8
Total Well Depth (TD): -	Depth to Water (DTW): 9.06
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (FVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer       Disposable Bailer      Positive Air Displacement      Electric Submersible

Waters: Peristaltic      Extraction Pump      Other \_\_\_\_\_

Sampling Method: Bailer      Disposable Bailer      Extraction Port      Dedicated Tubing

Other: \_\_\_\_\_

$\frac{\text{--- (Gals.)} \times \text{---}}{\text{Specified Volumes}} = \text{--- Gals.}$	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														
1 Case Volume	Calculated Volume																

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
						Heavy Slicky Strong Odor

Did well dewater?    Yes    No      Gallons actually evacuated: \_\_\_\_\_

Sampling Date: N/A      Sampling Time: \_\_\_\_\_      Depth to Water: \_\_\_\_\_

Sample I.D.: \_\_\_\_\_      Laboratory: STL    SPL    Other \_\_\_\_\_

Analyzed for: ~~TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other:~~

EB I.D. (if applicable): \_\_\_\_\_ @ \_\_\_\_\_ Time      Duplicate I.D. (if applicable): \_\_\_\_\_

Analyzed for: ~~TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other:~~

D.O. (if req'd):    Pre-purge: \_\_\_\_\_ mg/L      Post-purge: \_\_\_\_\_ mg/L

O.R.P. (if req'd):    Pre-purge: \_\_\_\_\_ mV      Post-purge: \_\_\_\_\_ mV

## WELL GAUGING DATA

Project # 080114: PWH Date 1/14/08 Client Shell

Site 6808 196th St S.W. Lynnwood, WA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-3	1158	2	S/O				9.06	-	TOC	
MW-4	1206	2	S/O	9.21	0.02	Approx 10ml	9.23	-	↓	
MW-5	1213	2	S/O				8.48	-		

\* Visually Confirmed lack  
of product in MW-3, 5 with  
disposable trailer

# WELLHEAD INSPECTION FORM

Client: Shell Site: 6807 196th St, Suite Lynwood Date: 1/14/08

Job #: 080114, DW4 Technician: D. Koblitz Page 1 of 1

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency										Well Not Inspected (explain in notes)	Notes <small>(list if cap or lock replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)</small>		
		Cap non-functional	Lock non-functional	Lock missing	Balls missing (list qty.)	Tabs stripped (list qty.)	Tabs broken (list qty.)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard			Below Grade	Other (explain in notes)
NW-3	X														
NW-4	X														
NW-5	X														

Notes: \_\_\_\_\_

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>080110-DW1</u>	Site: <u>9760 5410</u>
Sampler: <u>D. Koskela</u>	Date: <u>1/10/08</u>
Well I.D.: <u>MW-10</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>20.05</u>	Depth to Water (DTW): <u>10.52</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: ~~Bailer~~  
~~Disposable Bailer~~  
~~Positive Air Displacement~~  
~~Electric Submersible~~

Waterfa  
~~Peristaltic~~  
~~Extraction Pump~~  
 Other \_\_\_\_\_

Sampling Method: ~~Bailer~~  
~~Disposable Bailer~~  
~~Extraction Port~~  
~~Dedicated Tubing~~

Other: \_\_\_\_\_

_____ (Gals.) X _____	= _____	Gals.
1 Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
914	58.1	7.0	470	9	—	

Did well dewater? Yes  No  Gallons actually evacuated: \_\_\_\_\_

Sampling Date: 1/10/08 Sampling Time: 915 Depth to Water: \_\_\_\_\_

Sample I.D.: MW-10 Laboratory: STL SPL Other VA

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

EB I.D. (if applicable): @ \_\_\_\_\_ Duplicate I.D. (if applicable): \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

### SHELL WELL MONITORING DATA SHEET

BTS #: <u>080110, DW1</u>	Site: <u>9760 5410</u>
Sampler: <u>D. Koskela</u>	Date: <u>1/10/08</u>
Well I.D.: <u>MW-9</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>19.95</u>	Depth to Water (DTW): <u>9.76</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method:  Bailer  Disposable Bailer  Positive Air Displacement  Electric Submersible

Waterfa  Peristaltic  Extraction Pump  Other \_\_\_\_\_

Sampling Method:  Bailer  Disposable Bailer  Extraction Port  Dedicated Tubing

Other: \_\_\_\_\_

_____ (Gals.) X _____ = _____ Gals. 1 Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
844	57.6	6.7	477	6	—	

Did well dewater? Yes  No  Gallons actually evacuated: \_\_\_\_\_

Sampling Date: 1/10/08 Sampling Time: 845 Depth to Water: \_\_\_\_\_

Sample I.D.: MW-9 Laboratory: STL SPL Other VA

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

EB I.D. (if applicable): @ \_\_\_\_\_ Time Duplicate I.D. (if applicable): \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>080110 DW1</u>	Site: <u>9760 5410</u>
Sampler: <u>D. Koskela</u>	Date: <u>1/10/08</u>
Well I.D.: <u>MW-8</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>19.20</u>	Depth to Water (DTW): <u>8.16</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer  
~~Disposable Bailer~~  
~~Positive Air Displacement~~  
~~Electric Submersible~~

Waterfa  
~~Peristaltic~~  
~~Extraction Pump~~  
 Other \_\_\_\_\_

Sampling Method: Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

Other: \_\_\_\_\_

_____ (Gals.) X _____	= _____ Gals.
1 Case Volume	Specified Volumes      Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
829	56.9	6.8	646	13	—	

Did well dewater? Yes  No  Gallons actually evacuated: \_\_\_\_\_

Sampling Date: 1/10/08 Sampling Time: 830 Depth to Water: \_\_\_\_\_

Sample I.D.: MW-8 Laboratory: STL SPL Other VA

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

EB I.D. (if applicable): @ \_\_\_\_\_ Duplicate I.D. (if applicable): \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV



### SHELL WELL MONITORING DATA SHEET

BTS #: <u>080110-DW1</u>	Site: <u>976025410</u>
Sampler: <u>D. Koskela</u>	Date: <u>1/10/08</u>
Well I.D.: <u>MW-7</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>19.55</u>	Depth to Water (DTW): <u>7.32</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible

Waterfa  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method: Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other: \_\_\_\_\_

_____ (Gals.) X _____ = _____ Gals. Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
759	58.2	6.16	463	11	—	

Did well dewater? Yes  No  Gallons actually evacuated: \_\_\_\_\_

Sampling Date: 1/10/08 Sampling Time: 800 Depth to Water: \_\_\_\_\_

Sample I.D.: MW-7 Laboratory: STL SPL Other VA

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

EB I.D. (if applicable): @ \_\_\_\_\_ Time Duplicate I.D. (if applicable): \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

### SHELL WELL MONITORING DATA SHEET

BTS #: <u>080110-DW1</u>	Site: <u>9760 5410</u>
Sampler: <u>D. Koskela</u>	Date: <u>1/10/08</u>
Well I.D.: <u>MW-6</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>19.45</u>	Depth to Water (DTW): <u>7.86</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible

Waterfa  
 Peristaltic  
 Extraction Pump  
 Other

Sampling Method: Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

Other:

$\text{--- (Gals.)} \times \text{---} = \text{--- Gals.}$ 1 Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> + 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> + 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> + 0.163														

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
814	58.2	6.9	581	3	—	

Did well dewater? Yes  No  Gallons actually evacuated: —

Sampling Date: 1/10/08 Sampling Time: 815 Depth to Water: —

Sample I.D.: MW-6 Laboratory: STL SPL Other  VA

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

### SHELL WELL MONITORING DATA SHEET

BTS #: <u>080110, DW1</u>	Site: <u>97602 5410</u>
Sampler: <u>D. Koskela</u>	Date: <u>1/10/08</u>
Well I.D.: <u>MW-5</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>-</u>	Depth to Water (DTW): <u>8170</u>
Depth to Free Product:	Thickness of Free Product (feet): <u>0.02</u>
Referenced to: <u>File 8</u> <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method:  Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible

Waterfa  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method:  Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other: \_\_\_\_\_

_____ (Gals.) X _____ = _____ Gals. 1 Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
		<u>Bailed</u>	<u>SPH</u>		-	
		<u>Removed</u>	<u>approx</u>		<u>10ml</u>	

