Ċ		<b>CONESTOGA-ROVERS</b> & ASSOCIATES	Emeryville Telephone	s Street, Suite A e, California 94608 e: (510) 420-0700 Fax: (510) 420-9170 world.com
		TRANSM	ΛΙΤΤΑΙ	
		· · · · · · · · · · · · · · · · · · ·		
DATE:	Januar		ENCE NO.:	241501
-	<b>.</b>		CT NAME:	461 8th Street, Oakland
То:		Vickham		
		eda County Environmental Health	(	RECEIVED
	1131 H	Iarbor Bay Parkway, Suite 250		RECEIVED By Alameda County Environmental Health at 9:31 am, Jan 29, 2013
	Alame	eda, California 94502-6577		by Alameda County Environmental Realth at 9.51 am, Jan 29, 2015
Please find	d enclose		Final Other	· · · · · · · · · · · · · · · · · · ·
Sent via:	7 7 1		Same Day C OtherG	Courier eoTracker and Alameda County FTP
QUAN	TITY		DESCRIP	TION
1		Groundwater Monitoring Report -	Fourth Qu	arter 2012
=	Requested Your Use		nd Commer	nt
COMME If you hav (510) 420-	ve any q	uestions regarding the contents of the	document	t, please call Peter Schaefer at
		Dereis Bussers Chall Oil Bus derets LIC	-1	
Copy to:		Denis Brown, Shell Oil Products US ( Leroy Griffin, Fire Prevention Bureau Oakland, CA 94612 A.F. Evans Company (property owne Oakland, CA 94507	ı, 250 Franl	k Ogawa Plaza, 3 <sup>rd</sup> Floor, Suite 3341,
		Leah Goldberg, Meyers Nave, 555 12	<sup>th</sup> Street, Su	uite 1500, Oakland, CA 94607
		Grover Buhr, Treadwell & Rollo (elec		
Complete	ed by:	Peter Schaefer	Signed:	feter Schafen
Filing:	Correspo	ondence File	/	



Jerry Wickham Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577 Denis L. Brown Shell Oil Products US HSE – Environmental Services 20945 S. Wilmington Ave. Carson, CA 90810-1039 Tel (707) 865 0251 Fax (707) 865 2542 Email denis.1.brown@shel1.com

Re: Former Shell Service Station 461 8<sup>th</sup> Street Oakland, California SAP Code 129453 Incident No. 97093399 ACEH Case No. RO0000343

Dear Mr. Wickham:

The attached document is provided for your review and comment. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

As always, please feel free to contact me directly at (707) 865-0251 with any questions or concerns.

Sincerely,

Denis L. Brown Senior Program Manager



# GROUNDWATER MONITORING REPORT – FOURTH QUARTER 2012

FORMER SHELL SERVICE STATION 461 8<sup>th</sup> STREET OAKLAND, CALIFORNIA

SAP CODE	129453
INCIDENT NO.	97093399
AGENCY NO.	RO0000343

# Prepared by: Conestoga-Rovers & Associates

5900 Hollis Street, Suite A Emeryville, California U.S.A. 94608

Office: (510) 420-0700 Fax: (510) 420-9170

web: http://www.CRAworld.com

JANUARY 24, 2013 REF. NO. 241501 (32) This report is printed on recycled paper.

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# 1.0 INTRODUCTION

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

## 1.1 SITE INFORMATION

Site Address	461 8th Street, Oakland
Site Use	Parking lot
Shell Project Manager	Denis Brown
CRA Project Manager	Peter Schaefer
Lead Agency and Contact	ACEH, Jerry Wickham
Agency Case No.	RO0000343
Shell SAP Code:	129453
Shell Incident No.	97093399

Date of most recent agency correspondence was November 27, 2012 (electronic).

## 2.0 SITE ACTIVITIES, FINDINGS, AND DISCUSSION

### 2.1 <u>CURRENT QUARTER'S ACTIVITIES</u>

During third quarter 2012, the groundwater monitoring program was modified to gauge and sample wells S-5 and S-6 quarterly to better examine concentration trends for constituents of concern. Blaine Tech Services, Inc. (Blaine) gauged and sampled the wells according to the modified monitoring program for this site.

CRA prepared a vicinity map (Figure 1), a groundwater contour and chemical concentration map (Figure 2), and a groundwater data table (Table 1). Blaine's field notes are presented in Appendix A, and the laboratory reports are presented in Appendix B.

Alameda County Environmental Health's November 27, 2012 electronic correspondence extended the due date for this report to January 25, 2013.

