



**CONESTOGA-ROVERS
& ASSOCIATES**

20818 44th Ave. West, Suite 190
Seattle, Washington 98036
Telephone: (425) 563-6500 Fax: (425) 563-6599
www.CRAworld.com

TRANSMITTAL

DATE: January 25, 2012 REFERENCE NO.: 241739
PROJECT NAME: 6808 196th Street SW, Lynnwood, WA
TO: Department of Ecology - NWRO
Attn: Libby Goldstein
3190 160th Ave. SE
Bellevue, WA 98008-5452

Please find enclosed: Draft Final
 Originals Other
 Prints
Sent via: Mail Same Day Courier
 Overnight Courier Other

QUANTITY	DESCRIPTION
1	2011 Annual Groundwater Monitoring Report

As Requested For Review and Comment
 For Your Use

COMMENTS:

Copy to: Mr. Perry Pineda, Shell Oil
Products US (Livelink)
Bob Cahill, Heartland Automotive
Services, Inc.

Completed by: Jing Song
[Please Print]

Signed: 



2011 ANNUAL GROUNDWATER MONITORING REPORT

FORMER JIFFY LUBE FACILITY
6808 196th STREET SOUTHWEST
LYNNWOOD, WASHINGTON

SAP CODE	171152
INCIDENT NO.	97605410
AGENCY NO.	27496218
VCP NO.	NW2070

JANUARY 25, 2012
REF. NO. 241739 (9)

This report is printed on recycled paper.

Prepared by:
**Conestoga-Rovers
& Associates**

20818 44th Avenue West,
Suite 190
Lynnwood, Washington
U.S.A. 98036

Office: 425-563-6500
Fax: 425-563-6599

web: <http://www.CRAworld.com>



2011 ANNUAL GROUNDWATER MONITORING REPORT

FORMER JIFFY LUBE FACILITY
6808 196th STREET SOUTHWEST
LYNNWOOD, WASHINGTON

SAP CODE 171152
INCIDENT NO. 97605410
AGENCY NO. 27496218
VCP NO. NW2070

Jing Song

Christina McClelland

JANUARY 25, 2012
REF. NO. 241739 (9)

This report is printed on recycled paper.

Prepared by:
**Conestoga-Rovers
& Associates**

20818 44th Avenue West,
Suite 190
Lynnwood, Washington
U.S.A. 98036

Office: 425-563-6500
Fax: 425-563-6599

web: <http://www.CRAworld.com>

TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION	1
1.1 SITE INFORMATION.....	1
2.0 SITE ACTIVITIES, FINDINGS, AND DISCUSSION	1
2.1 CURRENT ACTIVITIES	1
2.2 FINDINGS	2

LIST OF FIGURES
(Following Text)

FIGURE 1	VICINITY MAP
FIGURE 2	GROUNDWATER CONTOUR AND CHEMICAL CONCENTRATION MAP - JANUARY 20, 2011

LIST OF TABLES
(Following Text)

TABLE 1	SUMMARY OF GROUNDWATER MONITORING DATA
---------	--

LIST OF APPENDICES

APPENDIX A	FIELD FORMS
APPENDIX B	LABORATORY ANALYTICAL REPORT

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (SOPUS). This annual report includes all groundwater monitoring data collected in 2011.

1.1 SITE INFORMATION

Site Address	6808 196 th Street Southwest, Lynnwood
Site Use	Former Jiffy Lube Facility
Shell Project Manager	Perry Pineda
CRA Project Manager	Christina McClelland
Lead Agency and Contact	Washington State Department of Ecology (Ecology), Libby Goldstein
Agency Case No.	27496218
Shell SAP Code:	171152
Shell Incident No.	97605410
VCP No.	NW2070

The most recent agency correspondence on record is from March 5, 2009.

2.0 SITE ACTIVITIES, FINDINGS, AND DISCUSSION

2.1 CURRENT ACTIVITIES

Blaine Tech Services, Inc. (Blaine) gauged and sampled wells according to the established monitoring program for this site. Sampling was suspended indefinitely following the first quarter event.

CRA prepared a vicinity map (Figure 1) and a groundwater contour and chemical concentration map (Figure 2). CRA prepared Table 1 summarizing groundwater monitoring data and laboratory analytical results. Field forms and the laboratory analytical report are included as Appendices A and B.

2.2 FINDINGS

Quarter/Date	1 st /January 20, 2011
Groundwater Flow Direction	Estimated to the southwest
Hydraulic Gradient	0.02 feet/foot
Depth to Water	5.40 to 9.59 feet below top of well casing

FIGURES

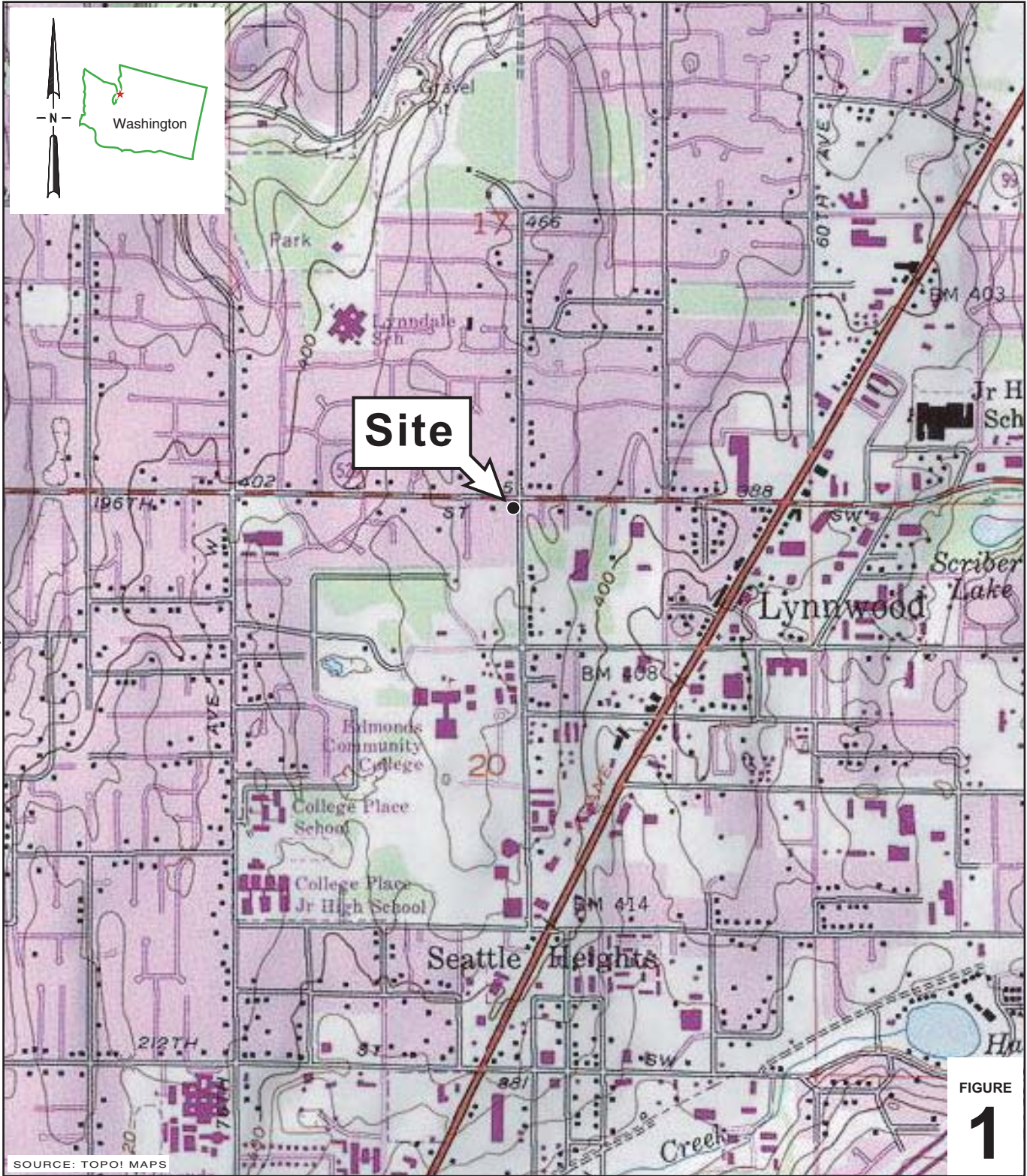


FIGURE 1

I:\EVERETT.SHELL\WA_Shell_Sites\6-char\2417-1\241739-6808_196th Street_SW Lynnwood\241739-FIGURES\241739_VICINITY_A1

SOURCE: TOPOI MAPS

0 1/8 1/4 1/2 1
SCALE : 1" = 1/4 MILE

Former Jiffy Lube Facility
6808 196th Street Southwest
Lynnwood, Washington



**CONESTOGA-ROVERS
& ASSOCIATES**

Vicinity Map

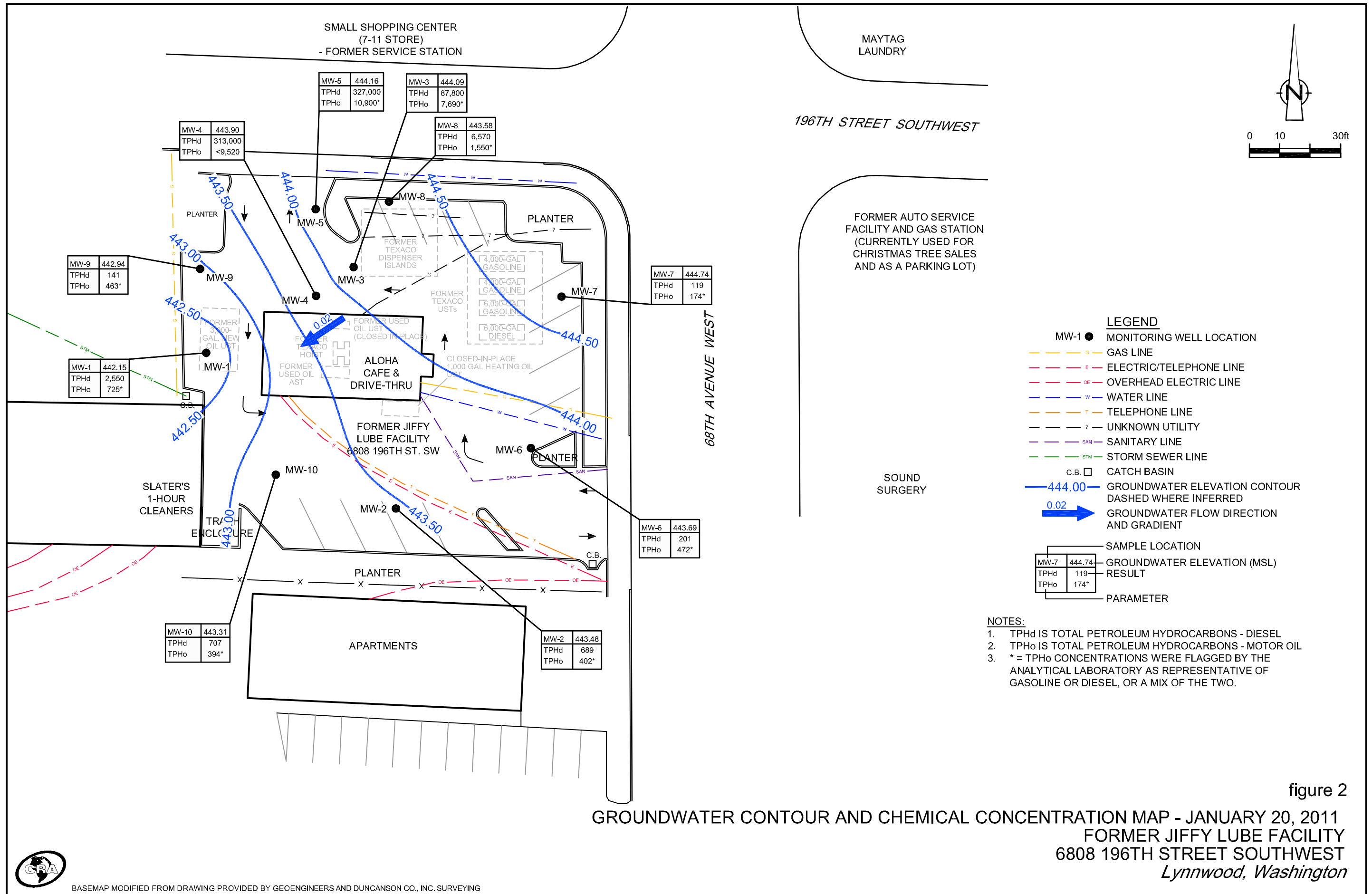


figure 2

GROUNDWATER CONTOUR AND CHEMICAL CONCENTRATION MAP - JANUARY 20, 2011
 FORMER JIFFY LUBE FACILITY
 6808 196TH STREET SOUTHWEST
 Lynnwood, Washington



TABLES

TABLE 1

SUMMARY OF GROUNDWATER MONITORING DATA
FORMER JIFFY LUBE FACILITY
6808 196TH STREET SOUTHWEST,
LYNNWOOD, WASHINGTON

Sample ID	Date	TOC	DTW	GWE	SPH Thickness	HYDROCARBONS			PRIMARY VOCs				OXYGENATES					LEAD		
						TPHg 800/1000 (ug/L)	TPHd 500 (ug/L)	TPHo 500 (ug/L)	B 5 (ug/L)	T 1000 (ug/L)	E 700 (ug/L)	X 1000 (ug/L)	EDB 0.01 (ug/L)	EDC 5 (ug/L)	MTBE 20 (ug/L)	TBA NE (ug/L)	DIPE NE (ug/L)	ETBE NE (ug/L)	TAME NE (ug/L)	Total 15 (ug/L)
MW-1	12/28/06	451.74	9.75	441.99	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-1	12/29/06	451.74	9.57	442.17	0.00	42,100	<255	<510 m	9,190	2,140	1,090	4,100	---	---	---	---	---	---	---	---
MW-1	02/15/07	451.74	10.10	441.64	0.00	41,200	<269	<538 m	9,230	1,840	938	3,710	---	---	<5.00	54.6	<1.00	<1.00	<1.00	---
MW-1	04/06/07	451.74	10.71	441.03	0.00	30,200	<258	<515 m	7,450	732	718	2,310	---	---	---	---	---	---	---	---
MW-1	07/09/07	451.74	10.78	440.96	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-1	07/28/07	451.74	11.01	440.73	0.00	5,850	<258	<515 m	2,400	32.4	131	190	---	---	---	---	---	---	---	---
MW-1	10/01/07	451.74	13.98	437.76	0.00	23,900	1,540 f,g	<105	6,270	196	653	1,340	---	---	---	---	---	---	---	---
MW-1	01/10/08	451.74	9.43	442.31	0.00	73,000	<243	<485	16,500	4,010	1,610	6,790	---	---	---	---	---	---	---	---
MW-1	07/10/08	451.74	10.81	440.93	0.00	800	1,400	<300	280	13	2	33	---	---	---	---	---	---	---	---
MW-1	01/06/09	451.74	10.16	441.58	0.00	<100	190	<380	1	<1.0	<1.0	<1.0	---	---	<1.0	<10	<2.0	<2.0	<2.0	---
MW-1 *	07/13/09	451.74	11.14	440.60	0.00	7,500	2,800 j	<100	1,200	60	220	470	<0.010	<0.29	---	---	---	---	---	3.33
MW-1	07/29/10	451.74	11.10	440.64	0.00	---	320 j	110	32	2.9	17	48	---	---	---	---	---	---	---	---
MW-1	01/20/11	451.74	9.59	442.15	0.00	---	2,550 p	725 q	13,400	3,950	1,700	7,240	---	---	<1.00	132	<1.00	<1.00	<1.00	---
MW-2	12/28/06	450.59	7.26	443.33	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	12/29/06	450.59	7.35	443.24	0.00	2,640	<253	<505 m	21.7	6.75	55.1	9.91	---	---	---	---	---	---	---	---
MW-2	02/15/07	450.59	8.03	442.56	0.00	249	<278	<556 m	2.06	<0.500	4.36	<1.00	---	---	<5.00	<50.0	<1.00	<1.00	<1.00	---
MW-2	04/06/07	450.59	8.50	442.09	0.00	180	<258	<515 m	1.83	0.518	2.61	<1.00	---	---	---	---	---	---	---	---
MW-2	07/09/07	450.59	8.62	441.97	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	07/28/07	450.59	8.96	441.63	0.00	3,200	<255	<510 m	66.1	7.86	137	20.4	---	---	---	---	---	---	---	---
MW-2	10/01/07	450.59	12.54	438.05	0.00	3,980	1,080 g,h	<105	175	13.7	331	47.4	---	---	---	---	---	---	---	---
MW-2	01/10/08	450.59	7.88	442.71	0.00	5,000	<243	<485	214	9.85	502	71.0	---	---	---	---	---	---	---	---
MW-2	07/10/08	450.59	9.98	440.61	0.00	540	<500	<200	4.9	<1	9.4	<1	---	---	---	---	---	---	---	---
MW-2	01/06/09	450.59	8.18	442.41	0.00	9,200	<100	<100	390	16	840	62.0	---	---	<10	<100	<20	<20	<20	---
MW-2	07/13/09	450.59	10.66	439.93	0.00	320	210 j	<100	3.8	<1.0	3.3	<1.0	<0.010	<0.50	---	---	---	---	---	<1.00
MW-2	07/29/10	450.59	10.31	440.28	0.00	---	200 j	<100	2.1	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---
MW-2	01/20/11	450.59	7.11	443.48	0.00	---	689 r	402 q	25.1	<1.00	54.4	5.42	---	---	<1.00	<20.0	<1.00	<1.00	<1.00	---
MW-3	12/28/06	451.69	8.45	443.24	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	12/29/06	451.69	8.51	443.18	0.00	171,000	608	<510 m	28,500	29,200	2,950	15,900	---	---	---	---	---	---	---	---
MW-3	02/15/07	451.69	9.09	442.60	0.00	263,000 a, b	2,580 c	<2,750 m	29,200	37,400	3,140	18,600	---	---	<500 m	<5,000	<100	<100	<100	---
MW-3	04/06/07	451.69	9.66	442.03	0.00	214,000	867 c	<495	26,600	37,500	2,850	16,800	---	---	---	---	---	---	---	---
MW-3	07/09/07	451.69	9.81	441.88	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	07/28/07	451.69	10.13	441.56	0.00	248,000	8,340 e	<5.050 m	28,600	37,400	2,810	12,800	---	---	---	---	---	---	---	---
MW-3	10/01/07	451.69	13.96	437.73	0.00	252,000	185,000 g,h	<10,500 m	29,300	35,200	3,260	19,300	---	---	---	---	---	---	---	---
MW-3	01/10/08	451.69	9.34	442.37 d	0.02	NOT SAMPLED - SPH PRESENT				---	---	---	---	---	---	---	---	---	---	---
MW-3	01/14/08	451.69	9.06	442.63	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	01/21/08	451.69	8.27	443.42	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	02/26/08	451.69	8.40	443.30 d	0.01	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	07/10/08	451.69	9.02	442.69 d	0.02	NOT SAMPLED - SPH PRESENT				---	---	---	---	---	---	---	---	---	---	---