Did well dewater? Yes  No  Gallons actually evacuated: \_\_\_\_\_

Sampling Date: 1/10/08 Sampling Time: \_\_\_\_\_ Depth to Water: \_\_\_\_\_

Sample I.D.: MW-5 Laboratory: STL SPL Other VA

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

EB I.D. (if applicable): \_\_\_\_\_ @ \_\_\_\_\_ Time Duplicate I.D. (if applicable): \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

D.O. (if req'd): Pre-purge: \_\_\_\_\_ mg/L Post-purge: \_\_\_\_\_ mg/L

O.R.P. (if req'd): Pre-purge: \_\_\_\_\_ mV Post-purge: \_\_\_\_\_ mV

### SHELL WELL MONITORING DATA SHEET

BTS #: <u>080110-DW1</u>	Site: <u>9760 5410</u>
Sampler: <u>D. Koskela</u>	Date: <u>1/10/08</u>
Well I.D.: <u>MW-4</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>—</u>	Depth to Water (DTW): <u>9.61</u>
Depth to Free Product: <u>9.58</u>	Thickness of Free Product (feet): <u>0.03</u>
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer  Disposable Bailer  Positive Air Displacement  Electric Submersible

Waterfa  Peristaltic  Extraction Pump  Other: —

Sampling Method: Bailer  Disposable Bailer  Extraction Port  Dedicated Tubing  Other: —

$\frac{\text{— (Gals.)} \times \text{—}}{\text{Specified Volumes}} = \text{— Gals.}$ Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
					—	Bailed 5FH
						Remained approx 10dwl

Did well dewater? Yes  No

Gallons actually evacuated: —

Sampling Date: 1/10/08 Sampling Time: — Depth to Water: —

Sample I.D.: MW-4 Laboratory: STL SPL Other VA

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: —

EB I.D. (if applicable): — Duplicate I.D. (if applicable): —

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: —

D.O. (if req'd): Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd): Pre-purge:	mV	Post-purge:	mV

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>080110-DW1</u>	Site: <u>9760 5410</u>
Sampler: <u>D. Koskela</u>	Date: <u>1/10/08</u>
Well I.D.: <u>MW-3</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>-</u>	Depth to Water (DTW): <u>9.34</u>
Depth to Free Product: <u>9.32</u>	Thickness of Free Product (feet): <u>0.02</u>
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method:  Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible

Waterfa  
 Peristaltic  
 Extraction Pump  
 Other

Sampling Method:  Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

Other: \_\_\_\_\_

_____ (Gals.) X _____	= _____ Gals.	
1 Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
	<u>Bailed</u>		<u>5PH</u>		-	
		<u>Remained</u>		<u>Approx</u>	<u>10ml</u>	

Did well dewater? Yes  No  Gallons actually evacuated: \_\_\_\_\_

Sampling Date: 1/10/08 Sampling Time: \_\_\_\_\_ Depth to Water: -

Sample I.D.: MW-3 Laboratory: STL SPL Other VA

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

EB I.D. (if applicable): @ \_\_\_\_\_ Duplicate I.D. (if applicable): \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

D.O. (if req'd): Pre-purge: _____ mg/L	Post-purge: _____ mg/L
O.R.P. (if req'd): Pre-purge: _____ mV	Post-purge: _____ mV

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>080110-DW1</u>	Site: <u>9760 5410</u>
Sampler: <u>D. Koskela</u>	Date: <u>1/10/08</u>
Well I.D.: <u>MW-2</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>17.40</u>	Depth to Water (DTW): <u>7.88</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible

Waterfa  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method: Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other: \_\_\_\_\_

_____ (Gals.) X _____	= _____ Gals.
I Case Volume	Specified Volumes = Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
929	56.8	6.5	283	14	—	

Did well dewater? Yes  No  Gallons actually evacuated: \_\_\_\_\_

Sampling Date: 1/10/08 Sampling Time: 930 Depth to Water: \_\_\_\_\_

Sample I.D.: MW-2 Laboratory: STL SPL Other VA

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

EB I.D. (if applicable): @ \_\_\_\_\_ Time Duplicate I.D. (if applicable): \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>080110-DW1</u>	Site: <u>9760 5410</u>
Sampler: <u>D. Koskela</u>	Date: <u>1/10/08</u>
Well I.D.: <u>MW-1</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>24.85</u>	Depth to Water (DTW): <u>9.43</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible

Waterfa  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method: Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other: \_\_\_\_\_

_____ (Gals.) X _____	=	_____ Gals.
1 Case Volume		Specified Volumes      Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
859	57.2	6.8	546	4	—	

Did well dewater? Yes  No  Gallons actually evacuated: \_\_\_\_\_

Sampling Date: 1/10/08 Sampling Time: 900 Depth to Water: \_\_\_\_\_

Sample I.D.: MW-1 Laboratory: STL SPL Other VA

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

EB I.D. (if applicable): @ \_\_\_\_\_ Time Duplicate I.D. (if applicable): \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxy's 1,2-DCA EDB Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

### WELL GAUGING DATA

Project # 080110-TW Date 1/10/08 Client Shell

Site 6808 196<sup>th</sup> St. Lynnwood, WA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-1	867	2					9.43	24.85	TOC	
MW-2	927	2					7.88	17.40		
MW-3	944	2	5/10	9.32	0.02	Approx 10ml	9.34	-		
MW-4	952	2	5/10	9.58	0.03	Approx 10ml	9.61	-		
MW-5	957	2	5/10	8.68	0.02	Approx 10ml	8.70	-		
MW-6	812	2					7.86	19.45		
MW-7	758	2					7.32	19.55		
MW-8	827	2	5/10				8.16	19.20		
MW-9	842	2					9.76	19.95		
MW-10	912	2					10.57	20.05		



# WELLHEAD INSPECTION FORM

Client: Blue Site: 6808 196<sup>th</sup> St, Lynnwood, WA Date: 1/10/08  
 Job #: 080110: TUL Technician: D. Koskela Page 1 of 1

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency										Well Not Inspected (explain in notes)	Notes <small>(list if cap or lock replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)</small>		
		Cap non-functional	Lock non-functional	Lock missing	Bots missing (list qty.)	Tube stripped (list qty.)	Tube broken (list qty.)	Annular seal incomplete	Apron damaged	Flm / Lid broken	Trip Hazard			Below Grade	Other (explain in notes)
MW-1	Q														
MW-2	X														
MW-3	X														
MW-4	X														
MW-5	Q														
MW-6	Q														
MW-7	X														
MW-8	K														
MW-9	Q														
MW-10	Q														