1

# 2.2 CURRENT QUARTER'S FINDINGS

Groundwater Flow Direction	Generally southerly
Hydraulic Gradient	Variable
Depth to Water	16.00 to 23.42 feet below top of well casing

# 2.3 PROPOSED ACTIVITIES

Blaine will gauge and sample wells according to the modified program discussed above. The site is monitored quarterly, and CRA will issue groundwater monitoring reports semiannually following the second and fourth quarter sampling events.

All of Which is Respectfully Submitted, CONESTOGA-ROVERS & ASSOCIATES

feter Schafen

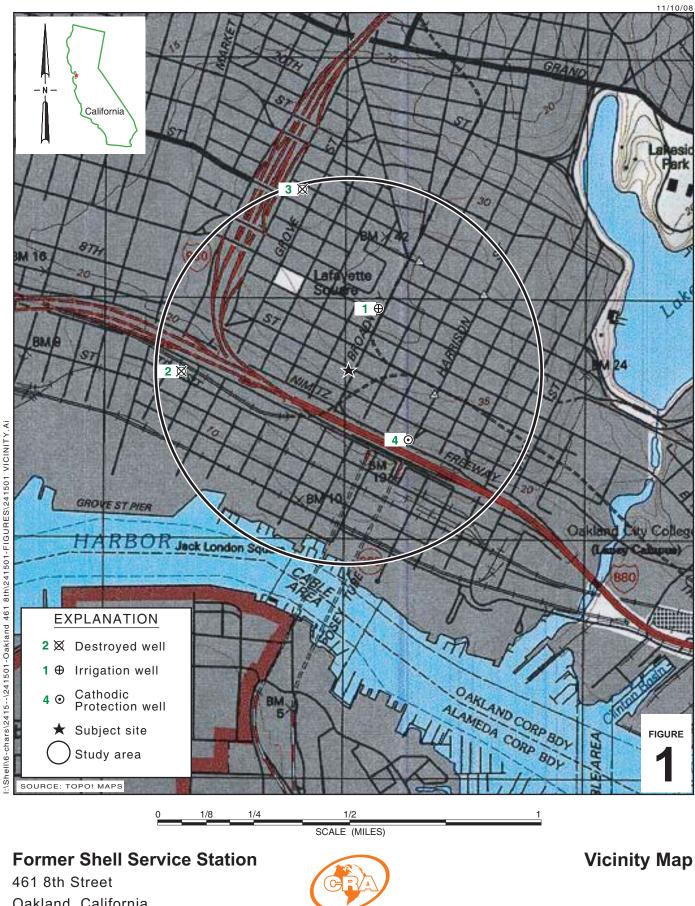
Peter Schaefer, CEG, CHG

Anney K Corl

Aubrey K. Cool, PG

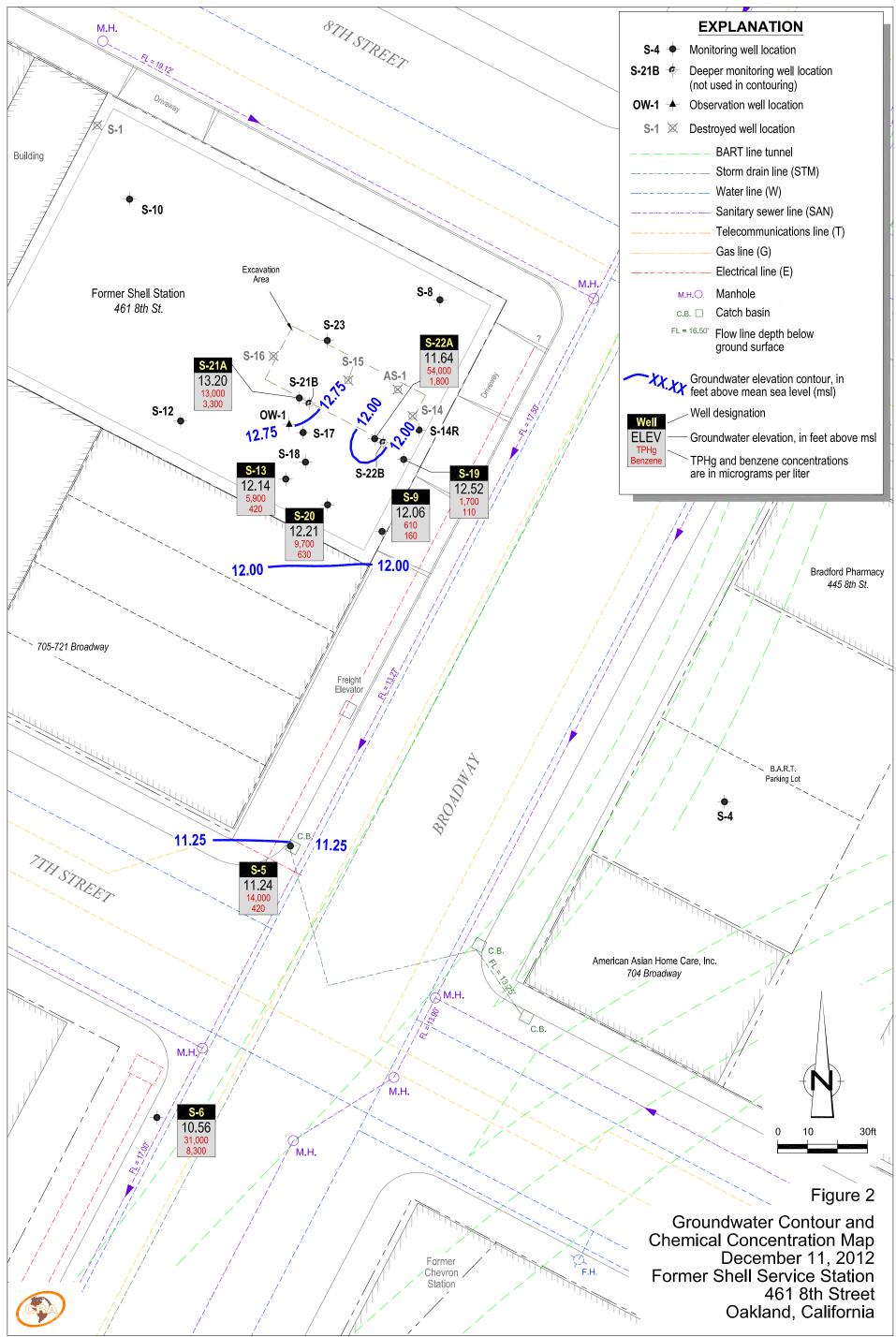


# FIGURES



Oakland, California





I:\Shell\6-chars\2415--\241501-Oakland 461 8th St\241501-REPORTS\241501-RPT32-4Q12\241501 4QM12-GW.DWG (01/24/2013)

#### GROUNDWATER DATA FORMER SHELL SERVICE STATION 461 8TH STREET, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	В (µg/L)	Τ (μg/L)	E (µg/L)	X (µg/L)	МТВЕ 8020 (µg/L)	МТВЕ 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-4	10/26/1988	130	3.8	13	4.0	30									93.51					
S-4	02/14/1989	<50	0.50	<1.0	<1.0	3.0									93.51	12.82		80.69		
S-4	05/01/1989	Well dry													93.51	16.48		77.03		
S-4	07/27/1989	Well dry													93.51	15.84	'	77.67		
S-4	10/05/1989	Well dry													93.51	15.98		77.53		
S-4	01/09/1990	Well dry													93.51	15.86		77.65		
S-4	04/30/1990	<50	<0.50	<0.50	< 0.50	<1.0									93.51	14.48		79.03		
S-4	07/31/1990	Well dry		'											93.51					
S-4	10/30/1990	Well dry													93.51					
S-4	05/06/1991	Well dry													93.51	15.23		78.28		
S-4	06/27/1991	<50	< 0.50	< 0.50	<0.50	<0.50				·					93.51	13.54		79.97		
S-4	09/24/1991	Well dry													93.51	15.85		77.66		
S-4	11/07/1991	Well dry													93.51	15.60		77.91		
S-4	02/13/1992	<50	<0.50	< 0.50	< 0.50	3.0									93.51	14.27		79.24		
S-4	05/11/1992	Well dry						·							93.51					