TABLE 1

SUMMARY OF GROUNDWATER MONITORING DATA
FORMER JIFFY LUBE FACILITY
6808 196TH STREET SOUTHWEST,
LYNNWOOD, WASHINGTON

Sample ID	Date	TOC	DTW	GWE	SPH Thickness	HYDROCARBONS			PRIMARY VOCs					OXYGENATES					LEAD	
						TPHg	TPHd	TPHo	B	T	E	X	EDB	EDC	MTBE	TBA	DIPE	ETBE	TAME	Total
						800/1000 (ug/L)	500 (ug/L)	500 (ug/L)	5 (ug/L)	1000 (ug/L)	700 (ug/L)	1000 (ug/L)	0.01 (ug/L)	5 (ug/L)	20 (ug/L)	NE (ug/L)	NE (ug/L)	NE (ug/L)	NE (ug/L)	15 (ug/L)
MW-3	08/26/08	451.69	9.55	442.16 d	0.02	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	09/22/08	451.69	10.00	441.71 d	0.03	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	01/06/09	451.69	8.47	443.24 d	0.02	NOT SAMPLED - SPH PRESENT			---	---	---	---	---	---	---	---	---	---	---	---
MW-3	07/29/10	451.69	9.21	442.50 d	0.03	NOT SAMPLED - SPH PRESENT			---	---	---	---	---	---	---	---	---	---	---	---
MW-3	01/20/11	451.69	7.60	444.09 d	0.00	---	87,800 r	7,690 s	12,100	23,200	3,020	19,700	---	---	<1.00	101	1.24	<1.00	<1.00	---
MW-4	12/28/06	452.01	9.41	442.60	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	12/29/06	452.01	9.36	442.65	0.00	207,000	1,810	<510 m	32,400	39,700	3,200	18,800	---	---	---	---	---	---	---	---
MW-4	02/15/07	452.01	9.96	442.05	0.00	253,000 a, b	72,100 c	<50,000 m	31,500 a, b	40,500 a, b	2,990 a, b	18,100 a, b	---	---	<500 m	<5,000	<100	<100	<100	---
MW-4	04/06/07	452.01	10.41	441.63 d	0.04	NOT SAMPLED - SPH PRESENT			---	---	---	---	---	---	---	---	---	---	---	---
MW-4	07/09/07	452.01	10.47	441.56 d	0.03	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	07/28/07	452.01	10.81	441.23 d	0.04	NOT SAMPLED - SPH PRESENT			---	---	---	---	---	---	---	---	---	---	---	---
MW-4	10/01/07	452.01	14.24	437.87 d	0.13	NOT SAMPLED - SPH PRESENT			---	---	---	---	---	---	---	---	---	---	---	---
MW-4	11/12/07	452.01	13.83	438.31 d	0.16	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	11/20/07	452.01	13.68	438.44 d	0.14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	11/26/07	452.01	13.52	438.58 d	0.11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	12/08/07	452.01	12.87	439.22 d	0.10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	12/14/08	452.01	12.41	439.66 d	0.07	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	12/19/07	452.01	12.33	439.72 d	0.05	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	12/28/07	452.01	12.24	439.80 d	0.04	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	01/10/08	452.01	9.61	442.42 d	0.03	NOT SAMPLED - SPH PRESENT			---	---	---	---	---	---	---	---	---	---	---	---
MW-4	01/14/08	452.01	9.23	442.80 d	0.02	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	01/21/08	452.01	8.07	443.96 d	0.03	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	02/26/08	452.01	9.03	443.00 d	0.03	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	07/10/08	452.01	9.71	442.41 d	0.14	NOT SAMPLED - SPH PRESENT			---	---	---	---	---	---	---	---	---	---	---	---
MW-4	08/26/08	452.01	10.52	441.68 d	0.24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	09/22/08	452.01	11.01	441.27 d	0.34	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	01/06/09	452.01	9.24	442.79 d	0.02	NOT SAMPLED - SPH PRESENT			---	---	---	---	---	---	---	---	---	---	---	---
MW-4	07/29/10	452.01	9.81	442.22 d	0.02	NOT SAMPLED - SPH PRESENT			---	---	---	---	---	---	---	---	---	---	---	---
MW-4	01/20/11	452.01	8.11	443.90 d	0.00	---	313,000 t	<9,520 m	12,800	28,700	3,180	21,200	---	---	<1.00	61.8	<1.00	<1.00	<1.00	---
MW-5	12/28/06	451.38	8.11	443.27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	12/29/06	451.38	8.17	443.21	---	122,000	603	<515 m	7,220	24,400	2,280	13,200	---	---	---	---	---	---	---	---
MW-5	02/15/07	451.38	8.49	442.89	---	771,000 a, b	49,200 c	<5,000 m	12,800 a, b	43,600 a, b	6,000 a, b	40,700 a, b	---	---	<500 m	<5,000	<100	<100	<100	---
MW-5	04/06/07	451.38	9.08	442.32 d	0.03	NOT SAMPLED - SPH PRESENT			---	---	---	---	---	---	---	---	---	---	---	---
MW-5	07/09/07	451.38	9.19	442.21 d	0.03	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	07/28/07	451.38	9.58	441.83 d	0.04	NOT SAMPLED - SPH PRESENT			---	---	---	---	---	---	---	---	---	---	---	---
MW-5	10/01/07	451.38	13.16	438.28 d	0.08	NOT SAMPLED - SPH PRESENT			---	---	---	---	---	---	---	---	---	---	---	---
MW-5	11/12/07	451.38	12.74	438.69 d	0.06	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	11/20/07	451.38	12.55	438.89 d	0.08	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 1

SUMMARY OF GROUNDWATER MONITORING DATA
FORMER JIFFY LUBE FACILITY
6808 196TH STREET SOUTHWEST,
LYNNWOOD, WASHINGTON

Sample ID	Date	TOC	DTW	GWE	SPH Thickness	HYDROCARBONS			PRIMARY VOCs					OXYGENATES					LEAD	
						TPHg	TPHd	TPHo	B	T	E	X	EDB	EDC	MTBE	TBA	DIPE	ETBE	TAME	Total
						800/1000 (ug/L)	500 (ug/L)	500 (ug/L)	5 (ug/L)	1000 (ug/L)	700 (ug/L)	1000 (ug/L)	0.01 (ug/L)	5 (ug/L)	20 (ug/L)	NE (ug/L)	NE (ug/L)	NE (ug/L)	NE (ug/L)	15 (ug/L)
MW-5	11/26/07	451.38	12.48	438.95 d	0.06	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	12/05/07	451.38	11.74	439.72 d	0.10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	12/14/07	451.38	11.53	439.90 d	0.06	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	12/19/07	451.38	11.41	440.00 d	0.04	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	12/28/07	451.38	11.29	440.12 d	0.04	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	01/10/08	451.38	8.70	442.70 d	0.02	NOT SAMPLED - SPH PRESENT			---	---	---	---	---	---	---	---	---	---	---	---
MW-5	01/14/08	451.38	8.70	442.68	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	01/21/08	451.38	8.00	443.54 d	0.20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	02/26/08	451.38	8.02	443.50 d	0.17	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	07/10/08	451.38	8.68	442.97 d	0.34	NOT SAMPLED - SPH PRESENT			---	---	---	---	---	---	---	---	---	---	---	---
MW-5	08/26/08	451.38	8.86	442.73 d	0.26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	09/22/08	451.38	9.18	442.36 d	0.20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	01/06/09	451.38	7.80	443.60 d	0.02	NOT SAMPLED - SPH PRESENT			---	---	---	---	---	---	---	---	---	---	---	---
MW-5	07/29/10	451.38	8.72	442.68 d	0.02	NOT SAMPLED - SPH PRESENT			---	---	---	---	---	---	---	---	---	---	---	---
MW-5	01/20/11	451.38	7.22	444.16 d	0.00	---	327,000 t	10,900 s	3,710	16,200	2,690	15,800	---	---	<1.00	45.4	<1.00	<1.00	<1.00	---
MW-6	07/09/07	449.40	8.33	441.07	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	07/28/07	449.40	8.61	440.79	0.00	52.4	<253	<505 m	<0.500	1.25	<0.500	<1.00	---	---	---	---	---	---	---	---
MW-6	10/01/07	449.40	12.22	437.18	0.00	<250	<105	<105	<1.00	<1.00	<1.00	<3.00	---	---	---	---	---	---	---	---
MW-6	01/10/08	449.40	7.86	441.54	0.00	<50.0	<250	<500	<0.500	<0.500	<0.500	<3.00	---	---	---	---	---	---	---	---
MW-6	07/10/08	449.40	7.87	441.53	0.00	<50	<500	<200	<1	<1	<1	<1	---	---	---	---	---	---	---	---
MW-6	01/06/09	449.40	6.10	443.30	0.00	<100	<100	<100	<0.50	<1.0	<1.0	<1.0	---	---	<1.0	<10	<2.0	<2.0	<2.0	---
MW-6	07/13/09	449.40	8.47	440.93	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<1.00
MW-6	07/29/10	449.40	8.17	441.23	0.00	---	<100	190	<0.50	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---
MW-6	01/20/11	449.40	5.71	443.69	0.00	---	201 s	472 s	<1.00	<1.00	<1.00	<3.00	---	---	<1.00	<20.0	<1.00	<1.00	<1.00	---
MW-7	07/09/07	450.14	7.81	442.33	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-7	07/28/07	450.14	8.03	442.11	0.00	<50.0	<253	<495	<0.500	<0.500	<0.500	<1.00	---	---	---	---	---	---	---	---
MW-7	10/01/07	450.14	11.71	438.43	0.00	<250	<111	<111	1.78	<1.00	<1.00	<3.00	---	---	---	---	---	---	---	---
MW-7	01/10/08	450.14	7.32	442.82	0.00	51.2	<250	<500	68.4	1.26	79.7	110	---	---	---	---	---	---	---	---
MW-7	07/10/08	450.14	7.27	442.87	0.00	<50	<500	<200	<1	<1	<1	<1	---	---	---	---	---	---	---	---
MW-7	01/06/09	450.14	7.07	443.07	0.00	<100	<100	<100	<0.50	<1.0	<1.0	<1.0	---	---	<1.0	<10	<2.0	<2.0	<2.0	---
MW-7	07/13/09	450.14	7.70	442.44	0.00	---	---	---	2.7	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	<1.00
MW-7	07/29/10	450.14	7.69	442.45	0.00	---	<100	<100	<0.50	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---
MW-7	01/20/11	450.14	5.40	444.74	0.00	---	119 u	174 u	<1.00	<1.00	<1.00	<3.00	---	---	<1.00	<20.0	<1.00	<1.00	<1.00	---
MW-8	07/09/07	451.31	8.63	442.68	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-8	07/28/07	451.31	8.97	442.34	0.00	266,000	8,580 e	<5,210 m	20,500	43,600	3,550	23,000	---	---	---	---	---	---	---	---
MW-8	10/01/07	451.31	12.58	438.73	0.00	181,000	6,540 g, i	<1,110 m	18,000	32,000	2,250	14,900	---	---	---	---	---	---	---	---
MW-8	01/10/08	451.31	8.16	443.15	0.00	202,000	9,190 c	<4,850 m	13,400	29,600	2,200	14,000	---	---	---	---	---	---	---	---

SUMMARY OF GROUNDWATER MONITORING DATA
FORMER JIFFY LUBE FACILITY
6808 196TH STREET SOUTHWEST,
LYNNWOOD, WASHINGTON

Sample ID	Date	TOC	DTW	GWE	SPH Thickness	HYDROCARBONS			PRIMARY VOCs				OXYGENATES					LEAD		
						TPHg	TPHd	TPHo	B	T	E	X	EDB	EDC	MTBE	TBA	DIPE	ETBE	TAME	Total
						800/1000 (ug/L)	500 (ug/L)	500 (ug/L)	5 (ug/L)	1000 (ug/L)	700 (ug/L)	1000 (ug/L)	0.01 (ug/L)	5 (ug/L)	20 (ug/L)	NE (ug/L)	NE (ug/L)	NE (ug/L)	NE (ug/L)	15 (ug/L)
MW-8	07/10/08	451.31	8.14	443.18 d	0.01	NOT SAMPLED - SPH PRESENT			---	---	---	---	---	---	---	---	---	---	---	---
MW-8	08/26/08	451.31	8.30	443.03 d	0.02	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-8	09/22/08	451.31	8.80	442.52 d	0.01	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-8	01/06/09	451.31	7.90	443.41	0.00	22,000	6,900	440	2,700	6,300	390	4,300	---	---	<20	<200	<40	<40	<40	---
MW-8	07/29/10	451.31	7.92	443.39	0.00	---	5,300 j	2,000 j	18,000	40,000	17,000	110,000	---	---	---	---	---	---	---	---
MW-8	01/20/11	451.31	7.73	443.58	0.00	---	6,570 r	1,550 s	13,800	31,500	3,290	21,900	---	---	<1.00	128	<1.00	<1.00	<1.00	---
MW-9	07/09/07	451.75	10.83	440.92	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-9	07/28/07	451.75	11.02	440.73	0.00	<50.0	<248	<495	<0.500	<0.500	<0.500	<1.00	---	---	---	---	---	---	---	---
MW-9	10/01/07	451.75	14.07	437.68	0.00	299	174 f,g	<111	5.52	<1.00	<1.00	<3.00	---	---	---	---	---	---	---	---
MW-9	01/10/08	451.75	9.76	441.99	0.00	<50.0	<238	<476	<0.500	<0.500	<0.500	<3.00	---	---	---	---	---	---	---	---
MW-9	07/10/08	451.75	9.71	442.04	0.00	<50	<500	<1,000 m	<1	<1	<1	<1	---	---	---	---	---	---	---	---
MW-9	01/06/09	451.75	9.35	442.40	0.00	<100	<100	<100	<0.50	<1.0	<1.0	<1.0	---	---	<1.0	<10	<2.0	<2.0	<2.0	---
MW-9	07/13/09	451.75	9.94	441.81	0.00	---	---	---	<0.50	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	<1.00
MW-9	07/29/10	451.75	9.80	441.95	0.00	---	<100	<100	<0.50	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---
MW-9	01/20/11	451.75	8.81	442.94	0.00	---	141 s	463 s	<1.00	<1.00	<1.00	<3.00	---	---	<1.00	<20.0	<1.00	<1.00	<1.00	---
MW-10	07/09/07	451.43	12.44	438.99	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-10	07/28/07	451.43	12.77	438.66	0.00	6,570	307 c	<505 m	299	179	237	615	---	---	---	---	---	---	---	---
MW-10	10/01/07	451.43	14.87	436.56	0.00	27,100	1,820 g,i	<556 m	1,510	1,220	1,210	2,650	---	---	---	---	---	---	---	---
MW-10	01/10/08	451.43	10.52	440.91	0.00	11,400	<248	<495	316	237	842	604	---	---	---	---	---	---	---	---
MW-10	07/10/08	451.43	11.69	439.74	0.00	1,400	<500	<1,000 m	1,400	1,200	710	2,310	---	---	---	---	---	---	---	---
MW-10	01/06/09	451.43	10.11	441.32	0.00	29,000	120	<100	4,800	1,400	1,800	5,100	---	---	<10	<100	<20	<20	<20	---
MW-10 *	07/13/09	451.43	12.31	439.12	0.00	4,800	<100	<100	1,600	260	190	1,000	<0.010	<1.5	---	---	---	---	---	1.02
MW-10	07/29/10	451.43	11.86	439.57	0.00	---	<100	<100	240	9.9	45	89	---	---	---	---	---	---	---	---
MW-10	01/20/11	451.43	8.12	443.31	0.00	---	707 r	394 q	938	16.6	108	115	---	---	<1.00	<20.0	<1.00	<1.00	<1.00	---
SB-3 n	05/10/10	---	---	---	0.00	360	1,600 j	<100	170	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---
SB-4 n	05/10/10	---	---	---	0.00	180	2,400 j	<100	<0.5	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---

Notes:

DTW = Depth to Water in feet

GWE = Groundwater Elevation in feet above mean sea level

TOC = Top of Casing in feet above mean sea level

SPH = Separate Phase Hydrocarbons

MTCA = Model Toxics Control Act

All results in micrograms per liter (µg/L) unless otherwise indicated.