Notes: \_\_\_\_\_

Job Clearance Form

<p>System Address: 4100 S 110th Ave, Suite 100, Lincoln, NE 68504</p> <p>Contract Number: 030110-011</p> <p>Work Order Number: 1110108</p> <p>Date: 1/10/08</p> <p>Start Time: 7:45</p> <p>End Time: 10:30</p> <p>Problem/Work Description: Ground water monitoring</p> <p>Return Call: yes/no</p> <p>Damage Claims: yes/no</p>	<p>Work Order Number: 030110-011</p> <p>Date: 1/10/08</p> <p>Start Time: 7:45</p> <p>End Time: 10:30</p> <p>Problem/Work Description: Ground water monitoring</p> <p>Return Call: yes/no</p> <p>Damage Claims: yes/no</p>	<p>Contractor representative name: D. Koskela</p> <p>Signature: <i>[Signature]</i></p> <p>Contractor representative name: J. Koskela</p> <p>Signature: <i>[Signature]</i></p>
<p><b>SIGN IN</b></p> <p>Operating sites to be signed by the Site Representative only</p> <p>Non-operating sites to be signed by Contractor Representative only</p> <p><b>GENERAL SAFETY CHECKS</b></p> <ul style="list-style-type: none"> <li>Have all site personnel been informed?</li> <li>Has LUL delivery service been in format?</li> <li>Is LUL delivery due?</li> <li>Have isolation procedures been agreed - lock out/tag out?</li> <li>Are work areas cordoned off to protect workers, site staff &amp; public?</li> <li>Clear.</li> </ul>		
<p><b>SIGN OUT</b></p> <p>This form must be completed for sign in and updated and re-signed if circumstances change or additional hazards identified.</p> <p><b>GENERAL SAFETY CHECKS</b></p> <ul style="list-style-type: none"> <li>Has the work area been lock tag and out?</li> <li>Are all personnel aware of status of work including remaining location?</li> <li>Are changes to equipment documented and communicated?</li> <li>All incidents, near incidents, unsafe situations reported?</li> <li>Other:</li> </ul>		
<p><b>Work documentation requirements</b></p> <p>Labels/Tags - no JSA required</p> <p>Labels/Tags/Labels/Blk. tags - JSA required</p> <p>Labels/Blk. - JSA required &amp; appropriate sheet to be completed (see below)</p> <p>Examples of Labels/Blk. tags:</p> <ul style="list-style-type: none"> <li>Works at heights in all cases on open sites - on closed sites if no JSA present</li> <li>Terminology or excavation related to underground tank / product line</li> <li>Heavy lifting</li> <li>Work in confined spaces (e.g. tank, intruder or deep manhole entry)</li> <li>Hot work with risk of product or vapor ignition</li> <li>LUL system bypassing, isolation or maintenance</li> </ul>		
<p><b>SAFETY VEST</b> <input checked="" type="checkbox"/> <b>PROTECTIVE CLOTHING</b> <input checked="" type="checkbox"/></p> <p><b>HARD HAT</b> <input type="checkbox"/> <b>SHOES &amp; BOOTS</b> <input checked="" type="checkbox"/></p> <p><b>GLOVES</b> <input checked="" type="checkbox"/> <b>SAFETY GLASSES/GOOGLES</b> <input checked="" type="checkbox"/></p> <p><b>HEARING PROTECTION</b> <input type="checkbox"/> <b>WELDING PPE</b> <input type="checkbox"/></p> <p><b>RESPIRATOR</b> <input type="checkbox"/> <b>OTHER</b> <input type="checkbox"/></p>		

The contractor through its authorized representative shall sign, is and be solely responsible for all job clearance forms and the obligations existing there under applicable to the work. This form covers important requirements and is not intended to release the contractor from safety performing the work in accordance with all applicable laws and regulations. The Site Representative may require the contractor to stop work if it appears that the contractor or any of its workers are failing to comply with the requirements of the form or other applicable safety requirements.

# SHELL Chain Of Custody Record



- LAB:
- TA - Seattle, Washington
  - TA - Portland, Oregon
  - TA - Sacramento, California
  - TA - Nashville, Tennessee
  - CalSciencs
  - Other

NAME OF PERSON TO BILL: Carol Campaigna

ENVIRONMENTAL SERVICES  
 NETWORK DEV / FE  
 COMPLIANCE

CHECK BOX TO VERIFY IF NO INCIDENT # APPLIES  
 BILL CONSULTANT  
 RMT/CRMT

INCIDENT # YES ONLY

9 7 6 0 5 4 1 0

DATE: 01/10/08

PAGE: 1 of 1

SAMPLING COMPANY:

Blaine Tech Services

ADDRESS: 1880 Rogers Avenue, San Jose, CA 95112

PROJECT CONTACT (Name/Title or Fax Project Tel): Jason Brown

TELEPHONE: 916-825-2913 x102

FAX: 916-825-2891

EMAIL: jbrown@blaintech.com

TAT (STD IS 10 BUSINESS DAYS / RUSH IS CALENDAR DAYS)  
 STD  5 DAY  3 DAY  2 DAY  24 HOURS  ON WEEKEND

ED NOT NEEDED  
 SHELL CONTRACT RATE APPLIES  
 STATE REIMB RATE APPLIES  
 RECEIPT VERIFICATION REQUESTED

SITE ADDRESS: Street and city

8808 196th Street SW, Lynnwood WA NA

PHONE NO: (425) 212-6111

CONSULTANT PROJECT REF: 080110-PK1

STATE: WA

ZIP: 98011

EMAIL: jbrown@blaintech.com

LAB / USE ONLY

*P. Koskela*

## REQUESTED ANALYSIS

cc Brenda Carter [brcarter@croworld.com] on pdf report

LA - RWQCS REPORT FORMAT  USE AGENCY:  
 SPECIAL INSTRUCTIONS OR NOTES:

Field Sample Identification	SAMPLING DATE	TIME	MATRIX	NO. OF CONT.
MW-1	1/10	8:00	W	8
MW-2	1/10	8:30	W	1
MW-6	1/10	8:15	W	1
MW-7	1/10	8:00	W	1
MW-8	1/10	8:30	W	1
MW-9	1/10	8:45	W	1
MW-10	1/10	9:15	W	1

ANALYSIS	NW TPH-DX	NW TPH-OX	BTEX (8260B)	8 Oxygenates (8260B)	(MTBE, TBA, DPE, TAME, STB)	MTBE (8260B)	TBA (8260B)	DPE (8260B)	TAME (8260B)	ETBE (8260B)	1,2 DCA (8260B)	BDB (8011B)	Ethanol (8260B)	Methanol (8015B)	PAH's (8270 SUM)	CPAH's (8270 SUM)
NW TPH-DX will be get clean up	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FIELD NOTES:																
CONTAINER PRESERVATIVE or PFD Readings or Laboratory Notes																
TEMPERATURE ON RECEIPT C°																

Requested by: (Signature)

*P. Koskela*

Requested by: (Signature)

Requested by: (Signature)

Date:

Date:

Date:

**Attachment B**  
**Laboratory Analysis Report**

THE LEADER IN ENVIRONMENTAL TESTING

Amended Report

April 10, 2008

Justin Foslien  
Conestoga-Rovers & Associates - Everett  
526 Commerce Center Building B - 1420 80th Street SW, Suite A  
Everett, WA 98203

RE: Shell - 6808 196th Street SW, Lynnwood

Enclosed are the results of analyses for samples received by the laboratory on 01/11/08 17:30.  
The following list is a summary of the Work Orders contained in this report, generated on 04/10/08  
15:15.

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

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
BRA0137	Shell - 6808 196th Street SW,	97605410

TestAmerica Seattle



Kate Haney, Project Manager

Amended Report

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



**Amended Report**

**Conestoga-Rovers & Associates - Everett**

526 Commerce Center Building B - 1420 80th Street SW, Suite  
Everett, WA 98203

Project Name: **Shell - 6808 196th Street SW, Lynnwood**

Project Number: 97605410

Project Manager: Justin Foslien

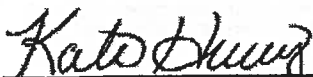
Report Created:

04/10/08 15:15

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	BRA0137-01	Water	01/10/08 09:00	01/11/08 17:30
MW-2	BRA0137-02	Water	01/10/08 09:30	01/11/08 17:30
MW-6	BRA0137-03	Water	01/10/08 08:15	01/11/08 17:30
MW-7	BRA0137-04	Water	01/10/08 08:00	01/11/08 17:30
MW-8	BRA0137-05	Water	01/10/08 08:30	01/11/08 17:30
MW-9	BRA0137-06	Water	01/10/08 08:45	01/11/08 17:30
MW-10	BRA0137-07	Water	01/10/08 09:15	01/11/08 17:30

TestAmerica Seattle



Kate Haney, Project Manager

**Amended Report**

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



**Amended Report**

**Conestoga-Rovers & Associates - Everett**

526 Commerce Center Building B - 1420 80th Street SW, Suite  
Everett, WA 98203

Project Name:

**Shell - 6808 196th Street SW, Lynnwood**

Project Number:

97605410

Project Manager:

Justin Foslien

Report Created:

04/10/08 15:15

**Analytical Case Narrative**

TestAmerica - Seattle, WA

**BRA0137**

AMENDED REPORT

The 8260 BTEX results for samples -05 and -06 were reported incorrectly in the initial report due to being switched on the autosampler. The remaining vials without headspace were re-analyzed outside the method established hold time and confirmed that the samples had been switched.