S-4	12/03/1992														93.51					
S-4	05/13/1993	Well inacce	essible												93.51	14.81		78.70		
S-4	07/22/1993	Well inacce	essible												93.51	14.42		79.09		
S-4	10/20/1993	Well inacce	essible												93.51					
S-4	01/25/1994	Well inacce	essible		` <del></del>										93.51	14.60		78.91		
S-4	04/25/1994	Well inacce	essible						-						93.51	14.39		79.12		
S-4	07/21/1994	<50	<0.50	< 0.50	<0.50	<0.50									93.51	22.29		71.22		
S-4	10/24/1994	<500	< 0.50	< 0.50	<0.50	<0.50									93.51	22.72		70.79		an an an
S-4	12/22/1994	<50	< 0.50	< 0.50	< 0.50	<0.50									25.77	22.25		3.52		
S-4	04/20/1995	<50	<0.50	< 0.50	< 0.50	<0.50									25.77	21.16		4.61		
S-4	10/04/1995	<50	1.2	0.70	< 0.50	<0.50									25.77	22.25		3.52		
S-4	01/03/1996	<50	0.60	< 0.50	<0.50	1.7									25.77	23.28		2.49		
S-4	04/11/1996	<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5						·		25.77	21.58		4.19	'	
S-4	07/11/1996	<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5								25.77	21.60		4.17		
S-4	10/02/1996	<50	< 0.50	< 0.50	< 0.50	<0.50	2.6								25.77	22.46		3.31		
S-4	01/22/1997	<50	0.73	<0.50	<0.50	0.63	<2.5								25.77	20.06		5.71		
S-4	07/21/1997	<50	< 0.50	< 0.50	<0.50	<0.50	<2.5								25.77	22.10		3.67		
S-4	01/22/1998	<50	< 0.50	< 0.50	<0.50	<0.50	<2.5								25.77	20.50		5.27		
S-4	07/08/1998	<50	< 0.50	< 0.50	<0.50	<0.50	<2.5								25.77	20.86		4.91		
S-4	10/26/1998												'		25.77	21.41		4.36		
S-4	01/28/1999	<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5								25.77	22.34		3.43		
S-4	04/23/1999						*****								25.77	21.43		4.34		
S-4	07/29/1999	<50.0	< 0.500	< 0.500	< 0.500	< 0.500	< 5.00								25.77	21.45		4.32		
S-4	11/01/1999														25.77	22.08		3.69		
S-4	01/07/2000	<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5								25.77	22.29		3.48		
S-4	04/11/2000									*					25.77	21.11		4.66		
S-4	07/19/2000	<50.0	< 0.500	< 0.500	< 0.500	< 0.500	<2.50								25.77	21.19		4.58		

