

MINIT WBE# 1102 Ly NN WOOD UST# 6502

> May 31, 2007 EATS # 570509

Mr. John Bails Northwest Regional Office Washington Department of Ecology 3190 160<sup>th</sup> Avenue SE Bellevue, WA 98008-5452

Re: Site Investigation Report

Aloha Cafe (Former Jiffy Lube)
6808 196<sup>th</sup> Street
Lynnwood, Washington
SAP No. 171152
JLI No. 2069
Incident No. 97605410

Dear Mr. Bails:

Conestoga-Rovers & Associates, Inc. (CRA) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) to document the recent site investigation activities at the above referenced site. CRA acquired the former Cambria Environmental Technology, Inc (Cambria) on April 1, 2007. The majority of work was completed by Cambria and will be referenced as such. The purpose of the investigation was to evaluate soil conditions throughout the property boundary of the subject site.

## **EXECUTIVE SUMMARY**

- Cambria Environmental Technology Inc. supervised the drilling of five monitoring wells
  and one soil boring to evaluate the extent of impacted soils within the property boundary of
  the subject site.
- Soil analytical data indicate concentrations of petroleum-related compounds above the Washington State Model Toxics Control Act (MTCA) Method A cleanup levels are present at the site.
- The impacts are believed to be related to historical use at the property as a service station and the associated former underground storage tanks (USTs).



## SITE DESCRIPTION AND BACKGROUND

The subject site is located on the corner of 196<sup>th</sup> Street and 68<sup>th</sup> Avenue W in Lynnwood, Washington (Figure 1). The property was formerly a Jiffy Lube facility and a former service station. Currently a coffee and espresso shop called the Aloha Café uses the property and building (Figure 2). The groundwater flow direction appears to be toward the west.

## INVESTIGATION RESULTS

**Drilling Dates:** 

November 16 – 17, 2006

Drilling Company:

Boart Longyear

Personnel:

Bryan Palmer of Cambria directed the drilling activities under the supervision of Justin Foslien (Washington State Licensed

Geologist #2540).

Drilling Method:

Hollow-stem auger

Number of Borings:

Six borings, five monitoring wells (MW-1, MW-2, MW-3, MW-4, and MW-5) and one soil boring (SB1) were completed during the investigation. The boring and well specifications and soil types encountered are described on the boring logs contained in Attachment A. The boring and well locations are shown on

Figure 2.

Boring Depths:

The boring depths were completed to a depth of 27.5 feet below

ground surface (bgs).

Groundwater Depths:

Groundwater ranged from approximately 10 to 20 feet bgs.

Soil Disposal:

Soil generated from drilling was placed into nine 55-gallon drums. The drums were sampled and profiled prior to transport and disposal by Burlington Environmental, Inc. Waste disposal

manifests are included in Attachment B.



### **FINDINGS**

Soil: The soil chemical analytical data are summarized in Table 1. Laboratory analytical reports are presented in Attachment C.

Groundwater: No groundwater samples were collected during the installation of the monitoring wells.

### CONCLUSIONS

The laboratory results indicate soil samples collected from all locations exceed levels above the Washington State Model Toxics Control Act (MTCA) Method A. Benzene and gasoline range hydrocarbons present at the site indicate the impacts are likely related to the property's historical use as a service station.

### RECOMMENDATIONS

Cambria has initiated quarterly groundwater sampling at wells MW-1 through MW-5 and will forward future quarterly monitoring reports to the Washington Department of Ecology. Cambria proposes to install an additional soil borings and wells at the site to define the lateral extent of impacted soil.

### CLOSING

The data collected during this investigation will be used to evaluate corrective action alternatives for this site.

If you have any questions regarding the contents of this document, please call Justin Foslien at (425) 212-5111.

Sincerely,

Conestoga-Rovers & Associates, Inc.

Justin Foslien, LG Project Geologist

Figures:

1 - Vicinity Map

2 - Site Map with Monitoring Well Locations

Justin Francio Foslien





Tables:

1 - Summary of Soil Analytical Data

2 - Summary of Soil Analytical Data3 - Summary of Soil Analytical Data

Attachments:

A - Boring Logs

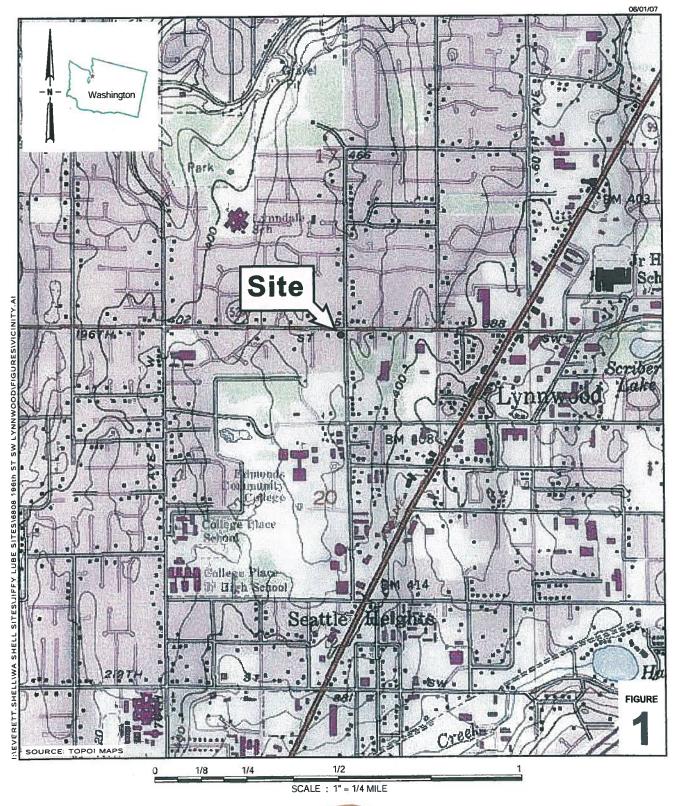
B - Waste Disposal ManifestsC - Certified Analytical Reports

cc: Carol Campagna, Shell Oil Products US, 20945 S. Wilmington Ave., Carson, CA 90810 Brian Clark, Heartland Automotive Services, Inc., 11308 Davenport Street, The Atriam Building, Omaha, NB 68154-5645

Bob Cahill, Heartland Automotive Services, Inc., 15007 Woodinville-Redmond Rd. Suite A, Woodinville, WA 98072

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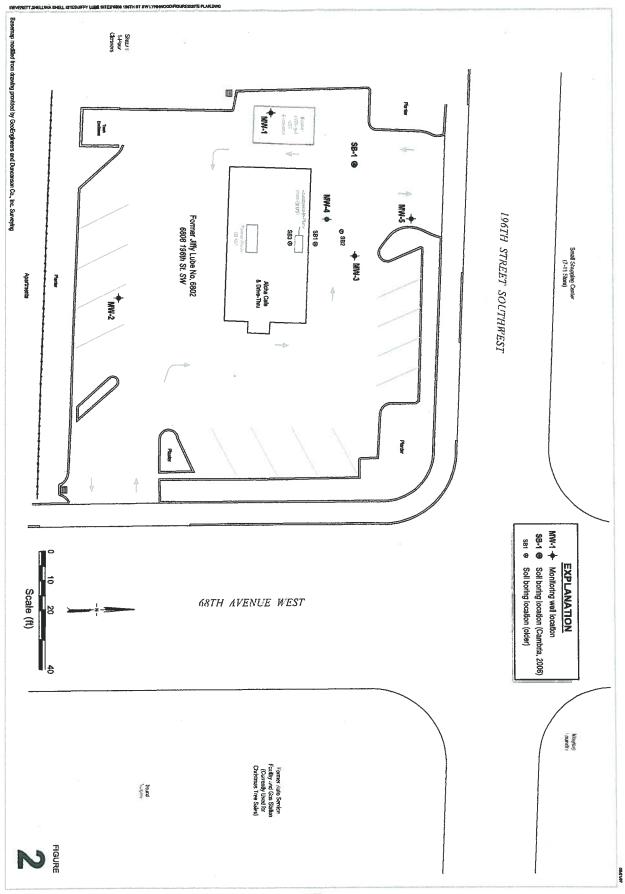


Jiffy Lube No. 2069

6808 196th Street Southwest Lynnwood, Washington



**Vicinity Map** 



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



Table 1

# SUMMARY OF SOIL ANALYTICAL RESULTS SAP# 171152 JLI# 2068 6808 196th ST SW Lynnwood, Washington

Sample Location		M	MW-1	SI	SB-1	M	MW-3	M	MW-2	M	MW-4	MW-5	V-5
Analyte	MTCA Method A Cleanup Levels	GW1-27.5	GW1-17.5	SB1-12.5	SB1-7.5	GW3-7.5	GW3-17.5	GW2-12.5	GW2-17.5	GW4-7.5	GW4-17.5	GW5-7.5	GW5-17.5
Sample Date		11/16/2006	11/16/2006	11/16/2006	11/16/2006	11/16/2006	11/16/2006	11/17/2006	11/17/2006	11/17/2006	11/17/2006	11/17/2006	11/17/2006
Sample Depth		27.50	17.50	12.50	7.50	7.50	17.50	12.50	17.50	7.50	17.50	7.50	17.50
TPH-G (mg/kg)	100	4.54	<3.54	12.30	4.51	1820.00	8.39	<3.68	9.49	1060.00	8.57	1550.00	23.90
TPH-D (mg/kg)	2000	<10 6	<10 9	<11.4	<10.8	63 30	11</td <td>&lt;11.0</td> <td>&lt;11.2</td> <td>30.90</td> <td>&lt;11.0</td> <td>62.40</td> <td>&lt;11.0</td>	<11.0	<11.2	30.90	<11.0	62.40	<11.0
TPH-O (mg/kg)	2000	<26.4	<27.2	<28.6	<27.1	<27.9	<27.8	<27.4	<28.1	<26.8	<27.5	<26.9	<27.5
MTBE (mg/kg)	0.1	<0.36	<0.35	<0.39	<0.41	<0.40	<0.39	<0.37	<0.43	<0.38	<0.38	<0.39	<0.37
Benzene (mg/kg)	0.03	0.14	97.0	0.73	0.14	8.60	0.53	0.02	0.33	0.48	0.24	0.97	0.09
Toluene (mg/kg)	7	0.38	0.34	1.70	0.42	00.66	0.85	<0.07	1.00	12.00	0.44	24.00	0.52
Ethylbenzene (mg/kg)	6	<0.07	<0.07	0.18	<0.08	25.00	0.12	<0.07	0.87	8.20	<0.08	14.00	0.19
Xylenes (mg/kg)	9	<0.21	<0.21	0.90	<0.24	160.00	0.39	<0.22	0.34	54.00	0.31	90.00	0.90
1,2-Dichloroethane (mg/kg)		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dibromoethane (mg/kg)	0.005	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Total Lead (mg/kg)	250	0.962	1.480	2.060	1.710	6.690	1.550	1.600	1.400	2.350	1.580	4.640	1.330

TPH-G = gasoline range hydrocarbons (C4-C12)
TPH-D = diesel range hydrocarbons (C10-C28)
TPH-O = oil range hydrocarbons (C16-C36)
MTBE = methyl-tert-butyl-ether
Xylenes = o-xylene + m,p xylene

Shaded concentrations indicate the result exceeds the MTCA Method A cleanup level for that analyte.

Table 2

SUMMARY OF SOIL ANALYTICAL RESULTS
SAP# 171152
JLI# 2068
6808 196th ST SW
Lynnwood, Washington

Sample Location	ion	I-MIM	V-1	SB-1		MW-3	V-3	Z-MW	V-Z	IVI W-4	V-4	C-MIM	N-5
Analyte	MTCA Method A Cleanup Levels	GW1-27.5	GW1-17.5	SB1-12.5	SB1-7.5	GW3-7.5	GW3-17.5	GW2-12.5	GW2-17.5	GW4-7.5	GW4-17.5	GW5-7.5	GW5-17.5
Sample Date		11/16/2006	11/16/2006	11/16/2006	11/16/2006	11/16/2006	11/16/2006	11/17/2006	11/17/2006	11/17/2006	11/17/2006	11/17/2006	11/17/2006
Sample Depth		27.50	17.50	12.50	7.50	7.50	17.50	12.50	17.50	7.50	17.50	7.50	17.50
VPHs (mg/kg)													
C5-C6 Aliphatics						<198	<3.90	-		<75.5	<3.80	<77.2	<3.69
C6-C8 Aliphatics			1			<198	4.15		-	104	<3.80	<77.2	7.96
C8-C10 Aliphatics						289.00	<3.90			147	<3.80	<77.2	<3.69
C8-C10 Aromatics						227.00	< 3.90			140	<3.80	<77.2	<3.69
C12-C13 Aromatics	,					<198	<3.90	***		<75.5	<3.80	<77.2	<3.69
Total VPH				also also anno		<1390	<3.90			699	<26.6	<77.2	<25.9
EPHs (mg/kg)						,							
C8-C10 Aliphatics						30.10	<5.56			<5.35	<5.52	<5.41	<5.54
C10-C12 Aliphatics		1	-	7	2 - 7	29.40	<5.56	1		11.30	<5.52	14.60	<5.54
C12-C16 Aliphatics		a a	at at at	-		7.95	<5.56	-		<5.35	<5.52	9.56	<5.54
C16-C21 Aliphatics				-		<5.53	<5.56	1	-	<5.35	<5.52	<5.41	<5.54
C21-C34 Aliphatics		-	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		<5.53	<5.56			<5.35	<5.52	<5.41	<5.54
C8-C10 Aromatics				-	2	33.80	<5.56		1	<5.35	<5.52	<5.41	<5.54
C10-C12 Aromatics			-			27.80	<5.56	-		19.40	<5.52	23.50	<5.54
C12-C16 Aromatics				-		9.73	<5.56		1	11.10	<5.52	16.20	<5.54
C16-C21 Aromatics						<5.53	<5.56		1	<5.35	<5.52	<5.41	<5.54
C21-C34 Aromatics					-	<5.53	<55.6		*	<5.35	<5.52	<5.41	<5.54
Extractable Petroleum													
Hydrocarbons						139.00	<53.5			<53.5	<55.2	63.90	<55.4
PCBs (mg/kg)													
Aroclor- 1016		<0.0264	<0.0271	<0.0288	<0.0270	<0.0280	<0.0270	<0.0273	<0.0282	<0.0269	<0.0276	<0.0269	<0.0275
Aroclor - 1221		<0.0529	<0.0541	<0.0575	<0.0540	<0.0561	<0.0554	<0.0546	<0.056.3	<0.0537	<0.0552	<0.0537	<0.0550
Aroclor - 1232		<0.0264	<0.0271	<0.0288	<0.0270	<0.0280	< 0.0270	< 0.0273	<0.0282	<0.0269	<0.0276	<0.0269	<0.0275
Aroclor - 1242		<0.0264	<0.0271	<0.0288	< 0.0270	<0.0280	109	<0.0273	<0.0282	<0.0269	<0.0276	<0.0269	<0.0275
Aroclor - 1248		< 0.0264	<0.0271	<0.0288	< 0.0270	<0.0280	<0.0270	< 0.0273	<0.0282	<0.0269	<0.0276	<0.0269	<0.0275
Aroclor - 1254		<0.0264	<0.0271	<0.0288	< 0.0270	<0.0280	<0.0270	< 0.0273	<0.0282	<0.0269	<0.0276	<0.0269	<0.0275
Aroclor - 1260		<0.0264	<0.0271	<0.0288	<0.0270	<0.0280	<0.0270	<0.0273	<0.0282	<0.0269	<0.0276	<0.0269	<0.0275
Aroclor - 1262		<0.0264	<0.0271	<0.0288	<0.0270	<0.0280	<0.0270	<0.0273	<0.0282	<0.0269	<0.0276	<0.0269	< 0.0275
Aroclor - 1268		<0.0264	<0.0271	<0.0288	<0.0270	<0.0280	<0.0270	<0.0273	<0.0282	<0.0269	<0.0276	<0.0269	<0.0275

SUMMARY OF SOIL ANALYTICAL RESULTS
SAP# 171152
JLI# 2068
6808 196th ST SW
Lynnwood, Washington

Sample Location	ation	NM	MW-1	SB-1	÷1	MW-3	V-3	M	MW-2	MW-4	<i>V</i> −4	M	MW-5
Analyte	MTCA Method A Cleanup Levels	GW1-27.5	GW1-17.5	SB1-12.5	SB1-7.5	GW3-7.5	GW3-17.5	GW2-12.5	GW2-17.5	GW4-7.5	GW4-17.5	GW5-7.5	GW5-17.5
Sample Date		11/16/2006	11/16/2006	11/16/2006	11/16/2006	11/16/2006	11/16/2006	11/17/2006	11/17/2006	11/17/2006	11/17/2006	11/17/2006	11/17/2006
Sample Depth		27.50	17.50	12.50	7.50	7.50	17.50	12.50	17.50	7.50	17.50	7.50	17.50
cPAHs (mg/kg)													
Acenaphthene		<0.0106	<0.0108	<0.0115	<0.0108	<0.0111	<0.0111	<0.0111	0.0113	<0.0107	<0.0110	<0.0108	<0.0111
Acenaphthylene		<0.0106	<0.0108	<0.0115	<0.0108	<0.0111	<0.0111	<0.0111	<0.0113	<0.0107	<0.0110	<0.0108	<0.0111
Anthracene		<0.0106	<0.0108	<0.0115	<0.0108	<0.0111	<0.0111	<0.0111	<0.0113	<0.0107	<0.0110	<0.0108	<0.0111
Benzo(a)anthracene		<0.0106	<0.0108	<0.0115	<0.0108	<0.0111	<0.0111	<0.0111	<0.0113	<0.0107	<0.0110	<0.0108	<0.0111
Chrysene		<0.0106	<0.0108	<0.0115	<0.0108	<0.0111	<0.0111	<0.0111	<0.0113	<0.0107	<0.0110	<0.0108	<0.0111
Benzo(b)fluoranthene		<0.0106	<0.0108	<0.0115	<0.0108	<0.0111	<0.0111	<0.0111	<0.0113	<0.0107	<0.0110	<0.0108	<0.0111
Benzo(k)fluoranthene	-	<0.0106	<0.0108	<0.0115	<0.0108	<0.0111	<0.0111	<0.0111	<0.0113	<0.0107	<0.0110	<0.0108	<0.0111
Benzo(a)pyrene	0.1	<0.0106	<0.0108	<0.0115	<0.0108	<0.0111	<0.0111	<0.0111	<0.0113	<0.0107	<0.0110	<0.0108	<0.0111
Indeno(1,2,3-cd)pyrene		<0.0106	<0.0108	<0.0115	<0.0108	<0.0111	<0.0111	<0.0111	<0.0113	<0.0107	<0.0110	<0.0108	<0.0111
Dibenzo(a,h)anthracene		<0.0106	<0.0108	<0.0115	<0.0108	<0.0111	<0.0111	<0.0111	<0.0113	<0.0107	<0.0110	<0.0108	<0.0111
Fluoranthene		<0.0106	<0.0108	<0.0115	<0.0108	<0.0111	<0.0111	<0.0111	<0.0113	<0.0107	<0.0110	<0.0108	<0.0111
Flourene		<0.0106	<0.0108	<0.0115	<0.0108	<0.0111	<0.0111	<0.0111	<0.0113	<0.0107	<0.0110	<0.0108	<0.0111
-Methylnaphthalene		<0.0106	<0.0108	<0.0115	0.0177	0.671	<0.0111	<0.0111	<0.0113	0.611	<0.0110	1.11	<0.0111
2-Methylnaphthalene		<0.0106	<0.0108	<0.0115	0.0464	1.79	<0.0111	<0.0111	<0.0113	1.620	<0.0110	2.77	0.0127
Naphthalene	5	<0.0106	<0.0108	0.0152	0.0497	3.4	<0.0111	<0.0111	<0.0113	1.8700	<0.0110	2.46	<0.0111
Phenanthrene		<0.0106	<0.0108	<0.0115	<0.0108	<0.0111	<0.0111	<0.0111	<0.0113	0.0120	<0.0110	<0.0108	<0.0111
Pyrene		<0.0106	<0.0108	<0.0115	<0.0108	<0.0111	<0.0111	1110.0>	<0.0113	0.0121	<0.0110	<0.0108	<0.0111

PCBs = polychlorinated biphenols
cPAHs = polycyclic aromatic hydrocarbons identified as known or probable human carcinogens by the US EPA
VPHs = Volatile Petroleum Hydrocarbons

EPHs = Extractable Petroleum Hydrocarbons --- = not analyzed

Shaded concentrations indicate the result exceeds the MTCA Method A cleanup level for that analyte.