TestAmerica Seattle



Kate Haney, Project Manager

**Amended Report**

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



**Amended Report**

<b>Conestoga-Rovers &amp; Associates - Everett</b> 526 Commerce Center Building B - 1420 80th Street SW, Suite Everett, WA 98203	<b>Project Name:</b> Shell - 6808 196th Street SW, Lynnwood <b>Project Number:</b> 97605410 <b>Project Manager:</b> Justin Foslien	<b>Report Created:</b> 04/10/08 15:15
--	--	--

**Volatile Petroleum Products by NWTPH-Gx**  
TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>BRA0137-01 (MW-1)</b>		<b>Water</b>		<b>Sampled: 01/10/08 09:00</b>						
Gasoline Range Hydrocarbons	NWTPH-Gx	73000	—	5000	ug/l	100x	8A16019	01/16/08 12:30	01/17/08 09:40	
Surrogate(s): 4-BFB (FID)		83.3%		58 - 144 %	1x					"
<b>BRA0137-02 (MW-2)</b>		<b>Water</b>		<b>Sampled: 01/10/08 09:30</b>						
Gasoline Range Hydrocarbons	NWTPH-Gx	5000	—	500	ug/l	10x	8A16019	01/16/08 12:30	01/17/08 09:09	
Surrogate(s): 4-BFB (FID)		84.0%		58 - 144 %	1x					"
<b>BRA0137-03 (MW-6)</b>		<b>Water</b>		<b>Sampled: 01/10/08 08:15</b>						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	—	50.0	ug/l	1x	8A16019	01/16/08 12:30	01/16/08 23:18	
Surrogate(s): 4-BFB (FID)		84.7%		58 - 144 %	"					"
<b>BRA0137-04 (MW-7)</b>		<b>Water</b>		<b>Sampled: 01/10/08 08:00</b>						
Gasoline Range Hydrocarbons	NWTPH-Gx	51.2	—	50.0	ug/l	1x	8A16019	01/16/08 12:30	01/16/08 18:01	
Surrogate(s): 4-BFB (FID)		89.8%		58 - 144 %	"					"
<b>BRA0137-05 (MW-8)</b>		<b>Water</b>		<b>Sampled: 01/10/08 08:30</b>						
Gasoline Range Hydrocarbons	NWTPH-Gx	202000	—	10000	ug/l	200x	8A16019	01/16/08 12:30	01/17/08 07:14	
Surrogate(s): 4-BFB (FID)		86.4%		58 - 144 %	1x					"
<b>BRA0137-06 (MW-9)</b>		<b>Water</b>		<b>Sampled: 01/10/08 08:45</b>						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	—	50.0	ug/l	1x	8A16019	01/16/08 12:30	01/16/08 19:04	
Surrogate(s): 4-BFB (FID)		86.6%		58 - 144 %	"					"
<b>BRA0137-07 (MW-10)</b>		<b>Water</b>		<b>Sampled: 01/10/08 09:15</b>						
Gasoline Range Hydrocarbons	NWTPH-Gx	11400	—	500	ug/l	10x	8A16019	01/16/08 12:30	01/17/08 06:42	
Surrogate(s): 4-BFB (FID)		91.3%		58 - 144 %	1x					"

TestAmerica Seattle

*Kate Haney*

Kate Haney, Project Manager

**Amended Report**

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.





**Amended Report**

**Conestoga-Rovers & Associates - Everett**

526 Commerce Center Building B - 1420 80th Street SW, Suite  
 Everett, WA 98203

Project Name: **Shell - 6808 196th Street SW, Lynnwood**  
 Project Number: 97605410  
 Project Manager: Justin Foslien

Report Created:  
 04/10/08 15:15

**Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up**  
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>BRA0137-01 (MW-1)</b>		<b>Water</b>		<b>Sampled: 01/10/08 09:00</b>						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.243	mg/l	1x	8A14017	01/14/08 09:23	01/17/08 18:29	
Lube Oil Range Hydrocarbons	"	ND	---	0.485	"	"	"	"	"	
Surrogate(s): 2-FBP		84.5%		53 - 125 %		"		"		
Octacosane		90.3%		68 - 125 %		"		"		
<b>BRA0137-02 (MW-2)</b>		<b>Water</b>		<b>Sampled: 01/10/08 09:30</b>						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.243	mg/l	1x	8A14017	01/14/08 09:23	01/17/08 18:55	
Lube Oil Range Hydrocarbons	"	ND	---	0.485	"	"	"	"	"	
Surrogate(s): 2-FBP		72.1%		53 - 125 %		"		"		
Octacosane		81.1%		68 - 125 %		"		"		
<b>BRA0137-03 (MW-6)</b>		<b>Water</b>		<b>Sampled: 01/10/08 08:15</b>						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.250	mg/l	1x	8A14017	01/14/08 09:23	01/17/08 19:21	
Lube Oil Range Hydrocarbons	"	ND	---	0.500	"	"	"	"	"	
Surrogate(s): 2-FBP		71.2%		53 - 125 %		"		"		
Octacosane		84.5%		68 - 125 %		"		"		
<b>BRA0137-04 (MW-7)</b>		<b>Water</b>		<b>Sampled: 01/10/08 08:00</b>						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.250	mg/l	1x	8A14017	01/14/08 09:23	01/17/08 19:47	
Lube Oil Range Hydrocarbons	"	ND	---	0.500	"	"	"	"	"	
Surrogate(s): 2-FBP		70.9%		53 - 125 %		"		"		
Octacosane		80.2%		68 - 125 %		"		"		
<b>BRA0137-05 (MW-8)</b>		<b>Water</b>		<b>Sampled: 01/10/08 08:30</b>						
Diesel Range Hydrocarbons	NWTPH-Dx	9.19	---	2.43	mg/l	10x	8A14017	01/14/08 09:23	01/17/08 20:13	Q5
Lube Oil Range Hydrocarbons	"	ND	---	4.85	"	"	"	"	"	
Surrogate(s): 2-FBP		100%		53 - 125 %		"		"		
Octacosane		81.7%		68 - 125 %		"		"		
<b>BRA0137-06 (MW-9)</b>		<b>Water</b>		<b>Sampled: 01/10/08 08:45</b>						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.238	mg/l	1x	8A14017	01/14/08 09:23	01/17/08 21:55	
Lube Oil Range Hydrocarbons	"	ND	---	0.476	"	"	"	"	"	
Surrogate(s): 2-FBP		84.9%		53 - 125 %		"		"		
Octacosane		87.1%		68 - 125 %		"		"		

TestAmerica Seattle

*Kate Haney*

Kate Haney, Project Manager

**Amended Report**

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.



THE LEADER IN ENVIRONMENTAL TESTING

Amended Report

**Conestoga-Rovers & Associates - Everett**

526 Commerce Center Building B - 1420 80th Street SW, Suite  
 Everett, WA 98203

Project Name: **Shell - 6808 196th Street SW, Lynnwood**

Project Number: 97605410

Project Manager: Justin Foslien

Report Created:

04/10/08 15:15

**Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up**  
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>BRA0137-07 (MW-10)</b>		<b>Water</b>		<b>Sampled: 01/10/08 09:15</b>						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.248	mg/l	1x	8A14017	01/14/08 09:23	01/17/08 22:21	
Lube Oil Range Hydrocarbons	"	ND	---	0.495	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>				81.5%		53 - 125 %	"			"
<i>Octacosane</i>				88.1%		68 - 125 %	"			"

TestAmerica Seattle

*Kate Haney*

Kate Haney, Project Manager

Amended Report

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



Amended Report

<b>Conestoga-Rovers &amp; Associates - Everett</b> 526 Commerce Center Building B - 1420 80th Street SW, Suite Everett, WA 98203	Project Name: <b>Shell - 6808 196th Street SW, Lynnwood</b> Project Number: 97605410 Project Manager: Justin Foslien	Report Created: 04/10/08 15:15
--	--	-----------------------------------

**Volatile Organic Compounds by EPA Method 8260B**  
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	-------

<b>BRA0137-01RE1 (MW-1)</b>		Water			Sampled: 01/10/08 09:00					
Ethylbenzene	EPA 8260B	1610	---	50.0	ug/l	100x	8A22027	01/22/08 12:46	01/22/08 13:53	
Toluene	"	4010	---	50.0	"	"	"	"	"	
Total Xylenes	"	6790	---	300	"	"	"	"	"	
Surrogate(s):		1,2-DCA-d4	102%	70 - 130 %	1x					
		Toluene-d8	99.2%	75 - 125 %	"					
		4-BFB	100%	75 - 125 %	"					