.

Well ID	Date	TPHg (µg/L)	В (µg/L)	Τ (μg/L)	Е (µg/L)	X (µg/L)	МТВЕ 8020 (µg/L)	МТВЕ 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-4	10/12/2000														25.77	22.22		3.55		
S-4	01/09/2001	<50.0	< 0.500	< 0.500	< 0.500	< 0.500	<2.50								25.77	22.17		3.60		
S-4	04/06/2001														25.77	21.50		4.27		
S-4	07/25/2001	<50	2.0	0.52	< 0.50	1.0		<5.0							25.77	21.50		4.27		
S-4	11/01/2001														25.77	21.95		3.82		
S-4	01/17/2002	<50 d	<0.50 d	<0.50 d	<0.50 d	<0.50 d		<5.0 d							25.77	21.13		4.64		
S-4	05/08/2002														25.77	21.35		4.42		
S-4	07/18/2002	<50	< 0.50	< 0.50	< 0.50	<0.50		<5.0							34.41	21.19		13.22		
S-4	10/15/2002														34.41	21.42		12.99		
S-4	01/02/2003	<50	< 0.50	< 0.50	< 0.50	<0.50		<5.0							34.41	20.75		13.66		
S-4	04/15/2003														34.41	21.08		13.33		
S-4	07/14/2003														34.41	19.93		14.48		
S-4	10/20/2003														34.41	19.56		14.85		
S-4	01/22/2004	<50	< 0.50	<0.50	<0.50	<1.0		< 0.50							34.41	19.12		15.29		
S-4	04/19/2004														34.41	19.15		15.26		
S-4	07/13/2004														34.41	20.48		13.93		
S-4	10/28/2004														34.41	21.00		13.41		
S-4	01/17/2005	<50	< 0.50	<0.50	<0.50	<1.0		<0.50			*****				34.41	20.17		14.24	<del></del>	
S-4	04/14/2005														34.41	19.82		14.59		
S-4	07/28/2005														34.41	20.71		13.70		
S-4	10/05/2005														34.41	20.85		13.56		
S-4	02/09/2006	<50.0	<0.500	< 0.500	<0.500	<0.500		<0.500							34.41	19.47		14.94		
S-4	05/15/2006														34.41	19.52		14.89		
S-4	08/23/2006														34.41	20.75		13.66		
S-4	11/15/2006														34.41	20.03		14.38		
S-4	01/30/2007	<50	<0.50	<0.50	<0.50	<1.0		<0.50							34.41	21.30		13.11		
S-4	05/29/2007														34.41	21.15		13.26		
S-4	08/15/2007														34.41	21.38		13.03		
S-4	11/28/2007								·						34.41	21.55		12.86		
S-4	02/08/2008	64 f	<0.50	<1.0	<1.0	<1.0		<1.0					<0.50	<1.0	34.41	22.75		11.66		
S-4	05/08/2008														34.41	22.18		12.23		
S-4	08/14/2008														34.41	21.77		12.64		
S-4	11/11/2008														34.41	20.68		13.73		
S-4	01/05/2009	250	1.8	<1.0	<1.0	<1.0		<1.0					<0.50	<1.0	34.41	20.92		13.49		
S-4	04/09/2009	'													34.41	21.10		13.31		
S-4	07/23/2009														34.41	21.76		12.65		
S-4	10/01/2009														34.41	22.10		12.31		
S-4	01/28/2010	<50	< 0.50	<1.0	<1.0	<1.0									34.41	21.75		12.66		
S-4	05/20/2010														34.41	21.44		12.97		
S-4	08/31/2010														34.41	21.72		12.69		
S-4	12/29/2010														34.41	20.91		13.50		
S-4	02/01/2011	<50	<0.50	<0.50	<0.50	1.1									34.41	21.19		13.22	1.84	157