## SUMARY OF SOIL ANALYTICAL RESULTS SAP# 171152 JLI# 2068 6808 196th St SW

Lynnwood, Washington

Sample I ocation		MW_1	V_1	2		MW.3	W-2	M	X-2	A.W.A		MW.5	7.5
Sample Location	٦	A TAT	4-1	T-GC	-1	TAI	3.5	TAI	7-AA TAI	A IAI	1	TAI	C8
Analyte	MTCA Method A Cleanup Levels	GW1-27.5	GW1-17.5	SB1-12.5	SB1-7.5	GW3-7.5	GW3-17.5	GW2-12.5	GW2-17.5	GW4-7.5	GW4-17.5	GW5-7.5	GW5-17.5
Sample Date		11/16/2006	11/16/2006	11/16/2006	11/16/2006	11/16/2006	11/16/2006	11/17/2006	11/17/2006	11/17/2006	11/17/2006	11/17/2006	11/17/2006
Sample Depth		27.50	17.50	12.50	7.50	7.50	17.50	12.50	17.50	7.50	17.50	7.50	17.50
PAHs (mg/kg)													
Acenaphthene		< 0.0106	< 0.0108	< 0.0115	< 0.0108	< 0.0111	< 0.0111	< 0.0111	0.0113	< 0.0107	< 0.0110	< 0.0108	< 0.0111
Acenaphthylene		< 0.0106	< 0.0108	< 0.0115	< 0.0108	< 0.0111	< 0.0111	< 0.0111	< 0.0113	< 0.0107	< 0.0110	< 0.0108	< 0.0111
Anthracene		< 0.0106	< 0.0108	< 0.0115	< 0.0108	< 0.0111	< 0.0111	< 0.0111	< 0.0113	< 0.0107	< 0.0110	< 0.0108	< 0.0111
Fluoranthene		< 0.0106	< 0.0108	< 0.0115	< 0.0108	< 0.0111	< 0.0111	< 0.0111	< 0.0113	< 0.0107	< 0.0110	< 0.0108	< 0.0111
Flourene		< 0.0106	< 0.0108	< 0.0115	< 0.0108	< 0.0111	< 0.0111	< 0.0111	< 0.0113	< 0.0107	< 0.0110	< 0.0108	< 0.0111
l-Methylnaphthalene		< 0.0106	< 0.0108	< 0.0115	0.0177	0.671	< 0.0111	< 0.0111	< 0.0113	0.611	< 0.0110	1.11	< 0.0111
2-Methylnaphthalene		< 0.0106	< 0.0108	< 0.0115	0.0464	1.79	< 0.0111	< 0.0III	< 0.0113	1.620	< 0.0110	2.77	0.0127
Naphthalene	.5	< 0.0106	< 0.0108	0.0152	0.0497	3.4	< 0.0111	< 0.0111	< 0.0113	1.8700	< 0.0110	2.46	< 0.0111
Phenanthrene		< 0.0106	< 0.0108	< 0.0115	< 0.0108	< 0.0111	< 0.0111	< 0.0111	< 0.0113	0.0120	< 0.0110	< 0.0108	< 0.0111
Pyrene		< 0.0106	< 0.0108	< 0.0115	< 0.0108	< 0.0111	< 0.0111	< 0.0111	< 0.0113	0.0121	< 0.0110	< 0.0108	< 0.0111
cPAHs (mg/kg)						5					- Constitution of the cons		
Benzo(a)anthracene		< 0.0106	< 0.0108	< 0.0115	< 0.0108	< 0.0111	< 0.0111	< 0.0111	< 0.0113	< 0.0107	< 0.0110	< 0.0108	< 0.0111
Chrysene		< 0.0106	< 0.0108	< 0.0115	< 0.0108	< 0.0111	< 0.0111	< 0.0111	< 0.0113	< 0.0107	< 0.0110	< 0.0108	< 0.0111
Benzo(b)fluoranthene		< 0.0106	< 0.0108	< 0.0115	< 0.0108	< 0.0111	< 0.0111	< 0.0111	< 0.0113	< 0.0107	< 0.0110	< 0.0108	< 0.0111
Benzo(k)fluoranthene		< 0.0106	< 0.0108	< 0.0115	< 0.0108	< 0.0111	< 0.0111	< 0.0111	< 0.0113	< 0.0107	< 0.0110	< 0.0108	< 0.0111
Benzo(a)pyrene	0.1	< 0.0106	< 0.0108	< 0.0115	< 0.0108	< 0.0111	< 0.0111	< 0.0111	< 0.0113	< 0.0107	< 0.0110	< 0.0108	< 0.0111
Indeno(1,2,3-cd)pyrene		< 0.0106	< 0.0108	< 0.0115	< 0.0108	< 0.0111	< 0.0111	< 0.0111	< 0.0113	< 0.0107	< 0.0110	< 0.0108	< 0.0111
Dibenzo(a,h)anthracene		< 0.0106	< 0.0108	< 0.0115	< 0.0108	< 0.0111	< 0.0111	< 0.0111	< 0.0113	< 0.0107	< 0.0110	< 0.0108	< 0.0111
		cPAHs x	сРАНs x	cPAHs x	cPAHs x	cPAHs x	cPAHs x	cPAHs x	cPAHs x				
Total cPAHs (mg/kg)		TEF	TEF	TEF									
Calculation		(mg/kg)	(mg/kg)	(mg/kg)									
Benzo(a)anthracene		0.00106	0.00108	0.00115	0.00108	0.00111	0.00111	0.00111	0.00113	0.00107	0.0011	0.00108	0.00111
Chrysene		0.000106	0.000108	0.000115	0.000108	0.000111	0.000111	0.000111	0.000113	0.000107	0.00011	0.000108	0.000111
Benzo(b)fluoranthene		0.00106	0.00108	0.00115	0.00108	0.00111	0.00111	0.00111	0.00113	0.00107	0.0011	0.00108	0.00111
Benzo(k)fluoranthene		0.00106	0.00108	0.00115	0.00108	0.00111	0.00111	0.00111	0.00113	0.00107	0.0011	0.00108	0.00111
Benzo(a)pyrene	0.1	0.0106	0.0108	0.0115	0.0108	0.0111	0.0111	0.0111	0.0113	0.0107	0.011	0.0108	0.0111
Indeno(1,2,3-cd)pyrene		0.00106	0.00108	0.00115	0.00108	0.00111	0.00111	0.00111	0.00113	0.00107	0.0011		
Dibenzo(a,h)anthracene		0.00424		0.00	0.00.00					00100		0.00108	0.00111
The second secon			0.00432	0.0046	0.00432	0.00444	0.00444	0.00444	0.00452	0.00428	0.0044	0.00108 0.00432	0.00111

<sup>\*=</sup> Total cPAHs are calculated using the Toxic Equivalency Factors for cPAHs found on page 21 of WSDOE's publication titled "Cleanup Levels and Risk Calculations under the Model Toxics Control Act Cleanup Regulation," Version 3.1, November 2001. Total cPAHs MTCA Method A cleanup level is based on benzo(a)pyrene

PCBs = polychlorinated biphenols

cPAHs = polycyclic aromatic hydrocarbons identified as known or probable human carcinogens by the US EPA

Shaded concentrations indicate the result exceeds the MTCA Method A cleanup level for that analyte.

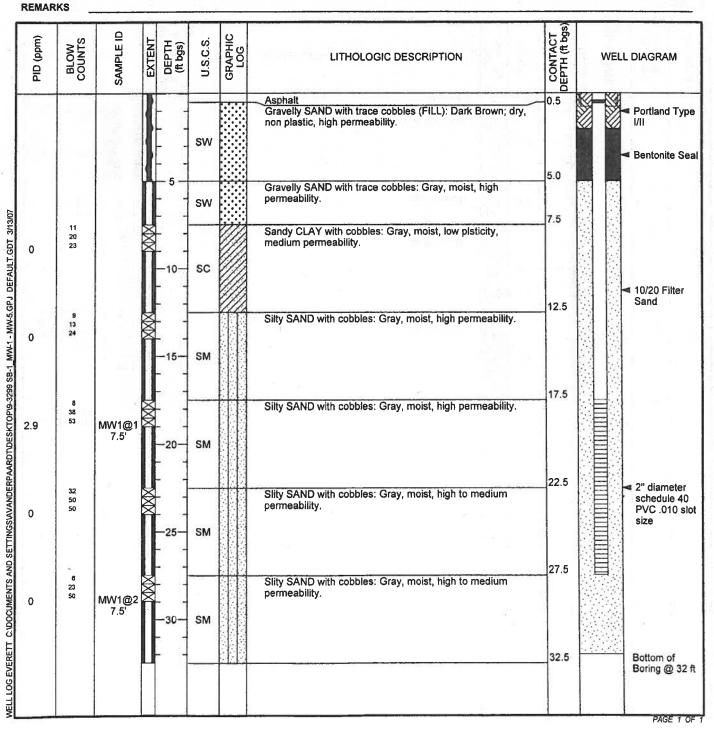
VPHs = Volatile Petroleum Hydrocarbons EPHs = Extractable Petroleum Hydrocarbons ---= not analyzed

## Attachment A Boring Logs



## **BORING/WELL LOG**

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME MW-1	
JOB/SITE NAME	LYNN6808	DRILLING STARTED 16-Nov-06	
LOCATION	6808 196th Street, Lynnwood, WA	DRILLING COMPLETED 16-Nov-06	
PROJECT NUMBER	248-1739	WELL DEVELOPMENT DATE (YIELD) 28-Dec-06 (12/29/2006)	
DRILLER	Boart Longyear Drilling	GROUND SURFACE ELEVATION 452 ft above msi	_
DRILLING METHOD	Hollow-stem auger	TOP OF CASING ELEVATION 452.00 ft above msl	3
BORING DIAMETER	8" cametity of the an included	SCREENED INTERVAL 17.5 to 27.5 ft bgs	
LOGGED BY	Bryan Palmer	DEPTH TO WATER (First Encountered) NA	Ž
REVIEWED BY	T. Crotwell	DEPTH TO WATER (Static) NA	V
444			





## **BORING/WELL LOG**

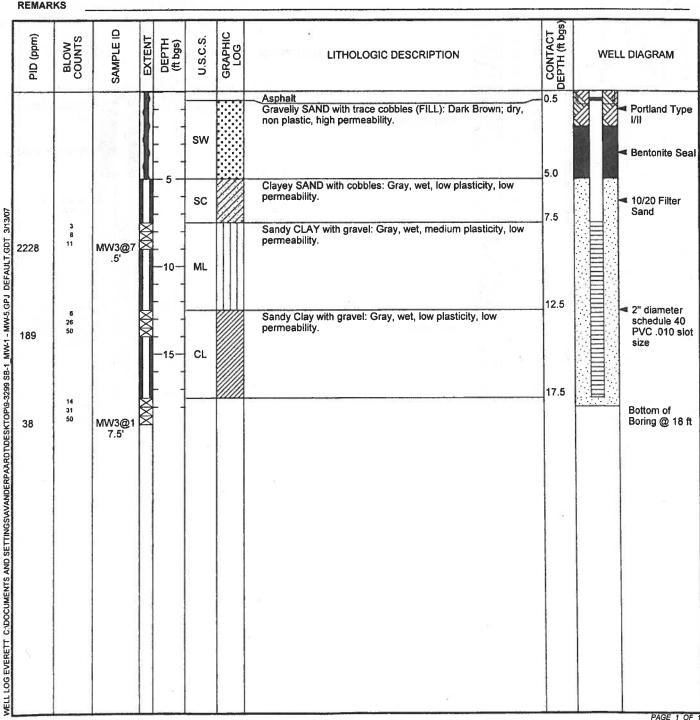
CLIENT NAME	Shell Oil Products US	BORING/WELL NAME MW-2
JOB/SITE NAME	LYNN6808	DRILLING STARTED 16-Nov-06
LOCATION	6808 196th Street, Lynnwood, WA	DRILLING COMPLETED 17-Nov-06
PROJECT NUMBER	248-1739	WELL DEVELOPMENT DATE (YIELD) 28-Dec-06 (12/29/2006)
DRILLER	Boart Longyear Drilling	GROUND SURFACE ELEVATION 451.04 ft above msl
DRILLING METHOD _	Hollow-stem auger	TOP OF CASING ELEVATION 451.04 ft above msl
BORING DIAMETER	8" ex relie no la sue	SCREENED INTERVAL 7.5 to 17.5 ft bgs
LOGGED BY	Bryan Palmer	DEPTH TO WATER (First Encountered) NA
REVIEWED BY	T. Crotwell	DEPTH TO WATER (Static) NA

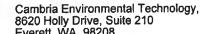
REMARKS CONTACT DEPTH (ft bgs) GRAPHIC LOG PID (ppm) BLOW U.S.C.S. EXTENT DEPTH (ft bgs) SAMPLE LITHOLOGIC DESCRIPTION WELL DIAGRAM Asphalt
Gravelly SAND with trace cobbles (FILL): Dark Brown; dry, non plastic, high permeability. 0.5 Portland Type 1/11 SW Bentonite Seal 5.0 Gravelly SAND with trace cobbles: Gray, moist, high permeability. SW ■ 10/20 Filter Sand 7.5 11 17 21 Clayey SAND with trace gravel: Gray, wet, low placitiy, low permeability. WELL LOG EVERETT C:DOCUMENTS AND SETTINGS!AVANDERPAARDTIDESKTOPI9-3299 SB-1\_MW-1-MW-5.GP.J\_DEFAULT.GDT 0.6 SC 12.5 ■ 2" diameter Sandy CLAY: Gray, wet, medium plasticity, low 21 35 schedule 40 permeability. PVC .010 slot MW2@1 2.5' 0.7 size CL 17.5 27 50 50 Bottom of MW2@1 7.5' Boring @ 18 ft 2.4 PAGE 1 OF



## **BORING/WELL LOG**

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME MW-3
JOB/SITE NAME	LYNN6808	DRILLING STARTED 16-Nov-06
LOCATION	6808 196th Street, Lynnwood, WA	DRILLING COMPLETED 16-Nov-06
PROJECT NUMBER	248-1739	WELL DEVELOPMENT DATE (YIELD) 28-Dec-06 (12/29/2006)
DRILLER	Boart Longyear Drilling	GROUND SURFACE ELEVATION 452.01 ft above msl
DRILLING METHOD	Hollow-stem auger	TOP OF CASING ELEVATION 452.01 ft above msl
BORING DIAMETER	8"1511511121112	SCREENED INTERVAL 7.5 to 17.5 ft bgs
LOGGED BY	Bryan Palmer	DEPTH TO WATER (First Encountered) NA
REVIEWED BY	T. Crotwell	DEPTH TO WATER (Static) NA NA

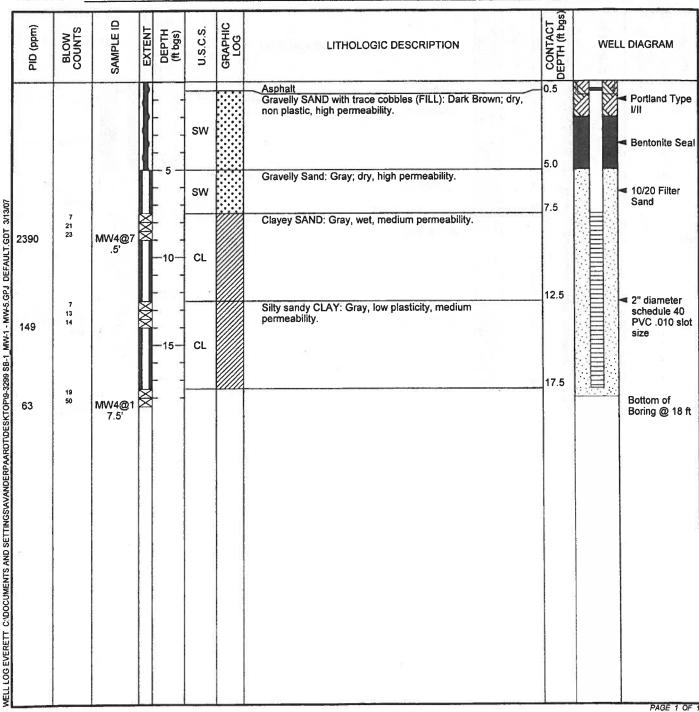




8620 Holly Drive, Suite 210 Everett, WA 98208 Telephone: 425.353.6670 Fax: 425.353.6443

ental rechnology, Inc. Suite 210	BORING/WELL LOG
3	

CLIENT NAME	Shell Oil Products US	fa film saving	BORING/WELL NAME	MW-4		
JOB/SITE NAME	LYNN6808		DRILLING STARTED	16-Nov-06		
LOCATION	6808 196th Street, Lynnwood, WA	si ne	DRILLING COMPLETED _	16-Nov-06		
PROJECT NUMBER _	248-1739		WELL DEVELOPMENT DA	TE (YIELD)	28-Dec-06 (12/29/2006)	
DRILLER	Boart Longyear Drilling		GROUND SURFACE ELEV	ATION	452.28 ft above msl	
DRILLING METHOD	Hollow-stem auger		TOP OF CASING ELEVAT	ION 452.28 ft	above msl	11 111_
BORING DIAMETER	8"		SCREENED INTERVAL	7.5 to 17	.5 ft bgs	
LOGGED BY	Bryan Palmer		DEPTH TO WATER (First	Encountered)	NA	$\bar{\Delta}$
REVIEWED BY	T. Crotwell		DEPTH TO WATER (Static	:)	NA	_ ▼
REMARKS						W =





## **BORING/WELL LOG**

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME MW-5
JOB/SITE NAME	LYNN6808	DRILLING STARTED 16-Nov-06
LOCATION	6808 196th Street, Lynnwood, WA	DRILLING COMPLETED 17-Nov-06
PROJECT NUMBER	248-1739	WELL DEVELOPMENT DATE (YIELD) 28-Dec-06 (12/29/2006)
DRILLER	Boart Longyear Drilling	GROUND SURFACE ELEVATION 451.85 ft above msi
DRILLING METHOD	Hollow-stem auger	TOP OF CASING ELEVATION 451.58 ft above msl
BORING DIAMETER	8"	SCREENED INTERVAL 7.5 to 17.5 ft bgs
LOGGED BY	Bryan Palmer	DEPTH TO WATER (First Encountered) NA
REVIEWED BY	T. Crotwell	DEPTH TO WATER (Static) NA
REVIEWED BY	T. Crotwell	DEPTH TO WATER (Static) NA X

REMARKS CONTACT DEPTH (ft bgs) SAMPLE ID GRAPHIC LOG PID (ppm) U.S.C.S. BLOW EXTENT DEPTH (ft bgs) LITHOLOGIC DESCRIPTION WELL DIAGRAM Asphalt
Gravelly SAND with trace cobbles (FILL): Dark Brown; dry, 0.5 Portland Type non plastic, high permeability. SW Bentonite Seal 5.0 Clayey SAND with gravel: Gray, dry, medium permeability. 10/20 Filter SC Sand WELL LOG EVERETT C'IDOCUMENTS AND SETTINGSIAVANDERPAARDTIDESKTOP19-3299 SB-1\_MW+1 - MW+5.GPJ DEFAULT.GDT 3/13/07 7.5 11 17 14 Sandy CLAY: Gray, wet, low plasticity, medium permeability. MW5@7 .5' 2956 CŁ 12.5 2" diameter 11 14 9 Sandy CLAY: Gray, wet, low plasticity, low permeability. schedule 40 PVC .010 slot 499 size CL 17.5 17 32 50 Bottom of MW5@1 7.5' Boring @ 18 ft 72.5



**BORING/WELL LOG** 

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME SB-1	
JOB/SITE NAME	LYNN6808	DRILLING STARTED 16-Nov-06	
LOCATION	6808 196th Street, Lynnwood, WA	DRILLING COMPLETED 17-Nov-06	
PROJECT NUMBER	248-1739	WELL DEVELOPMENT DATE (YIELD) NA	
DRILLER	Boart Longyear Drilling	GROUND SURFACE ELEVATION Not	Surveyed
DRILLING METHOD	Hollow-stem auger	TOP OF CASING ELEVATION Not Surveyed	d
BORING DIAMETER	8"	SCREENED INTERVAL NA	
LOGGED BY	Bryan Palmer	DEPTH TO WATER (First Encountered)	ıv ⊼
REVIEWED BY	T. Crotwell	DEPTH TO WATER (Static)	VA 🕎
DESTABLE			

REMARKS CONTACT DEPTH (ft bgs) SAMPLE ID GRAPHIC LOG PID (ppm) BLOW EXTENT U.S.C.S. DEPTH (ft bgs) LITHOLOGIC DESCRIPTION **WELL DIAGRAM** Asphalt
Gravelly SAND with trace cobbles (FILL): Dark Brown; dry, 0.5 0 Portland Type non plastic, high permeability. SW 5.0 Gravelly SAND with trace cobbles: Gray; dry, high permeability. SW WELL LOG EVERETT. C:IDOCUMENTS AND SETTINGS\AVANDERPAARDT\DESKTOP\9-3299 SB-1\_MW-1 - MW-5,GP.) DEFAULT.GDT 3/13/07 7.5 Clayey SAND with trace cobbles: Gray; wet, low plasticity, low permeability. 7.7 ■ Bentonite Seal SC 12.5 Gravelly SAND: Gray; moist, low permeability. SB1@1 2.5' 24.2 SW 17.5 Bottom of SB1@1 7.5' Boring @ 18 ft PAGE 1 OF

## Attachment B Waste Disposal Manifest

24 HOUR EMERGENCY RESPONSE, CALL (800) 567-7455 \*\*\*

## SHIPPING PAPER

Lading Manifest: 57881

SHIPPER / CUSTOMER SHELL OIL PRODUCTS US 300-F07  ADDRESS  12700 NORTHBOROUGH DR  CITY, STATE, ZIP HOUSTON TX 77067  CARRIER / TRANSPORTER BIRLINGTON ENVIRONMENTAL, INC.  CONSIGNEE / FACILITY BIRLINGTON ENVIRONMENTAL, INC.  ADDRESS 20245 77TH AVENUE SOUTH  CITY, STATE, ZIP KENT , WA 98032  HM US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  A X GASOLINE HIXTORE 3 081203 FGII ERG(128):  2 DM  CONTRACT  CONTRACT  DON WISDOM  (281)874-2238  PHONE # (253)383-3044  (253)383-3044  (253)3872-8030  CONTRACT  TOTAL  QUANTITY  CONTRACT  DON WISDOM  (253)3872-8030	4-2238 3-3044 2-8030 ainers Total Quantity UOM
ADDRESS  12700 NORTHBOROUGH DR  CITY, STATE, ZIP  HOUSTON TX 77067  CARRIER / TRANSPORTER  BURLINGTON ENVIRONMENTAL, INC.  CONSIGNEE / FACILITY  HURLINGTON ENVIRONMENTAL, INC.  ADDRESS  20245 77TH AVENUE SOUTH  CITY, STATE, ZIP  KENT , WA 98032  HM US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  A GASOLINE HIXTURE 3 UNIXUS FGIT ENG(128)  2 DM  1000	4-2238 3-3044 2-8030 ainers Total Quantity UOM
12700 NORTHBOROUGH DR  ITY, STATE, ZIP  HOUSTON TX 77067  ARRIER/TRANSPORTER  BURLINGTON ENVIRONMENTAL, INC.  POINT OF CONTACT  POINT OF CONTACT  PHONE #  (253) 383-3044  POINT OF CONTACT  PHONE #  (253) 872-8030  PHONE #  (253) 872-8030  TY, STATE, ZIP  KENT , WA 98032  HM US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  X GASOLIER HIXTURE 3 UNITS FRIT ERG(128):	3-3044  2-8030  ainers Total Quantity UOM
HOUSTON TX 77067  ARRIER / TRANSPORTER  BURLINGTON ENVIRONMENTAL, INC.  DONSIGNEE / FACILITY  BURLINGTON ENVIRONMENTAL, INC.  DORESS  20245 77TH AVENUE SOUTH  TY, STATE, ZIP  KENT , WA 98032  HM US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  X GASOLINK HIXYURK 3 URIZUS FGIT RRG(128):	3-3044  2-8030  ainers Total Quantity UOM
HOUSTON TX 77067  ARRIER / TRANSPORTER  BURLINGTON ENVIRONMENTAL, INC.  DISIGNEE / FACILITY  FURLINGTON ENVIRONMENTAL, INC.  DIRESS  20245 77TH AVENUE SOUTH  TY, STATE, ZIP  KENT , WA 98032  HM US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  X GASOLINE HIXTUR 3 061203 FGIT ERG [128].	2-8030 ainers Total Quantity UOM
PHONE # (253) 383-3044  PHONE # (253) 383-3044  POINT OF CONTACT  PHIRLINGTON ENVIRONMENTAL, INC.  PHONE # (253) 3872-8030  PHONE # (253) 872-8030  PHONE # (253) 872-8030  PHONE # (253) 872-8030  TY, STATE, ZIP  KENT , WA 98032  HM US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  X GASOLIER HIXTURE 3 081203 FGIT ERG(128):	2-8030 ainers Total Quantity UOM
DINSIGNEE / FACILITY HURLINGTON ENVIRONMENTAL, INC.  DIRESS 20245 77TH AVENUE SOUTH  TY, STATE, ZIP  KENT , WA 98032  HM US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  X GASOLINE HIXTUR 3 061203 FGIT ERG [128].	2-8030 ainers Total Quantity UOM
PHONE # (253)872-8030  TY, STATE, ZIP  KENT , WA 98032  HM US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  X GASOLIER HIXTURE 3 081203 FGIT ERG(128):	ainers Total UOM
20245 77TH AVENUE SOUTH  TY, STATE, ZIP  KENT , WA 98032  HM US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  X CASOLIER BIXYURE 3 081203 PGIT ERG(128):  (253)872-8030  Containers No. Type Quantity	ainers Total UOM
TY, STATE, ZIP  KENT , WA 98032  HM US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  Containers No. Type Quantity  X GASOLIER HIXTURE 3 081203 FGIT ERG [128]	ainers Total UON
KENT , WA 98032  HM US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  Containers No. Type Quantity  X GASOLIN HIXTUR 3 081203 FGIT ERG(128)	Type Quantity UON
HM US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  X GASOLIER BIXTURE 3 US1203 FGII ERG(128):  Containers No. Type Quantity	Type Quantity UON
HM US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  No. Type Quantity  X GASOLIER HIXTURE 3 081203 FGII ERG(128)	Type Quantity UON
	DM 110 G
200	



\*\*\*24 HOUR EMERGENCY RESPONSE, CALL (800) 567-7455 \*\*\*

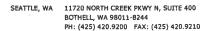
## SHIPPING PAPER

Lading Manifest: 17589-06

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(28 DNE #	1)874	1	
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DNE #	= 1111		
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NE#			
(25	3)872	-8030	
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Contai	ners	Total	Т-
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	9	DH 540	
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		9	
•	Ц		
	Contai No.	Containers   No.   Type   9	Containers Total Quantity

CONSIGNEE

## Attachment C Certified Analytical Reports





December 08, 2006

Justin Foslien Cambria - Seattle 8620 Holly Drive, Suite 210 Everett, WA 98208

RE: Shell - 6808 196th SW, Lynnwood

Enclosed are the results of analyses for samples received by the laboratory on 11/17/06 16:00. The following list is a summary of the Work Orders contained in this report, generated on 12/08/06 18:57.