<b>BRA0137-01RE2 (MW-1)</b>		Water			Sampled: 01/10/08 09:00					
Benzene	EPA 8260B	16500	---	100	ug/l	200x	8A22054	01/22/08 20:06	01/22/08 23:04	
Surrogate(s):		1,2-DCA-d4	101%	70 - 130 %	1x					
		Toluene-d8	101%	75 - 125 %	"					
		4-BFB	100%	75 - 125 %	"					

<b>BRA0137-02 (MW-2)</b>		Water			Sampled: 01/10/08 09:30					
Toluene	EPA 8260B	9.85	---	0.500	ug/l	1x	8A21040	01/21/08 14:19	01/21/08 22:38	
Total Xylenes	"	71.0	---	3.00	"	"	"	"	"	
Surrogate(s):		1,2-DCA-d4	109%	70 - 130 %	"					
		Toluene-d8	100%	75 - 125 %	"					
		4-BFB	103%	75 - 125 %	"					

<b>BRA0137-02RE1 (MW-2)</b>		Water			Sampled: 01/10/08 09:30					
Benzene	EPA 8260B	214	---	10.0	ug/l	20x	8A22027	01/22/08 12:46	01/22/08 14:20	
Ethylbenzene	"	502	---	10.0	"	"	"	"	"	
Surrogate(s):		1,2-DCA-d4	104%	70 - 130 %	1x					
		Toluene-d8	100%	75 - 125 %	"					
		4-BFB	101%	75 - 125 %	"					

<b>BRA0137-03 (MW-6)</b>		Water			Sampled: 01/10/08 08:15					
Benzene	EPA 8260B	ND	---	0.500	ug/l	1x	8A22027	01/22/08 12:46	01/22/08 14:47	
Ethylbenzene	"	ND	---	0.500	"	"	"	"	"	
Toluene	"	ND	---	0.500	"	"	"	"	"	
Total Xylenes	"	ND	---	3.00	"	"	"	"	"	
Surrogate(s):		1,2-DCA-d4	101%	70 - 130 %	"					
		Toluene-d8	100%	75 - 125 %	"					
		4-BFB	99.9%	75 - 125 %	"					

TestAmerica Seattle

*Kate Haney*

Kate Haney, Project Manager

Amended Report

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



**Amended Report**

<b>Conestoga-Rovers &amp; Associates - Everett</b> 526 Commerce Center Building B - 1420 80th Street SW, Suite Everett, WA 98203	<b>Project Name:</b> Shell - 6808 196th Street SW, Lynnwood <b>Project Number:</b> 97605410 <b>Project Manager:</b> Justin Foslien	<b>Report Created:</b> 04/10/08 15:15
--	--	--

**Volatile Organic Compounds by EPA Method 8260B**  
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>BRA0137-04 (MW-7)</b>		<b>Water</b>		<b>Sampled: 01/10/08 08:00</b>						
Benzene	EPA 8260B	68.4	---	0.500	ug/l	1x	8A22027	01/22/08 12:46	01/22/08 22:27	
Ethylbenzene	"	79.7	---	0.500	"	"	"	"	"	
Toluene	"	1.26	---	0.500	"	"	"	"	"	
Total Xylenes	"	110	---	3.00	"	"	"	"	"	

<i>Surrogate(s):</i> 1,2-DCA-d4	106%	70 - 130 %	"	"
Toluene-d8	102%	75 - 125 %	"	"
4-BFB	98.8%	75 - 125 %	"	"

<b>BRA0137-05RE1 (MW-8)</b>		<b>Water</b>		<b>Sampled: 01/10/08 08:30</b>							<b>RL7, H1</b>
Benzene	EPA 8260B	13400	---	200	ug/l	400x	8D03023	04/03/08 16:28	04/03/08 16:58		
Ethylbenzene	"	2220	---	200	"	"	"	"	"		
Toluene	"	29600	---	200	"	"	"	"	"		
Total Xylenes	"	14000	---	1200	"	"	"	"	"		

<i>Surrogate(s):</i> 1,2-DCA-d4	97.4%	70 - 130 %	1x	"
Toluene-d8	101%	75 - 125 %	"	"
4-BFB	100%	75 - 125 %	"	"

<b>BRA0137-06RE2 (MW-9)</b>		<b>Water</b>		<b>Sampled: 01/10/08 08:45</b>							<b>H1</b>
Benzene	EPA 8260B	ND	---	0.500	ug/l	1x	8D03023	04/03/08 16:28	04/03/08 15:16		
Ethylbenzene	"	ND	---	0.500	"	"	"	"	"		
Toluene	"	ND	---	0.500	"	"	"	"	"		
Total Xylenes	"	ND	---	3.00	"	"	"	"	"		

<i>Surrogate(s):</i> 1,2-DCA-d4	98.1%	70 - 130 %	"	"
Toluene-d8	101%	75 - 125 %	"	"
4-BFB	99.2%	75 - 125 %	"	"

<b>BRA0137-07RE1 (MW-10)</b>		<b>Water</b>		<b>Sampled: 01/10/08 09:15</b>						
Benzene	EPA 8260B	316	---	50.0	ug/l	100x	8A24025	01/24/08 08:00	01/24/08 14:36	
Ethylbenzene	"	842	---	50.0	"	"	"	"	"	
Toluene	"	237	---	50.0	"	"	"	"	"	
Total Xylenes	"	604	---	300	"	"	"	"	"	

<i>Surrogate(s):</i> 1,2-DCA-d4	100%	70 - 130 %	1x	"
Toluene-d8	102%	75 - 125 %	"	"
4-BFB	97.7%	75 - 125 %	"	"

TestAmerica Seattle

*Kate Haney*

Kate Haney, Project Manager

**Amended Report**

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.



Amended Report

<b>Conestoga-Rovers &amp; Associates - Everett</b> 526 Commerce Center Building B - 1420 80th Street SW, Suite Everett, WA 98203	Project Name: <b>Shell - 6808 196th Street SW, Lynnwood</b> Project Number: 97605410 Project Manager: Justin Foslien	Report Created: 04/10/08 15:15
--	--	-----------------------------------

**Volatile Petroleum Products by NWTPH-Gx - Laboratory Quality Control Results**  
 TestAmerica Seattle

QC Batch: 8A16019      Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
<b>Blank (8A16019-BLK1)</b>													Extracted: 01/16/08 12:30			
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	01/16/08 16:57			
Surrogate(s): 4-BFB (FID)		Recovery: 88.4%		Limits: 58-144%		"						01/16/08 16:57				
<b>LCS (8A16019-BS1)</b>													Extracted: 01/16/08 12:30			
Gasoline Range Hydrocarbons	NWTPH-Gx	992	---	50.0	ug/l	1x	--	1000	99.2%	(80-120)	--	--	01/16/08 17:29			
Surrogate(s): 4-BFB (FID)		Recovery: 94.3%		Limits: 58-144%		"						01/16/08 17:29				
<b>Duplicate (8A16019-DUP1)</b>													QC Source: BRA0137-04		Extracted: 01/16/08 12:30	
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	50.0	ug/l	1x	51.2	--	--	--	20.0% (25)		01/16/08 18:32			
Surrogate(s): 4-BFB (FID)		Recovery: 89.7%		Limits: 58-144%		"						01/16/08 18:32				
<b>Duplicate (8A16019-DUP2)</b>													QC Source: BRA0137-06		Extracted: 01/16/08 12:30	
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	50.0	ug/l	1x	ND	--	--	--	NR (25)		01/16/08 19:36			
Surrogate(s): 4-BFB (FID)		Recovery: 87.0%		Limits: 58-144%		"						01/16/08 19:36				
<b>Matrix Spike (8A16019-MS1)</b>													QC Source: BRA0137-04		Extracted: 01/16/08 12:30	
Gasoline Range Hydrocarbons	NWTPH-Gx	1100	---	50.0	ug/l	1x	51.2	1000	105%	(75-131)	--	--	01/16/08 20:39			
Surrogate(s): 4-BFB (FID)		Recovery: 89.7%		Limits: 58-144%		"						01/16/08 20:39				
<b>Matrix Spike Dup (8A16019-MSD1)</b>													QC Source: BRA0137-04		Extracted: 01/16/08 12:30	
Gasoline Range Hydrocarbons	NWTPH-Gx	1020	---	50.0	ug/l	1x	51.2	1000	96.7%	(75-131)	7.60% (25)		01/16/08 21:11			
Surrogate(s): 4-BFB (FID)		Recovery: 88.9%		Limits: 58-144%		"						01/16/08 21:11				