•

Well ID	Date	TPHg (µg/L)	В (µg/L)	Т (µg/L)	Е (µg/L)	X (µg/L)	МТВЕ 8020 (µg/L)	МТВЕ 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-4	04/25/2011														34.41	17.32		17.09	,	
S-4	07/28/2011														34.41	20.92		13.49		-
S-4	10/28/2011														34.41	21.35		13.06		
S-4	05/07/2012	240	86	22	9.5	25									34.41	20.65		13.76	2.52	119
S-5	04/16/1987	130,000	15,000	16,000	а	14,000				·					99.36					
S-5	10/26/1988	110,000	20,000	25,000	2,300	10,000									99.36					
S-5	02/14/1989	94,000	16,000	21,000	1,800	10,000									99.36	19.87		79.49		
S-5	05/01/1989	120,000	29,000	35,000	3,100	15,000									99.36	21.23		78.13		
S-5	07/27/1989	110,000	20,000	29,000	2,400	14,000									99.36	20.41		78.95		
S-5	10/05/1989														99.36	20.43	0.01	78.94		
S-5	01/09/1990												·		99.36	21.16	0.01	78.21		
S-5	04/30/1990	100,000	13,000	22,000	2,100	11,000									99.36	20.96		78.40		
S-5	07/31/1990	53,000	8,300	14,000	1,200	7,400									99.36	20.88		78.48		
S-5	10/30/1990														99.36	21.96	0.03	77.42		
S-5	05/06/1991						'								99.36	23.00	0.13	76.46		
S-5	06/27/1991														99.36	20.53	0.03	78.85		
S-5	09/24/1991														99.36	21.40	0.06	78.01		
S-5	11/07/1991														99.36	21.33	0.25	78.23		
S-5	02/13/1992														99.36	22.52	0.31	77.09		
S-5	05/11/1992														99.36	22.46	0.58	77.36		
S-5	12/03/1992	Well inacc	essible												99.36					
S-5	05/13/1993														99.36	22.22	0.27	77.36		
S-5	07/22/1993														99.36	21.68	0.25	77.88		
S-5	10/20/1993														99.36	20.51	0.23	79.03		
S-5	01/25/1994														99.36	21.93	0.18	77.57		
S-5	04/25/1994														99.36	21.97	0.35	77.67		
S-5	05/26/1994														99.36	20.84	0.35	78.80		
S-5	06/10/1994														99.36	21.01	0.32	78.61		
S-5	07/21/1994														99.36	22.18	0.47	77.56		
S-5	08/25/1994														99.36	22.01	0.44	77.70		
S-5	09/22/1994														99.36	22.00	0.15	77.48		
S-5	10/24/1994														99.36	22.28	0.56	77.53		
S-5	12/22/1994														22.94	22.88	0.99	0.85		
S-5	04/20/1995														22.94	21.66	0.33	1.54		
S-5	10/04/1995														22.94	22.18		0.76		
S-5	01/03/1996														22.94	22.80	0.83	0.80		
S-5	04/11/1996				***										22.94	21.15	0.67	2.33		
S-5	07/11/1996							~~~							22.94	22.62	0.90	1.04		
S-5	10/02/1996														22.94	23.07	0.64	0.38		
S-5	01/22/1997														22.94	20.83	0.16	2.24		
S-5	07/21/1997														22.94	21.16	0.05	1.82		
50	3. 1 1 / / /																			