TPHg = Total petroleum hydrocarbons as gasoline analyzed by NWTPH-Gx unless otherwise noted. The higher value is based on the assumption that no benzene is present in the groundwater sample. If any detectable amount of benzene is present in the groundwater sample, then the lower TPHg cleanup level is applicable.

TPHd = Total petroleum hydrocarbons as diesel, analyzed by NWTPH-Dx with silica gel cleanup unless otherwise noted.

SUMMARY OF GROUNDWATER MONITORING DATA
 FORMER JIFFY LUBE FACILITY
 6808 196TH STREET SOUTHWEST,
 LYNNWOOD, WASHINGTON

Sample ID	Date	TOC	DTW	GWE	SPH Thickness	HYDROCARBONS			PRIMARY VOCs					OXYGENATES					LEAD	
						TPHg	TPHd	TPHo	B	T	E	X	EDB	EDC	MTBE	TBA	DIPE	ETBE	TAME	Total
Model Toxics Control Act Method A Cleanup Levels						800/1000	500	500	5	1000	700	1000	0.01	5	20	NE	NE	NE	NE	15
						(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)

TPHo = Total petroleum hydrocarbons as oil, analyzed by NWTPH-Dx with silica gel cleanup unless otherwise noted.

VOCs = Volatile organic compounds

BTEX = Benzene, toluene, ethylbenzene, and xylenes analyzed by EPA Method 8260B unless otherwise noted.

Xylenes = o-xylene + m,p-xylene

MTBE = Methyl tertiary-butyl ether analyzed by EPA Method 8260B

EDB = 1,2-Dibromoethane analyzed by EPA Method 8011

EDC = 1,2-Dichloroethane analyzed by EPA Method 8260B

TBA = Tertiary-butanol analyzed by EPA Method 8260B

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

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

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

Total Lead analyzed by EPA Method 6020 unless otherwise noted.

<x = Not detected at laboratory reporting limit x

NE = Not established

--- = Not analyzed

Concentrations in bold type indicate the analyte was detected above MTCA Method A cleanup levels

a = Due to multiple re-shots required for re-analysis, the aliquot of sample analyzed on the instrument was taken from a VOA vial containing headspace.

b = Sample container contained headspace

c = Results reported in the diesel organics range are primarily due to overlap from a gasoline-range product.

d = Groundwater elevation formula adjusted for the presence of SPH: (TOC - DTW)+ (SPHT*0.80)

e = Hydrocarbon pattern most closely resembles a blend of gasoline and diesel.

f = The primary contamination elutes between C8 and C28, which is in the diesel range.

g = The contamination did not match any standard in our library.

h = The primary contamination elutes between C8 and C14, which is in the mineral spirits range.

i = The primary contamination elutes between C8 and C16, which is in the kerosene range.

j = The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard.

m = The laboratory reporting limit exceeded the MTCA Method A cleanup level.

n = Grab groundwater sample taken from temporary well. Sample ID is abbreviated from GW-241739-051010-HB-[Unique ID].

p = The hydrocarbon pattern most closely resembles a gasoline & diesel product.

q = The hydrocarbon pattern most closely resembles a diesel product.

r = The hydrocarbon pattern most closely resembles a gasoline product.

s = The contamination did not match any standards in the laboratory's library.

t = The hydrocarbon pattern most closely resembles a gasoline & mineral spirits product.

u = There was insufficient contamination present to perform a pattern match.

* = Sample also analyzed for one or more of the following: carcinogenic polycyclic aromatic hydrocarbons (cPAHs) by EPA Method 8270C-SIM, polychlorinated biphenyls (PCBs) by EPA Method 8082, and halogenated volatile organic compounds (HVOCs) by EPA Method 8260B. For those constituents analyzed, no concentrations exceeded the laboratory MDL. Please see applicable laboratory report(s) for more information.

APPENDIX A
FIELD FORMS

WELL GAUGING DATA

Project # 110120-SU Date 1/20/11 Client CRA

Site 6808 196th, LYNNWOOD

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-1	1001	2					9.59	24.80	↓	
MW-2	0943	2					7.11	17.40		
MW-3	1125	2					7.60	17.40		
MW-4	1107	2					8.11	17.35		
MW-5	1050	2					7.22	17.30		
MW-6	0843	2					5.71	19.44		
MW-7	0925	2					5.40	19.52		
MW-8	1033	2					7.73	19.12		
MW-9	0908	2					8.81	19.99		
MW-10	1017	2					8.12	20.13		

SHELL WELL MONITORING DATA SHEET

BTS #: <u>110120-SL1</u>	Site: <u>97605410</u>
Sampler: <u>SL</u>	Date: <u>1/20/11</u>
Well I.D.: <u>MW-1</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): <u>24.80</u>	Depth to Water (DTW): <u>9.59</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: ~~Bailer~~ ~~Disposible Bailer~~ ~~Middleburg~~ ~~Electric Submersible~~ ~~Watterra~~ ~~Peristaltic~~ ~~Extraction Pump~~ ~~Other~~ Sampling Method: ~~Bailer~~ ~~Disposible Bailer~~ ~~Extraction Port~~ ~~Dedicated Tubing~~ Other: _____

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

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

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
<u>1010</u>	<u>50.9</u>	<u>6.58</u>	<u>869</u>	<u>26</u>	<u>—</u>	<u>Odor</u>

Did well dewater? Yes No Gallons actually evacuated: —

Sampling Date: 1/20/11 Sampling Time: 1010 Depth to Water: _____

Sample I.D.: MW-1 Laboratory: Calscience Other TA

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See SOW

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____

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

SHELL WELL MONITORING DATA SHEET

BTS #: <u>110120-SL1</u>	Site: <u>97605410</u>
Sampler: <u>SL</u>	Date: <u>1/20/11</u>
Well I.D.: <u>MW-2</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): <u>17.40</u>	Depth to Water (DTW): <u>7.11</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: ~~Bailer~~
~~Disposable Bailer~~
~~Middleburg~~
~~Electric Submersible~~

Watertra
~~Peristaltic~~
~~Extraction Pump~~
 Other _____

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

Other: _____

_____ (Gals.) X _____ = _____ Gals. 1 Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	Gals. Removed	Observations
<u>0950</u>	<u>49.5</u>	<u>6.35</u>	<u>665</u>	<u>202</u>	—	<u>Odor</u>

Did well dewater? Yes No Gallons actually evacuated: _____

Sampling Date: 1/20/11 Sampling Time: 0950 Depth to Water: 7.11

Sample I.D.: MW-2 Laboratory: Calscience Other TA

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See SOW

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

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

SHELL WELL MONITORING DATA SHEET

BTS #: <u>110120-SL1</u>	Site: <u>97605410</u>
Sampler: <u>SL</u>	Date: <u>1/20/11</u>
Well I.D.: <u>MW-3</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth (TD): <u>17.40</u>	Depth to Water (DTW): <u>7.60</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer Disposable Bailer Middleburg Electric Submersible	Water Peristaltic Extraction Pump Other _____	Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____
---	---	---

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

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

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
<u>1135</u>	<u>47.8</u>	<u>6.51</u>	<u>715</u>	<u>58</u>	<u>—</u>	<u>Sheen, Odor</u>

Did well dewater? Yes No Gallons actually evacuated: _____

Sampling Date: 1/20/11 Sampling Time: 1135 Depth to Water: 7.60

Sample I.D.: MW-3 Laboratory: Calscience Other TA

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See SOW

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

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

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

SHELL WELL MONITORING DATA SHEET

BTS #: <u>110120-SL1</u>	Site: <u>97605410</u>
Sampler: <u>SL</u>	Date: <u>1/20/11</u>
Well I.D.: <u>MW-4</u>	Well Diameter: <u>2</u> 3 4 6 8 _____
Total Well Depth (TD): <u>17.75</u>	Depth to Water (DTW): <u>8.11</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: ~~Bailer~~
~~Disposable Bailer~~
~~Middleburg~~
~~Electric Submersible~~

Water
~~Peristaltic~~
~~Extraction Pump~~
 Other _____

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

Other: _____

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

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

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
<u>1115</u>	<u>48.3</u>	<u>6.29</u>	<u>561</u>	<u>103</u>	—	<u>Sheen, Odsr</u>

Did well dewater? Yes No Gallons actually evacuated: _____

Sampling Date: 1/20/11 Sampling Time: 1115 Depth to Water: 8.11

Sample I.D.: MW-4 Laboratory: Calscience Other TA

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See SOW

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____

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

SHELL WELL MONITORING DATA SHEET

BTS #: <u>110120-SL1</u>	Site: <u>97605410</u>
Sampler: <u>SL</u>	Date: <u>1/20/11</u>
Well I.D.: <u>MW-5</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): <u>17.30</u>	Depth to Water (DTW): <u>7.22</u>
Depth to Free Product: <u>N/A</u>	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer Disposable Bailer Middleburg Electric Submersible	Water Peristaltic Extraction Pump Other: _____	Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____
---	--	--

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

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

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
<u>1100</u>	<u>47.1</u>	<u>6.55</u>	<u>727</u>	<u>86</u>	<u>—</u>	<u>Sheen, Odor</u>

Did well dewater? Yes No Gallons actually evacuated: _____

Sampling Date: 1/20/11 Sampling Time: 1100 Depth to Water: 7.22

Sample I.D.: MW-5 Laboratory: Calscience Other: TA

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See SOW

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

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

SHELL WELL MONITORING DATA SHEET

BTS #: <u>110120-SL1</u>	Site: <u>97605410</u>
Sampler: <u>SL</u>	Date: <u>1/20/11</u>
Well I.D.: <u>MW-6</u>	Well Diameter: <u>(2)</u> 3 4 6 8 <u> </u>
Total Well Depth (TD): <u>19.44</u>	Depth to Water (DTW): <u>5.71</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: ~~Bailer~~
~~Disposable Bailer~~
~~Middleburg~~
~~Electric Submersible~~

~~Water~~
~~Peristaltic~~
~~Extraction Pump~~
Other: _____

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

Other: _____

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

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

Time	Temp (°F)	pH	Cond. (mS or <u>(µS)</u>)	Turbidity (NTUs)	Gals. Removed	Observations
<u>0850</u>	<u>52.9</u>	<u>6.05</u>	<u>509</u>	<u>42</u>	<u>—</u>	<u>clear</u>

Did well dewater? Yes (No) Gallons actually evacuated:

Sampling Date: 1/20/11 Sampling Time: 0850 Depth to Water: 5.71

Sample I.D.: MW-6 Laboratory: Calscience Other (TA)

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See SOW

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

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

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

SHELL WELL MONITORING DATA SHEET

BTS #: <u>110120-SL1</u>	Site: <u>97605410</u>
Sampler: <u>SL</u>	Date: <u>1/20/11</u>
Well I.D.: <u>MW-7</u>	Well Diameter: <u>2</u> 3 4 6 8 <u> </u>
Total Well Depth (TD): <u>19.52</u>	Depth to Water (DTW): <u>5.40</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: ~~Bailer~~
~~Disposable Bailer~~
~~Middleburg~~
~~Electric Submersible~~

~~Water~~
~~Peristaltic~~
~~Extraction Pump~~
 Other _____

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

Other: _____

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

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

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
<u>0935</u>	<u>50.0</u>	<u>6.28</u>	<u>428</u>	<u>139</u>	<u>—</u>	<u>cloudy</u>

Did well dewater? Yes No Gallons actually evacuated:

Sampling Date: 1/20/11 Sampling Time: 0935 Depth to Water: 5.40

Sample I.D.: MW-7 Laboratory: Calscience Other: FA

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See SOW

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

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

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

SHELL WELL MONITORING DATA SHEET

BTS #: <u>110120-SL1</u>	Site: <u>97605410</u>
Sampler: <u>SL</u>	Date: <u>1/20/11</u>
Well I.D.: <u>MW-8</u>	Well Diameter: <u>2</u> 3 4 6 8 _____
Total Well Depth (TD): <u>19.12</u>	Depth to Water (DTW): <u>7.73</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer Disposable Bailer Middleburg Electric Submersible	Wattera Peristaltic Extraction Pump Other _____	Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____
---	--	---

_____ (Gals.) X _____ = _____ Gals. 1 Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² = 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² = 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² = 0.163														

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
<u>1045</u>	<u>49.2</u>	<u>6.65</u>	<u>790</u>	<u>413</u>	—	<u>Odor, Shear</u>

Did well dewater? Yes No Gallons actually evacuated:

Sampling Date: 1/20/11 Sampling Time: 1045 Depth to Water: 7.73

Sample I.D.: MW-8 Laboratory: Calscience Other: TA

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See SOW

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

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

SHELL WELL MONITORING DATA SHEET

BTS #: <u>110120-SL1</u>	Site: <u>97605410</u>
Sampler: <u>SL</u>	Date: <u>1/20/11</u>
Well I.D.: <u>MW-9</u>	Well Diameter: <u>2</u> 3 4 6 8 <u> </u>
Total Well Depth (TD): <u>19.99</u>	Depth to Water (DTW): <u>8.81</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer Disposable Bailer Middleburg Electric Submersible	Water Peristaltic Extraction Pump Other _____	Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____
---	---	--

_____ (Gals.) X _____ = _____ Gals. 1 Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
<u>0915</u>	<u>51.8</u>	<u>6.09</u>	<u>284</u>	<u>13</u>	<u>—</u>	<u>clear</u>

Did well dewater? Yes No Gallons actually evacuated:

Sampling Date: 1/20/11 Sampling Time: 0915 Depth to Water: 8.81

Sample I.D.: MW-9 Laboratory: Calscience Other TA

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See SOW

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

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

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

SHELL WELL MONITORING DATA SHEET

BTS #: <u>110120-SL1</u>	Site: <u>97605410</u>
Sampler: <u>SL</u>	Date: <u>1/20/11</u>
Well I.D.: <u>MW-10</u>	Well Diameter: <u>2</u> 3 4 6 8 _____
Total Well Depth (TD): <u>20.13</u>	Depth to Water (DTW): <u>8.12</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer Disposable Bailer Middleburg Electric Submersible	Water Peristaltic Extraction Pump Other _____	Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____
---	---	--

_____ (Gals.) X _____ = _____ Gals. 1 Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F)	pH	Cond. (mS or <u>μS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
<u>1025</u>	<u>51.4</u>	<u>6.43</u>	<u>814</u>	<u>31</u>	—	<u>clear</u>

Did well dewater? Yes **No** Gallons actually evacuated: _____

Sampling Date: 1/20/11 Sampling Time: 1025 Depth to Water: 8.12

Sample I.D.: MW-10 Laboratory: Calscience Other: TA

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See SOW

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____

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

LAB (LOCATION)

- CALSCIENCE (_____)
- SPL Houston (_____)
- KENCO (_____)
- TEST AMERICA (_____)
- OTHER (_____)



Shell Oil Products Chain Of Custody Record

Please Check Appropriate Box:

<input type="checkbox"/> ENV. SERVICES	<input type="checkbox"/> MOTIVA RETAIL	<input type="checkbox"/> SHELL RETAIL
<input type="checkbox"/> MOTIVA SD&CM	<input checked="" type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES
<input type="checkbox"/> SHELL PIPELINE	<input type="checkbox"/> OTHER _____	

Print Bill To Contact Name: **Christina McClelland - 241739 - 2011 -**

INCIDENT # (ENV SERVICES): **9 7 6 0 5 4 1 0**

PO # **4 0 4 0 3 4 9 7 3** SAP # **1 7 1 1 5 2**

DATE: **1/20/11** PAGE: **1** of **1**

SAMPLING COMPANY: **Blaine Tech Services**

ADDRESS: **20735 Belshaw Ave., Carson, CA 90746**

CONTACT: **Lorin King**

TELEPHONE: **310-885-4455 x 108** FAX: **310-637-5802** EMAIL: **lking@blainetech.com**

SITE ADDRESS: Street and City **6808 196th Street SW, Lynnwood** State **WA**

PHONE NO: **425-583-6500** CONSULTANT PROJECT NO: **110120-SL1**

SAMPLER NAME (S) (Print): **SLane**

TURNAROUND TIME (CALENDAR DAYS):

STANDARD (14 DAY) 5 DAYS 3 DAYS 2 DAYS 24 HOURS RESULTS NEEDED ON WEEKEND

LA - RWQCB REPORT FORMAT UST AGENCY:

SPECIAL INSTRUCTIONS OR NOTES:

1) Please upload the "CRA EQUIS 4-file EDD" to the CRA Website (<http://cralabupload.craworld.com/equis/default.aspx>) and/or send it to the Shell-US-LabDataManagement@CRAworld.com email folder. 2) Please indicate that you have uploaded the EDD by including "EDD Uploaded to CRA website" in the body of the email used to deliver the final PDF report to the Shell-US-LabDataManagement@CRAworld.com email folder.