TestAmerica Seattle

*Kate Haney*

Kate Haney, Project Manager

Amended Report

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



Amended Report

<b>Conestoga-Rovers &amp; Associates - Everett</b> 526 Commerce Center Building B - 1420 80th Street SW, Suite Everett, WA 98203	Project Name: <b>Shell - 6808 196th Street SW, Lynnwood</b> Project Number: 97605410 Project Manager: Justin Foslien	Report Created: 04/10/08 15:15
--	--	-----------------------------------

**Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up - Laboratory Quality Control Results**  
 TestAmerica Seattle

QC Batch: 8A14017      Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (8A14017-BLK1)</b>													Extracted: 01/14/08 09:23	
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.250	mg/l	1x	--	--	--	--	--	--	01/17/08 16:47	
Lube Oil Range Hydrocarbons	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery:</i>		<i>72.4%</i>		<i>Limits: 53-125%</i>						<i>01/17/08 16:47</i>		
<i>Octacosane</i>		<i>89.8%</i>		<i>68-125%</i>		<i>"</i>						<i>"</i>		
<b>LCS (8A14017-BS1)</b>													Extracted: 01/14/08 09:23	
Diesel Range Hydrocarbons	NWTPH-Dx	1.96	---	0.250	mg/l	1x	--	2.00	97.9%	(61-132)	--	--	01/17/08 16:21	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery:</i>		<i>85.8%</i>		<i>Limits: 53-125%</i>						<i>01/17/08 16:21</i>		
<i>Octacosane</i>		<i>89.4%</i>		<i>68-125%</i>		<i>"</i>						<i>"</i>		
<b>LCS Dup (8A14017-BSD1)</b>													Extracted: 01/14/08 09:23	
Diesel Range Hydrocarbons	NWTPH-Dx	2.20	---	0.250	mg/l	1x	--	2.00	110%	(61-132)	11.8% (35)		01/17/08 17:12	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery:</i>		<i>97.5%</i>		<i>Limits: 53-125%</i>						<i>01/17/08 17:12</i>		
<i>Octacosane</i>		<i>99.4%</i>		<i>68-125%</i>		<i>"</i>						<i>"</i>		

TestAmerica Seattle

*Kate Haney*

Kate Haney, Project Manager

Amended Report

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



Amended Report

<b>Conestoga-Rovers &amp; Associates - Everett</b> 526 Commerce Center Building B - 1420 80th Street SW, Suite Everett, WA 98203	Project Name: <b>Shell - 6808 196th Street SW, Lynnwood</b> Project Number: 97605410 Project Manager: Justin Foslien	Report Created: 04/10/08 15:15
--	--	-----------------------------------

**Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica Seattle

QC Batch: 8A21040      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

**Blank (8A21040-BLK1)** Extracted: 01/21/08 10:16

Benzene	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	01/21/08 14:28	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Total Xylenes	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>		<i>Limits:</i>										
<i>Toluene-d8</i>		<i>99.6%</i>		<i>75-125%</i>										<i>01/21/08 14:28</i>
<i>4-BFB</i>		<i>101%</i>		<i>75-125%</i>										<i>"</i>

**LCS (8A21040-BS1)** Extracted: 01/21/08 10:16

Benzene	EPA 8260B	21.4	---	0.500	ug/l	1x	--	20.0	107%	(80-120)	--	--	01/21/08 13:53	
Ethylbenzene	"	21.3	---	0.500	"	"	--	"	107%	(75-125)	--	--	"	
Toluene	"	21.1	---	0.500	"	"	--	"	106%	"	--	--	"	
Total Xylenes	"	64.8	---	3.00	"	"	--	60.0	108%	"	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>		<i>Limits:</i>										
<i>Toluene-d8</i>		<i>102%</i>		<i>70-130%</i>										<i>01/21/08 13:53</i>
<i>4-BFB</i>		<i>100%</i>		<i>75-125%</i>										<i>"</i>

**Matrix Spike (8A21040-MS1)** QC Source: BRA0096-02      Extracted: 01/21/08 10:16

Benzene	EPA 8260B	24.5	---	0.500	ug/l	1x	5.11	20.0	96.8%	(80-124)	--	--	01/21/08 18:33	
Ethylbenzene	"	90.0	---	0.500	"	"	72.8	"	85.8%	(62-151)	--	--	"	
Toluene	"	18.8	---	0.500	"	"	ND	"	94.2%	(75-125)	--	--	"	
Total Xylenes	"	121	---	3.00	"	"	66.8	60.0	89.6%	"	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>		<i>Limits:</i>										
<i>Toluene-d8</i>		<i>107%</i>		<i>70-130%</i>										<i>01/21/08 18:33</i>
<i>4-BFB</i>		<i>100%</i>		<i>75-125%</i>										<i>"</i>

**Matrix Spike Dup (8A21040-MSD1)** QC Source: BRA0096-02      Extracted: 01/21/08 10:16

Benzene	EPA 8260B	17.6	---	0.500	ug/l	1x	5.11	20.0	62.6%	(80-124)	32.5%	(30)	01/21/08 19:01	M2, R2
Ethylbenzene	"	83.4	---	0.500	"	"	72.8	"	52.9%	(62-151)	7.60%	"	"	M2
Toluene	"	12.6	---	0.500	"	"	ND	"	62.8%	(75-125)	40.1%	"	"	M2, R2
Total Xylenes	"	104	---	3.00	"	"	66.8	60.0	62.7%	"	14.4%	"	"	M2
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>		<i>Limits:</i>										
<i>Toluene-d8</i>		<i>104%</i>		<i>70-130%</i>										<i>01/21/08 19:01</i>
<i>4-BFB</i>		<i>99.6%</i>		<i>75-125%</i>										<i>"</i>

TestAmerica Seattle

*Kate Haney*

Kate Haney, Project Manager

Amended Report

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



**Amended Report**

<b>Conestoga-Rovers &amp; Associates - Everett</b> 526 Commerce Center Building B - 1420 80th Street SW, Suite Everett, WA 98203	Project Name: <b>Shell - 6808 196th Street SW, Lynnwood</b> Project Number: 97605410 Project Manager: Justin Foslien	Report Created: 04/10/08 15:15
--	--	-----------------------------------

**Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica Seattle

QC Batch: 8A22027 Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (8A22027-BLK1)</b>													Extracted: 01/22/08 11:47	
Benzene	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	01/22/08 12:50	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Total Xylenes	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 1,2-DCA-d4		Recovery: 102%		Limits: 70-130%		"						01/22/08 12:50		
Toluene-d8		100%		75-125%		"						"		
4-BFB		99.3%		75-125%		"						"		
<b>LCS (8A22027-BS1)</b>													Extracted: 01/22/08 11:47	
Benzene	EPA 8260B	21.1	---	0.500	ug/l	1x	--	20.0	105%	(80-120)	--	--	01/22/08 11:56	
Ethylbenzene	"	20.0	---	0.500	"	"	--	"	100%	(75-125)	--	--	"	
Toluene	"	20.1	---	0.500	"	"	--	"	101%	"	--	--	"	
Total Xylenes	"	59.8	---	3.00	"	"	--	60.0	99.7%	"	--	--	"	
Surrogate(s): 1,2-DCA-d4		Recovery: 104%		Limits: 70-130%		"						01/22/08 11:56		
Toluene-d8		100%		75-125%		"						"		
4-BFB		100%		75-125%		"						"		
<b>LCS Dup (8A22027-BSD1)</b>													Extracted: 01/22/08 11:47	
Benzene	EPA 8260B	20.8	---	0.500	ug/l	1x	--	20.0	104%	(80-120)	1.19%	(20)	01/22/08 12:23	
Ethylbenzene	"	19.8	---	0.500	"	"	--	"	99.0%	(75-125)	1.11%	"	"	
Toluene	"	20.3	---	0.500	"	"	--	"	101%	"	0.742%	"	"	
Total Xylenes	"	59.9	---	3.00	"	"	--	60.0	99.8%	"	0.117%	"	"	
Surrogate(s): 1,2-DCA-d4		Recovery: 103%		Limits: 70-130%		"						01/22/08 12:23		
Toluene-d8		99.8%		75-125%		"						"		
4-BFB		101%		75-125%		"						"		

TestAmerica Seattle

*Kate Haney*

Kate Haney, Project Manager

**Amended Report**

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.