								MTBE	MTBE								Depth to	SPH	GW		
W	ell ID	Date	TPHg	В	Т	Ε	X	8020	8260	TBA	DIPE	ETBE	TAME	EDC	EDB	тос	Water		Elevation	DO	ORP
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ft MSL)	(ft TOC)	(ft)	(ft MSL)	(mg/L)	(mV)
	o <del>-</del>	01 /00 /1008														22.94	20.04	0.04	2.93		
	S-5	01/22/1998				 5.8	 34	3.3								22.94	20.04 18.61		4.33		
	S-5	07/08/1998	220	14	40			5.5								22.94	17.31		5.63		
	S-5	10/26/1998	 E1 000		1 200	1 200		2,400								22.94	20.11		2.83		
	S-5	01/28/1999	51,000	13,000	1,200	1,200	2,400 9,840	2,400 <1,000								22.94	19.21		3.73		
	S-5	04/23/1999	65,600	2,540	7,300	1,790	9,840 7,700	<1,000 <1,000								22.94	14.77		8.17		
	S-5	07/29/1999	61,400	3,320	6,980 5 740	1,520		<1,000 <500								22.94	15.56		7.38		
	S-5	11/01/1999	48,200	2,700	5,740	1,290	7,850		<40.0							22.94	15.82		7.12		
	S-5	01/07/2000	39,000	3,900	8,500 5.000	790	8,300	1,500 <250								22.94	13.32		4.75		
	S-5	04/11/2000	29,300	1,680	5,060	1,130	6,220		 0E2 h							22.94	19.01		3.93		
	S-5	07/19/2000	6,420	2,110	207	252	681	355	253 b							22.94	19.62		3.32		
	S-5	10/12/2000	41,500	2,940	4,940	1,520	7,770	<250	<66.7							22.94 22.94	19.02 19.94		3.00		
	S-5	01/09/2001	142,000	7,030	9,550	2,340	12,600	779													
	S-5	04/06/2001	Well inacc													22.94	 14.72		8.22		
	S-5	04/13/2001	59,800	4,810	10,800	1,950	10,100	842	<10.0							22.94					
	S-5	07/25/2001	71,000	2,900	6,800	1,700	9,100		<250							22.94	14.91		8.03		
	S-5	08/13/2001														22.94	19.43		3.51		
	S-5	11/01/2001														22.94					
	S-5	01/17/2002	58,000 d	460 d	3,300 d	1,900 d	8,400 d		<200 d							C	14.27				
	S-5	05/08/2002	60,000 d	d	2,700 d	1,800 d	8,800 d		<100 d							22.94	18.40		4.54	·	
	S-5	07/18/2002	53,000	240	1,200	1,500	6,400		<100							27.36	14.25		13.11		
	S-5	10/15/2002														27.36					
	S-5	10/17/2002	42,000	420	1,100	1,200	5,500		<10							27.36	14.90		12.46		
	S-5	01/02/2003	26,000	680	1,500	780	3,800		<5.0							27.36	14.72		12.64		
	S-5	04/15/2003	3,600	29	38	65	370		<5.0							e	14.45				
	S-5	07/14/2003	21,000	210	460	650	2,900		<10							e	14.10				
	S-5	10/20/2003	37,000	390	590	870	3,500		<13							e	14.63				
	S-5	01/22/2004	29,000	200	210	710	2,400		<13							e	14.08				
	S-5	04/19/2004	25,000	490	460	750	2,400		19							e	13.43				
	S-5	07/13/2004	28,000	300	280	690	2,400		<13							e	14.88				
	S-5	08/14/2008	31,000	1,700	1,600	1,400	3,350		<10					<5.0	<10	e	16.65				
	S-5	11/11/2008	37,000 i	2,500 i	1,300 i	2,000 i	3,490 i		<50 i					<25 i	<50 i	e	16.81				
	S-5	11/11/2008	40,000 j	2,300 j	1,400 j	1 <i>,</i> 900 j	3,630 j		<50 j					<25 j	<50 j	e	16.81				
	S-5	01/05/2009	57,000	2,300	1,400	1,500	2,900		<10					<5.0	<10	e	16.71				
	S-5	04/09/2009	52,000	2,100	3,500	1,900	5,400		<20					<10	<20	e	16.31			0.3	163
	S-5	07/23/2009	37,000	1,800	1,900	1,400	3,800									e	16.62			1.48	-84
	S-5	10/01/2009	36,000	1,800	1,900	1,400	3,700									27.24	16.35		10.89	0.86	-52
	S-5	01/28/2010	35,000	1,200	1,900	1,500	3,600									27.24	16.35		10.89		
	S-5	05/20/2010	36,000	1,600	2,500	1,700	4,500									27.24	16.50		10.74	1.22	227
	S-5	08/31/2010	32,000	1,300	1,100	1,600	3,400									27.24	16.95		10.29	0.58	-102
	S-5	12/29/2010	26,000	970	1,500	1,500	3,200									27.24	16.25		10.99	1.18	233
	S-5	02/01/2011	27,000	1,100	1,500	1,400	3,100									27.24	15.38		11.86	1.65	-83
	S-5	04/25/2011	70,000	380	440	720	1,200									27.24	13.98		13.26	0.95	-109