Email Invoice to Shell.Lab.Billing@craworld.com
Copy final report to Shell.Lab.Billing@craworld.com, Shell.results@craworld.com, and Shell-US-LabDataManagement@CRAworld.com

REQUESTED ANALYSIS

NWTPH-GX	NWTPH-Dx w/Silica Gel Cleanup	BTEx (8260B)	5 Oxygenates, MTBE, TBA, DIPE, TAME, ETBE (8260B)	EDC (8260B)	EDC (8011)	Total Lead (6020)	PCBs (8082)	PAHs (8070 SIM)	VOCs Full list (8260B)	Peat (8080)	NWTPH-VPH	NWTPH-EPH	n-Hexane (9071B)	MTBE (8260B)	TEMPERATURE ON RECEIPT °C
----------	-------------------------------	--------------	---	-------------	------------	-------------------	-------------	-----------------	------------------------	-------------	-----------	-----------	------------------	--------------	---------------------------

See Laboratory PM for WA Dept. of Ecology MTCA Method A cleanup levels for minimum detection limits

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	REQUESTED ANALYSIS													Container PID Readings or Laboratory Notes			
		DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER		NWTPH-GX	NWTPH-Dx w/Silica Gel Cleanup	BTEx (8260B)	5 Oxygenates, MTBE, TBA, DIPE, TAME, ETBE (8260B)	EDC (8260B)	EDC (8011)	Total Lead (6020)	PCBs (8082)	PAHs (8070 SIM)	VOCs Full list (8260B)	Peat (8080)	NWTPH-VPH	NWTPH-EPH		n-Hexane (9071B)	MTBE (8260B)	
	MW-1	1/20/11	1010	W	X					8	X	X	X														
	MW-2		0950	W	X					8	X	X	X														
	MW-3		1135	W	X					8	X	X	X														
	MW-4		1115	W	X					8	X	X	X														
	MW-5		1100	W	X					8	X	X	X														
	MW-6		0850	W	X					8	X	X	X														
	MW-7		0935	W	X					8	X	X	X														
	MW-8		1045	W	X					8	X	X	X														
	MW-9		0915	W	X					8	X	X	X														
	MW-10	✓	1025	W	X					8	X	X	X														

Released by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>Shipped by FedEx</i>	Date: 1/20/11	Time: 1700
Released by: (Signature)	Received by: (Signature)	Date:	Time:
Released by: (Signature)	Received by: (Signature)	Date:	Time:

* NWTPH-Dx includes TPH-D + TPH-O

WELLHEAD INSPECTION FORM

Client: CRA Site: Shell 97605410 Date: 1/20/11
 Job #: 110170-GL1 Technician: SL Page: 1 of 1

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

Notes: _____

Job Clearance Form															
CONTRACTOR INSTRUCTIONS PRIOR TO START OF WORK: 1. Review form, check appropriate boxes, read and sign at the bottom of this form. 2. Inform dealer, manager or site representative of the job to be performed and potential safety concerns, and obtain signature.															
Station #	Station Address: 6808 196th, Lynnwood				Work Order Number: 110120-541	Date: 1/20/11									
Contractor Company Name: BTS	Contract for person to change (if not present)	Name of Worker(s): Slane	Number of Workers: 1	JSA Reference Number: (if required)	Start Time: 0830	End Time: 1200	Leak	Turn Time	Travel Distance:						
Problem/Work Description: Sample 10 wells							Return Call: yes / no								
							Damage Claim: yes / no								
PPE REQUIRED (CHECK AND/OR FILL BLANK SPACE)															
<input checked="" type="checkbox"/> SAFETY VEST	<input checked="" type="checkbox"/> HARD HAT	<input checked="" type="checkbox"/> SHOES & BOOTS	<input type="checkbox"/> HEARING PROTECTION	<input type="checkbox"/> RESPIRATOR											
<input type="checkbox"/> PROTECTIVE CLOTHING	<input checked="" type="checkbox"/> GLOVES	<input checked="" type="checkbox"/> SAFETY GLASSES/GOGGLES	<input type="checkbox"/> WELDING PPE	<input type="checkbox"/> OTHER											
Contractor to complete this section below if circumstances and site or specific to this job may present additional hazards not listed on this form or in the JSA.															
TASKS/STEP			Hazards not covered by JSA			How to reduce or eliminate risk (include PPE to be worn)									
Work documentation requirements: Lower Risk - no JSA required Medium Risk / Higher Risk tasks - JSA required Higher Risk - JSA required & appropriate check list completed (see below)															
Examples of Higher / Medium tasks: <table style="width:100%; font-size: x-small;"> <tr> <td><input type="checkbox"/> Works at heights in all cases on open sites - on closed sites if no JSA present</td> <td><input type="checkbox"/> Work in confined spaces (e.g. tank, interceptor or deep manhole entry)</td> </tr> <tr> <td><input type="checkbox"/> Trenching or excavation related to underground tank / product line</td> <td><input type="checkbox"/> Hot work with risk of product or vapor ignition</td> </tr> <tr> <td><input type="checkbox"/> Heavy lifting</td> <td><input type="checkbox"/> LPG system degassing, installation or maintenance</td> </tr> </table>										<input type="checkbox"/> Works at heights in all cases on open sites - on closed sites if no JSA present	<input type="checkbox"/> Work in confined spaces (e.g. tank, interceptor or deep manhole entry)	<input type="checkbox"/> Trenching or excavation related to underground tank / product line	<input type="checkbox"/> Hot work with risk of product or vapor ignition	<input type="checkbox"/> Heavy lifting	<input type="checkbox"/> LPG system degassing, installation or maintenance
<input type="checkbox"/> Works at heights in all cases on open sites - on closed sites if no JSA present	<input type="checkbox"/> Work in confined spaces (e.g. tank, interceptor or deep manhole entry)														
<input type="checkbox"/> Trenching or excavation related to underground tank / product line	<input type="checkbox"/> Hot work with risk of product or vapor ignition														
<input type="checkbox"/> Heavy lifting	<input type="checkbox"/> LPG system degassing, installation or maintenance														
This form must be completed for each job and updated and re-signed if a firmance change or additional hazards identified.															
SIGN IN		Contractor representative name			Signature			SIGN OUT							
Operating sites: to be signed by the Site Representative		Slane			<i>[Signature]</i>			9/20							
Non-operating sites: to be signed by Contractor Representative only															
GENERAL SAFETY CHECKS		Site representative name			Signature			Site representative name							
<ul style="list-style-type: none"> • Have all site personnel been informed? • Has fuel delivery service been informed? • Is a fuel delivery due? • Have isolation procedures been agreed - lock out/tag out? • Are work areas confined off to protect workers, the staff & public? • Other: 		coffee shop			<i>[Signature]</i>			[Signature]							
PARTS - Ordered, Replaced and/or Disposed Of (include model and serial as appropriate)															

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

APPENDIX B
LABORATORY ANALYTICAL REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Road
Nashville, TN 37204
Tel: 800-765-0980

TestAmerica Job ID: NUA2719

TestAmerica Sample Delivery Group: NUA2719

Client Project/Site: SAP 171152

Client Project Description: 6808 196th Street SW, Lynwood, WA

For:

Conestoga-Rovers & Asso. (Everett)/ Shell
1420 80th Street SW, Suite A
Everett, WA 98203

Attn: Christina McClelland



Authorized for release by:
2/4/2011 5:45 PM

Johnny A. Mitchell
Laboratory Director

johnny.mitchell@testamericainc.com

Designee for

Ryan Fitzwater
Project Manager

Ryan.Fitzwater@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com



Table of Contents

Cover Page	1
Table of Contents	2
Sample Summary	3
Case Narrative	4
Definitions	5
Client Sample Results	6
QC Sample Results	16
QC Association	22
Chronicle	25
Method Summary	28
Certification Summary	29
Chain of Custody	30

Sample Summary

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
Project/Site: SAP 171152

TestAmerica Job ID: NUA2719

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
NUA2719-01	MW-1	Water	01/20/11 10:10	01/22/11 08:30
NUA2719-02	MW-2	Water	01/20/11 09:50	01/22/11 08:30
NUA2719-03	MW-3	Water	01/20/11 11:35	01/22/11 08:30
NUA2719-04	MW-4	Water	01/20/11 11:15	01/22/11 08:30
NUA2719-05	MW-5	Water	01/20/11 11:00	01/22/11 08:30
NUA2719-06	MW-6	Water	01/20/11 08:50	01/22/11 08:30
NUA2719-07	MW-7	Water	01/20/11 09:35	01/22/11 08:30
NUA2719-08	MW-8	Water	01/20/11 10:45	01/22/11 08:30
NUA2719-09	MW-9	Water	01/20/11 09:15	01/22/11 08:30
NUA2719-10	MW-10	Water	01/20/11 10:25	01/22/11 08:30

1

2

3

4

5

6

7

8

9

10

11

12

Case Narrative

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
SDG: NUA2719

Job ID: NUA2719

Laboratory: TestAmerica Nashville

NELAC Certification

NELAC certifications are not held for the following analytes included in this report:

<u>Method</u>	<u>Matrix</u>	<u>Analyte</u>
NWTPH-Dx	Water	Diesel Motor Oil

1

2

3

4

5

6

7

8

9

10

11

12

Qualifier Definition/Glossary

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
SDG: NUA2719

Qualifiers

GCMS Volatiles

Qualifier	Qualifier Description
ZX	Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.

GC Semivolatiles

Qualifier	Qualifier Description
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike.
QP5	There was insufficient contamination present to perform a pattern match.
QP6	The contamination did not match any standards in our library.
QP7	The hydrocarbon pattern most closely resembles a diesel product.
QP7a	The hydrocarbon pattern most closely resembles a gasoline & diesel product.
QP7b	The hydrocarbon pattern most closely resembles a gasoline & mineral spirits product.
QP7c	The hydrocarbon pattern most closely resembles a gasoline product.
RL1	Reporting limit raised due to sample matrix effects.
Z3	The sample required a dilution due to the nature of the sample matrix. Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Glossary

Glossary	Glossary Description
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Analytical Data

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
SDG: NUA2719

Client Sample ID: MW-1

Lab Sample ID: NUA2719-01

Date Collected: 01/20/11 10:10

Matrix: Water

Date Received: 01/22/11 08:30

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tert-Amyl Methyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 02:30	1.00
Ethyl tert-Butyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 02:30	1.00
Diisopropyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 02:30	1.00
Methyl tert-Butyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 02:30	1.00
Tertiary Butyl Alcohol	132		20.0		ug/L		01/25/11 23:21	01/26/11 02:30	1.00

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	45	ZX	63 - 140	01/25/11 23:21	01/26/11 02:30	1.00
Dibromofluoromethane	105		73 - 131	01/25/11 23:21	01/26/11 02:30	1.00
Toluene-d8	92		80 - 120	01/25/11 23:21	01/26/11 02:30	1.00
4-Bromofluorobenzene	103		79 - 125	01/25/11 23:21	01/26/11 02:30	1.00

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	1700		10.0		ug/L		01/25/11 23:21	01/26/11 10:18	10.0

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	98		63 - 140	01/25/11 23:21	01/26/11 10:18	10.0
Dibromofluoromethane	96		73 - 131	01/25/11 23:21	01/26/11 10:18	10.0
Toluene-d8	102		80 - 120	01/25/11 23:21	01/26/11 10:18	10.0
4-Bromofluorobenzene	105		79 - 125	01/25/11 23:21	01/26/11 10:18	10.0

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	13400		100		ug/L		01/28/11 10:08	01/28/11 19:38	100
Toluene	3950		100		ug/L		01/28/11 10:08	01/28/11 19:38	100
Xylenes, total	7240		300		ug/L		01/28/11 10:08	01/28/11 19:38	100

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	113		63 - 140	01/28/11 10:08	01/28/11 19:38	100
Dibromofluoromethane	101		73 - 131	01/28/11 10:08	01/28/11 19:38	100
Toluene-d8	90		80 - 120	01/28/11 10:08	01/28/11 19:38	100
4-Bromofluorobenzene	103		79 - 125	01/28/11 10:08	01/28/11 19:38	100

Method: NWTPH-Dx - Extractable Petroleum Hydrocarbons with Silica Gel Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil	725	QP7	95.2		ug/L		01/31/11 06:00	01/31/11 18:49	1.00

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	56		50 - 150	01/31/11 06:00	01/31/11 18:49	1.00

Method: NWTPH-Dx - Extractable Petroleum Hydrocarbons with Silica Gel Treatment - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel	2550	QP7a	190		ug/L		01/31/11 06:00	02/01/11 09:57	2.00

Analytical Data

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Client Sample ID: MW-2

Lab Sample ID: NUA2719-02

Date Collected: 01/20/11 09:50

Matrix: Water

Date Received: 01/22/11 08:30

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tert-Amyl Methyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 16:28	1.00
Benzene	25.1		1.00		ug/L		01/28/11 10:08	01/28/11 16:28	1.00
Ethylbenzene	54.4		1.00		ug/L		01/28/11 10:08	01/28/11 16:28	1.00
Ethyl tert-Butyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 16:28	1.00
Toluene	ND		1.00		ug/L		01/28/11 10:08	01/28/11 16:28	1.00
Diisopropyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 16:28	1.00
Methyl tert-Butyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 16:28	1.00
Tertiary Butyl Alcohol	ND		20.0		ug/L		01/28/11 10:08	01/28/11 16:28	1.00
Xylenes, total	5.42		3.00		ug/L		01/28/11 10:08	01/28/11 16:28	1.00
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	110		63 - 140				01/28/11 10:08	01/28/11 16:28	1.00
Dibromofluoromethane	104		73 - 131				01/28/11 10:08	01/28/11 16:28	1.00
Toluene-d8	91		80 - 120				01/28/11 10:08	01/28/11 16:28	1.00
4-Bromofluorobenzene	104		79 - 125				01/28/11 10:08	01/28/11 16:28	1.00

Method: NWTPH-Dx - Extractable Petroleum Hydrocarbons with Silica Gel Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel	689	QP7c	95.2		ug/L		01/31/11 06:00	01/31/11 19:08	1.00
Motor Oil	402	QP7	95.2		ug/L		01/31/11 06:00	01/31/11 19:08	1.00
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	74		50 - 150				01/31/11 06:00	01/31/11 19:08	1.00