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

Work Order	<u>Project</u>	<u>ProjectNumber</u>
BPK0570	Shell - 6808 196th SW, Lynnw	248-1739

TestAmerica - Seattle, WA

Kate Haney, Project Manager





SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

8620 Holly Drive, Suite 210

Everett, WA 98208

Project Name:

Shell - 6808 196th SW, Lynnwood

Project Number: Project Manager:

248-1739 Justin Foslien

Report Created: 12/08/06 18:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW1@27.5'	BPK0570-01	Soil	11/16/06 10:30	11/17/06 16:00
GW1@17.5'	BPK0570-02	Soil	11/16/06 10:03	11/17/06 16:00
SB1@12.5'	BPK0570-03	Soil	11/16/06 13:20	11/17/06 16:00
SB1@7.5'	BPK0570-04	Soil	11/16/06 13:15	11/17/06 16:00
GW3@7.5'	BPK0570-05	Soil	11/16/06 14:35	11/17/06 16:00
GW3@17.5'	BPK0570-06	Soil	11/16/06 14:50	11/17/06 16:00
GW2@12.5'	BPK0570-07	Soil	11/17/06 08:39	11/17/06 16:00
GW2@17.5'	BPK0570-08	Soil	11/17/06 08:50	11/17/06 16:00
GW4@7.5'	BPK0570-09	Soil	11/17/06 10:32	11/17/06 16:00
GW4@17.5'	BPK0570-10	Soil	11/17/06 10:45	11/17/06 16:00
GW5@7.5'	BPK0570-11	Soil	11/17/06 12:27	11/17/06 16:00
GW5@17.5'	BPK0570-12	Soil	11/17/06 12:45	11/17/06 16:00





SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208

Project Number: Project Manager: 248-1739 Justin Foslien Report Created:

12/08/06 18:57

## Volatile Petroleum Products by NWTPH-Gx

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-01 (GW1@27.5')		Soil			Samp	led: 11/	16/06 10:30			e rën
Gasoline Range Hydrocarbons	NWTPH-Gx	4.54		3.57	mg/kg dry	lx	6K29027	11/29/06 11:15	11/29/06 19:12	
Surrogate(s): 4-BFB (FID)			82.2%		50 - 150 %	п			н	
BPK0570-02 (GW1@17.5')	- 4 HIII	Soil			Sampl	led: 11/1	16/06 10:03			22
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	111	3.54	mg/kg dry	lx	6K29027	11/29/06 11:15	11/29/06 19:42	17
Surrogate(s): 4-BFB (FID)			84.0%		50 - 150 %			3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	н	
BPK0570-03 (SB1@12.5')		Soil		٠	Sampl	led: 11/	16/06 13:20			
Gasoline Range Hydrocarbons	NWTPH-Gx	12.3		3,92	mg/kg dry	lx	6K29027	11/29/06 11:15	11/29/06 20:12	
Surrogate(s): 4-BFB (FID)		-	82.6%		50 - 150 %	"			п	
BPK0570-04 (SB1@7.5')	41	Soil			Sampl	led: 11/1	16/06 13:15			
Gasoline Range Hydrocarbons	NWTPH-Gx	4.51		4.05	mg/kg dry	lx	6K29027	11/29/06 11:15	11/29/06 22:40	
Surrogate(s): 4-BFB (FID)			83.1%		50 - 150 %	"			"	
BPK0570-05 (GW3@7.5')		Soil			Sampl	led: 11/1	16/06 14:35			
Gasoline Range Hydrocarbons	NWTPH-Gx	1820		793	mg/kg dry	200x	6K29027	11/29/06 11:15	11/29/06 23:10	
Surrogate(s): 4-BFB (FID)	88		85.3%		50 - 150 %	İx			"	
BPK0570-06 (GW3@17.5')		Soil			Sampl	led: 11/	16/06 14:50			
Gasoline Range Hydrocarbons	NWTPH-Gx	8.39		3.90	mg/kg dry	lx	6K29027	11/29/06 11:15	11/29/06 20:41	
Surrogate(s): 4-BFB (FID)			85.9%		50 - 150 %	"			**	
BPK0570-07 (GW2@12.5')		Soil			Sampl	led: 11/	17/06 08:39			
Gasoline Range Hydrocarbons	NWTPH-Gx	ND		3,68	mg/kg dry	lx	6K30024	11/30/06 10:49	11/30/06 20:27	
Surrogate(s): 4-BFB (FID)			101%		50 - 150 %	"			н	
BPK0570-08 (GW2@17.5')		Soil			Sampl	led: 11/1	17/06 08:50		THE STATE OF THE S	
Gasoline Range Hydrocarbons	NWTPH-Gx	9.49		4.26	mg/kg dry	lx	6K30024	11/30/06 10:49	11/30/06 22:59	
Surrogate(s): 4-BFB (FID)			102%		50 - 150 %	ıı			tr .	

TestAmerica - Seattle, WA





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

## Volatile Petroleum Products by NWTPH-Gx

TestAmerica - Seattle, WA

Analyte	Method	Result MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-09 (GW4@7,5')		Soil		Şampl	eđ: 11/1	7/06 10:32		la e	-49-1
Gasoline Range Hydrocarbons	NWTPH-Gx	1060	189	mg/kg dry	50x	6K30024	11/30/06 10:49	11/30/06 23:30	
Surrogate(s): 4-BFB (FID)		111%		50 - 150 %	lx			"	
BPK0570-10 (GW4@17.5')		Soil	401	Sampl	ed: 11/1	7/06 10:45			
Gasoline Range Hydrocarbons	NWTPH-Gx	8.57	3.80	mg/kg dry	lx	6K30024	11/30/06 10:49	11/30/06 20:57	
Surrogate(s): 4-BFB (FID)		99.1%		50 - 150 %	"			#	
BPK0570-11 (GW5@7.5')	-	Soil		Sampl	ed: 11/1	7/06 12:27			
Gasoline Range Hydrocarbons	NWTPH-Gx	1550	193	mg/kg dry	50x	6K30024	11/30/06 10:49	12/01/06 00:01	
Surrogate(s): 4-BFB (FID)		99.1%	8.1	50 - 150 %	lx			н	
BPK0570-12 (GW5@17.5')		Soil		Sampl	ed: 11/1	7/06 12:45			
Gasoline Range Hydrocarbons	NWTPH-Gx	23.9	3.69	mg/kg dry	lx	6K30024	11/30/06 10:49	11/30/06 19:56	0.1
Surrogate(s): 4-BFB (FID)		99.1%		50 - 150 %	"			н	

TestAmerica - Seattle, WA

Kate Haney, Project Manager





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

Volatile Petroleum Hydrocarbons by WDOE TPH Policy Method

TestAmerica - Seattle, WA

Analyte	II Poorbu	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-05RE2	(GW3@7.5')		Soil	1 160		Sampl	led: 11/1	16/06 14:35			H
C5-C6 Aliphatics		WA MTCA-VPH	ND	- 4:	198	mg/kg dry	50x	6L06021	12/06/06 09;31	12/07/06 00:04	
C6-C8 Aliphatics		4	ND		198	n	17	*		*	L
C8-C10 Aromatics			289		198	*	ч	**		*	
C10-C12 Aromatics			227		198			*	*	19	
C12-C13 Aromatics			ND		198	*			н		
Total VPH (TVPH)			ND		1390			•			
Surrogate(s):	4-BFB (FID)			120%		60 - 140 %	lx			н	725
	4-BFB (PID)			100%		60 - 140 %	n			"	
BPK0570-06RE1	(GW3@17.5')		Soil			Sampl	led: 11/1	16/06 14:50			
C5-C6 Aliphatics		WA MTCA-VPH	ND	_	3.90	mg/kg dry	lx	6K28004	11/28/06 09:45	11/28/06 14:00	
C6-C8 Aliphatics		*	4,15	*****	3,90	*	н 5	•	#	•	
C8-C10 Aromatics			ND		3.90	11			*		
C10-C12 Aromatics			ND		3.90	н		tu			
C12-C13 Aromatics		*	ND		3.90	н	*	*	н		
Total VPH (TVPH)		"	ND		27.3	н	н	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	H	н	
Surrogate(s):	4-BFB (FID)			104%		60 - 140 %	н			"	
	4-BFB (PID)			96.6%		60 - 140 %	"			<i>"</i>	
BPK0570-09RE2	(GW4@7.5')		Soil	N N		Sampl	led: 11/1	17/06 10:32			H
C5-C6 Aliphatics		WA MTCA-VPH	ND		75.5	mg/kg dry	20x	6L06021	12/06/06 09:31	12/07/06 00:35	
C6-C8 Aliphatics		н	104		75.5	н		*	н	n	L
C8-C10 Aromatics			147		75.5	#	#		*	"	
C10-C12 Aromatics			140		75,5	u	м	u	*	u	
C12-C13 Aromatics		**	ND		75.5	n		*	н	"	
Total VPH (TVPH)		M	699		528	н		н		н	
Surrogate(s):	4-BFB (FID)			127%		60 - 140 %	lx			"	
	4-BFB (PID)			96.9%		60 - 140 %	H			и	
BPK0570-10RE1	(GW4@17.5')		Soil			Sampl	led: 11/1	17/06 10:45			
C5-C6 Aliphatics		WA MTCA-VPH	ND		3.80	mg/kg dry	1x	6K28004	11/28/06 09:45	11/28/06 15:41	
C6-C8 Aliphatics		**	ND		3.80	н	D	n	*	tt	
C8-C10 Aromatics		**	ND		3.80	*	н	"	**	н	
C10-C12 Aromatics		Ħ	ND		3.80	н	*		я	н	
C12-C13 Aromatics		н	ND		3,80	н	*	*	"	*	
Total VPH (TVPH)		н	ND		26.6	H		e	n	**	

TestAmerica - Seattle, WA

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Kate Haney, Project Manager





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208

Project Number: Project Manager: 248-1739

Report Created:

Justin Foslien

12/08/06 18:57

## Volatile Petroleum Hydrocarbons by WDOE TPH Policy Method

TestAmerica - Seattle, WA

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-10RE1	(GW4@17.5')		So	il		Sampl	ed: 11/1	7/06 10:45			
Surrogate(s):	4-BFB (FID) 4-BFB (PID)			97.4% 95.2%	- 1	60 - 140 % 60 - 140 %	lx "	12:		11/28/06 15;41	
BPK0570-11RE2	(GW5@7.5')		So	il		Sampl	ed: 11/1	7/06 12:27	ů.		н
C5-C6 Aliphatics		WA MTCA-VPH	ND		77.2	mg/kg dry	20x	6L06021	12/06/06 09:31	12/07/06 01:05	
C6-C8 Aliphatics			ND		77.2	и —			N		L
C8-C10 Aromatics		*	ND		77.2	*	ч	н		*	
C10-C12 Aromatics			ND		77.2	ıı	*		н	*	
C12-C13 Aromatics		н	ND		77.2	н	11	н	n	H	
Total VPH (TVPH)		н	ND		541	н	5.	*	*		
Surrogate(s):	4-BFB (FID)			99.6%		60 - 140 %	Ix		80	"	
	4-BFB (PID)			100%		60 - 140 %	"			"	
BPK0570-12RE1	(GW5@17.5')		So	il		Sampl	ed: 11/1	7/06 12:45			8
C5-C6 Aliphatics		WA MTCA-VPH	ND		3.69	mg/kg dry	ìx	6K28004	11/28/06 09:45	11/28/06 16:11	
C6-C8 Aliphatics		н	7.96		3.69		и	и	**	н	
C8-C10 Aromatics		н	ND	*****	3.69	н		*	н		
C10-C12 Aromatics			ND		3.69			**	- "	2. * 37	
C12-C13 Aromatics		**	ND		3.69	M	91	10			
Total VPH (TVPH)		0	ND	-	25.9	N	*		*		
Surrogate(s):	4-BFB (FID)			114%		60 - 140 %	"			н	
	4-BFB (PID)			91.9%		60 - 140 %	*			"	

TestAmerica - Seattle, WA

Kate Haney, Project Manager





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

## Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-01 (GW1@27.5')		So	il	6	Sampl	ed: 11/1	16/06 10:30		H-	Z=14
Diesel Range Hydrocarbons Lube Oil Range Hydrocarbons	NWTPH-Dx	ND ND		10.6 26.4	mg/kg dry	lx	6K27031	11/27/06 10:42	12/06/06 17:38	
Surrogate(s): 2-FBP Octacosane	=== ====	4%	105% 90.2%		54 - 148 % 62 - 142 %	"			n H	
BPK0570-02 (GW1@17.5')		So	il		Sampl	ed: 11/1	16/06 10:03			
Diesel Range Hydrocarbons Lube Oil Range Hydrocarbons	NWTPH-Dx	nD ND		10.9 27.2	mg/kg dry	lx "	6K27031	11/27/06 10:42	12/06/06 18:04	
Surrogate(s): 2-FBP Octacosane		_	95.5% 87.4%		54 - 148 % 62 - 142 %	"			n n	
BPK0570-03 (SB1@12.5')		So	il		Sampl	ed: 11/1	16/06 13:20			
Diesel Range Hydrocarbons Lube Oil Range Hydrocarbons	NWTPH-Dx	ND ND		11.4 28.6	mg/kg dry	lх	6K27031	11/27/06 10:42	12/06/06 19:48	
Surrogate(s): 2-FBP Octacosane			97.5% 87.8%		54 - 148 % 62 - 142 %	n			н	=1-
BPK0570-04 (SB1@7.5')		So	il		Sample	ed: 11/1	16/06 13:15			
Diesel Range Hydrocarbons Lube Oil Range Hydrocarbons	NWTPH-Dx	ND ND		10.8 27.1	mg/kg dry	lx "	6K27031	11/27/06 10:42	12/06/06 20:14	+0.2
Surrogate(s): 2-FBP Octacosane		8	102% 90.0%		54 - 148 % 62 - 142 %	"			n	1/2
BPK0570-05 (GW3@7.5')		So	il .		Sampl	ed: 11/1	16/06 14:35			
Diesel Range Hydrocarbons Lube Oil Range Hydrocarbons	NWTPH-Dx	<b>63.3</b> ND		11,2 27.9	mg/kg dry	lx "	6K27031	11/27/06 10:42	12/06/06 20:40	Q
Surrogate(s): 2-FBP Octacosane			110% 96.9%		54 - 148 % 62 - 142 %	"			п	
BPK0570-06 (GW3@17.5')		Soi	il		Sampl	ed: 11/	16/06 14:50			
Diesel Range Hydrocarbons Lube Oil Range Hydrocarbons	NWTPH-Dx	ND ND		11.1 27.8	mg/kg dry	lx "	6K27031	11/27/06 10:42	12/06/06 21:06	
Surrogate(s): 2-FBP Octacosane		ki	104% 91.5%		54 - 148 % 62 - 142 %	"			11	

TestAmerica - Seattle, WA

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Kate Haney, Project Manager





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created:

12/08/06 18:57

## Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-07 (GW2@12.5')		Soil	٠,,		Sampl	ed: 11/1	17/06 08:39			
Diesel Range Hydrocarbons	NWTPH-Dx	ND		11.0	mg/kg dry	lx	6K27031	11/27/06 10:42	12/06/06 21:32	_ 14
Lube Oil Range Hydrocarbons		ND		27.4	<u>"</u>					
Surrogate(s): 2-FBP			106%		54 - 148 %	**			н	
Octacosane			90.7%		62 - 142 %	"			н	
BPK0570-08 (GW2@17.5')		Soil			Sampl	ed: 11/1	17/06 08:50			
Diesel Range Hydrocarbons	NWTPH-Dx	ND		11.2	mg/kg dry	1x	6K27031	11/27/06 10:42	12/06/06 21:58	
Lube Oil Range Hydrocarbons	н	ND		28.1			#	н	"	
Surrogate(s): 2-FBP			106%		54 - 148 %	n			"	
Octacosane			91.9%		62 - 142 %	n			"	
BPK0570-09 (GW4@7.5')		Soil			Sampl	ed: 11/1	17/06 10:32			
Diesel Range Hydrocarbons	NWTPH-Dx	30,9		10,7	mg/kg dry	lx	6K27031	11/27/06 10:42	12/06/06 22:24	Q
Lube Oil Range Hydrocarbons	н	ND		26.8		н	*		**	
Surrogate(s): 2-FBP			102%		54 - 148 %	n			н	
Octacosane			93.8%		62 - 142 %	n			"	
BPK0570-10 (GW4@17.5')		Soil			Sampl	ed: 11/1	17/06 10:45			
Diesel Range Hydrocarbons	NWTPH-Dx	ND		11.0	mg/kg dry	ìx	6K27031	11/27/06 10:42	12/06/06 22:50	
Lube Oil Range Hydrocarbons	н	ND		27.5	*	" 7	н	ч	10	
Surrogate(s): 2-FBP			101%		54 - 148 %	"			n	
Octacosane			89.3%		62 - 142 %	"			"	
BPK0570-11 (GW5@7.5')		Soil			Sampl	ed: 11/1	17/06 12:27			
Diesel Range Hydrocarbons	NWTPH-Dx	62.4		10.7	mg/kg dry	lx	6K27031	11/27/06 10:42	12/06/06 23:15	Q
Lube Oil Range Hydrocarbons		ND		26.9	**	*	*	н	*	
Surrogate(s): 2-FBP			109%		54 - 148 %	н			n	
Octacosane			96.5%		62 - 142 %	"			"	
BPK0570-12 (GW5@17.5')		Soil			Sampl	ed: 11/	17/06 12:45			
Diesel Range Hydrocarbons	NWTPH-Dx	ND		11.0	mg/kg dry	l×	6K27031	11/27/06 10:42	12/06/06 23:41	
Lube Oil Range Hydrocarbons	11	ND		27.5	u E		*	u		
Surrogate(s): 2-FBP			103%		54 - 148 %	"			*	
Octacosane			91.4%		62 - 142 %	"			.,	

ΓestAmerica - Seattle, WA





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210



Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

## Extractable Petroleum Hydrocarbons by WDOE TPH Policy Method

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-05 (GW3@7.5')		Sọi	HILDIG		Sampl	ed: 11/1	6/06 14:35			ци. Ти
C8-C10 Aliphatics	WA MTCA-EPH	30.1		5,53	mg/kg dry	lx	6K27029	11/27/06 10:39	12/01/06 16:09	
C10-C12 Aliphatics	H	29.4		5.53	#	н	**	"		
C12-C16 Aliphatics	н	7.95		5.53		n	*	n		
C16-C21 Aliphatics	n .	ND		5.53	н			п	•	
C21-C34 Aliphatics	*	ND		5.53	•			**	H	
C8-C10 Aromatics	и	33.8		5.53		н	n	н	12/01/06 16:41	
C10-C12 Aromatics		27.8		5.53		- "	**			
C12-C16 Aromatics		9.73		5.53			,	п		
C16-C21 Aromatics		ND		5.53		я	H			
C21-C34 Aromatics		ND		5.53		н	**	н	×	
Extractable Petroleum Hydrocarbons	п	139	-	55.3	*	*	[CALC]		н	
Surrogate(s): o-Terphenyl			92.4%		60 - 140 %	tt			н	VI V
1-Chlorooctadecane			98.9%		60 - 140 %	"			12/01/06 16:09	
BPK0570-06 (GW3@17.5')		Soi	1		Sampl	ed: 11/1	6/06 14:50			
C8-C10 Aliphatics	WA MTCA-EPH	ND		5.56	mg/kg dry	lx	6K27029	11/27/06 10:39	12/01/06 19:18	
C10-C12 Aliphatics		ND		5.56	H	×	н			
C12-C16 Aliphatics	"	ND		5.56		н		,		
C16-C21 Aliphatics	H	ND		5.56		н	н	**	×	
21-C34 Aliphatics	H	ND		5.56	н		н	*		
C8-C10 Aromatics	P	ND		5.56	н	н			12/01/06 19:49	
C10-C12 Aromatics	4	ND		5.56	н	н	N	н	,	2
C12-C16 Aromatics		ND		5.56	и	н	*			
C16-C21 Aromatics	95	ND	****	5.56	N		*	*	м	
C21-C34 Aromatics	**	ND		5.56		н	v	*1	N	
Extractable Petroleum Hydrocarbons	*	ND		55.6		H	[CALC]	n	*	
Surrogate(s): o-Terphenyl			91.9%		60 - 140 %	"			H	
1-Chlorooctadecane			103%		60 - 140 %	"			12/01/06 19:18	
BPK0570-09 (GW4@7.5')		Soi	l		Sampl	ed: 11/1	7/06 10:32			
C8-C10 Aliphatics	WA MTCA-EPH	ND		5.35	mg/kg dry	1x	6K27029	11/27/06 10:39	12/01/06 20:21	74-
C10-C12 Aliphatics	*	11.3		5.35	н	*	н	H	н	
212-C16 Aliphatics	н	ND		5.35	te	*	ч			
C16-C21 Aliphatics		ND		5.35	11	*	*		н	
C21-C34 Aliphatics	M	ND		5.35	#	*	**	н		
C8-C10 Aromatics	n	ND		5.35	*	n	30		12/01/06 20:53	
C10-C12 Aromatics		19.4		5.35	u		n	tt.	н	
C12-C16 Aromatics	*	11.1		5.35	**		,	*		

TestAmerica - Seattle, WA

Mal Dung

Kate Haney, Project Manager





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

8620 Holly Drive, Suite 210 Everett, WA 98208

Project Name:

Shell - 6808 196th SW, Lynnwood

Project Number: Project Manager: 248-1739 Justin Foslien

Report Created: 12/08/06 18:57

## Extractable Petroleum Hydrocarbons by WDOE TPH Policy Method

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-09 (GW4@7.5')		Soi	1		Sample	ed: 11/1	7/06 10:32			
C16-C21 Aromatics	WA MTCA-EPH	ND		5.35	mg/kg dry	lx	6K27029	11/27/06 10:39	12/01/06 20:53	-
C21-C34 Aromatics		ND	*****	5.35	**	*	**	•	H	
Extractable Petroleum Hydrocarbons		ND		53.5	*	D	[CALC]	u	*	
Surrogate(s): o-Terphenyl			93.3%		60 - 140 %	"			n	
1-Chlorooctadecane			102%		60 - 140 %	"			12/01/06 20.21	
3PK0570-10 (GW4@17.5')		Soi	1		Sample	ed: 11/1	7/06 10:45			
C8-C10 Aliphatics	WA MTCA-EPH	ND		5.52	mg/kg dry	lx	6K27029	11/27/06 10:39	12/01/06 21:24	. <u>-                                   </u>
C10-C12 Aliphatics	н	ND		5.52		H (2)	*		н	
C12-C16 Aliphatics	#	ND		5.52		10	**	*	t+	
C16-C21 Aliphatics	Ħ	ND		5.52	н	*	н		*	
C21-C34 Aliphatics	**	ND		5.52	*	"	*	н	_ P =	
C8-C10 Aromatics	u	ND		5.52	4			**	12/01/06 21:55	
210-C12 Aromatics	п	ND		5,52	*			*	*	
12-C16 Aromatics	н	ND		5.52	"		"	*	•	
216-C21 Aromatics		ND		5.52	4		•	*		
21-C34 Aromatics	**	ND		5.52	"			*	н	
Extractable Petroleum Hydrocarbons	er	ND		55,2	*1	*	[CALC]	*	и.	
Surrogate(s): o-Terphenyl			91.8%		60 - 140 %	н			н	
1-Chlorooctadecane			101%		60 - 140 %	"			12/01/06 21:24	
SPK0570-11 (GW5@7.5')		Soi	ı		Sample	ed: 11/1	7/06 12:27			
28-C10 Aliphatics	WA MTCA-EPH	ND		5,41	mg/kg dry	lx	6K27029	11/27/06 10:39	12/01/06 22:27	
10-C12 Aliphatics	#	14.6		5.41		n	IP.	**	н	
12-C16 Aliphatics		9.56		5.41	. "	н	н	"	n	
16-C21 Aliphatics	rt .	ND ·		5.41	*	*		*	*	
C21-C34 Aliphatics	и	ND		5.41	*	*	н	n	"	
C8-C10 Aromatics	н	ND		5.41	*		н	*	12/01/06 22:58	
110-C12 Aromatics	**	23.5	-	5.41	а	н	н	H	Ħ	
12-C16 Aromatics	н	16.2		5.41	49		*		н	
16-C21 Aromatics	н	ND	****	5.41	**	"		н	н	
21-C34 Aromatics	u	ND		5.41	"	н			0	
xtractable Petroleum	н	63,9		54.1	н	*	[CALC]	54	n	
lydrocarbons				_						
Surrogate(s): o-Terphenyl			96.7%		60 - 140 %	"			u	
I-Chlorooctadecane			104%		60 - 140 %	**			12/01/06 22:27	





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

Project Number:

248-1739

Report Created:

Everett, WA 98208

8620 Holly Drive, Suite 210

Project Manager: Justin Foslien

12/08/06 18:57

## Extractable Petroleum Hydrocarbons by WDOE TPH Policy Method

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-12 (GW5@17.5')	300	Soil	Soil		Sampled: 11/17/06				e Italia	
C8-C10 Aliphatics	WA MTCA-EPH	ND	*****	5.54	mg/kg dry	lx	6K27029	11/27/06 10:39	12/05/06 17:34	
C10-C12 Aliphatics	м	ND		5.54	N	•		*		
C12-C16 Aliphatics	#	ND		5.54	•	•		n		-1-1-14
C16-C21 Aliphatics	*	ND		5.54	**			м	N SE	
C21-C34 Aliphatics		ND		5.54	*		**	10		
C8-C10 Aromatics	n	ND		5.54	**		M		12/04/06 13:26	
C10-C12 Aromatics	n	ND		5.54	*		н	*		
C12-C16 Aromatics	*	ND		5.54	-	*		**		
C16-C21 Aromatics		ND		5.54		*	и	n	e	
C21-C34 Aromatics		ND		5,54			61		**	
Extractable Petroleum Hydrocarbons	•	ND		55.4		e e	[CALC]	н	12/05/06 17:34	
Surrogate(s): o-Terphenyl			101%		60 - 140 %	"			12/04/06 13:26	
1-Chlorooctadecane			87.6%		60 - 140 %	"			12/05/06 17:34	

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Kate Haney, Project Manage





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

## Total Metals by EPA 6000/7000 Series Methods

TestAmerica - Seattle, WA

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes	
BPK0570-01 (GW1@27.5')			Soil	Local		Sampled: 11/16/06 10:30						
Lead	V	EPA 6020	0.962		0.543	mg/kg dry	lx	6K30060	11/30/06 17:12	12/01/06 11:38		
BPK0570-02	(GW1@17.5')		Soil		Samp	led: 11/	16/06 10:03		•			
Lead		EPA 6020	1.48	-	0.539	mg/kg dry	]x	6K30060	11/30/06 17:12	12/01/06 12:25		
BPK0570-03	(SB1@12.5')	3	Soil	25		Samp	led: 11/	16/06 13:20				
Lead	2	EPA 6020	2.06		0,550	mg/kg dry	lx	6K30060	11/30/06 17:12	12/01/06 12:31	-	
BPK0570-04	(SB1@7.5')		Soil			Samp	led; 11/	16/06 13:15				
Lead		EPA 6020	1.71	-	0.440	mg/kg dry	lx	6K30060	11/30/06 17:12	12/01/06 12 37		
BPK0570-05	(GW3@7.5')		Soil			Samp	led: 11/	16/06 14:35				
Lead		EPA 6020	6.69		0.431	mg/kg dry	1x	6K30060	11/30/06 17:12	12/01/06 12:43		
BPK0570-06	(GW3@17.5')		Soil			Samp	led: 11/	16/06 14:50				
Lead		EPA 6020	1.55		0.545	mg/kg dry	lx	6K30060	11/30/06 17:12	12/01/06 12:49		
BPK0570-07	(GW2@12.5')		Soil			Samp	led: 11/	17/06 08:39				
ead		EPA 6020	1.60		0.477	mg/kg dry	lx	6K30060	11/30/06 17:12	12/01/06 12:55		
3PK0570-08	(GW2@17.5')		Soil			Samp	led: 11/	17/06 08:50				
Lead		EPA 6020	1.40	*****	0.569	mg/kg dry	lx	6K30060	11/30/06 17:12	12/01/06 13:42		
BPK0570-09	(GW4@7.5')		Soil			Samp	led: 11/	17/06 10:32				
lead		EPA 6020	2.35		0,532	mg/kg dry	lx	6K30060	11/30/06 17:12	12/01/06 13:48		
BPK0570-10	(GW4@17.5')		Soil			Samp	led: 11/	17/06 10:45				
ead		EPA 6020	1.58		0.509	mg/kg dry	lx	6K30060	11/30/06 17:12	12/01/06 13:54		
3PK0570-11	(GW5@7.5')		Soil		Sampled: 11/17/06 12:27							
ead		EPA 6020	4.64		0.516	mg/kg dry	1x	6K30060	11/30/06 17:12	12/01/06 14:00		

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11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Name:

Shell - 6808 196th SW, Lynnwood

Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

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## Total Metals by EPA 6000/7000 Series Methods

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL Unit	ls Dil	Batch	Prepared	Analyzed	Notes
BPK0570-12 (GW5@17.5')		Soil	i ng iliye		Sampled: 11	/17/06 12:45			
Lead	EPA 6020	1.33		0.477 mg/kg	dry lx	6K30060	11/30/06 17:12	12/01/06 14:05	

TestAmerica - Seattle, WA

Kate Haney, Project Manager





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX; (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

## Polychlorinated Biphenyls by EPA Method 8082

TestAmerica - Seattle, WA

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-01	(GW1@27.5')		Soi	Soil		Sampled: 11/16/06 10:30				in the Marine	
Aroclor 1016 [2C]		EPA 8082	ND		26.4	ug/kg dry	lx	6K27027	11/27/06 10:36	11/30/06 00.01	
Aroclor 1221			ND	*****	52.9	н	,	br .	н		
Aroclor 1232		н	ND		26.4	н		**	64		
Aroclor 1242		н	ND		26.4			**	*	н	
Aroclor 1248		н	ND		26.4	n	11	11	*		
Aroclor 1254			ND		26,4	41	11	"	at	R	
Aroclor 1260 [2C]			ND		26.4	*	н		H	tr	
Aroclor 1262		n	ND		26.4	н	и		п	н	
Aroclor 1268		н	ND		26.4	n	"	п	11	94	
Surrogate(s):	TCX [2C]			99.0%	- 0.	39 - 139 %	11			и	
***********	Decachlorobiphenyl [2	2C]		82.0%		33 - 163 %	"			**	
BPK0570-02	(GW1@17.5')		Soi	Sampled: 11/16/06 10:03					LI EL -		
Aroclor 1016 [2C]		EPA 8082	ND		27.1	ug/kg dry	lx	6K27027	11/27/06 10:36	11/30/06 00:19	
Aroclor 1221		11	ND		54.1	**	*	. н	,,		
Aroclor 1232		16	ND		27.1		#	н	н	n	
Aroclor 1242		я	ND	*****	27.1	n	**	*		и	
Aroclor 1248		н	ND	and the same	27.1	ii .	п		u	4	
Aroclor 1254		н	ND		27.1	н	**	н	*	**	
Aroclor 1260 [2C]		*	ND		27.1	н		*	1,00	**	
Aroclor 1262		,	ND		27.1	н		н	*	н	
Aroclor 1268			ND		27.1				D.	*	
Surrogate(s):	TCX [2C]			99.0%		39 - 139 %	"			n	
3 17	Decachlorobiphenyl [2	PC]		90.2%		33 - 163 %	*			"	
BPK0570-03	(SB1@12.5')		Soi	1		Sampled: 11/16/06 13:20					
roclor 1016 [2C]		EPA 8082	ND		28.8	ug/kg dry	lx	6K27027	11/27/06 10:36	11/30/06 00:37	
Aroclor 1221		н	ND		57.5	44	н	*	*	н	
Aroclor 1232			ND		28.8	н	н	ч	H	91	
Aroclor 1242		n	ND	*****	28.8	**		н	*	n.	
Aroclor 1248		н	ND		28.8			567	*	*	
Arocior 1254		el	ND		28.8	"	*	м	н	н	
aroclor 1260 [2C]		**	ND		28.8		*	н	**	98	
Aroclor 1262		н	ND		28.8	п	9	"	*	н	
Aroclor 1268		н	ND	*****	28.8	ŧ	н	9.00	"	н	
Surrogate(s):	TCX [2C]			104%		39 - 139 %	н			и	
	Decachlorobiphenyl [2			94.7%		33 - 163 %	"				

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Kate Haney, Project Manager





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Everett, WA 98208

8620 Holly Drive, Suite 210

Project Name:

Shell - 6808 196th SW, Lynnwood

Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

## Polychlorinated Biphenyls by EPA Method 8082

TestAmerica - Seattle, WA

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Note
BPK0570-04	(SB1@7.5')		Soil			Sampled: 11/16/06 13:15					1
Aroclor 1016 [2C]		EPA 8082	ND		27.0	ug/kg dry	lx	6K27027	11/27/06 10:36	11/30/06 00:56	
Aroclor 1221		*	ND	*****	54.0	n	10	11	н	n	
Aroclor 1232		*	ND		27.0	n	*	*	n	*	
Aroclor 1242			ND		27.0		*	"		н	
roclor 1248		*	ND		27.0	н	*	н		•	
croclor 1254		"	ND		27.0	н	•	15	н	н	
roclor 1260 [2C]		н	ND		27.0	H		и	b	*	
roclor 1262		**	ND		27.0	*	н	H	11		
roclor 1268			ND		27.0	**		н	н		
Surrogate(s):	TCX [2C]			101%		39 - 139 %	н	8		"	
	Decachlorobiphenyl [2C	1		93.2%		33 - 163 %	# **			"	
PK0570-05	(GW3@7.5')	Soil				Sample	ed: 11/1	6/06 14:35			
roclor 1016 [2C]		EPA 8082	ND		28.0	ug/kg dry	lx	6K27027	11/27/06 10:36	11/30/06 01:14	== 1
roclor 1221		н	ND		56.1		Ħ	41	н	и	
roclor 1232		et	ND		28.0	*	**	*	ti		
roclor 1242			ND		28.0	*		н	н	H	
roclor 1248		*	ND		28,0	*	*	"	н	н	
roclor 1254			ND		28.0		•	н	н	н	
roclor 1260 [2C]		n	ND		28.0		*	Ħ	н	н	
roclor 1262		n	ND		28.0			**	н		
roclor 1268		н	ND	*****	28.0		п		N	н	
Surrogate(s):	TCX [2C]			91.2%		39 - 139 %	**			и	
	Decachlorobiphenyl [2C]	7		88.0%		33 - 163 %	n			"	
PK0570-06	(GW3@17.5')		Soil		Sampled: 11/16/06 14:50					-5-5	
oclor 1016 [2C]		EPA 8082	ND		27.7	ug/kg dry	lx	6K27027	11/27/06 10:36	11/30/06 01:32	
oclor 1221			ND		55.4		*	**	и	н	
roclor 1232		**	ND		27.7	*	*	tr .	**	Ħ	
roclor 1242 [2C]		*	109		27.7	n		*	H	н	
oclor 1248		u	ND	*****	27.7	*	"	u	н	н	
oclor 1254		<b>H</b>	ND		27.7	a	*	**	н	*	
oclor 1260 [2C]		н	ND		27.7	o	h	*	H	•	
roclor 1262		19	ND		27.7	**		*	10		
roclor 1268		Ħ	ND		27.7	*		*	н	u u	
Surrogate(s):	TCX [2C]			102%		39 - 139 %	"			и	
	Decachlorobiphenyl [2C]	,		96.5%		33 - 163 %	"				

TestAmerica - Seattle, WA

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Cate Haney, Project Manager





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

#### Polychlorinated Biphenyls by EPA Method 8082

TestAmerica - Seattle, WA

			Т	estAmeric	a - Seatt	le, WA	3				
Analyte	i lower	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-07	(GW2@12.5')		Soil			Sampl	ed: 11/	17/06 08:39	9		GI Z
Aroclor 1016 [2C]	- I I I	EPA 8082	ND		27,3	ug/kg dry	lx	6K27027	11/27/06 10:36	11/30/06 01:50	
Aroclor 1221		*	ND		54.6	и	41	4	*	и	
Aroclor 1232		**	ND		27.3	н	4			и	
Aroclor 1242		м	ND		27.3		*		н	11	
Aroclor 1248			ND		27.3		н				
Aroclor 1254		н	ND		27,3	н	Ħ			*	
Aroclor 1260 [2C]		. 28	ND		27.3		H	- "		N	
Aroclor 1262			ND		27.3	Ħ	n	*	"		
Aroclor 1268		п	ND		27.3	4	*	н	91		
Surrogate(s):	TCX [2C]			98.5%		39 - 139 %	11			"	
	Decachlorobiphenyl [2C]	7		98.2%		33 - 163 %	"			"	
BPK0570-08	(GW2@17.5')		Soil			Sample	ed: 11/	17/06 08:50			54
roclor 1016 [2C]		EPA 8082	ND		28.2	ug/kg dry	lx	6K27027	11/27/06 10:36	11/30/06 02:08	
roclor 1221		n	ND		56.3		12		п	*	
roclor 1232		*	ND		28.2	*	4		*	m	
roclor 1242		#	ND	*****	28.2	#1		**	×	*	
roclor 1248		e	ND		28.2	er	*	**	,	n	
roclor 1254			ND		28.2	ti	*	н	*		
Aroclor 1260 [2C]		n	ND		28.2	#	n	u	*	**	
Aroclor 1262		н	ND		28.2	**	*	*	*	ÿ.	
croclor 1268		м	ND		28.2	p.	*	H	†1	94	
Surrogate(s):	TCX [2C]			97.2%		39 - 139 %	н			н 🖫	
	Decachlorobiphenyl [2C]	1	2	97.5%		33 - 163 %	"			"	
PK0570-09	(GW4@7.5')		Soil	71.		Sampl	ed: 11/	17/06 10:32			
roclor 1016 [2C]		EPA 8082	ND		26,9	ug/kg dry	lx	6K27027	11/27/06 10:36	11/30/06 02:27	
roclor 1221		н	ND		53.7	**	•	N	44	9	
roclor 1232		19	ND		26.9	н	*	IP.	н	μ	
roclor 1242			ND		26.9	*	ж	n	10	44	
roclor 1248		ч	ND		26.9		10		N	**	
roclor 1254		н	ND		26.9	*			4	н	
roclor 1260 [2C]		н	ND		26.9	H		H	*	n	
roclor 1262		п	ND		26.9	н		п	sy.	н	
Aroclor 1268			ND		26.9	н			н	19	
Surrogate(s):	TCX [2C]			95.3%		39 - 139 %	-			"	
3 17	Decachlorobiphenyl [2C]			96.5%		33 - 163 %	"			*	

TestAmerica - Seattle, WA

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11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

## Polychlorinated Biphenyls by EPA Method 8082

TestAmerica - Seattle, WA

Analyte		Method	Result	MDL* MR	L Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-10	(GW4@17.5')	74-	Soil		Samp	led: 11/1	7/06 10:45		10/34 = 3	-
Aroclor 1016 [2C]		EPA 8082	ND	27	6 ug/kg dry	lx	6K27027	11/27/06 10:36	11/30/06 02:45	0 / II
Aroclor 1221			ND	55	2 "		H	u	*	
Aroclor 1232		и	ND	27	6 "				н	
Aroclor 1242			ND	27	6 "	н	*	н	н	
Aroclor 1248		*	ND	27	6 "	н		u u	я	
Aroclor 1254		п	ND	27	6 "	*	<u> </u>	н	н	
Aroclor 1260 [2C]		и	ND	27	6 "	n	п	n	н	
Aroclor 1262			ND	27	6 "	"	*	11	н	
Aroclor 1268			ND	27	6 "			н		
Surrogate(s):	TCX [2C]			98.8%	39 - 139 %	"			"	
	Decachlorobiphenyl	[2C]		99.3%	33 - 163 %	"			"	
BPK0570-11	(GW5@7.5')		Soil	and .	Samp	led: 11/1	7/06 12:27			
Aroclor 1016 [2C]		EPA 8082	ND	26	9 ug/kg dry	1×	6K27027	11/27/06 10:36	11/30/06 03:03	
Aroclor 1221		,	ND	53.					н	
Aroclor 1232		'n	ND	26	9 "	*			н	
Aroclor 1242		п	ND	26	9 "	*	н		"	
Aroclor 1248			ND	26.	9 "	*	н	п	м	
Aroclor 1254		н	ND	26	9 "	**	**		•	
Aroclor 1260 [2C]			ND	26	9 "	*	*	*	**	
Aroclor 1262		n	ND	26	9 "		**	n	H	
Aroclor 1268		,	ND	26	9 "	•	**	li .		
Surrogate(s):	TCX [2C]			86.8%	39 - 139 %	n				
	Decachlorobiphenyl	[2C]	**	90.5%	33 - 163 %	"			n	
BPK0570-12	(GW5@17.5')		Soil		Samp	led: 11/1	17/06 12:45			
roclor 1016 [2C]		EPA 8082	ND	27	5 ug/kg dry	lx	6K27027	11/27/06 10:36	11/30/06 03:21	
roclor 1221		н	ND	55	0 "	*	n	*		
Aroclor 1232		Ħ	ND	27	5 "	и	n	H	и	
Aroclor 1242		n	ND	27	5 "	*	10		π	
roclor 1248		*	ND	27	5 "		*	н	*	
roclor 1254		H	ND	27	5 "	H	• 0	*	n	
roclor 1260 [2C]		n	ND	27	5 "	н	**	u	N	
Aroclor 1262			ND	27	5 "	"	**	*	н	
Aroclor 1268		п	ND	27	5 "	н	"			
Surrogate(s):	TCX [2C]			98.1%	39 - 139 %	"		<u>*</u>	n	
	Decachlorobiphenyl	[2C]	.0	96.2%	33 - 163 %	"			"	

TestAmerica - Seattle, WA

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11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208

Project Number: Project Manager: 248-1739 Justin Foslien

Report Created: 12/08/06 18:57

# Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-01 (GW1@27.5')		Soi	1		Samp	led: 11/	16/06 10:30			
Acenaphthene	8270C-SIM	ND		0.0106	mg/kg dry	lx	6K27029	11/27/06 10:39	12/01/06 19:33	
Acenaphthylene		ND		0.0106	н	и		и	n	
Anthracene	5 H	ND		0.0106	tr.	n	8	н	н	
Benzo (a) anthracene	н	ND		0.0106	н	**	п		11	
Benzo (a) pyrene	n	ND		0.0106	n		v	**	н	
Benzo (b) fluoranthene	*	ND		0.0106	*	**	, n	*	H	
Benzo (k) fluoranthene	и	ND		0.0106	**	**	*	*	n	
Benzo (ghi) perylene	н	ND		0.0106	**					
Chrysene	•	ND		0.0106	*	**	n	*	**	
Dibenz (a,h) anthracene	п	ND		0.0106			**		*	
Fluoranthene		ND		0.0106	N		**	*	w =	
Fluorene	р	ND	*****	0.0106	*	**	**	*		
Indeno (1,2,3-cd) pyrene	u = 11	ND		0.0106	*	*	*	*	n	
1-Methylnaphthalene	*	ND		0.0106	H	*	н		11	
2-Methylnaphthalene	n	ND		0.0106		*		H	и	
Naphthalene	n	ND		0.0106	н	*			e	
Phenanthrene		ND		0.0106	и =	*	H .	ы	*	
Pyrene		ND		0.0106		*	н		*	