Well ID	Date	TPHg (µg/L)	В (µg/L)	Τ (μg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	МТВЕ 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-5	07/28/2011	21,000	340	430	570	1,000						,			27.24	13.80		13.44	0.71	-95
S-5	10/28/2011	23,000	430	480	570	1,300									27.24	14.28		12.96	6.05	190
S-5	05/07/2012	16,000	150	200	350	760									27.24	13.82		13.42	3.61	120
S-5	08/31/2012	12,000	330	300	330	850									27.24	14.68		12.56	1.38	253
S-5	12/11/2012	14,000	420	700	550	1,500									27.24	16.00		11.24	1.07/1.29	162/63
S-6	04/16/1987	81,000	16,000	9,000	а	6,400									100.58					
S-6	10/26/1988	110,000	29,000	18,000	2,500	8,200									100.58					
S-6	02/14/1989	54,000	18,000	4,500	1,400	4,000									100.58	20.87		79.71		
S-6	05/01/1989	93,000	43,000	9,900	3,000	8,000									100.58	20.49		80.09		
S-6	07/27/1989	52,000	20,000	3,200	1,700	5,500									100.58	21.01		79.57		
S-6	10/05/1989	55,000	20,000	2,900	1,600	5,500									100.58	21.24		79.34		
S-6	01/09/1990	76,000	35,000	9,100	2,300	8,600									100.58	22.62	Sheen	77.96		
S-6	04/30/1990	39,000	13,000	2,300	900	2,800									100.58	22.10		78.48		
S-6	07/31/1990	48,000	20,000	4,600	1,500	4,900									100.58	22.00		78.58		
S-6	10/30/1990	27,000	7,400	900	600	1,400									100.58	22.14		78.44		
S-6	05/06/1991	35,000	3,900	2,700	2,300	3,500									100.58	22.40		78.18		
S-6	06/27/1991	51,000	19,000	5,600	1,700	6,300									100.58	21.21		79.37		
S-6	09/24/1991	42,000	14,000	4,300	1,200	4,000									100.58	22.26		78.32		
S-6	11/07/1991	39,000	11,000	2,000	800	2,300									100.58	22.35		78.23	an 10, an	
S-6	02/13/1992	64,000	21,000	6,200	1,600	5,100									100.58	22.28		78.30		
S-6	05/11/1992	57,000	22,000	7,600	2,200	7,700									100.58	22.10		78.48		
S-6	12/03/1992	110,000	26,000	9,400	2,100	8,700									100.58	22.14		78.44		
S-6	05/13/1993	58,000	21,000	6,800	2,500	9,800									100.58	22.16		78.42		
S-6	07/22/1993	70,000	31,000	14,000	3,000	13,000						-			100.58	21.64		78.94		
S-6	10/20/1993	48,000	28,000	9,800	3,200	12,000									100.58	21.62		78.96		
S-6	01/25/1994	70,000	23,000	7,500	2,500	8,000									100.58	21.80		78.78		
S-6	04/25/1994	61,000	16,000	4,000	1,800	5,100									100.58	21.68		78.90		
S-6	07/21/1994	44,000	8,200	3,600	1,400	3,900				*					100.58	21.78		78.80		
S-6 (D)	07/21/1994	32,000	7,800	3,400	1,300	3,700									100.58					
S-6	10/24/1994	2,936	1,184	440.6	163.4	648.4									100.58	22.06		78.52		
S-6 (D)	10/24/1994	2,968	770.8	325.3	144.1	622									22.08*					
S-6	12/22/1994	32,000	7,000	2,900	790	2,400									22.08	21.91		0.17		
S-6 (D)	12/22/1994	32,000	8,000	3,800	1,100	3,400									22.08					
S-6	04/20/1995	56,000	15,000	3,800	1,900	4,900									22.08	21.38		0.70		
S-6 (D)	04/20/1995	49,000	13,000	3,500	1,800	4,700									22.08		,			
S-6	10/04/1995	49,000	8,400	4,700	1,800	4,800									22.08	21.80		0.28		
S-6 (D)	10/04/1995	41,000	8,400	4,100	1,400	4,400									22.08					
S-6	01/03/1996	52,000	9,100	7,100	1,800	5,800									22.08	21.70		0.38		
S-6	04/11/1996	59,000	11,000	7,100	2,100	6,400	<500								22.08	21.62		0.46		
S-6 (D)	04/11/1996	59,000	11,000	6,800	1,900	6,400	<500								22.08					
S-6	07/11/1996	72,000	18,000	6,600	2,500	8,400	<1,000					'			22.08	21.65		0.43		
00	,,	,	20,000	.,	_,	-,	_,													