Analytical Data

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Client Sample ID: MW-3

Lab Sample ID: NUA2719-03

Date Collected: 01/20/11 11:35

Matrix: Water

Date Received: 01/22/11 08:30

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tert-Amyl Methyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 03:24	1.00
Ethyl tert-Butyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 03:24	1.00
Diisopropyl Ether	1.24		1.00		ug/L		01/25/11 23:21	01/26/11 03:24	1.00
Methyl tert-Butyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 03:24	1.00
Tertiary Butyl Alcohol	101		20.0		ug/L		01/25/11 23:21	01/26/11 03:24	1.00

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	158	ZX	63 - 140	01/25/11 23:21	01/26/11 03:24	1.00
Dibromofluoromethane	140	ZX	73 - 131	01/25/11 23:21	01/26/11 03:24	1.00
Toluene-d8	130	ZX	80 - 120	01/25/11 23:21	01/26/11 03:24	1.00
4-Bromofluorobenzene	147	ZX	79 - 125	01/25/11 23:21	01/26/11 03:24	1.00

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	23200		1000		ug/L		01/31/11 09:39	01/31/11 12:49	1000

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	112		63 - 140	01/31/11 09:39	01/31/11 12:49	1000
Dibromofluoromethane	104		73 - 131	01/31/11 09:39	01/31/11 12:49	1000
Toluene-d8	87		80 - 120	01/31/11 09:39	01/31/11 12:49	1000
4-Bromofluorobenzene	104		79 - 125	01/31/11 09:39	01/31/11 12:49	1000

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	12100		100		ug/L		01/31/11 09:39	01/31/11 14:10	100
Ethylbenzene	3020		100		ug/L		01/31/11 09:39	01/31/11 14:10	100
Xylenes, total	19700		300		ug/L		01/31/11 09:39	01/31/11 14:10	100

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	114		63 - 140	01/31/11 09:39	01/31/11 14:10	100
Dibromofluoromethane	103		73 - 131	01/31/11 09:39	01/31/11 14:10	100
Toluene-d8	88		80 - 120	01/31/11 09:39	01/31/11 14:10	100
4-Bromofluorobenzene	103		79 - 125	01/31/11 09:39	01/31/11 14:10	100

Method: NWTPH-Dx - Extractable Petroleum Hydrocarbons with Silica Gel Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil	7690	QP6	476		ug/L		01/31/11 06:00	01/31/11 19:27	5.00

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	60		50 - 150	01/31/11 06:00	01/31/11 19:27	5.00

Method: NWTPH-Dx - Extractable Petroleum Hydrocarbons with Silica Gel Treatment - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel	87800	QP7c	9520		ug/L		01/31/11 06:00	01/31/11 20:06	100

Analytical Data

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Client Sample ID: MW-4

Lab Sample ID: NUA2719-04

Date Collected: 01/20/11 11:15

Matrix: Water

Date Received: 01/22/11 08:30

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tert-Amyl Methyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 03:51	1.00
Ethyl tert-Butyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 03:51	1.00
Diisopropyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 03:51	1.00
Methyl tert-Butyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 03:51	1.00
Tertiary Butyl Alcohol	61.8		20.0		ug/L		01/25/11 23:21	01/26/11 03:51	1.00

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	48	ZX	63 - 140	01/25/11 23:21	01/26/11 03:51	1.00
Dibromofluoromethane	108		73 - 131	01/25/11 23:21	01/26/11 03:51	1.00
Toluene-d8	69	ZX	80 - 120	01/25/11 23:21	01/26/11 03:51	1.00
4-Bromofluorobenzene	129	ZX	79 - 125	01/25/11 23:21	01/26/11 03:51	1.00

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	12800		500		ug/L		01/28/11 10:08	01/28/11 20:05	500
Toluene	28700		500		ug/L		01/28/11 10:08	01/28/11 20:05	500

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	113		63 - 140	01/28/11 10:08	01/28/11 20:05	500
Dibromofluoromethane	102		73 - 131	01/28/11 10:08	01/28/11 20:05	500
Toluene-d8	91		80 - 120	01/28/11 10:08	01/28/11 20:05	500
4-Bromofluorobenzene	103		79 - 125	01/28/11 10:08	01/28/11 20:05	500

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	3180		50.0		ug/L		01/28/11 10:08	01/28/11 20:32	50.0
Xylenes, total	21200		150		ug/L		01/28/11 10:08	01/28/11 20:32	50.0

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	112		63 - 140	01/28/11 10:08	01/28/11 20:32	50.0
Dibromofluoromethane	103		73 - 131	01/28/11 10:08	01/28/11 20:32	50.0
Toluene-d8	90		80 - 120	01/28/11 10:08	01/28/11 20:32	50.0
4-Bromofluorobenzene	103		79 - 125	01/28/11 10:08	01/28/11 20:32	50.0

Method: NWTPH-Dx - Extractable Petroleum Hydrocarbons with Silica Gel Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil	ND	RL1	9520		ug/L		01/31/11 06:00	01/31/11 20:25	100

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	299	Z3	50 - 150	01/31/11 06:00	01/31/11 20:25	100

Method: NWTPH-Dx - Extractable Petroleum Hydrocarbons with Silica Gel Treatment - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel	313000	QP7b	19000		ug/L		01/31/11 06:00	02/01/11 10:35	200

Analytical Data

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Client Sample ID: MW-5

Lab Sample ID: NUA2719-05

Date Collected: 01/20/11 11:00

Matrix: Water

Date Received: 01/22/11 08:30

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tert-Amyl Methyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 04:18	1.00
Ethyl tert-Butyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 04:18	1.00
Diisopropyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 04:18	1.00
Methyl tert-Butyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 04:18	1.00
Tertiary Butyl Alcohol	45.4		20.0		ug/L		01/25/11 23:21	01/26/11 04:18	1.00

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	187	ZX	63 - 140	01/25/11 23:21	01/26/11 04:18	1.00
Dibromofluoromethane	161	ZX	73 - 131	01/25/11 23:21	01/26/11 04:18	1.00
Toluene-d8	156	ZX	80 - 120	01/25/11 23:21	01/26/11 04:18	1.00
4-Bromofluorobenzene	162	ZX	79 - 125	01/25/11 23:21	01/26/11 04:18	1.00

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	3710		100		ug/L		01/31/11 09:39	01/31/11 14:37	100
Ethylbenzene	2690		100		ug/L		01/31/11 09:39	01/31/11 14:37	100
Toluene	16200		100		ug/L		01/31/11 09:39	01/31/11 14:37	100
Xylenes, total	15800		300		ug/L		01/31/11 09:39	01/31/11 14:37	100

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	113		63 - 140	01/31/11 09:39	01/31/11 14:37	100
Dibromofluoromethane	104		73 - 131	01/31/11 09:39	01/31/11 14:37	100
Toluene-d8	87		80 - 120	01/31/11 09:39	01/31/11 14:37	100
4-Bromofluorobenzene	104		79 - 125	01/31/11 09:39	01/31/11 14:37	100

Method: NWTPH-Dx - Extractable Petroleum Hydrocarbons with Silica Gel Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil	10900	QP6, RL1	9520		ug/L		01/31/11 06:00	01/31/11 20:44	100

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	196	Z3	50 - 150	01/31/11 06:00	01/31/11 20:44	100

Method: NWTPH-Dx - Extractable Petroleum Hydrocarbons with Silica Gel Treatment - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel	327000	QP7b	19000		ug/L		01/31/11 06:00	02/01/11 10:54	200

Analytical Data

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Client Sample ID: MW-6
Date Collected: 01/20/11 08:50
Date Received: 01/22/11 08:30

Lab Sample ID: NUA2719-06
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tert-Amyl Methyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 16:56	1.00
Benzene	ND		1.00		ug/L		01/28/11 10:08	01/28/11 16:56	1.00
Ethylbenzene	ND		1.00		ug/L		01/28/11 10:08	01/28/11 16:56	1.00
Ethyl tert-Butyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 16:56	1.00
Toluene	ND		1.00		ug/L		01/28/11 10:08	01/28/11 16:56	1.00
Diisopropyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 16:56	1.00
Methyl tert-Butyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 16:56	1.00
Tertiary Butyl Alcohol	ND		20.0		ug/L		01/28/11 10:08	01/28/11 16:56	1.00
Xylenes, total	ND		3.00		ug/L		01/28/11 10:08	01/28/11 16:56	1.00
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	114		63 - 140				01/28/11 10:08	01/28/11 16:56	1.00
Dibromofluoromethane	105		73 - 131				01/28/11 10:08	01/28/11 16:56	1.00
Toluene-d8	89		80 - 120				01/28/11 10:08	01/28/11 16:56	1.00
4-Bromofluorobenzene	104		79 - 125				01/28/11 10:08	01/28/11 16:56	1.00

Method: NWTPH-Dx - Extractable Petroleum Hydrocarbons with Silica Gel Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel	201	QP6	95.2		ug/L		01/31/11 06:00	01/31/11 21:03	1.00
Motor Oil	472	QP6	95.2		ug/L		01/31/11 06:00	01/31/11 21:03	1.00
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	81		50 - 150				01/31/11 06:00	01/31/11 21:03	1.00

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Analytical Data

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Client Sample ID: MW-7
Date Collected: 01/20/11 09:35
Date Received: 01/22/11 08:30

Lab Sample ID: NUA2719-07
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tert-Amyl Methyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 17:22	1.00
Benzene	ND		1.00		ug/L		01/28/11 10:08	01/28/11 17:22	1.00
Ethylbenzene	ND		1.00		ug/L		01/28/11 10:08	01/28/11 17:22	1.00
Ethyl tert-Butyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 17:22	1.00
Toluene	ND		1.00		ug/L		01/28/11 10:08	01/28/11 17:22	1.00
Diisopropyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 17:22	1.00
Methyl tert-Butyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 17:22	1.00
Tertiary Butyl Alcohol	ND		20.0		ug/L		01/28/11 10:08	01/28/11 17:22	1.00
Xylenes, total	ND		3.00		ug/L		01/28/11 10:08	01/28/11 17:22	1.00
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	113		63 - 140				01/28/11 10:08	01/28/11 17:22	1.00
Dibromofluoromethane	104		73 - 131				01/28/11 10:08	01/28/11 17:22	1.00
Toluene-d8	90		80 - 120				01/28/11 10:08	01/28/11 17:22	1.00
4-Bromofluorobenzene	103		79 - 125				01/28/11 10:08	01/28/11 17:22	1.00

Method: NWTPH-Dx - Extractable Petroleum Hydrocarbons with Silica Gel Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel	119	QP5	95.2		ug/L		01/31/11 06:00	01/31/11 21:22	1.00
Motor Oil	174	QP5	95.2		ug/L		01/31/11 06:00	01/31/11 21:22	1.00
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	79		50 - 150				01/31/11 06:00	01/31/11 21:22	1.00

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Analytical Data

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Client Sample ID: MW-8

Lab Sample ID: NUA2719-08

Date Collected: 01/20/11 10:45

Matrix: Water

Date Received: 01/22/11 08:30

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tert-Amyl Methyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 05:39	1.00
Ethyl tert-Butyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 05:39	1.00
Diisopropyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 05:39	1.00
Methyl tert-Butyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 05:39	1.00
Tertiary Butyl Alcohol	128		20.0		ug/L		01/25/11 23:21	01/26/11 05:39	1.00

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	150	ZX	63 - 140	01/25/11 23:21	01/26/11 05:39	1.00
Dibromofluoromethane	135	ZX	73 - 131	01/25/11 23:21	01/26/11 05:39	1.00
Toluene-d8	101		80 - 120	01/25/11 23:21	01/26/11 05:39	1.00
4-Bromofluorobenzene	153	ZX	79 - 125	01/25/11 23:21	01/26/11 05:39	1.00

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	31500		1000		ug/L		01/31/11 09:39	01/31/11 13:43	1000

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	112		63 - 140	01/31/11 09:39	01/31/11 13:43	1000
Dibromofluoromethane	103		73 - 131	01/31/11 09:39	01/31/11 13:43	1000
Toluene-d8	88		80 - 120	01/31/11 09:39	01/31/11 13:43	1000
4-Bromofluorobenzene	102		79 - 125	01/31/11 09:39	01/31/11 13:43	1000

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	13800		100		ug/L		01/31/11 09:39	01/31/11 15:04	100
Ethylbenzene	3290		100		ug/L		01/31/11 09:39	01/31/11 15:04	100
Xylenes, total	21900		300		ug/L		01/31/11 09:39	01/31/11 15:04	100

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	111		63 - 140	01/31/11 09:39	01/31/11 15:04	100
Dibromofluoromethane	103		73 - 131	01/31/11 09:39	01/31/11 15:04	100
Toluene-d8	88		80 - 120	01/31/11 09:39	01/31/11 15:04	100
4-Bromofluorobenzene	104		79 - 125	01/31/11 09:39	01/31/11 15:04	100

Method: NWTPH-Dx - Extractable Petroleum Hydrocarbons with Silica Gel Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil	1550	QP6	95.2		ug/L		01/31/11 06:00	01/31/11 21:40	1.00

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	65		50 - 150	01/31/11 06:00	01/31/11 21:40	1.00

Method: NWTPH-Dx - Extractable Petroleum Hydrocarbons with Silica Gel Treatment - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel	6570	QP7c	476		ug/L		01/31/11 06:00	02/01/11 10:16	5.00

Analytical Data

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Client Sample ID: MW-9
Date Collected: 01/20/11 09:15
Date Received: 01/22/11 08:30

Lab Sample ID: NUA2719-09
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tert-Amyl Methyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 17:50	1.00
Benzene	ND		1.00		ug/L		01/28/11 10:08	01/28/11 17:50	1.00
Ethylbenzene	ND		1.00		ug/L		01/28/11 10:08	01/28/11 17:50	1.00
Ethyl tert-Butyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 17:50	1.00
Toluene	ND		1.00		ug/L		01/28/11 10:08	01/28/11 17:50	1.00
Diisopropyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 17:50	1.00
Methyl tert-Butyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 17:50	1.00
Tertiary Butyl Alcohol	ND		20.0		ug/L		01/28/11 10:08	01/28/11 17:50	1.00
Xylenes, total	ND		3.00		ug/L		01/28/11 10:08	01/28/11 17:50	1.00

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	114		63 - 140	01/28/11 10:08	01/28/11 17:50	1.00
Dibromofluoromethane	103		73 - 131	01/28/11 10:08	01/28/11 17:50	1.00
Toluene-d8	90		80 - 120	01/28/11 10:08	01/28/11 17:50	1.00
4-Bromofluorobenzene	103		79 - 125	01/28/11 10:08	01/28/11 17:50	1.00

Method: NWTPH-Dx - Extractable Petroleum Hydrocarbons with Silica Gel Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel	141	QP6	95.2		ug/L		01/31/11 06:00	01/31/11 21:59	1.00
Motor Oil	463	QP6	95.2		ug/L		01/31/11 06:00	01/31/11 21:59	1.00

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	87		50 - 150	01/31/11 06:00	01/31/11 21:59	1.00

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Analytical Data

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Client Sample ID: MW-10

Lab Sample ID: NUA2719-10

Date Collected: 01/20/11 10:25

Matrix: Water

Date Received: 01/22/11 08:30

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tert-Amyl Methyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 18:44	1.00
Ethylbenzene	108		1.00		ug/L		01/28/11 10:08	01/28/11 18:44	1.00
Ethyl tert-Butyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 18:44	1.00
Toluene	16.6		1.00		ug/L		01/28/11 10:08	01/28/11 18:44	1.00
Diisopropyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 18:44	1.00
Methyl tert-Butyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 18:44	1.00
Tertiary Butyl Alcohol	ND		20.0		ug/L		01/28/11 10:08	01/28/11 18:44	1.00
Xylenes, total	115		3.00		ug/L		01/28/11 10:08	01/28/11 18:44	1.00

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	116		63 - 140	01/28/11 10:08	01/28/11 18:44	1.00
Dibromofluoromethane	103		73 - 131	01/28/11 10:08	01/28/11 18:44	1.00
Toluene-d8	89		80 - 120	01/28/11 10:08	01/28/11 18:44	1.00
4-Bromofluorobenzene	107		79 - 125	01/28/11 10:08	01/28/11 18:44	1.00

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	938		10.0		ug/L		01/28/11 10:08	01/28/11 18:17	10.0

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	112		63 - 140	01/28/11 10:08	01/28/11 18:17	10.0
Dibromofluoromethane	103		73 - 131	01/28/11 10:08	01/28/11 18:17	10.0
Toluene-d8	90		80 - 120	01/28/11 10:08	01/28/11 18:17	10.0
4-Bromofluorobenzene	105		79 - 125	01/28/11 10:08	01/28/11 18:17	10.0