Surrogate(s): p-Terphenyl-d14

99.1%

50 - 147 %

BPK0570-02 (GW1@17.5')		 Soil			Sampl	ed: 11/1	6/06 10:03			
Acenaphthene	8270C-SIM	ND		0.0108	mg/kg dry	lx	6K27029	11/27/06 10:39	12/01/06 19:59	 
Acenaphthylene	×	ND		0.0108	н		*		*	
Anthracene	•	ND		0.0108	w	н		и		
Benzo (a) anthracene	*	ND	*****	0.0108	H			Ħ		
Benzo (a) pyrene	*	ND		0.0108		*		41	- "	
Benzo (b) fluoranthene	*	ND		0,0108	(2) M	*		н	n	
Benzo (k) fluoranthene		ND		0.0108	H	*	*	W	*	
Benzo (ghi) perylene		ND		0.0108	*	н	79		H	
Chrysene		ND		0.0108	*	41	*	n	и	
Dibenz (a,h) anthracene	*	ND		0.0108	#		#	и 🚉		
Fluoranthene	н	ND		0.0108	77	n	Ħ	V #2	м	
Fluorene	47	ND		0.0108	#	и	"	п	м	
Indeno (1,2,3-cd) pyrene	a	ND		0.0108	n	н	n	n	н	
1-Methylnaphthalene		ND		0.0108	n	н		н		
2-Methylnaphthalene	*	ND		0.0108			"	*	.000	
Naphthalene	Nr.	ND		0.0108	н	*			"	
Phenanthrene	4	ND		0.0108		•	*	м		
Pyrene	*	ND		0.0108	ıı	n	•	н	84	
Surrogate(s): p-Terphenyl-d14		9	99.1%		50 - 147 %	n			"	 

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Page 18 of 49



Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208

Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

#### Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-03 (SB1@12.5')		Soi			Samp	oled: 11/	16/06 13:20			100
Acenaphthene	8270C-SIM	ND		0.0115	mg/kg dry	lx	6K27029	11/27/06 10:39	12/01/06 20:24	
Acenaphthylene	W	ND		0.0115		*		**	#	
Anthracene		ND		0.0115			*	н "	*	
Benzo (a) anthracene	u	ND		0.0115	n n	*	н	н	*	
Benzo (a) pyrene	n	ND		0.0115			н	*	н	
Benzo (b) fluoranthene	*	ND		0.0115	11	*	u	н	w w	
Benzo (k) fluoranthene		ND =		0.0115	н	н	н	н	*	
Benzo (ghi) perylene	e	ND		0.0115	41				tf .	
Chrysene	ĸ	ND		0.0115	*1		н		м.	
Dibenz (a,h) anthracene	H	ND		0.0115		*	н	*	п	
Fluoranthene	"	ND	*****	0.0115	*			*	*	
Fluorene	*	ND		0.0115	•		*		*	
Indeno (1,2,3-cd) pyrene	N	ND		0.0115	H .			*	11	
1-Methylnaphthalene	*	ND		0.0115	ıı	н	111	н	Ħ	
2-Methylnaphthalene	*	ND		0.0115	*			"	E n	
Naphthalene	N	0.0152		0.0115	н	*	н	н	11	*
Phenanthrene		ND		0.0115		*			*	
Pyrene	н	ND		0.0115	**	н	*	ii	el .	
Surrogate(s): p-Terphenyl-d14	1	IAD	101%	0.0113	50 - 147 %		ăi .		и	

BPK0570-04 (SB1@7.5')			Soil	1,724		Samp	led: 11/1	6/06 13:15			
Acenaphthene		8270C-SIM	ND		0,0108	mg/kg dry	1x	6K27029	11/27/06 10:39	12/01/06 20:49	
Acenaphthylene		н	ND		8010,0	**			*	N	
Anthracene			ND		0.0108	*	н	Я н	*	et	
Benzo (a) anthracene		"	ND		0.0108	н			*	N	
Benzo (a) pyrene			ND		0.0108	H 5	*		*		
Benzo (b) fluoranthene			ND		0.0108		*		*	a	
Benzo (k) fluoranthene			ND		0.0108	H			Р	P	
Benzo (ghi) perylene		n	ND		0.0108	61	*		H	т п	
Chrysene		*	ND		0.0108	H	*	"		u	
Dibenz (a,h) anthracene			ND		0.0108	H	*	**	*	<b>m</b>	
Fluoranthene		n	ND		0.0108	*	*	"	*		
Fluorene		n	ND		0.0108				*	60	
Indeno (1,2,3-cd) pyrene		19	ND		0.0108		*	11	16	46	
1-Methylnaphthalene		#	0.0177		0.0108	"	11	"	**	44	
2-Methylnaphthalene		u	0.0464		0.0108	n		Ħ	*	n	
Naphthalene		п	0.0497		0.0108	н	**	d	H		
Phenanthrene		ü	ND		0.0108		H		**		
Pyrene		п	ND		0.0108		"		н	n	
Surrogate(s): p-Terphenyl-d	14			102%		50 - 147 %				n	

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11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-05 (GW3@7.5')		Soi	1		Sampl	ed: 11/1	6/06 14:35		11 .	5 B
Acenaphthene	8270C-SIM	ND		0.0111	mg/kg dry	lx	6K27029	11/27/06 10:39	12/01/06 21:15	
Acenaphthylene	**	ND		0.0111		**	*	**	н	
Anthracene	q	ND		0.0111	н		*	*	п	
Benzo (a) anthracene		ND		0.0111			*	н	н	
Benzo (a) pyrene	*	ND		0.0111	н	Ħ	н .	*	•	
Benzo (b) fluoranthene		ND		0.0111	и			н	66	
Benzo (k) fluoranthene	н	ND		0.0111	н		"	н	н	
Benzo (ghi) perylene	51	ND		0.0111	*	**			U	
Chrysene	•	ND	*****	0.0111	H	*	p		н	
Dibenz (a,h) anthracene		ND		0.0111		*		н		
Fluoranthene	и	ND		0.0111		**		er er	н	
Fluorene	n	ND		0.0111		*	*	n	а	
Indeno (1,2,3-cd) pyrene	*	ND		0.0111	н	ir	н		*	
1-Methylnaphthalene	п	0.671	State of the last	0.0111	н ,	n	Ħ	н	н	
Phenanthrene	и	ND		0.0111				10	ir	
Pyrene	н	ND		0.0111	*				H	
Surrogate(s): p-Terphenyl-d14			97.3%		50 - 147 %	ır			i	
BPK0570-05RE1 (GW3@7.5')		Soi	ı		Sampl	ed: 11/1	6/06 14:35			
2-Methylnaphthalene	8270C-SIM	1.79	trabadra.	0,111	mg/kg dry	10x	6K27029	11/27/06 10:39	12/02/06 13:27	
Naphthalene	н	3,40		0.111	**			n		
Surrogate(s): p-Terphenyl-d14			93.7%		50 - 147 %	"			"	
BPK0570-06 (GW3@17.5')		Soi	ı		Sampl	ed: 11/1	16/06 14:50			
Acenaphthene	8270C-SIM	ND		0.0111	mg/kg dry	lx	6K27029	11/27/06 10:39	12/01/06 21:40	
Acenaphthylene	н .	ND		0.0111	н				n	
Anthracene	н	ND		0.0111	u		N	н	н	
Benzo (a) anthracene	п	ND		0.0111	*	ts	н	M	n in	
Benzo (a) pyrene	n	ND		0.0111			*	#	н	
Benzo (b) fluoranthene		ND		0.0111		19	*	*		
Benzo (k) fluoranthene	w	ND		0.0111		*			н	
Benzo (ghi) perylene	11	ND		0 0111				**	r	
Chrysene	и	ND		0.0111	*		*	ж	м	
Dibenz (a,h) anthracene		ND		0.0111	н		н	В	n	
Fluoranthene	н	ND		0.0111	**		**		и	
Fluorene	н	ND		0.0111	п			*	70	
Indeno (1,2,3-cd) pyrene	н	ND		0.0111	= 0	μ		*	n	
1-Methylnaphthalene	н	ND		0.0111	9		*	н	н	
2-Methylnaphthalene	н	ND		0,0111	п	н	H	*		
• •	11	ND		0.0111	**		п		11	
Naphthalene Phenanthrene	II .	ND		0.0111		*		4	н	
I Hendithin elle		140								

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Jan Lynn

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Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica - Seattle, WA

Analyte	Method R	esult	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-06 (GW3@17.5')		Soil			Sample	ed: 11/1	6/06 14:50			
Pyrene	8270C-SIM	ND		0.0111	mg/kg dry	1x	6K27029	11/27/06 10:39	12/01/06 21:40	
Surrogate(s): p-Terphenyl-d14			104%		50 - 147 %	н	× -		"	
BPK0570-07 (GW2@12.5')		Soil		- 5	Sample	ed: 11/1	7/06 08:39			
Acenaphthene	8270C-SIM	ND		0.0111	mg/kg dry	l×	6K27029	11/27/06 10:39	12/01/06 22:05	
Acenaphthylene	н	ND		0.0111	67	n		н	#	
Anthracene	et e	ND		0.0111	*	29	H	*	p	
Benzo (a) anthracene	•	ND		0.0111	н	*		н	н	
Benzo (a) pyrene		ND		0.0111	*			н	н	
Benzo (b) fluoranthene	M	ND		0.0111	н	*		*	*	
Benzo (k) fluoranthene	•	ND		0.0111	te		*	*	u	
Benzo (ghi) perylene	н	ND		0.0111			*	*	Ħ	
Chrysene		ND		0.0111	Ħ	,	**	Ħ	e e	
Dibenz (a,h) anthracene	H	ND		0.0111	H	•	н 🔻	*	n	
Fluoranthene	4	ND		0.0111	M	11	**	*	n	
Fluorene	•	ND		0.0111	н	**	H		e e	
ndeno (1,2,3-cd) pyrene	r r	ND		0.0111	н	11	48	н	H	
l-Methylnaphthalene	16	ND		0.0111	*	11	**		H	
2-Methylnaphthalene	H	ND		0.0111	н		h		50 m = =""	
Naphthalene		ND		0.0111	н	н	u u		н	
Phenanthrene	N	ND		0.0111	н	н		н	**	
Pyrene		ND		0.0111	н			**		

BPK0570-08 (GW2@17.5')		Soil	1-0		Samp	led: 11/1	7/06 08:50			
Acenaphthene	8270C-SIM	ND		0.0113	mg/kg dry	lx	6K27029	11/27/06 10:39	12/01/06 22:30	
Acenaphthylene		ND		0.0113	n	**	*	*	н	
Anthracene	"	ND		0.0113	n	и	*		*	
Benzo (a) anthracene	"	ND	*****	0.0113	40		n	H	#	
Benzo (a) pyrene	*	ND	*****	0.0113	*		h	M	Ħ	
Benzo (b) fluoranthene	п	ND		0.0113				11	н	
Benzo (k) fluoranthene	u	ND		0.0113		"	*	m		
Benzo (ghi) perylene	N	ND		0.0113		"	**	н	и	
Chrysene	н	ND		0.0113					14	
Dibenz (a,h) anthracene	р	ND		0.0113		*	*	н	*	
Fluoranthene		ND		0.0113		*		•		
Fluorene	*	ND	****	0.0113	. "	н	W		и	
Indeno (1,2,3-cd) pyrene		ND		0.0113	er .	н	н	и	49	
1-Methylnaphthalene	n	ND		0.0113	44	**	n		41	
2-Methylnaphthalene	F. e	ND		0.0113	**	n	•			
Naphthalene	M	ND		0.0113	**	*	#	**	n	

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Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

#### Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Note
BPK0570-08 (GW2@17.5')		Soi			Sampl	ed: 11/1	17/06 08:50		1	
Phenanthrene	8270C-SIM	ND		0.0113	mg/kg dry	lx	6K27029	11/27/06 10:39	12/01/06 22:30	
Pyrene	#	ND		0.0113		*	**		•	
Surrogate(s): p-Terphenyl-d14	l <sub>1</sub>		101%		50 - 147 %	п	34		ıı	
BPK0570-09 (GW4@7.5')		Soil	ı		Sampl	ed: 11/1	17/06 10:32			
Acenaphthene	8270C-SIM	ND		0.0107	mg/kg dry	lx	6K27029	11/27/06 10:39	12/01/06 22:56	
Acenaphthylene		ND		0.0107					4	
Anthracene		ND		0.0107	,	**		M		
Benzo (a) anthracene	•	ND		0.0107	*			n	0	
Benzo (a) pyrene	u	ND		0.0107	*		н			
Benzo (b) fluoranthene	*	ND		0.0107	"	*	"		*	
Benzo (k) fluoranthene		ND		0.0107	я	,,		10	w	
Benzo (ghi) perylene	44	ND		0.0107	47	*		и		
Chrysene	н	ND		0.0107	**	*		н		
Dibenz (a,h) anthracene		ND		0.0107	*	3i		п	н	
Fluoranthene	9	ND		0.0107		*	44	u	n	
Fluorene	н	ND		0.0107				*	*	
ndeno (1,2,3-cd) pyrene	*	ND	*****	0.0107			ч			
-Methylnaphthalene		0.611	*****	0.0107				4	N	
• •	н	0.011		0.0107	**		n	н	,	197
Phenanthrene	n			0.0107	er			,,		
Pyrene	<del></del>	0.0121		0.0107						
Surrogate(s): p-Terphenyl-d14			102%		50 - 147 %	"			н	
3PK0570-09RE1 (GW4@7.5')		Soil	I		Sampl	ed: 11/1	17/06 10:32			
-Methylnaphthalene	8270C-SIM	1.62		0.0535	mg/kg dry	5x	6K27029	11/27/06 10:39	12/02/06 13:53	
daphthalene	h	1.87		0.0535			н	н		
Surrogate(s): p-Terphenyl-d14			101%		50 - 147 %	11			u	
3PK0570-10 (GW4@17.5')		Soil	l		Sampl	ed: 11/1	17/06 10:45			
Acenaphthene	8270C-SIM	ND	l	0.0110	mg/kg dry	1x	6K27029	11/27/06 10:39	12/02/06 12:11	
Acenaphthylene	*	ND		0.0110	н	n	n	н	II.	
Anthracene	#	ND		0.0110	19	*				
Benzo (a) anthracene	*,,	ND		0.0110		•	w	и,		
Benzo (a) pyrene	U	ND		0.0110		н	и		и	
Benzo (b) fluoranthene	e	ND		0.0110	н	41	н		н	
Benzo (k) fluoranthene	n	ND		0.0110	**	,,	н	н	n	
Benzo (ghi) perylene	н	ND		0.0110	*	*			D	
series (Biri) her krous		ND		0.0110	"		n	,	н	
harcene										
Chrysene Dibenz (a,h) anthracene	н	ND		0.0110	11	в				

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7 100





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-10 (GW4@17.5')		Soi			Sampl	ed: 11/	17/06 10:45			
Fluorene	8270C-SIM	ND		0.0110	mg/kg dry	lx	6K27029	11/27/06 10:39	12/02/06 12:11	
Indeno (1,2,3-cd) pyrene		ND		0.0110	н	u	*		н	
I-Methylnaphthalene	H	ND	*****	0.0110	н		u		м —	
2-Methylnaphthalene	н	ND		0.0110	н		,		11	
Naphthalene		ND		0.0110	н	*	11	tr	Ħ	
Phenanthrene		ND	23 11	0.0110	h	*	þ			
Pyrene	a	ND		0.0110	н	*	H		h	
Surrogate(s): p-Terphenyl-d14			80.1%		50 - 147 %	н			er	
BPK0570-11 (GW5@7.5')		Soi	ı		Sampl	ed: 11/	17/06 12:27			
Acenaphthene	8270C-ŠIM	ND		0.0108	mg/kg dry	lx	6K27029	11/27/06 10:39	12/02/06 12:36	27
Acenaphthylene		ND		0.0108				н	H	
Anthracene	n	ND		0.0108	**	"		н	н	
Benzo (a) anthracene	н	ND		0.0108	Ħ	*		*	н	
Benzo (a) pyrene		ND		0.0108	m			н		
Benzo (b) fluoranthene		ND		0.0108	"			н	#	
Benzo (k) fluoranthene	ii ii	ND		8010.0	н	*		н	н	
Benzo (ghi) perylene	n	ND		0,0108	*	н		н	*	
Chrysene	,	ND		0.0108		*	*	н	H	
Dibenz (a,h) anthracene		ND		0.0108	*		**	н		
luoranthene	W	ND		0.0108			н	Ħ	н	
luorene	H	ND		0.0108	4		*	n	н	
ndeno (1,2,3-cd) pyrene	м	ND		0.0108	Ħ	e	*		H	
-Methylnaphthalene	ii .	1,11		0.0108	•		9			
henanthrene		ND		0.0108	*	u	#	н	*	
Pyrene	и	ND		0.0108	*	"	ir .		"	
Surrogate(s): p-Terphenyl-d14			106%		50 - 147 %	н			"	
BPK0570-11RE1 (GW5@7.5')		Soil	!		Sampl	ed: 11/	17/06 12:27			

0.108

0.108

mg/kg dry

50 - 147 %

10x

6K27029

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2-Methylnaphthalene

Surrogate(s): p-Terphenyl-d14

Naphthalene

8270C-SIM

2.77

2.46

95.4%

Kate Haney Project Manager

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11/27/06 10:39

12/02/06 14:18





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Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208

Project Number: Project Manager: 248-1739 Justin Foslien

Report Created: 12/08/06 18:57

#### Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-12 (GW5@17.5')		Soi			Sampl	ed: 11/1	7/06 12:45	7	17	111
Acenaphthene	8270C-SIM	I W W ND		0.0111	mg/kg dry	lx	6K27029	11/27/06 10:39	12/02/06 13:02	
Acenaphthylene		ND		0.0111	"		н	**	И	
Anthracene	*	ND		0.0111	*		*	н	н	
Benzo (a) anthracene	H	ND		0.0111			'n	u	и Года	
Benzo (a) pyrene	н н	ND	-	0.0111		H 7	**		н	
Benzo (b) fluoranthene	10	ND		0.0111	**	н	*		н	
Benzo (k) fluoranthene	н	ND		0.0111	**		H			
Benzo (ghi) perylene	u	ND		0.0111	*		*	H		
Chrysene		ND		0.0111				N .		
Dibenz (a,h) anthracene	#	ND		0.0111		*	**	14	4	
Fluoranthene	п	ND	*****	0.0111	*		*	н	le .	
Fluorene	H	ND		0.0111	**	•	*	п	н	
Indeno (1,2,3-cd) pyrene		ND		0.0111	В	9.		n	a	
l-Methylnaphthalene	#	ND		0.0111	u			а	*	
2-Methylnaphthalene	н	0.0127	*****	0.0111				*	n	
Naphthalene	н	ND		0.0111	**					
Phenanthrene	h	ND		0.0111						
Pyrene	H	ND		0.0111	н		N N	*	н	

TestAmerica - Seattle, WA





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

#### Physical Parameters by APHA/ASTM/EPA Methods

TestAmerica - Seattle, WA

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-01	(GW1@27.5')		Soil	, e4e		Samp	oled: 11/1	16/06 10:30	:		
Dry Weight		BSOPSPL003R0 8	93.9		1.00	%	lx	6K30051	11/30/06 15:18	12/01/06 00:00	
BPK0570-02	(GW1@17.5')		Soil			Samp	oled: 11/1	16/06 10:03			
Dry Weight	20000	BSOPSPL003R0 8	91.8	*****	1.00	%	lx	6K30051	11/30/06 15:18	12/01/06 00:00	1-174
BPK0570-03	(SB1@12.5')		Soil			Samp	oled: 11/1	16/06 13:20			
Dry Weight		BSOPSPL003R0 8	86.6	1	1.00	%	lx	6K30051	11/30/06 15:18	12/01/06 00:00	uto (
BPK0570-04	(SB1@7.5')		Soil			Samp	oled: 11/	16/06 13:15			
Dry Weight		BSOPSPL003R0 8	92.3		1.00	%	lx	6K30051	11/30/06 15:18	12/01/06 00:00	
BPK0570-05	(GW3@7.5')		Soil			Samı	oled: 11/1	16/06 14:35	0.00		
Dry Weight		BSOPSPL003R0 8	89.2	3 <u></u> 3	1.00	%	lx	6K30051	11/30/06 15:18	12/01/06 00:00	
BPK0570-06	(GW3@17.5')		Soil			Samj	oled: 11/	16/06 14:50			
Dry Weight		BSOPSPL003R0 8	89.9		1.00	%	lx	6K30051	11/30/06 15 18	12/01/06 00:00	
BPK0570-07	(GW2@12.5')		Soil			Sami	oled: 11/	17/06 08:39			Ŋ
Dry Weight		BSOPSPL003R0 8	90.4		1.00	%	lx	6K30051	11/30/06 15:18	12/01/06 00 00	20
BPK0570-08	(GW2@17.5')		Soil			Samı	oled: 11/	17/06 08:50			
Dry Weight		BSOPSPL003R0 8	88.8		1.00	%	lx	6K30050	11/30/06 15:17	12/01/06 00:00	
BPK0570-09	(GW4@7.5')		Soil			Samj	pled: 11/	17/06 10:32			
Dry Weight	14	BSOPSPL003R0 8	93.1	(2004)	1.00	%	lx	6K30050	11/30/06 15:17	12/01/06 00:00	
BPK0570-10	(GW4@17.5')		Soil			Sam	oled: 11/	17/06 10:45			
Dry Weight		BSOPSPL003R0 8	90.2	( <del>)      </del>	1.00	9/6	lx	6K30050	11/30/06 15:17	12/01/06 00:00	
BPK0570-11	(GW5@7.5')		Soil			Sam	pled: 11/	17/06 12:27			

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Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

Physical Parameters by APHA/ASTM/EPA Methods

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Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-11	(GW5@7.5')		Soil	1.2		Samp	oled: 11/1	7/06 12:27		H ==	
Dry Weight	14 1	BSOPSPL003R0 8	91,5		1.00	%	lx	6K30050	11/30/06 15:17	12/01/06 00:00	1,2
BPK0570-12	(GW5@17.5')	A 10.00	Soil			Samp	oled: 11/1	7/06 12:45			
Dry Weight		BSOPSPL003R0	90.3		1.00	%	lx	6K30050	11/30/06 15 17	12/01/06 00:00	-

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Kate Haney, Project Manager





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Cambria - Seattle

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Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created:

12/08/06 18:57

#### Oxygenates by EPA Method 8260B

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-01 (GW1@27.5')		Soi			Sampl	ed: 11/	16/06 10:30			11
tert-Amyl Methyl Ether	EPA 8260B	ND		0.36 m	ng/kg dry	lx	6K27048	11/27/06 13:30	11/27/06 21:10	
Benzene	<b>H</b>	0.14	*****	0.01	n		n			
tert-Butyl Alcohol	"	ND		3.6	r			•		
1,2-Dibromoethane (EDB)	н	ND	****	0.04		н		P P	н	
1,2-Dichloroethane (EDC)	н	ND		0.04					4	
Diisopropyl ether	**	ND		0.36	*	*	m m			
Ethyl tert-butyl ether	*	ND		0.36	pt.		"	и	м	
Ethanol	H	ND		14	Ħ				н	
Ethylbenzene	*	ND		0.07	0	"	P .	н	и —	
Methyl tert-butyl ether	M	ND		0.36	n	*	4:1		н	
Toluene		0.38		0.07	н		n		*	
o-Xylene	н	ND		0.07			н	н	16	
m,p-Xylene	н	ND		0.14	н			н	n	
Xylenes (total)	89	ND		0.21	*		"	888	H	
Surrogate(s): 1,2-DCA-d4			93.0%		75 - 125 %	"			и	
Surrogale(s): 1,2-DCA-44					ac 10000	"			"	
Surrogate(s): 1,2-DCA-d4  Toluene-d8			101%		75 - 125 %					
• 17			101% 98.6%		75 - 125 % 75 - 125 %	**			"	
Toluene-d8			98.6%		75 - 125 %				n .	
Toluene-d8		Soil	98.6%		75 - 125 %		16/06 10:03	, i	"	
Toluene-d8 4-BFB	EPA 8260B	<b>Soi</b> l ND	98.6%		75 - 125 %		16/06 10:03 6K27048	11/27/06 13/30	11/27/06 21.49	
Toluene-d8 4-BFB BPK0570-02 (GW1@17.5')	EPA 8260B		98.6%		75 - 125 % Sample	ed: 11/		11/27/06 13/30	11/27/06 21:49	
Toluene-d8 4-BFB  BPK0570-02 (GW1@17.5')  tert-Amyl Methyl Ether	EPA 8260B "	ND	98.6%	0.35 m	75 - 125 % Sample	ed: 11/1		11/27/06 13:30	11/27/06 21.49	
Toluene-d8 4-BFB  BPK0570-02 (GW1@17.5')  tert-Amyl Methyl Ether  Benzene	EPA 8260B " "	ND 0.16	98.6%	0.35 m 0.01	75 - 125 % Sample	ed: 11/1		11/27/06 13:30	11/27/06 21.49	
Toluene-d8 4-BFB  BPK0570-02 (GW1@17.5')  tert-Amyl Methyl Ether  Benzene tert-Butyl Alcohol	EPA 8260B " " "	ND <b>0.16</b> ND	98.6%	0.35 m 0.01 3.5	75 - 125 %  Sample  ng/kg dry  "	ed: 11/1		11/27/06 13:30	11/27/06 21.49	
Toluene-d8 4-BFB  BPK0570-02 (GW1@17.5')  tert-Amyl Methyl Ether Benzene tert-Butyl Alcohol 1,2-Dibromoethane (EDB)	EPA 8260B " " " "	ND <b>0.16</b> ND ND	98.6%	0.35 m 0.01 3.5 0.04	75 - 125 %  Sample  ng/kg dry  """	lx "		11/27/06 13:30	11/27/06 21.49	
Toluene-d8 4-BFB  BPK0570-02 (GW1@17.5')  tert-Amyl Methyl Ether Benzene tert-Butyl Alcohol 1,2-Dibromoethane (EDB) 1,2-Dichloroethane (EDC)	EPA 8260B " " " " "	ND <b>0.16</b> ND ND ND	98.6%	0.35 m 0.01 3.5 0.04 0.04	75 - 125 %  Sample  sig/kg dry  """  """  """	lx "	6K27048	11/27/06 13:30	11/27/06 21.49	
Toluene-d8 4-BFB  BPK0570-02 (GW1@17.5')  tert-Amyl Methyl Ether Benzene tert-Butyl Alcohol 1,2-Dibromoethane (EDB) 1,2-Dichloroethane (EDC) Diisopropyl ether	EPA 8260B " " " " " "	ND 0.16 ND ND ND ND	98.6%	0.35 m 0.01 3.5 0.04 0.04 0.35	75 - 125 %  Sample  rg/kg dry  " " "	lx	6K27048	11/27/06 13:30	11/27/06 21.49	
Toluene-d8 4-BFB  BPK0570-02 (GW1@17.5')  tert-Amyl Methyl Ether Benzene tert-Butyl Alcohol 1,2-Dibromoethane (EDB) 1,2-Dichloroethane (EDC) Diisopropyl ether Ethyl tert-butyl ether	EPA 8260B	ND 0.16 ND ND ND ND ND ND	98.6%	0.35 m 0.01 3.5 0.04 0.04 0.35 0.35	75 - 125 %  Sample  ng/kg dry  """  """  """  """	lx	6K27048	11/27/06 13:30	11/27/06 21.49	
Toluene-d8 4-BFB  BPK0570-02 (GW1@17.5')  tert-Amyl Methyl Ether Benzene tert-Butyl Alcohol 1,2-Dibromoethane (EDB) 1,2-Dichloroethane (EDC) Diisopropyl ether Ethyl tert-butyl ether Ethanol	EPA 8260B	ND 0.16 ND ND ND ND ND ND ND	98.6%	0.35 m 0.01 3.5 0.04 0.04 0.35 0.35	75 - 125 %  Sample  ng/kg dry  " " "	lx	6K27048	11/27/06 13:30	11/27/06 21.49	
Toluene-d8 4-BFB  BPK0570-02 (GW1@17.5')  tert-Amyl Methyl Ether Benzene  tert-Butyl Alcohol 1,2-Dibromoethane (EDB) 1,2-Dichloroethane (EDC) Diisopropyl ether Ethyl tert-butyl ether Ethanol Ethylbenzene	EPA 8260B	ND 0.16 ND	98.6%	0.35 m 0.01 3.5 0.04 0.04 0.35 0.35 14	75 - 125 %  Sample  ng/kg dry  " " " "	lx	6K27048	11/27/06 13:30	11/27/06 21.49	
Toluene-d8 4-BFB  BPK0570-02 (GW1@17.5')  tert-Amyl Methyl Ether Benzene  tert-Butyl Alcohol 1,2-Dibromoethane (EDB) 1,2-Dichloroethane (EDC) Diisopropyl ether Ethyl tert-butyl ether Ethanol Ethylbenzene Methyl tert-butyl ether Toluene	EPA 8260B	ND 0.16 ND	98.6%	0.35 m 0.01 3.5 0.04 0.04 0.35 0.35 14 0.07	75 - 125 %  Sample  ng/kg dry  " " " " "	lx	6K27048	11/27/06 13:30	11/27/06 21.49	
Toluene-d8 4-BFB  BPK0570-02 (GW1@17.5')  tert-Amyl Methyl Ether  Benzene  tert-Butyl Alcohol 1,2-Dibromoethane (EDB) 1,2-Dichloroethane (EDC) Diisopropyl ether Ethyl tert-butyl ether Ethanol Ethylbenzene Methyl tert-butyl ether Toluene o-Xylene	EPA 8260B	ND 0.16 ND	98.6%	0.35 m 0.01 3.5 0.04 0.04 0.35 0.35 14 0.07 0.35 0.07	75 - 125 %  Sample  ng/kg dry  " " " " " " "	ed: 11/1	6K27048	11/27/06 13:30 " " " " " " " " " " "	11/27/06 21.49	
Toluene-d8 4-BFB  BPK0570-02 (GW1@17.5')  tert-Amyl Methyl Ether Benzene  tert-Butyl Alcohol 1,2-Dibromoethane (EDB) 1,2-Dichloroethane (EDC) Diisopropyl ether Ethyl tert-butyl ether Ethyl tert-butyl ether Ethylbenzene Methyl tert-butyl ether Toluene D-Xylene n,p-Xylene	EPA 8260B	ND 0.16 ND	98.6%	0.35 m 0.01 3.5 0.04 0.04 0.35 0.35 14 0.07 0.35 0.07	75 - 125 %  Sample  ng/kg dry  " " " " " " " "	lx	6K27048	11/27/06 13:30	11/27/06 21:49	
Toluene-d8 4-BFB  BPK0570-02 (GW1@17.5')  tert-Amyl Methyl Ether Benzene tert-Butyl Alcohol 1,2-Dibromoethane (EDB) 1,2-Dichloroethane (EDC) Diisopropyl ether Ethyl tert-butyl ether Ethanol Ethylbenzene Methyl tert-butyl ether Toluene o-Xylene m,p-Xylene Xylenes (total)	EPA 8260B	ND 0.16 ND	98.6%	0.35 m 0.01 3.5 0.04 0.04 0.35 0.35 14 0.07 0.35 0.07 0.07	75 - 125 %  Sample  ng/kg dry  " " " " " " " " " "	lx	6K27048		11/27/06 21.49	
Toluene-d8 4-BFB  BPK0570-02 (GW1@17.5')  tert-Amyl Methyl Ether  Benzene  tert-Butyl Alcohol 1,2-Dibromoethane (EDB) 1,2-Dichloroethane (EDC) Diisopropyl ether Ethyl tert-butyl ether Ethanol Ethylbenzene Methyl tert-butyl ether Toluene	EPA 8260B	ND 0.16 ND	98.6%	0.35 m 0.01 3.5 0.04 0.04 0.35 0.35 14 0.07 0.35 0.07 0.07	75 - 125 %  Sample  ng/kg dry	ed: 11/1	6K27048		11/27/06 21.49	

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Kate Haney, Project Manager





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created:

12/08/06 18:57

#### Oxygenates by EPA Method 8260B

TestAmerica - Seattle, WA

		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-03 (	(SB1@12.5')		Soi	1		Sampl	ed: 11/1	6/06 13:20			
tert-Amyl Methyl Et	ther	EPA 8260B	ND		0.39	mg/kg dry	lx	6K27048	11/27/06 13:30	11/27/06 22:19	
Benzene		tı	0.73		0.02	0	*	10	**	и	
tert-Butyl Alcohol		**	ND		3.9			н	η		
1,2-Dibromoethane (	(EDB)	28	ND		0.04			н	# <b>#</b>	и	
1,2-Dichloroethane (	(EDC)	*	ND		0.04				**	н	
Diisopropyl ether		*	ND		0.39		а	4	н	н	
Ethyl tert-butyl ether	r	н	ND		0.39	10		н	H		
Ethanol		ri	ND		16	•			**	u u	
Ethylbenzene		10	0.18	*****	0.08	#	п	н	11		
Methyl tert-butyl ethe	er		ND		0.39	н		*	**	и	
Toluene		**	1.7		0.08				**		
o-Xylene		м	0.18		0.08	n			н	11	
m,p-Xylene		H 25	0.72		0.16	п	н	n	*	н	
Xylenes (total)			0.90		0.23	п	- us		**	vi	
Surrogate(s):	1,2-DCA-d4			93.6%		75 - 125 %	"			"	
	Toluene-d8			103%		75 - 125 %				# ==	
	4-BFB			97.4%		75 - 125 %	н			"	
s								ell		и	
BPK0570-04 (S	4-BFB SB1@7.5')		Soi					6/06 13:15			
	SB1@7.5')	EPA 8260B	<b>Soi</b> ND		0.41			6/06 13:15 6K29036	11/29/06 12:33	11/29/06 19:11	
BPK0570-04 (Stert-Amyl Methyl Eth	SB1@7.5')	EPA 8260B		1	0.41	Sample	ed: 11/1		11/29/06 12:33		
tert-Amyl Methyl Eth	SB1@7.5')	EPA 8260B "	ND	1		Sample	ed: 11/1		11/29/06 12:33		
tert-Amyl Methyl Eth	SB1@7.5') her	EPA 8260B	ND 0.14		0.02	Sample	ed: 11/1	6K29036	11/29/06 12:33		
tert-Amyl Methyl Eth Benzene tert-Butyl Alcohol 1,2-Dibromoethane (l	SB1@7.5') her EDB)	EPA 8260B	ND 0.14 ND		0.02 4.1	Sample	ed: 11/1	6K29036	11/29/06 12:33		
tert-Amyl Methyl Eth Benzene tert-Butyl Alcohol 1,2-Dibromoethane (I 1,2-Dichloroethane (I	SB1@7.5') her EDB)	EPA 8260B	ND 0.14 ND ND		0.02 4.1 0.04	Sample	ed: 11/1	6K29036	11/29/06 12:33		
tert-Amyl Methyl Eth Benzene tert-Butyl Alcohol 1,2-Dibromoethane (I 1,2-Dichloroethane (I	SB1@7.5') her  EDB) EDC)	EPA 8260B	ND 0.14 ND ND ND		0.02 4.1 0.04 0.04	Sample	ed: 11/1	6K29036	11/29/06 12:33 " " " " "		
tert-Amyl Methyl Eth Benzene tert-Butyl Alcohol 1,2-Dibromoethane (I 1,2-Dichloroethane (I Diisopropyl ether	SB1@7.5') her  EDB) EDC)	EPA 8260B	ND 0.14 ND ND ND		0.02 4.1 0.04 0.04 0.41	Sample	ed: 11/1	6K29036	11/29/06 12:33 " " " " " " " "		
tert-Amyl Methyl Eth Benzene tert-Butyl Alcohol 1,2-Dibromoethane (I 1,2-Dichloroethane (I Diisopropyl ether Ethyl tert-butyl ether Ethanol	SB1@7.5') her  EDB) EDC)	EPA 8260B	ND 0.14 ND ND ND ND ND ND ND		0.02 4.1 0.04 0.04 0.41 0.41	Sample	ed: 11/1 1x " " " " " " "	6K29036	11/29/06 12:33 " " " " " " " " "		
tert-Amyl Methyl Eth Benzene tert-Butyl Alcohol 1,2-Dibromoethane (I 1,2-Dichloroethane (I Diisopropyl ether Ethyl tert-butyl ether Ethanol Ethylbenzene	SB1@7.5') ther  EDB) EDC)	EPA 8260B	ND 0.14 ND		0.02 4.1 0.04 0.04 0.41 0.41	Sample	ed: 11/1 1x " " " " " " "	6K29036	11/29/06 12:33 " " " " " " " " " " "		
tert-Amyl Methyl Eth Benzene tert-Butyl Alcohol 1,2-Dibromoethane (I 1,2-Dichloroethane (I Diisopropyl ether Ethyl tert-butyl ether Ethanol Ethylbenzene Methyl tert-butyl ether	SB1@7.5') ther  EDB) EDC)	EPA 8260B	ND 0.14 ND		0.02 4.1 0.04 0.04 0.41 0.41 16 0.08	Sample	ed: 11/1 1x " " " " " " "	6K29036	11/29/06 12:33		
tert-Amyl Methyl Eth Benzene tert-Butyl Alcohol 1,2-Dibromoethane (I 1,2-Dichloroethane (I Diisopropyl ether Ethyl tert-butyl ether Ethanol Ethylbenzene Methyl tert-butyl ether Toluene	SB1@7.5') ther  EDB) EDC)	EPA 8260B	ND 0.14 ND		0.02 4.1 0.04 0.04 0.41 0.41 16 0.08 0.41	Sample mg/kg dry	ed: 11/1 1x " " " " " " "	6K29036	11/29/06 12:33		
tert-Amyl Methyl Eth Benzene tert-Butyl Alcohol 1,2-Dibromoethane (I 1,2-Dichloroethane (I Diisopropyl ether Ethyl tert-butyl ether Ethanol Ethylbenzene Methyl tert-butyl ether Toluene o-Xylene	SB1@7.5') ther  EDB) EDC)	EPA 8260B	ND 0.14 ND		0.02 4.1 0.04 0.04 0.41 0.41 16 0.08 0.41	Sample mg/kg dry	ed: 11/1 1x " " " " " "	6K29036	11/29/06 12:33		
tert-Amyl Methyl Eth Benzene tert-Butyl Alcohol 1,2-Dibromoethane (I 1,2-Dichloroethane (I Diisopropyl ether Ethyl tert-butyl ether Ethyl tert-butyl ether Ethylbenzene Methyl tert-butyl ethe Toluene o-Xylene m,p-Xylene	SB1@7.5') ther  EDB) EDC)	EPA 8260B	ND 0.14 ND		0.02 4.1 0.04 0.04 0.41 0.41 16 0.08 0.41 0.08	Sample mg/kg dry	ed: 11/1  lx  " " " " " " " " " " "	6K29036	11/29/06 12:33 " " " " " " " " " " " " " "		
tert-Amyl Methyl Eth Benzene tert-Butyl Alcohol 1,2-Dibromoethane (I 1,2-Dichloroethane (I Diisopropyl ether Ethyl tert-butyl ether Ethanol Ethylbenzene Methyl tert-butyl ethe Toluene o-Xylene m,p-Xylene Xylenes (total)	SB1@7.5') ther  EDB) EDC)	EPA 8260B	ND 0.14 ND	93.8%	0.02 4.1 0.04 0.04 0.41 16 0.08 0.41 0.08 0.08	Sample mg/kg dry	ed: 11/1	6K29036			
tert-Amyl Methyl Eth Benzene tert-Butyl Alcohol 1,2-Dibromoethane (I 1,2-Dichloroethane (I Diisopropyl ether Ethyl tert-butyl ether Ethanol Ethylbenzene Methyl tert-butyl ether Toluene o-Xylene m,p-Xylene Xylenes (total)  Surrogate(s):	SB1@7.5') ther  EDB) EDC)	EPA 8260B	ND 0.14 ND		0.02 4.1 0.04 0.04 0.41 16 0.08 0.41 0.08 0.08	Sample	ed: 11/1	6K29036		11/29/06 19:11	

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Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

Project Number:

248-1739

Report Created: 12/08/06 18:57

Everett, WA 98208

8620 Holly Drive, Suite 210

Project Manager: Justin Foslien

Oxygenates by EPA Method 8260B

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-05 (GW3@7.5')	AT 1	Soi	il m		Sampl	ed: 11/1	6/06 14:35			
tert-Amyl Methyl Ether	EPA 8260B	ND		0.40	mg/kg dry	lx	6K29036	11/29/06 12:33	11/29/06 19:41	Dia ne
tert-Butyl Alcohol	*	ND -		4.0	*			н	н	
1,2-Dibromoethane (EDB)	• .,	ND	- 10	0.04	**	*		*	*	
1,2-Dichloroethane (EDC)	**	ND		0.04	*		*	н	ń	
Diisopropyl ether	*	ND		0.40			*	n	н	
Ethyl tert-butyl ether	*	ND		0.40	*	n		н	*	
Ethanol	*	ND		16	•	*	te	н	**	
Methyl tert-butyl ether	н	ND		0.40	n	н			u	
Surrogate(s): 1,2-DCA-d4			109%		75 - 125 %	"			#	
Toluene-d8			106%		75 - 125 %	"			**	
4-BFB			100%		75 - 125 %	"			**	
BPK0570-05RE1 (GW3@7.5')		Soi	1		Sampl	ed: 11/1	6/06 14:35			
Benzene	EPA 8260B	8,6		0.79	mg/kg dry	50x	6K30039	11/30/06 11:22	11/30/06 14:11	
Ethylbenzene	N	25		4.0	н				н	
oluene	11	99		4.0	н		и	11	н	
-Xylene	*	44		4.0		**	н	n		
n,p-Xylene		120		7.9	я		n		н	
(ylenes (total)	п	160	-	12	м	**	н	н	н	
Surrogate(s): 1,2-DCA-d4	· · · · · · · · · · · · · · · · · · ·		91.8%		75 - 125 %	lx		-	"	
Toluene-d8			102%		75 - 125 %	"			,,	
4-BFB			97.5%		75 - 125 %	"			н	
BPK0570-06 (GW3@17.5')		Soi	1		Sampl	ed: 11/1	6/06 14:50			
ert-Amyl Methyl Ether	EPA 8260B	ND		0.39	mg/kg dry	lx	6K30039	11/30/06 11:22	11/30/06 14:40	
enzene	u	0.53		0.02		"	Ħ	n		
ert-Butyl Alcohol	н	ND		3.9	н	н	*	н	н	
,2-Dibromoethane (EDB)		ND		0.04	41	"	*		и	
,2-Dichloroethane (EDC)	*	ND		0.04	**		#	,	84	
Disopropyl ether	11	ND		0.39	n			n	n	
thyl tert-butyl ether		ND		0.39	**	н	*	er	N	
thanol	n	ND	-	16	и		ы	"	n	
thylbenzene	н	0.12		0.08		ù	n	n	н	
fethyl tert-butyl ether	*	ND	10	0.39		н	п		н	
oluene	и	0.85		0,08		*	*		(*)	
-Xylene	н	0.08		0.08	н	**	н	ш	(M.)	
ı,p-Xylene	н	0.30		0.16	н	**	**	н	*	
(ylenes (total)	r	0.39		0.23		11		,	*	
Surrogate(s): 1,2-DCA-d4		<u> </u>	91.7%		75 - 125 %	"	2140	<del></del>	и	
Toluene-d8			101%		75 - 125 %	н	597		и	

TestAmerica - Seattle, WA





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

#### Oxygenates by EPA Method 8260B

TestAmerica - Seattle, WA

Analyte		Method	Result	MDL*	MRL	Units	Di)	Batch	Prepared	Analyzed	Notes
BPK0570-06	(GW3@17.5')		Soi	le on a		Sampl	ed: 11/1	6/06 14:50			4
	4-BFB			95.5%		75 - 125 %	lx			11/30/06 14:40	31 =
BPK0570-07	(GW2@12.5')		Soi	i		Sampl	ed: 11/1	7/06 08:39			
tert-Amyl Methyl B	ther	EPA 8260B	ND		0,37	mg/kg dry	lx	6K30039	11/30/06 11:22	11/30/06 15:14	
Benzene		P	0.02		0.01	**			*	n	
tert-Butyl Alcohol		н	ND	******	3.7	4	•	н		m	
1,2-Dibromoethane	(EDB)	n .	ND		0.04	H			*	*	
1,2-Dichloroethane	(EDC)	н	ND		0.04	n	*		ú	*	
Diisopropyl ether	. ,	n	ND		0.37		**		*		
Ethyl tert-butyl ethe	er	н 🗵	ND		0.37	*		*	99		
Ethanol		*	ND		15	H.	**	**	**	н	
Ethylbenzene		17	ND	****	0.07		*	н	n		
Methyl tert-butyl et	her	**	ND		0.37		H	и	н	THE STATE OF THE S	
Foluene		u	ND		0.07	и	*	**	н	P	
-Xylene		и	ND		0.07	и	= •	*	н —		
n,p-Xylene			ND		0.15	н	п		н	н	
Kylenes (total)		н	ND		0.22	*	н	н		19	
Surrogate(s):	1,2-DCA-d4			92.5%		75 - 125 %	Ħ			"	
0 .,	Toluene-d8			101%		75 - 125 %	n			**	
	4-BFB			97.3%		75 - 125 %	n			н	
BPK0570-08	(GW2@17.5')		Soi	ı		Sampl	ed: 11/1	7/06 08:50			
ert-Amyl Methyl E		EPA 8260B	ND		0.43	mg/kg dry	- lx	6K29036	11/29/06 12:33	11/29/06 21:25	
Benzene		H	0.33		0.02	•		*	н		
ert-Butyl Alcohol		n	ND		4.3						
,2-Dibromoethane	(EDB)	н	ND		0.04		**	н	н	M	
,2-Dichloroethane		n	ND		0.04				**	н	
Diisopropyl ether	/	н	ND		0.43			н	11	т.	
Sthyl tert-butyl ethe	т	м	ND		0.43		W		a	н	
Ethanol	-		ND		17		**		tr.	н	
thylbenzene		н	0.87		0.09	а	*		н	н	
Anyibenzene Aethyl tert-butyl eth	her	н	ND		0.43	14	,	*		N	
ioluene	101	π	1.0		0.09	**	19		н	"	
		*	ND		0.09		н		н	19	
-Xylene		N				н	н		e e		
n,p-Xylene			0.28		0.17			·			
(ylenes (total)			0.34		0.26				NE.		
	1,2-DCA-d4			91.8%		75 - 125 %	"			"	
Surrogate(s):							"				
Surrogate(s):	Toluene-d8			101%		75 - 125 %				"	

TestAmerica - Seattle, WA

Kato Dung

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.