Amended Report

<b>Conestoga-Rovers &amp; Associates - Everett</b> 526 Commerce Center Building B - 1420 80th Street SW, Suite Everett, WA 98203	Project Name: <b>Shell - 6808 196th Street SW, Lynnwood</b> Project Number: 97605410 Project Manager: Justin Foslien	Report Created: 04/10/08 15:15
--	--	-----------------------------------

**Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica Seattle

QC Batch: 8A22054      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (8A22054-BLK1)</b>														
Extracted: 01/22/08 08:06														
Benzene	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	01/22/08 21:00	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Total Xylenes	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 99.0%</i>		<i>Limits: 70-130%</i>		"						01/22/08 21:00		
<i>Toluene-d8</i>		<i>101%</i>		<i>75-125%</i>		"						"		
<i>4-BFB</i>		<i>102%</i>		<i>75-125%</i>		"						"		

<b>LCS (8A22054-BS1)</b>														
Extracted: 01/22/08 08:06														
Benzene	EPA 8260B	23.0	---	0.500	ug/l	1x	--	20.0	115%	(80-120)	--	--	01/22/08 19:50	
Ethylbenzene	"	23.7	---	0.500	"	"	--	"	118%	(75-125)	--	--	"	
Toluene	"	23.1	---	0.500	"	"	--	"	116%	"	--	--	"	
Total Xylenes	"	73.8	---	3.00	"	"	--	60.0	123%	"	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 97.8%</i>		<i>Limits: 70-130%</i>		"						01/22/08 19:50		
<i>Toluene-d8</i>		<i>99.6%</i>		<i>75-125%</i>		"						"		
<i>4-BFB</i>		<i>99.8%</i>		<i>75-125%</i>		"						"		

<b>Matrix Spike (8A22054-MS1)</b>														
QC Source: BRA0117-05      Extracted: 01/22/08 08:06														
Benzene	EPA 8260B	15.6	---	0.500	ug/l	1x	ND	20.0	78.0%	(80-124)	--	--	01/23/08 02:38	M2
Ethylbenzene	"	15.8	---	0.500	"	"	ND	"	78.8%	(62-151)	--	--	"	
Toluene	"	15.3	---	0.500	"	"	ND	"	76.6%	(75-125)	--	--	"	
Total Xylenes	"	47.3	---	3.00	"	"	ND	60.0	78.8%	"	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 100%</i>		<i>Limits: 70-130%</i>		"						01/23/08 02:38		
<i>Toluene-d8</i>		<i>96.0%</i>		<i>75-125%</i>		"						"		
<i>4-BFB</i>		<i>99.0%</i>		<i>75-125%</i>		"						"		

<b>Matrix Spike Dup (8A22054-MSD1)</b>														
QC Source: BRA0117-05      Extracted: 01/22/08 08:06														
Benzene	EPA 8260B	15.4	---	0.500	ug/l	1x	ND	20.0	76.9%	(80-124)	1.42%	(30)	01/23/08 03:09	M2
Ethylbenzene	"	15.2	---	0.500	"	"	ND	"	76.1%	(62-151)	3.49%	"	"	
Toluene	"	15.1	---	0.500	"	"	ND	"	75.4%	(75-125)	1.58%	"	"	
Total Xylenes	"	46.1	---	3.00	"	"	ND	60.0	76.9%	"	2.53%	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 99.0%</i>		<i>Limits: 70-130%</i>		"						01/23/08 03:09		
<i>Toluene-d8</i>		<i>97.4%</i>		<i>75-125%</i>		"						"		
<i>4-BFB</i>		<i>103%</i>		<i>75-125%</i>		"						"		

TestAmerica Seattle

*Kate Haney*

Kate Haney, Project Manager

Amended Report

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



**Amended Report**

<b>Conestoga-Rovers &amp; Associates - Everett</b> 526 Commerce Center Building B - 1420 80th Street SW, Suite Everett, WA 98203	Project Name: <b>Shell - 6808 196th Street SW, Lynnwood</b> Project Number: 97605410 Project Manager: Justin Foslien	Report Created: 04/10/08 15:15
--	--	-----------------------------------

**Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica Seattle

QC Batch: 8A23025 Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

**Blank (8A23025-BLK1)**

Extracted: 01/23/08 11:58

Benzene	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	01/23/08 12:50	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Total Xylenes	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	

Surrogate(s):	1,2-DCA-d4	Recovery:	110%	Limits:	70-130%	"							01/23/08 12:50	
	Toluene-d8		98.8%		75-125%	"							"	
	4-BFB		94.8%		75-125%	"							"	

**LCS (8A23025-BS1)**

Extracted: 01/23/08 11:58

Benzene	EPA 8260B	20.2	---	0.500	ug/l	1x	--	20.0	101%	(80-120)	--	--	01/23/08 12:09	
Ethylbenzene	"	20.7	---	0.500	"	"	--	"	104%	(75-125)	--	--	"	
Toluene	"	20.4	---	0.500	"	"	--	"	102%	"	--	--	"	
Total Xylenes	"	62.0	---	3.00	"	"	--	60.0	103%	"	--	--	"	

Surrogate(s):	1,2-DCA-d4	Recovery:	107%	Limits:	70-130%	"							01/23/08 12:09	
	Toluene-d8		98.0%		75-125%	"							"	
	4-BFB		92.4%		75-125%	"							"	

**Matrix Spike (8A23025-MS1)**

QC Source: BRA0263-03

Extracted: 01/23/08 11:58

Benzene	EPA 8260B	368	---	0.500	ug/l	1x	344	20.0	122%	(80-124)	--	--	01/23/08 20:34	E
Ethylbenzene	"	339	---	0.500	"	"	333	"	28.5%	(62-151)	--	--	"	MHA, E
Toluene	"	63.7	---	0.500	"	"	41.3	"	112%	(75-125)	--	--	"	
Total Xylenes	"	927	---	3.00	"	"	840	60.0	145%	"	--	--	"	MHA, E

Surrogate(s):	1,2-DCA-d4	Recovery:	132%	Limits:	70-130%	"							01/23/08 20:34	Z2
	Toluene-d8		101%		75-125%	"							"	
	4-BFB		93.8%		75-125%	"							"	

**Matrix Spike Dup (8A23025-MSD1)**

QC Source: BRA0263-03

Extracted: 01/23/08 11:58

Benzene	EPA 8260B	372	---	0.500	ug/l	1x	344	20.0	138%	(80-124)	0.887% (30)		01/23/08 21:01	E, MHA
Ethylbenzene	"	560	---	0.500	"	"	333	"	1140%	(62-151)	49.3%	"	"	E, MHA
Toluene	"	65.0	---	0.500	"	"	41.3	"	118%	(75-125)	2.04%	"	"	
Total Xylenes	"	949	---	3.00	"	"	840	60.0	182%	"	2.42%	"	"	E, MHA

Surrogate(s):	1,2-DCA-d4	Recovery:	134%	Limits:	70-130%	"							01/23/08 21:01	Z2
	Toluene-d8		103%		75-125%	"							"	
	4-BFB		94.6%		75-125%	"							"	

TestAmerica Seattle

*Kate Haney*

Kate Haney, Project Manager

**Amended Report**

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.