Method: NWTPH-Dx - Extractable Petroleum Hydrocarbons with Silica Gel Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel	707	QP7c	95.2		ug/L		01/31/11 06:00	01/31/11 22:18	1.00
Motor Oil	394	QP7	95.2		ug/L		01/31/11 06:00	01/31/11 22:18	1.00

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	80		50 - 150	01/31/11 06:00	01/31/11 22:18	1.00

Quality Control Data

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B

Lab Sample ID: 11A5705-BLK1

Matrix: Water

Analysis Batch: U001504

Client Sample ID: 11A5705-BLK1

Prep Type: total

Prep Batch: 11A5705_P

Analyte	Blank	Blank	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Tert-Amyl Methyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 13:46	1.00
Benzene	ND		1.00		ug/L		01/28/11 10:08	01/28/11 13:46	1.00
Ethylbenzene	ND		1.00		ug/L		01/28/11 10:08	01/28/11 13:46	1.00
Ethyl tert-Butyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 13:46	1.00
Toluene	ND		1.00		ug/L		01/28/11 10:08	01/28/11 13:46	1.00
Diisopropyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 13:46	1.00
Methyl tert-Butyl Ether	ND		1.00		ug/L		01/28/11 10:08	01/28/11 13:46	1.00
Tertiary Butyl Alcohol	ND		20.0		ug/L		01/28/11 10:08	01/28/11 13:46	1.00
Xylenes, total	ND		3.00		ug/L		01/28/11 10:08	01/28/11 13:46	1.00

Surrogate	Blank	Blank	Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
1,2-Dichloroethane-d4	113		63 - 140	01/28/11 10:08	01/28/11 13:46	1.00
Dibromofluoromethane	103		73 - 131	01/28/11 10:08	01/28/11 13:46	1.00
Toluene-d8	90		80 - 120	01/28/11 10:08	01/28/11 13:46	1.00
4-Bromofluorobenzene	103		79 - 125	01/28/11 10:08	01/28/11 13:46	1.00

Lab Sample ID: 11A5705-BS1

Matrix: Water

Analysis Batch: U001504

Client Sample ID: 11A5705-BS1

Prep Type: total

Prep Batch: 11A5705_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	Limits
Tert-Amyl Methyl Ether	50.0	44.8		ug/L		90	70 - 133
Benzene	50.0	47.8		ug/L		96	80 - 121
Ethylbenzene	50.0	50.7		ug/L		101	78 - 133
Ethyl tert-Butyl Ether	50.0	46.3		ug/L		93	68 - 138
Toluene	50.0	43.0		ug/L		86	78 - 125
Diisopropyl Ether	50.0	48.5		ug/L		97	63 - 136
Methyl tert-Butyl Ether	50.0	48.6		ug/L		97	76 - 120
Tertiary Butyl Alcohol	500	638		ug/L		128	60 - 140
Xylenes, total	150	151		ug/L		101	78 - 134

Surrogate	LCS	LCS	Limits
	% Recovery	Qualifier	
1,2-Dichloroethane-d4	109		63 - 140
Dibromofluoromethane	105		73 - 131
Toluene-d8	90		80 - 120
4-Bromofluorobenzene	103		79 - 125

Lab Sample ID: 11A5705-MS1

Matrix: Water

Analysis Batch: U001504

Client Sample ID: MW-10

Prep Type: total

Prep Batch: 11A5705_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	% Rec	Limits
Tert-Amyl Methyl Ether	ND		500	431		ug/L		86	69 - 139
Benzene	938		500	1380		ug/L		88	65 - 151
Ethylbenzene	127		500	638		ug/L		102	68 - 157
Ethyl tert-Butyl Ether	ND		500	447		ug/L		89	68 - 139
Toluene	19.9		500	444		ug/L		85	61 - 153
Diisopropyl Ether	ND		500	475		ug/L		95	59 - 145
Methyl tert-Butyl Ether	ND		500	442		ug/L		88	56 - 152

TestAmerica Nashville

Quality Control Data

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B (Continued)

Lab Sample ID: 11A5705-MS1

Matrix: Water

Analysis Batch: U001504

Client Sample ID: MW-10

Prep Type: total

Prep Batch: 11A5705_P

Analyte	Sample	Sample	Spike	Matrix Spike	Matrix Spike	Unit	D	% Rec	% Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Tertiary Butyl Alcohol	ND		5000	3540		ug/L		71		14 - 200
Xylenes, total	134		1500	1650		ug/L		101		68 - 158
Surrogate	% Recovery	Qualifier	Matrix Spike							
1,2-Dichloroethane-d4	110		63 - 140							
Dibromofluoromethane	103		73 - 131							
Toluene-d8	89		80 - 120							
4-Bromofluorobenzene	105		79 - 125							

Lab Sample ID: 11A5705-MSD1

Matrix: Water

Analysis Batch: U001504

Client Sample ID: MW-10

Prep Type: total

Prep Batch: 11A5705_P

Analyte	Sample	Sample	Spike	Matrix Spike Dup	Matrix Spike Dup	Unit	D	% Rec	% Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Tert-Amyl Methyl Ether	ND		500	431		ug/L		86		69 - 139	0.05	16
Benzene	938		500	1360		ug/L		85		65 - 151	1	12
Ethylbenzene	127		500	641		ug/L		103		68 - 157	0.4	12
Ethyl tert-Butyl Ether	ND		500	447		ug/L		89		68 - 139	0.02	16
Toluene	19.9		500	443		ug/L		85		61 - 153	0.2	35
Diisopropyl Ether	ND		500	475		ug/L		95		59 - 145	0.1	32
Methyl tert-Butyl Ether	ND		500	443		ug/L		89		56 - 152	0.3	32
Tertiary Butyl Alcohol	ND		5000	3610		ug/L		72		14 - 200	2	30
Xylenes, total	134		1500	1650		ug/L		101		68 - 158	0.05	18
Surrogate	% Recovery	Qualifier	Matrix Spike Dup									
1,2-Dichloroethane-d4	108		63 - 140									
Dibromofluoromethane	102		73 - 131									
Toluene-d8	90		80 - 120									
4-Bromofluorobenzene	103		79 - 125									

Lab Sample ID: 11B0154-BLK1

Matrix: Water

Analysis Batch: U001568

Client Sample ID: 11B0154-BLK1

Prep Type: total

Prep Batch: 11B0154_P

Analyte	Blank	Blank	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Tert-Amyl Methyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 02:03	1.00
Benzene	ND		1.00		ug/L		01/25/11 23:21	01/26/11 02:03	1.00
Ethylbenzene	ND		1.00		ug/L		01/25/11 23:21	01/26/11 02:03	1.00
Ethyl tert-Butyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 02:03	1.00
Toluene	ND		1.00		ug/L		01/25/11 23:21	01/26/11 02:03	1.00
Diisopropyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 02:03	1.00
Methyl tert-Butyl Ether	ND		1.00		ug/L		01/25/11 23:21	01/26/11 02:03	1.00
Tertiary Butyl Alcohol	ND		20.0		ug/L		01/25/11 23:21	01/26/11 02:03	1.00
Xylenes, total	ND		3.00		ug/L		01/25/11 23:21	01/26/11 02:03	1.00
Surrogate	% Recovery	Qualifier	Blank				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	105		63 - 140				01/25/11 23:21	01/26/11 02:03	1.00
Dibromofluoromethane	102		73 - 131				01/25/11 23:21	01/26/11 02:03	1.00
Toluene-d8	91		80 - 120				01/25/11 23:21	01/26/11 02:03	1.00

TestAmerica Nashville

Quality Control Data

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B (Continued)

Lab Sample ID: 11B0154-BLK1
Matrix: Water
Analysis Batch: U001568

Client Sample ID: 11B0154-BLK1
Prep Type: total
Prep Batch: 11B0154_P

Surrogate	Blank		Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
4-Bromofluorobenzene	101		79 - 125	01/25/11 23:21	01/26/11 02:03	1.00

Lab Sample ID: 11B0154-BS1
Matrix: Water
Analysis Batch: U001568

Client Sample ID: 11B0154-BS1
Prep Type: total
Prep Batch: 11B0154_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec.	
							Limits	RPD
Tert-Amyl Methyl Ether	50.0	47.6		ug/L		95	70 - 133	
Benzene	50.0	51.4		ug/L		103	80 - 121	
Ethylbenzene	50.0	53.4		ug/L		107	78 - 133	
Ethyl tert-Butyl Ether	50.0	49.8		ug/L		100	68 - 138	
Toluene	50.0	53.0		ug/L		106	78 - 125	
Diisopropyl Ether	50.0	51.4		ug/L		103	63 - 136	
Methyl tert-Butyl Ether	50.0	50.7		ug/L		101	76 - 120	
Tertiary Butyl Alcohol	500	643		ug/L		129	60 - 140	
Xylenes, total	150	158		ug/L		105	78 - 134	

Surrogate	LCS		Limits
	% Recovery	Qualifier	
1,2-Dichloroethane-d4	99		63 - 140
Dibromofluoromethane	97		73 - 131
Toluene-d8	100		80 - 120
4-Bromofluorobenzene	100		79 - 125

Lab Sample ID: 11B0154-BSD1
Matrix: Water
Analysis Batch: U001568

Client Sample ID: 11B0154-BSD1
Prep Type: total
Prep Batch: 11B0154_P

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	% Rec	% Rec.		RPD
							Limits	RPD	
Tert-Amyl Methyl Ether	50.0	49.3		ug/L		99	70 - 133	3	16
Benzene	50.0	53.1		ug/L		106	80 - 121	3	12
Ethylbenzene	50.0	54.1		ug/L		108	78 - 133	1	12
Ethyl tert-Butyl Ether	50.0	50.2		ug/L		100	68 - 138	0.8	16
Toluene	50.0	49.5		ug/L		99	78 - 125	7	35
Diisopropyl Ether	50.0	51.9		ug/L		104	63 - 136	1	32
Methyl tert-Butyl Ether	50.0	52.7		ug/L		105	76 - 120	4	32
Tertiary Butyl Alcohol	500	702		ug/L		140	60 - 140	9	30
Xylenes, total	150	166		ug/L		111	78 - 134	5	18

Surrogate	LCS Dup		Limits
	% Recovery	Qualifier	
1,2-Dichloroethane-d4	105		63 - 140
Dibromofluoromethane	104		73 - 131
Toluene-d8	94		80 - 120
4-Bromofluorobenzene	101		79 - 125

Quality Control Data

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B (Continued)

Lab Sample ID: 11B0154-MS1

Matrix: Water

Analysis Batch: U001568

Client Sample ID: MW-1

Prep Type: total

Prep Batch: 11B0154_P

Analyte	Sample	Sample	Spike	Matrix Spike	Matrix Spike	D	% Rec	% Rec.		
	Result	Qualifier	Added	Result	Qualifier			Unit	Limits	RPD
Tert-Amyl Methyl Ether	ND		5000	5460			109	69 - 139		
Benzene	14300		5000	19400			101	65 - 151		
Ethylbenzene	1960		5000	7000			101	68 - 157		
Ethyl tert-Butyl Ether	ND		5000	5510			110	68 - 139		
Toluene	5310		5000	9970			93	61 - 153		
Diisopropyl Ether	ND		5000	5300			106	59 - 145		
Methyl tert-Butyl Ether	ND		5000	5580			112	56 - 152		
Tertiary Butyl Alcohol	ND		50000	77800			156	14 - 200		
Xylenes, total	8810		15000	23500			98	68 - 158		
Matrix Spike Matrix Spike										
Surrogate	% Recovery		Qualifier	Limits						
1,2-Dichloroethane-d4	100			63 - 140						
Dibromofluoromethane	102			73 - 131						
Toluene-d8	100			80 - 120						
4-Bromofluorobenzene	104			79 - 125						

Lab Sample ID: 11B0154-MSD1

Matrix: Water

Analysis Batch: U001568

Client Sample ID: MW-1

Prep Type: total

Prep Batch: 11B0154_P

Analyte	Sample	Sample	Spike	Matrix Spike Dup	Matrix Spike Dup	D	% Rec	% Rec.		RPD	
	Result	Qualifier	Added	Result	Qualifier			Unit	Limits	RPD	Limit
Tert-Amyl Methyl Ether	ND		5000	5450			109	69 - 139	0.1	16	
Benzene	14300		5000	19200			97	65 - 151	1	12	
Ethylbenzene	1960		5000	6910			99	68 - 157	1	12	
Ethyl tert-Butyl Ether	ND		5000	5440			109	68 - 139	1	16	
Toluene	5310		5000	9710			88	61 - 153	3	35	
Diisopropyl Ether	ND		5000	5260			105	59 - 145	0.6	32	
Methyl tert-Butyl Ether	ND		5000	5770			115	56 - 152	3	32	
Tertiary Butyl Alcohol	ND		50000	81000			162	14 - 200	4	30	
Xylenes, total	8810		15000	23100			95	68 - 158	2	18	
Matrix Spike Dup Matrix Spike Dup											
Surrogate	% Recovery		Qualifier	Limits							
1,2-Dichloroethane-d4	100			63 - 140							
Dibromofluoromethane	102			73 - 131							
Toluene-d8	100			80 - 120							
4-Bromofluorobenzene	104			79 - 125							

Lab Sample ID: 11B0502-BLK1

Matrix: Water

Analysis Batch: U001655

Client Sample ID: 11B0502-BLK1

Prep Type: total

Prep Batch: 11B0502_P

Analyte	Blank	Blank	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		1.00		ug/L		01/31/11 09:39	01/31/11 12:22	1.00
Ethylbenzene	ND		1.00		ug/L		01/31/11 09:39	01/31/11 12:22	1.00
Toluene	ND		1.00		ug/L		01/31/11 09:39	01/31/11 12:22	1.00
Xylenes, total	ND		3.00		ug/L		01/31/11 09:39	01/31/11 12:22	1.00

Quality Control Data

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B (Continued)

Lab Sample ID: 11B0502-BLK1
Matrix: Water
Analysis Batch: U001655

Client Sample ID: 11B0502-BLK1
Prep Type: total
Prep Batch: 11B0502_P

Surrogate	Blank		Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
1,2-Dichloroethane-d4	112		63 - 140	01/31/11 09:39	01/31/11 12:22	1.00
Dibromofluoromethane	103		73 - 131	01/31/11 09:39	01/31/11 12:22	1.00
Toluene-d8	87		80 - 120	01/31/11 09:39	01/31/11 12:22	1.00
4-Bromofluorobenzene	104		79 - 125	01/31/11 09:39	01/31/11 12:22	1.00

Lab Sample ID: 11B0502-BS1
Matrix: Water
Analysis Batch: U001655

Client Sample ID: 11B0502-BS1
Prep Type: total
Prep Batch: 11B0502_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Ethylbenzene	50.0	50.2		ug/L		100	78 - 133
Toluene	50.0	41.2		ug/L		82	78 - 125
Xylenes, total	150	150		ug/L		100	78 - 134

Surrogate	LCS		Limits
	% Recovery	Qualifier	
1,2-Dichloroethane-d4	108		63 - 140
Dibromofluoromethane	105		73 - 131
Toluene-d8	88		80 - 120
4-Bromofluorobenzene	104		79 - 125

Lab Sample ID: 11B0502-BSD1
Matrix: Water
Analysis Batch: U001655

Client Sample ID: 11B0502-BSD1
Prep Type: total
Prep Batch: 11B0502_P

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Ethylbenzene	50.0	50.4		ug/L		101	78 - 133	0.4	12
Toluene	50.0	41.5		ug/L		83	78 - 125	0.8	35
Xylenes, total	150	150		ug/L		100	78 - 134	0.1	18

Surrogate	LCS Dup		Limits
	% Recovery	Qualifier	
1,2-Dichloroethane-d4	109		63 - 140
Dibromofluoromethane	105		73 - 131
Toluene-d8	88		80 - 120
4-Bromofluorobenzene	103		79 - 125

Lab Sample ID: 11B0502-MS1
Matrix: Water
Analysis Batch: U001655

Client Sample ID: NUA3504-18
Prep Type: total
Prep Batch: 11B0502_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	% Rec	% Rec. Limits
Ethylbenzene	ND		50.0	48.9		ug/L		98	68 - 157
Toluene	ND		50.0	39.9		ug/L		80	61 - 153
Xylenes, total	ND		150	145		ug/L		97	68 - 158

Quality Control Data

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B (Continued)