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

#### Oxygenates by EPA Method 8260B

TestAmerica - Seattle, WA

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-09 (	GW4@7.5')		Soi	il III.		Sampl	ed: 11/1	7/06 10:32			
tert-Amyl Methyl Etl	her	EPA 8260B	ND		0.38	mg/kg dry	lx	6K29036	11/29/06 12:33	11/29/06 21:55	
Benzene		at .	0.48	ti-man	0.02	t t	4	u	н		70
tert-Butyl Alcohol		и	ND		3.8	H	"	**	п	н	
1,2-Dibromoethane (	EDB)	*	ND		0.04	N	*	н	н	н	
1,2-Dichloroethane (	EDC)	н	ND		0.04		6				
Diisopropyl ether		н	ND		0.38	я	н				
Ethyl tert-butyl ether		tr	ND		0.38	н		н	н		
Ethanol		. "	ND		15	#	*		н		
Methyl tert-butyl ethe	er	н	ND		0.38	n		*	н	н	
Surrogate(s):	1,2-DCA-d4			105%		75 - 125 %	"			"	
	Toluene-d8			106%		75 - 125 %	"			"	
	4-BFB			100%		75 - 125 %	H			и	
BPK0570-09RE1	(GW4@7.5')		Soi	il		Sampl	ed: 11/1	7/06 10:32			
Ethylbenzene		EPA 8260B	8.2		0.75	mg/kg dry	10x	6K30039	11/30/06 11:22	11/30/06 15:37	
Coluene		*	12		0.75	"	H			#	
-Xylene			15		0,75				*	*	
-			40		1.5	n			P	11	
n,p-Xylene (ylenes (total)		ń	40 54	*****	2.3				Ħ		
				03.404	- Fi					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	1,2-DCA-d4			93.4% 101%		75 - 125 % 75 - 125 %	lx "			"	
	Toluene-d8			97.4%		75 - 125 % 75 - 125 %	,,				
	4-BFB			97.470		73 - 123 %					
3PK0570-10 (C	GW4@17.5')		Soi	1		Sampl	ed: 11/1	7/06 10:45			
ert-Amyl Methyl Eth	ier	EPA 8260B	ND		0.38	mg/kg dry	lx	6K30039	11/30/06 11:22	11/30/06 16:06	
enzene		*	0.24		0.02	4	*	*	н	*	
art-Butyl Alcohol		M	ND		3.8	*		H		Ħ	
,2-Dibromoethane (E	EDB)	Ħ	ND		0.04	*		#	н	н	
,2-Dichloroethane (E	EDC)		ND		0.04	4		*	*	к	
Diisopropyl ether		н	ND		0.38	P	n	*		n	
Ethyl tert-butyl ether		н	ND		0.38	н	н	*		н	
thanol		н	ND		15	4	н	ĸ	**	H	
Ethylbenzene		и	ND		0.08	ч	*	•	*		
Methyl tert-butyl ethe	er		ND		0.38	**	*	H		*	
oluene		*	0.44	*****	0.08	4	n	"	P	*	
		н	ND		0.08	н		n	19	н	
-Xylene			0.24		0.15	*		н. П	is	4	
•			0.24								
1,p-Xylene		я	0.31		0.23	н	н		11	н	
o-Xylene n,p-Xylene  Kylenes (total)  Surrogate(s):	1,2-DCA-d4	n		94.1%	0.23	75 - 125 %	H H		1)	н	

TestAmerica - Seattle, WA

Xate Haney, Project Manager





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Name:

Shell - 6808 196th SW, Lynnwood

Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

## Oxygenates by EPA Method 8260B

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-10 (GW4@17.5')		So	i — E		Sampl	ed: 11/1	7/06 10:45			11
4-BFB			98.0%		75 - 125 %	lx		1 =	11/30/06 16:06	
BPK0570-11 (GW5@7.5')		So	il		Sampl	ed: 11/1	7/06 12:27			
tert-Amyl Methyl Ether	EPA 8260B	ND		0.39	mg/kg dry	lx	6K29036	11/29/06 12:33	11/29/06 22:54	
Benzene	R	0.97		0.02	4	400	*	ч	**	
tert-Butyl Alcohol	n	ND		3.9	11	44	*			
1,2-Dibromoethane (EDB)	н	ND		0.04	44	•	*	0	es	
1,2-Dichloroethane (EDC)		ND		0.04		*	# 2	69	•	
Diisopropyl ether	*	ND		0,39			**	"	19	
Ethyl tert-butyl ether	н	ND	*****	0.39				**	и	
Ethanol		ND		15	н	н	11	н	н	
Methyl tert-butyl ether	nt.	ND		0.39	H		*	b	n	
Surrogate(s): 1,2-DCA-d4			110%		75 - 125 %	"			#	
Toluene-d8			108%		75 - 125 %	#			n	
4-BFB			98.1%		75 - 125 %	"			"	
BPK0570-11RE1 (GW5@7.5')		Soi	1		Sampl	ed: 11/1	7/06 12:27			
thylbenzene	EPA 8260B	14		0.77	mg/kg dry	10x	6K30039	11/30/06 11:22	11/30/06 16:40	
oluene	N	24	******	0.77	н		*		#	
-Xylene		24		0.77	н	,	u	н	м	
n,p-Xylene		67		1.5				**	*	
Tylenes (total)	н	90		2.3		и			н	
Surrogate(s): 1,2-DCA-d4			93.5%		75 - 125 %	lx			н	
Toluene-d8			103%		75 - 125 %	,,,			"	
4-BFB			96.8%		75 - 125 %	н			н	
		6			S1	. 3. 446	E/0 / 12 / F			
BPK0570-12 (GW5@17.5')		Soi			<del></del>		7/06 12:45	·		
ert-Amyl Methyl Ether	EPA 8260B	ND		0.37	mg/kg dry	lx "	6K30039	11/30/06 11:22	11/30/06 17:24	
enzene	•	0.09		0.03		•	"	"	*	
ert-Butyl Alcohol		ND		3.7			и	*	41	
,2-Dibromoethane (EDB)	*	ND		0.04	"		н	u	н	
,2-Dichloroethane (EDC)	-	ND		0.04	я.	H	"	20	*	
iisopropyl ether		ND		0.37	н	rt	н	"		
thyl tert-butyl ether		ND		0.37	н	"	10000	<b>H</b>	"	
thanol	н	ND		15	n	"		ir	lt	
thylbenzene	н	0.19		0.07	ĮI.	н	**	"	μ	
fethyl tert-butyl ether	n E	ND		0.37	n	*	н	н	н	
oluene	н	0.52		0.07	19	4	и	**	H	
-Xylene	n	0.27		0.07		**	*	. 11	*	
		0.90		0.15						

TestAmerica - Seattle, WA

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SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400

BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

Project Number:

248-1739

Report Created:

Everett, WA 98208

8620 Holly Drive, Suite 210

Project Manager: Justin Foslien 12/08/06 18:57

#### Oxygenates by EPA Method 8260B

TestAmerica - Seattle, WA

Analyte		Method	Result	MDL*	MRL Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0570-12	(GW5@17.5')	· · · · · · · · · · · · · · · · · · ·	Soil	J	Sai	npled: 11	/17/06 12:45	84		
Xylenes (total)		EPA 8260B	1.2		0.22 mg/kg dry	1x	6K30039	11/30/06 11:22	11/30/06 17:24	
Surrogate(s):	1,2-DCA-d4		2	91.9%	75 - 125	% "			n	-
Darroguic(s).	Toluene-d8			102%	75 - 125	96 "			"	
	4-BFB			99.3%	75 - 125	% "			н	

TestAmerica - Seattle, WA





Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208

Project Number: Project Manager: 248-1739 Justin Foslien

Report Created: 12/08/06 18:57

	Volatile 1	Petroleum	Produc	des le		I-Gx - La - Seattle, W		ory Qual	ity Cor	ntrol .	Results				
QC Batch: 6K29027	Soil Pr	eparation N	Aethod:	EPA	5030B (	МеОН)									
Analyte	Method	Result	1	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6K29027-BLK1)									Extr	acted:	11/29/06 11	:15			
Gasoline Range Hydrocarbons	NWTPH-Gx	ND			5.00	mg/kg wet	lx			-				11/29/06 12:30	
Surrogate(s): 4-BFB (FID)		Recovery:	82.7%		Li	mits: 50-150%	"							11/29/06 12:30	
LCS (6K29027-BS1)									Extr	acted:	11/29/06 11	:15			
Gasoline Range Hydrocarbons	NWTPH-Gx	46.4			5.00	mg/kg wet	lx		50.0	92.8%	(75-125)			11/29/06 13:04	
Surrogate(s): 4-BFB (FID)		Recovery:	90.7%		Li	mits 50-150%	"	ě.						11/29/06 13:04	
Duplicate (6K29027-DUP1)					QC Source	: BPK0700-01			Extr	acted:	11/29/06 11	:15			
Gasoline Range Hydrocarbons	NWTPH-Gx	ND			12.5	mg/kg dry	lx	ND				22.5%	(40)	11/29/06 16:14	
Surrogate(s): 4-BFB (FID)	¥	Recovery.	82.7%	-	Li	mits: 50-150%	"							11/29/06 16:14	
Duplicate (6K29027-DUP2)					QC Source	: BPK0642-01	RÉI		Extr	acted:	11/29/06 11	:15			
Gasoline Range Hydrocarbons	NWTPH-Gx	3.30	570		2,53	mg/kg wet	lx	3,39				2.69%	(40)	11/29/06 21:41	
Surrogate(s): 4-BFB (FID)		Recovery:	82.9%		Li	mits: 50-150%	,,							11/29/06 21:41	
Matrix Spike (6K29027-MS1)					QC Source	: BPK0700-01			Extr	acted:	11/29/06 11	:15			
Gasoline Range Hydrocarbons	NWTPH-Gx	EE 131			12,5	mg/kg dry	lx	2.67	125	103%	(42-125)			11/29/06 17:14	
Surrogate(s): 4-BFB (FID)		Recovery:	95.2%		Li	mits: 50-150%	н							11/29/06 17:14	
QC Batch: 6K30024	Soil Pro	eparation M	lethod:	EPA	. 5030B (1	МеОН)									
nalyte	Method	Result	N	/IDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6K30024-BLK1)									Extr	acted:	11/30/06 10	:49			
Gasoline Range Hydrocarbons	NWTPH-Gx	ND			5.00	mg/kg wet	lx				-			11/30/06 16:34	
Surrogate(s): 4-BFB (FID)		Recovery:	94.7%		Li	mits: 50-150%	n							11/30/06 16:34	
CS (6K30024-BS1)									Extr	acted:	11/30/06 16	):49			
Gasoline Range Hydrocarbons	NWTPH-Gx	51.6			5.00	mg/kg wet	lx		50.0	103%	(75-125)			11/30/06 17:23	
Surrogate(s): 4-BFB (FID)		Recovery:	117%		Li	mits: 50-150%	"							11/30/06 17:23	
Ouplicate (6K30024-DUP1)					QC Source	: BPK0570-10			Extr	acted:	11/30/06 10	):49			
Gasoline Range Hydrocarbons	NWTPH-Gx	13.9	-		3.80	mg/kg dry	1x	8.57			-	47.4%	(40)	11/30/06 19:25	RP-3, A-
Surrogate(s): 4-BFB (FID)		Recovery:	101%		Li	mits: 50-150%	п							11/30/06 19:25	
Matrix Spike (6K30024-MS1)					QC Source	: BPK0570-10			Extr	acted:	11/30/06 10	0:49			
Gasoline Range Hydrocarbons	NWTPH-Gx	45.8			3.80	mg/kg dry	lx	8.57	38.0	98.0%	(42-125)			11/30/06 21:28	
Surrogate(s): 4-BFB (FID)		Recovery:	98.7%			mits: 50-150%								11/30/06 21:28	

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.





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Everett, WA 98208

8620 Holly Drive, Suite 210

Project Name:

Shell - 6808 196th SW, Lynnwood

Project Number: Project Manager: 248-1739

Report Created: 12/08/06 18:57

Justin Foslien

Volatile Petroleum Products by NWTPH-Gx - Laboratory Quality Control Results

TestAmerica - Seattle, WA

TestAmerica - Seattle, WA

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,

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11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

40.0 98.8%

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager:

Volatile Petroleum Hydrocarbons by WDOE TPH Policy Method - Laboratory Quality Control Results

248-1739 Justin Foslien Report Created: 12/08/06 18:57

TestAmerica - Seattle, WA QC Batch: 6K28004 Soil Preparation Method: EPA 5030B (MeOH) Spike %
Amt REC (Limits) % RPD Analyte MDL\* MRL Method Result Units Dil (Limits) Analyzed Notes Result Blank (6K28004-BLK1) Extracted: 11/28/06 09:45 C5-C6 Aliphatics WA ND 11/28/06 12:58 5,00 mg/kg wet lx MTCA-VPH C6-C8 Aliphatics ND 5.00 C10-C12 Aliphatics ND 5.00 C8-C10 Aromatics ND 5,00 C10-C12 Aromatics ND 5.00 C12-C13 Aromatics ND 5.00 Total VPH (TVPH) ND 35.0 4-BFB (FID) 96.7% Limits: 60-140% Surrogate(s): Recovery: 11/28/06 12:58 4-BFB (PID) 100% 60-140% LCS (6K28004-BS2) Extracted: 11/28/06 09:45 C5-C6 Aliphatics 4.99 5.00 mg/kg wet 5.00 99.8% (70-130) 11/28/06 14:39 MTCA-VPH C6-C8 Aliphatics 2.25 5.00 2.50 90.0% C10-C12 Aliphatics 3 65 5.00 146% C8-C10 Aromatics 11.1 5.00 10.0 111% 2.81 C10-C12 Aromatics 5.00 2.50 112% C12-C13 Aromatics 4.91 5.00 5.00 98 2%

Duplicate (6K28	004-DUP1)		QC Source	: BPK0570-0	6RE1		Ext	racted:	11/28/06 (	9:45				
C5-C6 Aliphatics		WA MTCA-VPH	ND		 3.90	mg/kg dry	lx	ND		-		5.62% (25)	11/28/06 15:10	
C6-C8 Aliphatics		**	4.18		 3.90	*	Ħ	4,15				0.720% "	*	
C10-C12 Aliphatics		n	ND		 3.90		**	ND				18.6% "		BS-1
C8-C10 Aromatics		*	ND		 3,90	*	п	ND				1.58% "		
C10-C12 Aromatics			ND		 3.90		*	ND				2.11% "	н	
C12-C13 Aromatics		n	ND		 3.90		tr	ND				3.24% "	н	
Total VPH (TVPH)			ND		 27.3	*	"	ND				0.805% *	1¢	
Surrogate(s): 4-	BFB (FID)		Recovery:	104%	L	imits: 60-140%	, "						11/28/06 15:10	
4-	BFB (PID)			96.2%		60-140%	6 "						"	

Limits: 60-140%

60-140%

35.0

39.5

92.3%

104%

Recovery:

TestAmerica - Seattle, WA

Total VPH (TVPH)

Surrogate(s):

4-BFB (FID)

4-BFB (PID)

Nawyaung

ate Haney, Project Manager

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.



11/28/06 14 39



Cambria - Seattle

8620 Holly Drive, Suite 210 Everett, WA 98208

Project Name:

Shell - 6808 196th SW, Lynnwood

Project Number: Project Manager: 248-1739 Justin Foslien Report Created:

12/08/06 18:57

## Volatile Petroleum Hydrocarbons by WDOE TPH Policy Method - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 6K280	004 Soil Pre	paration M	fethod: El	PA 5030B (	MeOH)	ell II	x 2	nge-			×			
Analyte	Method	Result	MDL	* MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	) Analyzed	Notes
Matrix Spike (6K28004-	-MS1)			QC Sourc	e: BPK0570-12	RE1	= 47	Ext	racted:	11/28/06 09	:45			
C5-C6 Aliphatics	WA MTCA-VPH	7.26		3.69	mg/kg dry	lx	2,25	3.69	136%	(70-130)	••		11/28/06 16:42	MS-
C6-C8 Aliphatics		10.5		3.69	н	**	7.96	1.85	137%	"				MS-3
C10-C12 Aliphatics	и	5.07		3.69		н	2.62	*	132%		ŭ			MS-3, BS-5
C8-C10 Aromatics	*	11.1		3.69	*	*	2.74	7.39	113%					
C10-C12 Aromatics	н	4.24		3.69	н	н	2.09	1.85	116%	**			u	
C12-C13 Aromatics	н	3,93		3.69	n		0.668	3.69	88.4%		••			
Total VPH (TVPH)	h	54.6		25.9	#		21.4	29.6	112%	н				
Surrogate(s): 4-BFB (FID	)	Recovery:	112%	L	imits: 60-140%	"							11/28/06 16:4	2
4-BFB (PID	y .		91.0%		60-140%	"							"	

Analyte		Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6L060	21-BLK1)								Ext	racted:	12/06/06 09	:31			
C5-C6 Aliphatics		WA MTCA-VPH	ND		5.00	mg/kg wet	lx		**	••				12/06/06 16:31	-
C6-C8 Aliphatics			ND		5.00	n									
C8-C10 Aliphatics		и	ND		5.00					••			-		
C10-C12 Aliphatics		п	ND		5.00		н	-	-						
C8-C10 Aromatics		."	ND	****	5.00	м .		**						н	
C10-C12 Aromatics		Ж. и	ND		5.00									"	
C12-C13 Aromatics			ND		5.00	н	*							*	
Total VPH (TVPH)		58	ND	***	35.0	н							•-	*	
Surrogate(s):	4-BFB (FID) 4-BFB (PID)		Recovery:	99.0% 101%	L	imits: 60-140% 60-140%	- "							12/06/06 16:31	
LCS (6L06021	1-BS2)								Ext	racted:	12/06/06 09	:31	36		
C5-C6 Aliphatics		WA MTCA-VPH	7.06		5.00	mg/kg wet	lx		8.00	88.2%	(70-130)		••	12/07/06 08:38	
C6-C8 Aliphatics		**	6.08		5.00	"	*		4.00	152%	**			*	
C8-C10 Aliphatics		*	9.79		5.00	to to	*	**	8.00	122%				n	
C10-C12 Aliphatics		,4	5.26		5.00		8		4.00	132%	н			w	
C8-C10 Aromatics		H .	16.9		5.00	и	н		16.0	106%					
C10-C12 Aromatics		"	4.55		5.00	н			4.00	114%	н				
C12-C13 Aromatics		<b>\$1</b>	6.92		5.00	n	н	79	8.00	86.5%	н			*	
Total VPH (TVPH)		n	73.1		35.0	p.	и		64.0	114%	*			*	
Surrogate(s):	4-BFB (FID) 4-BFB (PID)		Recovery:	113% 100%	L	imits: 60-140% 60-140%	"							12/07/06 08 38	





Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208

Project Number: Project Manager: 248-1739 Justin Foslien

Report Created: 12/08/06 18:57

# Volatile Petroleum Hydrocarbons by WDOE TPH Policy Method - Laboratory Quality Control Results

QC Batc	h: 6L06021	Soil Pre	paration M	lethod: EPA	5030B (	МеОН)	32 (0.00)								
Analyte	ш. Тр. же	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (6L)	06021-DUP1)				QC Source	e: BPK0455-06	RE3		Extr	acted:	12/06/06 09	:31			
C5-C6 Aliphatics		WA MTCA-VPH	ND		4.46	mg/kg dry	lx	ND	••			2.34%	(25)	12/06/06 18:57	
C6-C8 Aliphatics		H	22.6		4.46	11	*	21.1	-			6.86%	н	•	L
C8-C10 Aliphatics		н	29.8		4.46	11	*	24.2	-			20.7%		•	
C10-C12 Aliphatics		**	45.6		4.46	н	۳.	34.6		T		27.4%	"	•	R3, L
C8-C10 Aromatics		n .	14.1		4.46	11		14.2	-			0.707%	. "	•	
C10-C12 Aromatics			30.5		4.46	н	н	30.1				1.32%			
C12-C13 Aromatics		*	15.9		4.46		н	13.7				14.9%	и		
Total VPH (TVPH)		*	160	***	31.2	×	*	140				13.3%			
Surrogate(s):	.4-BFB (FID)	21	Recovery:	171%	Li	mits: 60-140%	n							12/06/06 18:57	
	4-BFB (PID)			89.2%		60-140%	ti							"	
Matrix Spike (	6L06021-MS1)				QC Source	e: BPK0455-06	RE3		Extr	acted:	12/06/06 09	:31			
C5-C6 Aliphatics		WA MTCA-VPH	5.28	200	4.46	mg/kg dry	lx	0.928	7.14	61.0%	(70-130)			12/07/06 03:09	M
C6-C8 Aliphatics		11	27.3		4.46	*	*	21.1	3.57	174%	*				M1, L
C8-C10 Aliphatics		н	38.4		4.46	H	*	24.2	7.14	199%					M
C10-C12 Aliphatics		н	48.8		4.46	*	H	34.6	3.57	398%	н	•••		•	MI, L
C8-C10 Aromatics		n	21.8		4.46	ч	п	14.2	14.3	53.1%	*	-			M
C10-C12 Aromatics		*	30.9	***	4.46	11	**	30.1	3.57	22.4%	*		-	14	M:
C12-C13 Aromatics		N	17.3		4.46	*	**	13.7	7.14	50.4%	98			н	M
Total VPH (TVPH)			200		31.2	**	**	140	57.1	105%	р			*	





NWTPH-Dx

67.0

114%

90.9%

Recovery:

SEATTLE, WA

11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Everett, WA 98208

8620 Holly Drive, Suite 210

Project Name:

Shell - 6808 196th SW, Lynnwood

Project Number: Project Manager: 248-1739 Justin Foslien Report Created:

12/08/06 18:57

#### Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up - Laboratory Quality Control Results TestAmerica - Seattle, WA EPA 3550B QC Batch: 6K27031 Soil Preparation Method: Spike % (Limits) % (Limits) Analyzed Source Analyte Method Result MDL\* MRL Units Result Blank (6K27031-BLK1) Extracted: 11/27/06 10:42 Diesel Range Hydrocarbons NWTPH-Dx ND 10.0 mg/kg wet 12/06/06 14:08 Lube Oil Range Hydrocarbons ND 25.0 Surrogate(s): 2-FBP 106% Limits: 54-148% Recovery: 12/06/06 14:08 Octaco sane LCS (6K27031-BS1) Extracted: 11/27/06 10:42 NWTPH-Dx 61.7 66.7 92.5% (78-129) Diesel Range Hydrocarbons 10.0 mg/kg wet 12/06/06 14:35 lx Limits: 54-148% Surrogate(s): Recovery: 101% 12/06/06 14:35 Octacosane 87.6% 62-142% QC Source: BPK0570-01 Duplicate (6K27031-DUP1) Extracted: 11/27/06 10:42 Diesel Range Hydrocarbons NWTPH-Dx ND 10.6 mg/kg dry 12/06/06 15:01 Lube Oil Range Hydrocarbons ND 26.5 ND NR Limits: 54-148% Surrogate(s): 2-FBP 101% 12/06/06 15:01 Octacosane 86.8% 62-142% Duplicate (6K27031-DUP2) QC Source: BPK0569-10 Extracted: 11/27/06 10:42 NWTPH-Dx Diesel Range Hydrocarbons 164 10.7 mg/kg dry 12.3 28.6% (50) 12/06/06 15:27 26.8 103 Lube Oil Range Hydrocarbons \*\*\* 84.3 20.0% Surrogate(s): 2-FBP Limits: 54-148% 89.5% 12/06/06 15:27 Recovery: 92.7% 62-142% Octacosane Matrix Spike (6K27031-MS1) QC Source: BPK0570-01 Extracted: 11/27/06 10:42

10.6 mg/kg dry

Limits: 54-148%

62-142%

TestAmerica - Seattle, WA

Diesel Range Hydrocarbons

2-FBP

Octacosane

Surrogate(s):

Kate Haney, Project Manager

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.