Amended Report

<b>Conestoga-Rovers &amp; Associates - Everett</b> 526 Commerce Center Building B - 1420 80th Street SW, Suite Everett, WA 98203	Project Name: <b>Shell - 6808 196th Street SW, Lynnwood</b> Project Number: 97605410 Project Manager: Justin Foslien	Report Created: 04/10/08 15:15
--	--	-----------------------------------

**Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica Seattle

QC Batch: 8A24025      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

**Blank (8A24025-BLK1)** Extracted: 01/24/08 08:00

Benzene	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	01/24/08 13:28	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Total Xylenes	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 105%</i>		<i>Limits: 70-130%</i>		"							01/24/08 13:28	
<i>Toluene-d8</i>		<i>103%</i>		<i>75-125%</i>		"							"	
<i>4-BFB</i>		<i>101%</i>		<i>75-125%</i>		"							"	

**LCS (8A24025-BS1)** Extracted: 01/24/08 08:00

Benzene	EPA 8260B	18.4	---	0.500	ug/l	1x	--	20.0	92.0%	(80-120)	--	--	01/24/08 08:44	
Ethylbenzene	"	19.7	---	0.500	"	"	--	"	98.4%	(75-125)	--	--	"	
Toluene	"	18.6	---	0.500	"	"	--	"	92.8%	"	--	--	"	
Total Xylenes	"	59.7	---	3.00	"	"	--	60.0	99.6%	"	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 104%</i>		<i>Limits: 70-130%</i>		"							01/24/08 08:44	
<i>Toluene-d8</i>		<i>101%</i>		<i>75-125%</i>		"							"	
<i>4-BFB</i>		<i>100%</i>		<i>75-125%</i>		"							"	

**LCS Dup (8A24025-BSD1)** Extracted: 01/24/08 08:00

Benzene	EPA 8260B	21.2	---	0.500	ug/l	1x	--	20.0	106%	(80-120)	14.2%	(20)	01/24/08 09:48	
Ethylbenzene	"	22.7	---	0.500	"	"	--	"	114%	(75-125)	14.5%	"	"	
Toluene	"	21.9	---	0.500	"	"	--	"	110%	"	16.7%	"	"	
Total Xylenes	"	69.7	---	3.00	"	"	--	60.0	116%	"	15.3%	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 101%</i>		<i>Limits: 70-130%</i>		"							01/24/08 09:48	
<i>Toluene-d8</i>		<i>101%</i>		<i>75-125%</i>		"							"	
<i>4-BFB</i>		<i>99.6%</i>		<i>75-125%</i>		"							"	

TestAmerica Seattle

*Kate Haney*

Kate Haney, Project Manager

Amended Report

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



**Amended Report**

**Conestoga-Rovers & Associates - Everett**  
 526 Commerce Center Building B - 1420 80th Street SW, Suite  
 Everett, WA 98203

Project Name: **Shell - 6808 196th Street SW, Lynnwood**  
 Project Number: 97605410  
 Project Manager: Justin Foslien

Report Created:  
 04/10/08 15:15

**Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica Seattle

QC Batch: 8D03023 Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

**Blank (8D03023-BLK1)**

Extracted: 04/03/08 06:15

Benzene	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	04/03/08 14:45	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Total Xylenes	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 1,2-DCA-d4		Recovery:		99.0%	Limits: 70-130%								04/03/08 14:45	
Toluene-d8		Recovery:		100%	Limits: 75-125%								"	
4-BFB		Recovery:		100%	Limits: 75-125%								"	

**LCS (8D03023-BS1)**

Extracted: 04/03/08 06:15

Benzene	EPA 8260B	32.4	---	0.500	ug/l	1x	--	40.0	81.0%	(80-120)	--	--	04/03/08 13:38	
Ethylbenzene	"	34.8	---	0.500	"	"	--	"	87.0%	(75-125)	--	--	"	
Toluene	"	35.0	---	0.500	"	"	--	"	87.6%	"	--	--	"	
Total Xylenes	"	107	---	3.00	"	"	--	120	88.9%	"	--	--	"	
Surrogate(s): 1,2-DCA-d4		Recovery:		95.2%	Limits: 70-130%								04/03/08 13:38	
Toluene-d8		Recovery:		100%	Limits: 75-125%								"	
4-BFB		Recovery:		101%	Limits: 75-125%								"	

**LCS Dup (8D03023-BSD1)**

Extracted: 04/03/08 06:15

Benzene	EPA 8260B	33.8	---	0.500	ug/l	1x	--	40.0	84.5%	(80-120)	4.26%	(20)	04/03/08 14:09	
Ethylbenzene	"	36.6	---	0.500	"	"	--	"	91.6%	(75-125)	5.09%	"	"	
Toluene	"	36.9	---	0.500	"	"	--	"	92.2%	"	5.12%	"	"	
Total Xylenes	"	111	---	3.00	"	"	--	120	92.6%	"	4.09%	"	"	
Surrogate(s): 1,2-DCA-d4		Recovery:		97.3%	Limits: 70-130%								04/03/08 14:09	
Toluene-d8		Recovery:		103%	Limits: 75-125%								"	
4-BFB		Recovery:		99.2%	Limits: 75-125%								"	

TestAmerica Seattle

*Kate Haney*

Kate Haney, Project Manager

**Amended Report**

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.



**Amended Report**

**Conestoga-Rovers & Associates - Everett**

526 Commerce Center Building B - 1420 80th Street SW, Suite  
Everett, WA 98203

Project Name: **Shell - 6808 196th Street SW, Lynnwood**  
Project Number: 97605410  
Project Manager: Justin Foslien

Report Created:  
04/10/08 15:15

**Notes and Definitions**

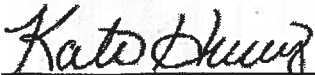
Report Specific Notes:

- E - Concentration exceeds the calibration range and therefore result is semi-quantitative.
- H1 - Sample analysis performed past the method-specified holding time per client's approval.
- M2 - The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- MHA - Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
- Q5 - Results in the diesel organics range are primarily due to overlap from a gasoline range product.
- R2 - The RPD exceeded the acceptance limit.
- RL7 - Sample required dilution due to high concentrations of target analyte.
- Z2 - Surrogate recovery was above the acceptance limits. Data not impacted.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Seattle



Kate Haney, Project Manager

**Amended Report**

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



BRAD037

# SHELL Chain of Custody Record



LAB:

- TA - Seattle, Washington
- TA - Portland, Oregon
- TA - Sacramento, California
- TA - Nashville, Tennessee
- Calcasieu
- Other \_\_\_\_\_

NAME OF PERSON TO BILL: Carol Campagna

- ENVIRONMENTAL SERVICES
- NETWORK DIV / FE
- COMPLIANCE
- BILL CONSULTANT
- RPT/CRMT

DATE: 01/10/08  
PAGE: 1 of 1

INCIDENT # (FOR ONLY)

9 7 6 0 5 4 1 0

SUBJECT OR ORIGIN

CLIENT PROJECT NO.: 080110 PK1

LAB USE ONLY

STATE: WA

CITY: Lynnwood

ADDRESS: 6308 196th Street SW, Lynnwood

PHONE NO.: (425) 212-6111

CONTACT: Justin Feeffer, CRA, Seattle

EMAIL: jfeeffer@crewworld.com

LAB USE ONLY

P. Koskela

### REQUESTED ANALYSIS

<input checked="" type="checkbox"/> NW TPH-DX	<input type="checkbox"/> NW TPH-OX	<input type="checkbox"/> BTEX (8299)	<input type="checkbox"/> 6 Oxygenates (8299)	<input type="checkbox"/> (MTR, TRA, DPE, TAME, TRB)	<input type="checkbox"/> MTRB (8299)	<input type="checkbox"/> TRA (8299)	<input type="checkbox"/> DPE (8299)	<input type="checkbox"/> TAME (8299)	<input type="checkbox"/> TRB (8299)	<input type="checkbox"/> 1,2 DCA (8299)	<input type="checkbox"/> EDB (80119)	<input type="checkbox"/> Ethanol (80169)	<input type="checkbox"/> PAHs (8270 SIM)	<input type="checkbox"/> CPAHs (8270 SIM)	TEMPERATURE ON RECEIPT C
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

FIELD NOTES:  
Contains Preservative  
or PID Readings  
or Laboratory Notes

cc Brenda Carter [brcarter@crewworld.com] on pdf report

LA - RWQCB REPORT FORMAT  LIST AGENCY:

SPECIAL INSTRUCTIONS OR NOTES:

- EDD NOT NEEDED
- SHELL CONTRACT RATE APPLIES
- STATE REIMB RATE APPLIES
- RECEIPT VERIFICATION REQUESTED

Field Sample Identification	SAMPLING DATE	TIME	MATRIX	NO. OF CONT.
MW-1	1/10	900	w	8
MW-2	1/10	930		
MW-6	1/10	915		
MW-7	1/10	900		
MW-8	1/10	930		
MW-9	1/10	945		
MW-10	1/10	915		

Received by: (Signature) *[Signature]*

Received by: (Signature) *[Signature]*

Received by: (Signature) \_\_\_\_\_

Date: 1/11/08

Time: 1255

Notes: @Lab. 1730 3.3.c w/o