Lab Sample ID: 11B0502-MS1
Matrix: Water
Analysis Batch: U001655

Client Sample ID: NUA3504-18
Prep Type: total
Prep Batch: 11B0502_P

Surrogate	Matrix Spike		Limits
	% Recovery	Qualifier	
1,2-Dichloroethane-d4	110		63 - 140
Dibromofluoromethane	105		73 - 131
Toluene-d8	87		80 - 120
4-Bromofluorobenzene	103		79 - 125

Lab Sample ID: 11B0502-MSD1
Matrix: Water
Analysis Batch: U001655

Client Sample ID: NUA3504-18
Prep Type: total
Prep Batch: 11B0502_P

Analyte	Sample	Sample	Spike	Matrix Spike Dup	Matrix Spike Dup	D	% Rec	% Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier					
Benzene	ND		50.0	48.4			97	65 - 151	7	12
Ethylbenzene	ND		50.0	53.1			106	68 - 157	8	12
Toluene	ND		50.0	43.1			86	61 - 153	8	35
Xylenes, total	ND		150	158			105	68 - 158	8	18

Surrogate	Matrix Spike Dup		Limits
	% Recovery	Qualifier	
1,2-Dichloroethane-d4	109		63 - 140
Dibromofluoromethane	105		73 - 131
Toluene-d8	87		80 - 120
4-Bromofluorobenzene	103		79 - 125

Method: NWTPH-Dx - Extractable Petroleum Hydrocarbons with Silica Gel Treatment

Lab Sample ID: 11A4348-BLK1
Matrix: Water
Analysis Batch: U001552

Client Sample ID: 11A4348-BLK1
Prep Type: total
Prep Batch: 11A4348_P

Analyte	Blank	Blank	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel	ND		100		ug/L		01/31/11 06:00	01/31/11 18:11	1.00
Motor Oil	ND		100		ug/L		01/31/11 06:00	01/31/11 18:11	1.00

Surrogate	Blank	Blank	Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
o-Terphenyl	84		50 - 150	01/31/11 06:00	01/31/11 18:11	1.00

Lab Sample ID: 11A4348-BS1
Matrix: Water
Analysis Batch: U001552

Client Sample ID: 11A4348-BS1
Prep Type: total
Prep Batch: 11A4348_P

Analyte	Spike Added	LCS	LCS	Unit	D	% Rec	% Rec.
		Result	Qualifier				
Diesel	1000	812	MNR1	ug/L		81	57 - 132

Surrogate	LCS	LCS	Limits
	% Recovery	Qualifier	
o-Terphenyl	85		50 - 150

QC Association Summary

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

GCMS Volatiles

Prep Batch: 11A5705_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11A5705-BS1	11A5705-BS1	total	Water	EPA 5030B	
11A5705-BLK1	11A5705-BLK1	total	Water	EPA 5030B	
NUA2719-02 - RE1	MW-2	total	Water	EPA 5030B	
NUA2719-06 - RE1	MW-6	total	Water	EPA 5030B	
NUA2719-07 - RE1	MW-7	total	Water	EPA 5030B	
NUA2719-09 - RE1	MW-9	total	Water	EPA 5030B	
NUA2719-10 - RE2	MW-10	total	Water	EPA 5030B	
NUA2719-10 - RE1	MW-10	total	Water	EPA 5030B	
NUA2719-01 - RE3	MW-1	total	Water	EPA 5030B	
NUA2719-04 - RE1	MW-4	total	Water	EPA 5030B	
NUA2719-04 - RE2	MW-4	total	Water	EPA 5030B	
11A5705-MS1	MW-10	total	Water	EPA 5030B	
11A5705-MSD1	MW-10	total	Water	EPA 5030B	

Prep Batch: 11B0154_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B0154-BS1	11B0154-BS1	total	Water	EPA 5030B	
11B0154-BSD1	11B0154-BSD1	total	Water	EPA 5030B	
11B0154-BLK1	11B0154-BLK1	total	Water	EPA 5030B	
NUA2719-01	MW-1	total	Water	EPA 5030B	
NUA2719-03	MW-3	total	Water	EPA 5030B	
NUA2719-04	MW-4	total	Water	EPA 5030B	
NUA2719-05	MW-5	total	Water	EPA 5030B	
NUA2719-08	MW-8	total	Water	EPA 5030B	
NUA2719-01 - RE2	MW-1	total	Water	EPA 5030B	
11B0154-MS1	MW-1	total	Water	EPA 5030B	
11B0154-MSD1	MW-1	total	Water	EPA 5030B	

Prep Batch: 11B0502_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B0502-BS1	11B0502-BS1	total	Water	EPA 5030B	
11B0502-BSD1	11B0502-BSD1	total	Water	EPA 5030B	
11B0502-BLK1	11B0502-BLK1	total	Water	EPA 5030B	
NUA2719-03 - RE1	MW-3	total	Water	EPA 5030B	
NUA2719-08 - RE1	MW-8	total	Water	EPA 5030B	
NUA2719-03 - RE2	MW-3	total	Water	EPA 5030B	
NUA2719-05 - RE1	MW-5	total	Water	EPA 5030B	
NUA2719-08 - RE2	MW-8	total	Water	EPA 5030B	
11B0502-MS1	NUA3504-18	total	Water	EPA 5030B	
11B0502-MSD1	NUA3504-18	total	Water	EPA 5030B	

Analysis Batch: U001504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11A5705-BS1	11A5705-BS1	total	Water	SW846 8260B	11A5705_P
11A5705-BLK1	11A5705-BLK1	total	Water	SW846 8260B	11A5705_P
NUA2719-02 - RE1	MW-2	total	Water	SW846 8260B	11A5705_P
NUA2719-06 - RE1	MW-6	total	Water	SW846 8260B	11A5705_P
NUA2719-07 - RE1	MW-7	total	Water	SW846 8260B	11A5705_P
NUA2719-09 - RE1	MW-9	total	Water	SW846 8260B	11A5705_P
NUA2719-10 - RE2	MW-10	total	Water	SW846 8260B	11A5705_P
NUA2719-10 - RE1	MW-10	total	Water	SW846 8260B	11A5705_P
NUA2719-01 - RE3	MW-1	total	Water	SW846 8260B	11A5705_P



QC Association Summary

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

GCMS Volatiles (Continued)

Analysis Batch: U001504 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
NUA2719-04 - RE1	MW-4	total	Water	SW846 8260B	11A5705_P
NUA2719-04 - RE2	MW-4	total	Water	SW846 8260B	11A5705_P
11A5705-MS1	MW-10	total	Water	SW846 8260B	11A5705_P
11A5705-MSD1	MW-10	total	Water	SW846 8260B	11A5705_P

Analysis Batch: U001568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B0154-BS1	11B0154-BS1	total	Water	SW846 8260B	11B0154_P
11B0154-BSD1	11B0154-BSD1	total	Water	SW846 8260B	11B0154_P
11B0154-BLK1	11B0154-BLK1	total	Water	SW846 8260B	11B0154_P
NUA2719-01	MW-1	total	Water	SW846 8260B	11B0154_P
NUA2719-03	MW-3	total	Water	SW846 8260B	11B0154_P
NUA2719-04	MW-4	total	Water	SW846 8260B	11B0154_P
NUA2719-05	MW-5	total	Water	SW846 8260B	11B0154_P
NUA2719-08	MW-8	total	Water	SW846 8260B	11B0154_P
NUA2719-01 - RE2	MW-1	total	Water	SW846 8260B	11B0154_P
11B0154-MS1	MW-1	total	Water	SW846 8260B	11B0154_P
11B0154-MSD1	MW-1	total	Water	SW846 8260B	11B0154_P

Analysis Batch: U001655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B0502-BS1	11B0502-BS1	total	Water	SW846 8260B	11B0502_P
11B0502-BSD1	11B0502-BSD1	total	Water	SW846 8260B	11B0502_P
11B0502-BLK1	11B0502-BLK1	total	Water	SW846 8260B	11B0502_P
NUA2719-03 - RE1	MW-3	total	Water	SW846 8260B	11B0502_P
NUA2719-08 - RE1	MW-8	total	Water	SW846 8260B	11B0502_P
NUA2719-03 - RE2	MW-3	total	Water	SW846 8260B	11B0502_P
NUA2719-05 - RE1	MW-5	total	Water	SW846 8260B	11B0502_P
NUA2719-08 - RE2	MW-8	total	Water	SW846 8260B	11B0502_P
11B0502-MS1	NUA3504-18	total	Water	SW846 8260B	11B0502_P
11B0502-MSD1	NUA3504-18	total	Water	SW846 8260B	11B0502_P

GC Semivolatiles

Prep Batch: 11A4348_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11A4348-BLK1	11A4348-BLK1	total	Water	EPA 3510C	
11A4348-BS1	11A4348-BS1	total	Water	EPA 3510C	
NUA2719-01	MW-1	total	Water	EPA 3510C	
NUA2719-02	MW-2	total	Water	EPA 3510C	
NUA2719-03	MW-3	total	Water	EPA 3510C	
NUA2719-03 - RE1	MW-3	total	Water	EPA 3510C	
NUA2719-04	MW-4	total	Water	EPA 3510C	
NUA2719-05	MW-5	total	Water	EPA 3510C	
NUA2719-06	MW-6	total	Water	EPA 3510C	
NUA2719-07	MW-7	total	Water	EPA 3510C	
NUA2719-08	MW-8	total	Water	EPA 3510C	
NUA2719-09	MW-9	total	Water	EPA 3510C	
NUA2719-10	MW-10	total	Water	EPA 3510C	
NUA2719-01 - RE1	MW-1	total	Water	EPA 3510C	
NUA2719-08 - RE1	MW-8	total	Water	EPA 3510C	
NUA2719-04 - RE1	MW-4	total	Water	EPA 3510C	

QC Association Summary

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

GC Semivolatiles (Continued)

Prep Batch: 11A4348_P (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
NUA2719-05 - RE1	MW-5	total	Water	EPA 3510C	

Analysis Batch: U001552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11A4348-BLK1	11A4348-BLK1	total	Water	NWTPH-Dx	11A4348_P
11A4348-BS1	11A4348-BS1	total	Water	NWTPH-Dx	11A4348_P
NUA2719-01	MW-1	total	Water	NWTPH-Dx	11A4348_P
NUA2719-02	MW-2	total	Water	NWTPH-Dx	11A4348_P
NUA2719-03	MW-3	total	Water	NWTPH-Dx	11A4348_P
NUA2719-03 - RE1	MW-3	total	Water	NWTPH-Dx	11A4348_P
NUA2719-04	MW-4	total	Water	NWTPH-Dx	11A4348_P
NUA2719-05	MW-5	total	Water	NWTPH-Dx	11A4348_P
NUA2719-06	MW-6	total	Water	NWTPH-Dx	11A4348_P
NUA2719-07	MW-7	total	Water	NWTPH-Dx	11A4348_P
NUA2719-08	MW-8	total	Water	NWTPH-Dx	11A4348_P
NUA2719-09	MW-9	total	Water	NWTPH-Dx	11A4348_P
NUA2719-10	MW-10	total	Water	NWTPH-Dx	11A4348_P
NUA2719-01 - RE1	MW-1	total	Water	NWTPH-Dx	11A4348_P
NUA2719-08 - RE1	MW-8	total	Water	NWTPH-Dx	11A4348_P
NUA2719-04 - RE1	MW-4	total	Water	NWTPH-Dx	11A4348_P
NUA2719-05 - RE1	MW-5	total	Water	NWTPH-Dx	11A4348_P



Lab Chronicle

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Client Sample ID: MW-1

Date Collected: 01/20/11 10:10

Date Received: 01/22/11 08:30

Lab Sample ID: NUA2719-01

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
total	Prep	EPA 5030B		1.00	11B0154_P	01/25/11 23:21	EML	TestAmerica Nashville
total	Analysis	SW846 8260B		1.00	U001568	01/26/11 02:30	EML	TestAmerica Nashville
total	Prep	EPA 5030B	RE2	1.00	11B0154_P	01/25/11 23:21	EML	TestAmerica Nashville
total	Analysis	SW846 8260B	RE2	10.0	U001568	01/26/11 10:18	EML	TestAmerica Nashville
total	Prep	EPA 5030B	RE3	1.00	11A5705_P	01/28/11 10:08	EML	TestAmerica Nashville
total	Analysis	SW846 8260B	RE3	100	U001504	01/28/11 19:38	EML	TestAmerica Nashville
total	Prep	EPA 3510C		0.952	11A4348_P	01/31/11 06:00	TDM	TestAmerica Nashville
total	Analysis	NWTPH-Dx		1.00	U001552	01/31/11 18:49	cec	TestAmerica Nashville
total	Prep	EPA 3510C	RE1	0.952	11A4348_P	01/31/11 06:00	TDM	TestAmerica Nashville
total	Analysis	NWTPH-Dx	RE1	2.00	U001552	02/01/11 09:57	cec	TestAmerica Nashville

Client Sample ID: MW-2

Date Collected: 01/20/11 09:50

Date Received: 01/22/11 08:30

Lab Sample ID: NUA2719-02

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
total	Prep	EPA 5030B	RE1	1.00	11A5705_P	01/28/11 10:08	EML	TestAmerica Nashville
total	Analysis	SW846 8260B	RE1	1.00	U001504	01/28/11 16:28	EML	TestAmerica Nashville
total	Prep	EPA 3510C		0.952	11A4348_P	01/31/11 06:00	TDM	TestAmerica Nashville
total	Analysis	NWTPH-Dx		1.00	U001552	01/31/11 19:08	cec	TestAmerica Nashville

Client Sample ID: MW-3

Date Collected: 01/20/11 11:35

Date Received: 01/22/11 08:30

Lab Sample ID: NUA2719-03

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
total	Prep	EPA 5030B		1.00	11B0154_P	01/25/11 23:21	EML	TestAmerica Nashville
total	Analysis	SW846 8260B		1.00	U001568	01/26/11 03:24	EML	TestAmerica Nashville
total	Prep	EPA 5030B	RE1	1.00	11B0502_P	01/31/11 09:39	EML	TestAmerica Nashville
total	Analysis	SW846 8260B	RE1	1000	U001655	01/31/11 12:49	EML	TestAmerica Nashville
total	Prep	EPA 5030B	RE2	1.00	11B0502_P	01/31/11 09:39	EML	TestAmerica Nashville
total	Analysis	SW846 8260B	RE2	100	U001655	01/31/11 14:10	EML	TestAmerica Nashville
total	Prep	EPA 3510C		0.952	11A4348_P	01/31/11 06:00	TDM	TestAmerica Nashville
total	Analysis	NWTPH-Dx		5.00	U001552	01/31/11 19:27	cec	TestAmerica Nashville
total	Prep	EPA 3510C	RE1	0.952	11A4348_P	01/31/11 06:00	TDM	TestAmerica Nashville
total	Analysis	NWTPH-Dx	RE1	100	U001552	01/31/11 20:06	cec	TestAmerica Nashville

Client Sample ID: MW-4

Date Collected: 01/20/11 11:15

Date Received: 01/22/11 08:30

Lab Sample ID: NUA2719-04

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
total	Prep	EPA 5030B		1.00	11B0154_P	01/25/11 23:21	EML	TestAmerica Nashville
total	Analysis	SW846 8260B		1.00	U001568	01/26/11 03:51	EML	TestAmerica Nashville
total	Prep	EPA 5030B	RE1	1.00	11A5705_P	01/28/11 10:08	EML	TestAmerica Nashville

Lab Chronicle

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Client Sample ID: MW-4
Date Collected: 01/20/11 11:15
Date Received: 01/22/11 08:30

Lab Sample ID: NUA2719-04
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
total	Analysis	SW846 8260B	RE1	500	U001504	01/28/11 20:05	EML	TestAmerica Nashville
total	Prep	EPA 5030B	RE2	1.00	11A5705_P	01/28/11 10:08	EML	TestAmerica Nashville
total	Analysis	SW846 8260B	RE2	50.0	U001504	01/28/11 20:32	EML	TestAmerica Nashville
total	Prep	EPA 3510C		0.952	11A4348_P	01/31/11 06:00	TDM	TestAmerica Nashville
total	Analysis	NWTPH-Dx		100	U001552	01/31/11 20:25	cec	TestAmerica Nashville
total	Prep	EPA 3510C	RE1	0.952	11A4348_P	01/31/11 06:00	TDM	TestAmerica Nashville
total	Analysis	NWTPH-Dx	RE1	200	U001552	02/01/11 10:35	cec	TestAmerica Nashville

Client Sample ID: MW-5
Date Collected: 01/20/11 11:00
Date Received: 01/22/11 08:30