94.4% (46-155)



12/06/06 15:53

12/06/06 15:53



Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208

Project Number: Project Manager:

248-1739 Justin Foslien Report Created:

12/08/06 18:57

# Extractable Petroleum Hydrocarbons by WDOE TPH Policy Method - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Bate	h: 6K27029	Soil Pro	paration l	Method: EP.	A 3545				mat "			190			
Analyte		Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6K270	29-BLK1)								Extr	acted:	11/27/06 10	:39	= % 0	u Tuliu y	y
C8-C10 Aliphatics	- 1 - 1	WA	ND		5.00	mg/kg wet	lx							12/01/06 11:57	
C10-C12 Aliphatics		MTCA-EPH	ND	***	5.00	H					-		_	н	
C12-C16 Aliphatics			ND		5.00	н	н								
C16-C21 Aliphatics		0	ND		5.00						30-	_		= ====	
C21-C34 Aliphatics		w <sub>e</sub>	ND		5.00	11	н							*	
C8-C10 Aromatics		às às	ND		5.00		l <sub>µ</sub>							12/01/06 12:28	
C10-C12 Aromatics		H	ND		5.00	•	*			-				н	
C12-C16 Aromatics		11	ND		5.00	н	•								
C16-C21 Aromatics		0	ND		5.00		**								
C21-C34 Aromatics		tr	ND		5.00	н									
Surrogate(s):	o-Terphenyl I-Chlorooctadecane		Recovery:	88.0% 95.8%	L	imits: 60-140% 60-140%	"		-					12/01/06 12:28 12/01/06 11:57	
LCS (6K27029	P-BS1)								Extr	acted:	11/27/06 10	:39			
C8-C10 Aliphatics		WA MTCA-EPH	7.77	***	5.00	mg/kg wet	lx		10.0	77.7%	(50-150)		±.	12/01/06 13:00	
C10-C12 Aliphatics		"	2.93	***	5.00	и			3.33	88.0%	(70-130)			н	
C12-C16 Aliphatics		н	6.25		5.00	sa .			6.67	93.7%	н		_		
C16-C21 Aliphatics		н	9.36		5.00	н	**		10.0	93.6%					
C21-C34 Aliphatics		"	18.1		5.00		Tr .		20.0	90.5%	н				
C8-C10 Aromatics			3.01		5.00	11	#		3.33	90.4%	(50-150)			12/01/06 13:31	
C10-C12 Aromatics			3.27	_	5.00	м	"		w	98.2%	(70-130)			*	
C12-C16 Aromatics		н	9.34		5.00	n	*		10.0	93.4%	11			*	
C16-C21 Aromatics		n	16.6		5.00	11	*		16.7	99.4%	11			*	
C21-C34 Aromatics		e	28.9		5.00	11	*		26.7	108%	**		**	et	
Surrogate(s):	o-Terphenyl I-Chlorooctadecane		Recovery:	92.8% 95.8%	L	imits: 60-140% 60-140%	"							12/01/06 13:31 12/01/06 13:00	
Matrix Spike (	6K27029-MS1)	29		22.	QC Source	: BPK0570-05			Extr	acted:	11/27/06 10	39			
C8-C10 Aliphatics		WA MTCA-EPH	17.6		5,51	mg/kg dry	ix	30.1	11.0	-114%	(50-150)			12/01/06 14:03	MS
C10-C12 Aliphatics		n	15.8		5.51	н	,	29.4	3,68	-370%	(70-130)			n	MS
C12-C16 Aliphatics		**	10.2		5.51	h		7.95	7.35	30.6%	G <sub>h</sub>				MS
C16-C21 Aliphatics		u	10.2		5.51	H		ND	11.0	92.7%	*				
C21-C34 Aliphatics			20.0		5.51	Ħ		ND	22.1	90.5%	*			ч	
C8-C10 Aromatics		"	23.3		5.51	н		33.8	3,68	-285%	(50-150)			12/01/06 14:34	MS
C10-C12 Aromatics		н	19.1		5.51	*	"	27.8	**	-236%	(70-130)			."	MS
C12-C16 Aromatics		н	14.5		5.51	н	"	9.73	11.0	43.4%		-		*	MS
C16-C21 Aromatics		H	16.8		5.51	H	"	ND	18.4	91.3%	**				
C21-C34 Aromatics		и	29.0		5.51	**	"	ND	29.4	98.6%	**				

Kate Haney, Project Manager





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

C16-C21 Aliphatics

C21-C34 Aliphatics

C8-C10 Aromatics

C10-C12 Aromatics

C12-C16 Aromatics

C16-C21 Aromatics

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208

Project Number: Project Manager: 248-1739 Justin Foslien

ND

33.8

27.8

ND

ND

22.4 96.4%

18.7

29.9

21.4%

88.1%

100%

109%

7.69% "

39.0% "

49.0% "

29.9% "

10.7% "

12.0% "

Report Created:

12/08/06 18:57

	Extracta	ble Petroleun	1 Hydroca	rbons b	CALL		H Policy M - Seattle, W		d - Labo	oratory	Qua	lity Con	trol R	esults		
QC Bate	h: 6K27029	Soil Pro	paration M	lethod:	EPA	3545					, 1		H2-	4		78-11-5
Analyte		Method	Result	M	IDL*	MRL	Units	Đil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike	(6K27029-MS1)					QC Source	: BPK0570-05			Extr	acted:	11/27/06 10	:39		X #-	X=1
Surrogate(s):	o-Terphenyi 1-Chloroociadecane		Recovery:	85.3% 95.1%		Li	mits: 60-140% 60-140%								12/01/06 14:3- 12/01/06 14:0.	
Matrix Spike I	Oup (6K27029-MS	(D1)				QC Source	: BPK0570-05			Extr	acted:	11/27/06 10	:39			
C8-C10 Aliphatics		WA MTCA-EPH	31.0	-		5,61	mg/kg dry	lx	30.1	11.2	8.04%	(50-150)	55.1%	6 (25)	12/01/06 15 06	MS-2, RP-
C10-C12 Aliphatics		ir	33.4	-		5.61	н	**	29,4	3.74	107%	(70-130)	71.5%	6 "		RP-
C12-C16 Aliphatics		H	15.3	٠.		5.61		н	7.95	7.47	98.4%	u	40.0%	6 "		RP-
C16-C21 Aliphatics		•	11.2		- 25	5.61	*	H	ND	11.2	100%	•	9.35%	6 "	*	

5.61

5.61

5.61

5,61

5.61

C21-C34 Aromatics 32,7 5.61 Surrogate(s): o-Terphenyl Recovery: 93.0% Limits: 60-140% 100% I-Chloroociadecane 60-140%

21.6

34.6

31.5

19.6

18.7

12/01/06 15:38

12/01/06 15:38

MS-2, RP-1

RP-1

RP-1

12/01/06 15:06

TestAmerica - Seattle, WA





Cambria - Seattle

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208

Project Name: Project Number: Project Manager:

248-1739 Justin Foslien

Report Created: 12/08/06 18:57

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results

			Tes	tAmerica	- Seattle, V	VA.							
QC Batch: 6K30060	Soil Pre	paration Metl	hod: EPA	3050B			عليه		semi]	1.8		1 6116	AL E
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike % Amt REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6K30060-BLK1)	- ' -							Extracted:	11/30/06 1	7:12		district.	=0.11
Lead	EPA 6020	ND		0.500	mg/kg wet	lx				169 <del>-</del>	-	12/01/06 12:01	II RL <sup>®</sup> V
LCS (6K30060-BS1)								Extracted:	11/30/06 1	7:12		51	
Lead	EPA 6020	42.5	_	0.500	mg/kg wet	1x		40.0 106%	(80-120)	-		12/01/06 11:14	
Duplicate (6K30060-DUP1)				QC Source	: BPK0570-	01		Extracted:	11/30/06 1	7:12			
Lead	EPA 6020	1.29		0.532	mg/kg dry	lx	0.962			29.1%	(30)	12/01/06 11:32	
Matrix Spike (6K30060-MS1)				QC Source	: BPK0570-	D1		Extracted:	11/30/06 1	7:12			
Lead =	EPA 6020	45.0	***	0.543	mg/kg dry	lx	0.962	43.5 101%	(29-166)	-		12/01/06 11:26	
Post Spike (6K30060-PS1)				QC Source	: BPK0570-	01		Extracted:	11/30/06 1	7:12			
Lead	EPA 6020	0.0988			ug/ml	lx	0.00181	0.0995 97.5%	(75-125)		+ <u></u>	12/01/06 11:20	





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210

Project Number:

248-1739

Report Created:

Everett, WA 98208

Project Manager: Justin Foslien

12/08/06 18:57

		Polychlorin	ated Biphe		PA Methorica			atory Qu	ality Co	ontro	l Result	S			
QC Batc	h: 6K27027	Soil Pr	eparation M	ethod: E	PA 3550B		F 8		Hill		nage i		¥E		
Analyte		Method	Result	MDL	* MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6K270	27-BLK1)	= 11							Extra	cted:	11/27/06 10	):36			4 E W
Aroclor 1016 [2C]		EPA 8082	ND		25.0	ug/kg wet	1x					-		11/29/06 18:33	
Aroclor 1221			ND		50.0					-				и	
Aroclor 1232		* 10	ND	•••	25.0	n	- "				-			н	
Aroclor 1242		и	ND	4 -	25.0		n							н	
Aroclor 1248		n	ND		25.0		**								
Aroclor 1254		н	ND		25.0		н	-							
Aroclor 1260 [2C]		u	ND	***	25.0		н							*	
Aroclor 1262		*	ND		25.0				_						
Aroclor 1268		R	ND		25.0										
Surrogate(s):	TCX [2C]		Recovery:	102%	Li	mits: 39-139%								11/29/06 18:33	
	Decachlorobiphenyl [2C]			106%		33-1639	6 "							n	
LCS (6K2702	7-BS1)								Extra	cted:	11/27/06 10	):36			MNF

DOS (SEES, SE	. 2021							 					
Aroclor 1016 [2C]		EPA 8082	78.0		25.0	ug/kg wet	lx	 83.3	93.6%	(54-125)	 	11/29/06 18:51	
Aroclor 1260 [2C]		**	80.2		25.0	n	*	 *	96.3%	(58-128)	 -		
Surrogate(s):	TCX [2C]		Recovery:	99.1%	L	imits: 39-139%	6 "				 	11/29/06 18:51	
	Decachlorobiphenyl [2C]			101%		33-1639	6 "					er .	

TestAmerica - Seattle, WA

Kate Haney, Project Manage







Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208

Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Laboratory Quality Control Results TestAmerica - Seattle, WA

Method													
Memod	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	) Analyzed	Notes
		13					Extr	acted:	11/27/06 10	:39		7.2	
8270C-SIM	ND		0.0100	mg/kg wet	lx		_	-		-		12/01/06 17:01	
4	ND		0.0100	н							••		
	ND	•••	0,0100		*							*	
н	ND		0.0100	n									
н	ND	***	0.0100	n	"				-			,	
н	ND	***	0.0100	H									
**	ND		0.0100	n	4								
п	ND		0.0200	н	*							•	
	ND		0.0100		н				••				
н	ND		0.0100	*					••	-		н	
H	ND	***	0.0100	10								*	
n	ND		0.0100	W	н							*	
н	ND		0.0100	a	и							*	
*	ND		0.0100	п								,	
*	ND	***	0.0100		и							b .	
H	ND	***	0.0100	R									
ч	ND	8	0.0100	4	н								
и	ND	***	0.0100			_							
	ND		0.0100	*	и	••						*	
		" ND	ND     ND	" NID 0.0100	" ND 0.0100 "	" ND 0.0100 " "	" ND 0.0100 " " "	8270C-SIM ND 0.0100 mg/kg wet 1x  " ND 0.0100 " "  ND 0.0100 " "  ND 0.0100 " "  ND 0.0100 " "  ND 0.0100 " "  ND 0.0100 " "  ND 0.0100 " "  ND 0.0100 " "  ND 0.0100 " "  ND 0.0100 " "	8270C-SIM ND 0.0100 mg/kg wet 1x	8270C-SIM NID 0.0100 mg/kg wet 1x	" ND 0.0100 " "	8270C-SIM ND 0.0100 mg/kg wet 1x	8270C-SIM         ND

LCS (6K27029-BS2)							Ext	racted:	11/27/06 10:3	39	4	
Acenaphthene	8270C-SIM	0.595	 0.0100	mg/kg wet	1x	**	0.667	89.2%	(70-125)		 12/01/06 17:26	190 2
Acenaphthylene		0.634	 0.0100	44	**		н	95.1%	(70-133)		 **	
Anthracene	н	0.681	 0.0100	H	н		,	102%	(70-152)		 e ====================================	
Benzo (a) anthracene	н	0.524	 0.0100	41			*	78.6%	(60-125)		 H	
Benzo (a) pyrene	H	0.649	 0.0100	#	*		*	97.3%	(64-134)	••	 н	
Benzo (b) fluoranthene	н	0.624	 0.0100	н	н	-		93.6%	(62-147)		 н	
Benzo (k) fluoranthene	H	0 619	 0.0100	11	н	**	и	92.8%	(60-144)		 #	
Benzo (ghi) perylene	н	0.590	 0.0100				и	88.5%	(57-137)		 и	
Chrysene	H	0.628	 0.0100	n	**		11	94.2%	(70-139)		 4	
Dibenz (a,h) anthracene	a a	0,636	 0.0100	,	n		*	95.4%	(56-140)		 u	
Fluoranthene	tr .	0.632	 0.0100		19	••		94.8%	(70-141)	••		
Fluorene	ď	0.670	 0.0100		l h			100%	(76-132)		 19	
Indeno (1,2,3-cd) pyrene	н	0.617	 0.0100		3.81			92.5%	(55-138)			
1-Methylnaphthalene		0.612	 0.0100	W	н Ч		**	91.8%	(46-128)		 н	
2-Methylnaphthalene	n	0.636	 0.0100	н	и		н	95.4%	(41-125)		 н	
Naphthalene	н	0.607	 0.0100	11	pf		н	91.0%	(43-125)		 и	
Phenanthrene	*	0,580	 0.0100	11.5	*1		,	87.0%	(73-125)			





Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208

Project Number: Project Manager: 248-1739 Justin Foslien

ND

87.9% (51-172)

Report Created: 12/08/06 18:57

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Laboratory Quality Control Results TestAmerica - Seattle, WA

QC Batch: 6K27029	Soil Pro	paration M	lethod: EPA	3545		Ĩ.,	- 1						HE TO I	
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (6K27029-BS2)						20		Extr	acted:	11/27/06 10	:39		X 112-11	
Pyrene	8270C-SIM	0.602	***	0.0100	mg/kg wet	lx		0.667	90.3%	(68-140)		-	12/01/06 17:26	
Surrogate(s): p-Terphenyl-d14		Recovery:	94.1%	L	imits: 50-147%	**							12/01/06 17:26	
Matrix Spike (6K27029-MS2)				QC Source	e: BPK0570-06			Extr	acted:	11/27/06 10	:39		7	
Acenaphthene	8270C-SIM	0.599		0.0110	mg/kg dry	lx	ND	0,737	81.3%	(67-132)			12/01/06 17:52	
Acenaphthylene	n	0,644	***	0,0110		и	ND	8	87.4%	(65-142)				
Anthracene	*	0.761	•••	0.0110	U		ND	a	103%	(66-158)			•	
Benzo (a) anthracene	и	0.569		0.0110		H	ND	a	77.2%	(41-156)				
Benzo (a) pyrene	н	0.689		0.0110	*		ND	*	93.5%	(52-148)	٠			
Benzo (b) fluoranthene	u	0.707		0.0110	н		ND	#1	95,9%	(53-151)				
Benzo (k) fluoranthene	II .	0.604		0.0110	h	*	ND	**	82.0%	(46-161)				
Benzo (ghi) perylene	н	0.630		0.0110	п	e	ND	*1	85.5%	(26-154)			н	
Chrysene	<b>19</b>	0.674	•••	0.0110	н		ND	17	91.5%	(55-155)			н	
Dibenz (a,h) anthracene	41	0.669		0.0110			ND		90.8%	(27-157)			ь	
Fluoranthene	м	0.694		0.0110	*	"	ND	*	94.2%	(46-172)				
Fluorene		0.687		0.0110		"	ND	**	93.2%	(66-143)				
Indeno (1,2,3-cd) pyrene	n	0,655		0.0110			ND	"	88.9%	(24-159)		••	*	
1-Methylnaphthalene		0.594		0.0110		**	ND	н	80.6%	(39-140)				
2-Methylnaphthalene	я	0.624	***	0.0110		•	ND	11	84.7%	(32-139)		-2		
Naphthalene		0.592		0.0110			0.00193	н	80.1%	(38-134)		**		
Phenanthrene	- "	0,624		0.0110	и	*	ND		84.7%	(63-139)			*	

Matrix Spike Dup	(6K27029-MSD2)			QC Source:	BPK0570-0	6		Ext	racted:	11/27/06 10	:39		
Acenaphthene	8270C-SIM	0.597		0.0111	mg/kg dry	lx	ND	0.742	80.5%	(67-132)	0.334% (50)	12/01/06 19:08	
Acenaphthylene	D	0.631	-	0.0111	*	**	ND		85.0%	(65-142)	2.04% "		
Anthracene	4	0.746		0.0111	н	**	ND	*	101%	(66-158)	1.99% "	н	
Benzo (a) anthracene	и	0.581		0.0111		**	ND	11	78.3%	(41-156)	2.09% *	*	
Benzo (a) pyrene	•	0.687		0.0111	*	н	ND		92.6%	(52-148)	0.291% "	w	
Benzo (b) fluoranthene		0.698		0.0111	*		ND		94.1%	(53-151)	1.28% "	*	
Benzo (k) fluoranthene	"	0.580		0.0111	4		ND	"	78,2%	(46-161)	4.05% "	•	
Benzo (ghi) perylene	н	0.623		0.0111	*	*	ND	*	84.0%	(26-154)	1.12% "	**	
Chrysene	#	0.672		0.0111	п	*	ND	н	90.6%	(55-155)	0.297% (44)	н	
Dibenz (a,h) anthracene	и	0.655		0.0111		н	ND	*	88.3%	(27-157)	2.11% (50)	19	
Fluoranthene	"	0.683		0.0111	**	o	ND		92.0%	(46-172)	1.60% "		
Fluorene	я	0.687		0.0111	*	μ	ND	\$1	92.6%	(66-143)	0.00% (52)	n	
Indeno (1,2,3-cd) pyrene	n	0.656		0.0111	44		ND	n	88.4%	(24-159)	0.153% (43)		
1-Methylnaphthalene	tt .	0.599		0.0111	•	e	ND		80,7%	(39-140)	0.838% (50)	u	

Limits: 50-147%

0.0110

0.648

Recovery:

p-Terphenyl-d14

Surrogate(s):

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12/01/06 17:52



Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208

Project Number: Project Manager:

248-1739 Justin Foslien Report Created:

12/08/06 18:57

# Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Laboratory Quality Control Results

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	) Analyzed	Notes
Matrix Spike Dup (6K27029-	MSD2)			QC Source	: BPK0570-0	6		Ext	acted:	11/27/06 10	:39		1111111	
2-Methylnaphthalene	8270C-SIM	0.613		0.0111	mg/kg dry	lx	ND	0.742	82.6%	(32-139)	1.78%	(50)	12/01/06 19:08	
Naphthalene		0.573		0.0111	*		0.00193	и	77.0%	(38-134)	3.26%	, ,	н	
Phenanthrene	и	0.621		0.0111	"	*	ND	н	83.7%	(63-139)	0.482%	, "		
Pyrene	н	0.657		0.0111	11		ND	*	88.5%	(51-172)	1.38%	н	P	

Kate Haney, Project Manager





11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210

Project Number:

248-1739

Report Created:

Everett, WA 98208

Project Manager:

Justin Foslien

12/08/06 18:57

	Physical Parai	neters by A			<b>1ethods</b> Seattle, V		oratory (	Quality (	Cont	roi Res	ults			
QC Batch: 6K30050	Soil Preparation Method: Dry Weight													
	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6K30050-BLK1)					0.5			Extra	cted:	11/30/06 1	5:17	1 2001	went h	
Dry Weight	BSOPSPL00 3R08	100		1.00	%	lx		-					12/01/06 00:00	A.W.
QC Batch: 6K30051	Soil Prep	paration Met	hod: Dry \	Weight										
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result		% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6K30051-BLK1)								Extrac	cted:	11/30/06 1	5:18			
Dry Weight	BSOPSPL00 3R08	99.8		1.00	%	lx	_	-					12/01/06 00:00	

TestAmerica - Seattle, WA

Kate Haney, Project Manager





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Cambria - Seattle

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Everett, WA 98208

Project Name:

Shell - 6808 196th SW, Lynnwood

Project Number: Project Manager: 248-1739

Justin Foslien

Report Created:

12/08/06 18:57

#### **Notes and Definitions**

#### Report Specific Notes:

- A-01 Sample contains carryover from previous sample.
- BS-1 Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the laboratory control limits. Analyte not detected, data not impacted.
- BS-5 Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the laboratory control limits. A high bias to sample results is indicated.
- C Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
- H2 Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
- L1 Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above acceptance limits.
- M1 The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M2 The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- MNR No results were reported for the MS/MSD. The sample used for the MS/MSD required dilution due to the sample matrix. Because of this, the spike compounds were diluted below the detection limit.
- MS-2 The Matrix Spike and/or Matrix Spike Duplicate were below the acceptance limits due to sample matrix interference. See Laboratory Control Sample.
- MS-3 The Matrix Spike and/or Matrix Spike Duplicate were above the acceptance limits due to sample matrix interference. See Laboratory Control Sample.
- Q5 Results in the diesel organics range are primarily due to overlap from a gasoline range product.
- R3 The RPD exceeded the acceptance limit due to sample matrix effects.
- RP-1 The RPD exceeded the laboratory control limit due to sample matrix interference. The individual analyte QA/QC recoveries, however, were within laboratory control limits.
- RP-3 The RPD exceeded the laboratory control limit due to sample matrix effects.
- ZX Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.

#### **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.

TestAmerica - Seattle, WA

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11720 NORTH CREEK PKWY N, SUITE 400

BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Cambria - Seattle

Project Name:

Shell - 6808 196th SW, Lynnwood

8620 Holly Drive, Suite 210 Everett, WA 98208 Project Number: Project Manager: 248-1739 Justin Foslien Report Created: 12/08/06 18:57

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, WA

Kate Haney, Project Manager