Lab Sample ID: NUA2719-05
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
total	Prep	EPA 5030B		1.00	11B0154_P	01/25/11 23:21	EML	TestAmerica Nashville
total	Analysis	SW846 8260B		1.00	U001568	01/26/11 04:18	EML	TestAmerica Nashville
total	Prep	EPA 5030B	RE1	1.00	11B0502_P	01/31/11 09:39	EML	TestAmerica Nashville
total	Analysis	SW846 8260B	RE1	100	U001655	01/31/11 14:37	EML	TestAmerica Nashville
total	Prep	EPA 3510C		0.952	11A4348_P	01/31/11 06:00	TDM	TestAmerica Nashville
total	Analysis	NWTPH-Dx		100	U001552	01/31/11 20:44	cec	TestAmerica Nashville
total	Prep	EPA 3510C	RE1	0.952	11A4348_P	01/31/11 06:00	TDM	TestAmerica Nashville
total	Analysis	NWTPH-Dx	RE1	200	U001552	02/01/11 10:54	cec	TestAmerica Nashville

Client Sample ID: MW-6
Date Collected: 01/20/11 08:50
Date Received: 01/22/11 08:30

Lab Sample ID: NUA2719-06
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
total	Prep	EPA 5030B	RE1	1.00	11A5705_P	01/28/11 10:08	EML	TestAmerica Nashville
total	Analysis	SW846 8260B	RE1	1.00	U001504	01/28/11 16:56	EML	TestAmerica Nashville
total	Prep	EPA 3510C		0.952	11A4348_P	01/31/11 06:00	TDM	TestAmerica Nashville
total	Analysis	NWTPH-Dx		1.00	U001552	01/31/11 21:03	cec	TestAmerica Nashville

Client Sample ID: MW-7
Date Collected: 01/20/11 09:35
Date Received: 01/22/11 08:30

Lab Sample ID: NUA2719-07
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
total	Prep	EPA 5030B	RE1	1.00	11A5705_P	01/28/11 10:08	EML	TestAmerica Nashville
total	Analysis	SW846 8260B	RE1	1.00	U001504	01/28/11 17:22	EML	TestAmerica Nashville
total	Prep	EPA 3510C		0.952	11A4348_P	01/31/11 06:00	TDM	TestAmerica Nashville
total	Analysis	NWTPH-Dx		1.00	U001552	01/31/11 21:22	cec	TestAmerica Nashville

Lab Chronicle

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Client Sample ID: MW-8

Date Collected: 01/20/11 10:45

Date Received: 01/22/11 08:30

Lab Sample ID: NUA2719-08

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
total	Prep	EPA 5030B		1.00	11B0154_P	01/25/11 23:21	EML	TestAmerica Nashville
total	Analysis	SW846 8260B		1.00	U001568	01/26/11 05:39	EML	TestAmerica Nashville
total	Prep	EPA 5030B	RE1	1.00	11B0502_P	01/31/11 09:39	EML	TestAmerica Nashville
total	Analysis	SW846 8260B	RE1	1000	U001655	01/31/11 13:43	EML	TestAmerica Nashville
total	Prep	EPA 5030B	RE2	1.00	11B0502_P	01/31/11 09:39	EML	TestAmerica Nashville
total	Analysis	SW846 8260B	RE2	100	U001655	01/31/11 15:04	EML	TestAmerica Nashville
total	Prep	EPA 3510C		0.952	11A4348_P	01/31/11 06:00	TDM	TestAmerica Nashville
total	Analysis	NWTPH-Dx		1.00	U001552	01/31/11 21:40	cec	TestAmerica Nashville
total	Prep	EPA 3510C	RE1	0.952	11A4348_P	01/31/11 06:00	TDM	TestAmerica Nashville
total	Analysis	NWTPH-Dx	RE1	5.00	U001552	02/01/11 10:16	cec	TestAmerica Nashville

Client Sample ID: MW-9

Date Collected: 01/20/11 09:15

Date Received: 01/22/11 08:30

Lab Sample ID: NUA2719-09

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
total	Prep	EPA 5030B	RE1	1.00	11A5705_P	01/28/11 10:08	EML	TestAmerica Nashville
total	Analysis	SW846 8260B	RE1	1.00	U001504	01/28/11 17:50	EML	TestAmerica Nashville
total	Prep	EPA 3510C		0.952	11A4348_P	01/31/11 06:00	TDM	TestAmerica Nashville
total	Analysis	NWTPH-Dx		1.00	U001552	01/31/11 21:59	cec	TestAmerica Nashville

Client Sample ID: MW-10

Date Collected: 01/20/11 10:25

Date Received: 01/22/11 08:30

Lab Sample ID: NUA2719-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
total	Prep	EPA 5030B	RE1	1.00	11A5705_P	01/28/11 10:08	EML	TestAmerica Nashville
total	Analysis	SW846 8260B	RE1	1.00	U001504	01/28/11 18:44	EML	TestAmerica Nashville
total	Prep	EPA 5030B	RE2	1.00	11A5705_P	01/28/11 10:08	EML	TestAmerica Nashville
total	Analysis	SW846 8260B	RE2	10.0	U001504	01/28/11 18:17	EML	TestAmerica Nashville
total	Prep	EPA 3510C		0.952	11A4348_P	01/31/11 06:00	TDM	TestAmerica Nashville
total	Analysis	NWTPH-Dx		1.00	U001552	01/31/11 22:18	cec	TestAmerica Nashville

Method Summary

Client: Conestoga-Rovers & Asso. (Everett)/ Shell
Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
SDG: NUA2719

Method	Method Description	Protocol	Laboratory
SW846 8260B	Volatile Organic Compounds by EPA Method 8260B		TAL NSH
NWTPH-Dx	Extractable Petroleum Hydrocarbons with Silica Gel Treatment		TAL NSH

Protocol References:

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Road, Nashville, TN 37204, TEL 800-765-0980

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Certification Summary

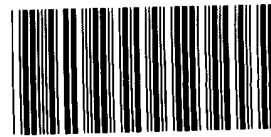
Client: Conestoga-Rovers & Asso. (Everett)/ Shell
 Project/Site: SAP 171152

TestAmerica Job ID: NUA2719
 SDG: NUA2719

Laboratory	Authority	Program	EPA Region	Certification ID	* Expiration Date
TestAmerica Nashville		AIHA		100790	09/01/11
TestAmerica Nashville		USDA		S-48469	11/02/13
TestAmerica Nashville	A2LA	A2LA	0	0453.07	12/31/11
TestAmerica Nashville	A2LA	WY UST	0	453.07	12/31/11
TestAmerica Nashville	Alabama	State Program	4	41150	10/31/10
TestAmerica Nashville	Alaska	Alaska UST	10	UST-087	07/24/11
TestAmerica Nashville	Arizona	State Program	9	AZ0473	05/05/11
TestAmerica Nashville	Arkansas	State Program	6	88-0737	04/25/11
TestAmerica Nashville	California	NELAC	9	1168CA	10/31/11
TestAmerica Nashville	Colorado	State Program	8	N/A	02/28/11
TestAmerica Nashville	Connecticut	State Program	1	PH-0220	12/31/11
TestAmerica Nashville	Florida	NELAC	4	E87358	06/30/11
TestAmerica Nashville	Illinois	NELAC	5	200010	12/09/11
TestAmerica Nashville	Iowa	State Program	7	131	05/01/12
TestAmerica Nashville	Kansas	NELAC	7	E-10229	10/31/11
TestAmerica Nashville	Kentucky	Kentucky UST	4	19	07/13/12
TestAmerica Nashville	Kentucky	State Program	4	90038	02/15/11
TestAmerica Nashville	Louisiana	NELAC	6	30613	06/30/11
TestAmerica Nashville	Louisiana	NELAC	6	LA100011	12/31/11
TestAmerica Nashville	Maryland	State Program	3	316	03/31/11
TestAmerica Nashville	Massachusetts	State Program	1	M-TN032	06/30/11
TestAmerica Nashville	Minnesota	NELAC	5	047-999-345	12/31/11
TestAmerica Nashville	Mississippi	State Program	4	N/A	06/30/11
TestAmerica Nashville	Montana	State Program	8	NA	01/01/15
TestAmerica Nashville	Nevada	State Program	9	TN00032	07/31/11
TestAmerica Nashville	New Hampshire	NELAC	1	2963	10/09/11
TestAmerica Nashville	New Jersey	NELAC	2	TN965	06/30/11
TestAmerica Nashville	New York	NELAC	2	11342	04/01/11
TestAmerica Nashville	North Carolina	State Program	4	387	12/31/11
TestAmerica Nashville	North Dakota	State Program	8	R-146	06/30/11
TestAmerica Nashville	Ohio	OVAP	5	CL0033	04/01/12
TestAmerica Nashville	Oklahoma	State Program	6	9412	08/31/11
TestAmerica Nashville	Oregon	NELAC	10	TN200001	04/30/11
TestAmerica Nashville	Pennsylvania	NELAC	3	68-00585	06/30/11
TestAmerica Nashville	Rhode Island	State Program	1	LAO00268	12/30/11
TestAmerica Nashville	South Carolina	State Program	4	84009	02/28/11
TestAmerica Nashville	South Carolina	State Program	4	84009	03/19/11
TestAmerica Nashville	Tennessee	State Program	4	2008	03/19/11
TestAmerica Nashville	Texas	NELAC	6	T104704077-09-TX	08/31/11
TestAmerica Nashville	Utah	NELAC	8	TAN	06/30/11
TestAmerica Nashville	Virginia	State Program	3	00323	06/30/11
TestAmerica Nashville	Washington	State Program	10	C789	07/19/11
TestAmerica Nashville	West Virginia	West Virginia DEP	3	219	02/28/11
TestAmerica Nashville	Wisconsin	State Program	5	998020430	08/31/11

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

* Any expired certifications in this list are currently pending renewal and are considered valid.



COOLER RE

NUA2719

Cooler Received/Opened On 1/22/2011 @ 008:30

1. Tracking # 1899 (last 4 digits, FedEx)

Courier: FEDEX IR Gun ID 96210146

2. Temperature of rep. sample or temp blank when opened: 0.7 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES NO NA

If yes, how many and where: 1-Front

5. Were the seals intact, signed, and dated correctly? YES NO NA

6. Were custody papers inside cooler? YES NO NA

I certify that I opened the cooler and answered questions 1-6 (initial) P.H.

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap, Plastic bag, Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES NO NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES NO NA

12. Did all container labels and tags agree with custody papers? YES NO NA

13a. Were VOA vials received? YES NO NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES NO NA If multiple coolers, sequence # NA

I certify that I unloaded the cooler and answered questions 7-14 (initial) JH

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) JH

17. Were custody papers properly filled out (ink, signed, etc)? YES NO NA

18. Did you sign the custody papers in the appropriate place? YES NO NA

19. Were correct containers used for the analysis requested? YES NO NA

20. Was sufficient amount of sample sent in each container? YES NO NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) JH

I certify that I attached a label with the unique LIMS number to each container (initial) JH

21. Were there Non-Conformance issues at login? YES NO Was a PIPE generated? YES NO #

COOLER RECEIPT FORM

Cooler Received/Opened On 1/22/2011 @ 008:30

1. Tracking # 4561 (last 4 digits, FedEx)

Courier: FEDEX IR Gun ID 96210146

2. Temperature of rep. sample or temp blank when opened: 1.6 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES NO NA
If yes, how many and where: 1-FRONT

5. Were the seals intact, signed, and dated correctly? YES NO NA

6. Were custody papers inside cooler? YES NO NA

I certify that I opened the cooler and answered questions 1-6 (initial) P.H.

7. Were custody seals on containers: YES NO and Intact YES NO NA
Were these signed and dated correctly? YES NO NA

8. Packing mat'l used? ~~Bubblewrap~~ ~~Plastic bag~~ Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES NO NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES NO NA

12. Did all container labels and tags agree with custody papers? YES NO NA

13a. Were VOA vials received? YES NO NA

b. Was there any observable headspace present in any VOA vial? YES NO NA

14. Was there a Trip Blank in this cooler? YES NO NA If multiple coolers, sequence # NA

I certify that I unloaded the cooler and answered questions 7-14 (initial) JH

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES NO NA

b. Did the bottle labels indicate that the correct preservatives were used YES NO NA

16. Was residual chlorine present? YES NO NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) JH

17. Were custody papers properly filled out (ink, signed, etc)? YES NO NA

18. Did you sign the custody papers in the appropriate place? YES NO NA

19. Were correct containers used for the analysis requested? YES NO NA

20. Was sufficient amount of sample sent in each container? YES NO NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) JH

I certify that I attached a label with the unique LIMS number to each container (initial) JH

21. Were there Non-Conformance issues at login? YES NO Was a PIPE generated? YES NO #



Shell Oil Products Chain Of Custody Record

LAB (LOCATION)

CALSCIENCE ()

SPL Houston ()

XENCO ()

TEST AMERICA ()

OTHER ()

Please Check Appropriate Box:

ENV. SERVICES MOTIVA RETAIL SHELL RETAIL

MOTIVA SD&CM CONSULTANT LUBES

SHELL PIPELINE OTHER ()

Print Bill To Contact Name: Christina McClelland - 241739 - 2011 -

INCIDENT # (ENV SERVICES) 9 7 6 0 5 4 1 0

PO # 4 0 4 0 3 4 9 7 3

SAP # 1 7 1 1 5 2

CHECK IF NO INCIDENT # APPLIES

DATE: 1/20/11

PAGE: 1 of 1

SAMPLING COMPANY: Blaine Tech Services

ADDRESS: 20735 Belshaw Ave., Carson, CA 90746

PROJECT CONTACT (Hardcopy or PDF Report to): Lorin King

TELEPHONE: 310-885-4455 x 108 **FAX:** 310-637-5802 **E-MAIL:** lking@blainetech.com

LOG CODE:

SITE ADDRESS: Street and City: 6808 196th Street SW, Lynnwood WA

EDF DELIVERABLE TO (Name, Company, Office Location): CRA, Seattle, WA

PHONE NO.: 425-563-6500

E-MAIL: Shell-US-LabDataManagement@CRAworld.com

CONSULTANT PROJECT NO.: 110120-524

SAMPLER NAME(S) (Print): SLane

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS)

STANDARD (14 DAY) 5 DAYS 3 DAYS 2 DAYS 24 HOURS RESULTS NEEDED ON WEEKEND

LA - RWQCB REPORT FORMAT UST AGENCY:

REQUESTED ANALYSIS

SPECIAL INSTRUCTIONS OR NOTES:

1) Please upload the "CRA EQUIS 4-file EDD" to the CRA Website (<http://cralabedupload.craworld.com/equis/default.aspx>) and/or send it to the Shell-US-LabDataManagement@CRAworld.com email folder. 2) Please indicate that you have uploaded the EDD by including "EDD Uploaded to CRA website" in the body of the email used to deliver the final PDF report to the Shell-US-LabDataManagement@CRAworld.com email folder.

Email invoice to Shell.Lab.Billing@craworld.com
Copy final report to Shell.Lab.Billing@craworld.com, Shell.results@craworld.com, and Shell-US-LabDataManagement@CRAworld.com

TEMPERATURE ON RECEIPT C°
NUA2719 02/07/11 23:59
Container PID Readings of Laboratory Notes

See Laboratory PM for WA Dept. of Ecology MTCA Method A cleanup levels for minimum detection limits

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	NWTPH-Gx	NWTPH-Dx w/Silica Gel Cleanup	BTEX (8260B)	5 Oxygenates, MTBE, TBA, DIPE, TAME, ETBE (8260B)	EDC (8260B)	EDC (8011)	Total Lead (6020)	PCBs (8082)	PAHs (8070 SIM)	VOCs Full list (8280B)	Pest (8080)	NWTPH-VPH	NWTPH-EPH	n-Hexane (8071B)	MTBE (8260B)	
		DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER																	
	MW-1	1/20/11	1010	W	X					8	X	X	X													
	MW-2		0950	W	X					8	X	X	X													
	MW-3		1125	W	X					8	X	X	X													
	MW-4		1115	W	X					8	X	X	X													
	MW-5		1100	W	X					8	X	X	X													
	MW-6		0850	W	X					8	X	X	X													
	MW-7		0935	W	X					8	X	X	X													
	MW-8		1045	W	X					8	X	X	X													
	MW-9		0915	W	X					8	X	X	X													
	MW-10		1025	W	X					8	X	X	X													

Relinquished by (Signature): <i>Gene</i>	Received by (Signature): <i>Shipped by Fed Ex</i>	Date: 1/20/11	Time: 1700Z 1/20/11
Relinquished by (Signature): <i>[Signature]</i>	Received by (Signature): <i>[Signature]</i>	Date: 1/22/11	Time: 0830

* NWTPH-Dx includes TPH-D + TPH-O