Well ID	Date	TPHg	В	Т	Ε	X	MTBE 8020	MTBE 8260	TBA	DIPE	ETBE	TAME	EDC	EDB	тос	Depth to Water	SPH Thickness	GW Elevation	DO	ORP
	2000	(µg/L)	- (μg/L)	(μg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ft MSL)	(ft TOC)	(ft)	(ft MSL)	( <i>mg/L</i> )	(mV)
S-6	10/02/1996	57,000	11,000	6,500	1,500	5,100	<500								22.08	21.80		0.28		
S-6	01/22/1997	67,000	15,000	5,000	1,800	5,400	<1,000								22.08	19.95		2.13		
S-6 (D)	01/22/1997	63,000	15,000	4,800	1,800	5,200	<1,000								22.08					
S-6	07/21/1997	61,000	15,000	2,100	1,100	3,500	1,900								22.08	20.61		1.47		
S-6	01/22/1998	46,000	14,000	3,200	1,300	3,400	<500								22.08	19.82		2.26		
S-6	07/08/1998	74,000	26,000	7,500	2,200	6,200	<1,000								22.08	18.20		3.88		
S-6	10/26/1998						·								22.08	18.81		3.27		
S-6	01/28/1999	120,000	9,000	14,000	2,700	14,000	3 <i>,</i> 700								22.08	19.73		2.35		
S-6	04/23/1999	58,500	15,900	1,360	1,640	3,030	<2500								22.08	17.58		4.50	240 <sup>-</sup> 240 <sup>-</sup> 440	
S-6	07/29/1999	36,200	10,300	760	930	1,360	<1,000								22.08	21.35		0.73		
S-6	11/01/1999	36,000	11,700	767	865	1,670	<1,250	<40.0							22.08	19.23		2.85		
S-6	01/07/2000	36,000	7,600	4,600	840	3,600	<1,000								22.08	19.53		2.55		·
S-6	04/11/2000	14,600	7,540	205	306	609	621								22.08	18.16		3.92		
S-6	07/19/2000	2,590	629	63.9	99.6	267	124	72.7 b							22.08	18.40		3.68		
S-6	10/12/2000	32,900	14,200	966	1,060	1,790	<500	<100							22.08	19.52		2.56		
S-6	01/09/2001	27,600	11,200	675	666	1,580	1,430	<10.0 b							22.08	19.69		2.39		
S-6	02/05/2001														22.08	19.20		2.88		
S-6	04/06/2001	16,900	7,800	343	172	966	809	<20.0							22.08	18.25		3.83		
S-6	07/25/2001	29,000	9,800	1,700	1,000	1,800		<250							22.08	18.27		3.81		
S-6	11/01/2001	41,000	15,000	2,400	1,100	2,500		<500							22.08	19.30		2.78		
S-6	01/17/2002	38,000 d	11,000 d	1,700 d	990 d	2,200 d		<500 d							22.08	18.51		3.57		
S-6	05/08/2002	72,000	21,000	4,400	2,200	5,300		<1,000							22.08	18.30		3.78		
S-6	07/18/2002	71,000	17,000	4,300	1,700	4,800		<1,000							30.56	18.19		12.37		
S-6	10/15/2002	55,000	16,000	4,600	1,500	4,600		<100							30.56	18.77		11.79		
S-6	01/02/2003	75,000	21,000	5,000	2,400	6,400		<50							30.56	18.60		11.96		
S-6	04/15/2003	64,000	29,000	6,400	2,700	5,600		<1,000							30.56	18.27		12.29		
S-6	07/14/2003	47,000	19,000	4,300	1,500	4,300		<100							30.56	18.05		12.51		
S-6	10/20/2003	63,000	21,000	5,800	1,900	5,200		<130							30.56	18.55	Sheen	12.01		
S-6	01/22/2004	41,000	21,000	4,300	1,800	4,000		<130							30.56	18.18	Sheen	12.38		
S-6	04/19/2004	58,000	23,000	4,200	2,200	3,900		<130							30.56	17.32		13.24		
S-6	05/03/2004														30.56	17.30		13.26		
S-6	06/17/2004										·				30.56	17.70		12.86		
S-6	07/13/2004											~~~			30.56	17.85		12.71		
S-6	10/28/2004	45,000	21,000	3,600	1,700	3,300		<130							30.56	18.45		12.11		
S-6	01/17/2005	61,000	21,000	3,500	1,600	3,200		<130							30.56	17.52		13.04		
S-6	04/14/2005	36,000	12,000	6,200	850	4,800		<50							30.56	22.49		8.07		
S-6	07/28/2005	54,000	16,000	9,100	1,800	5,900		<130							30.56	19.38		11.18		
S-6	10/05/2005	59,000	14,000	7,500	1,400	5,000		<50							30.56	18.32		12.24		
S-6	02/09/2006	41,100	7,060	3,900	673	2,380		< 0.500							30.56	17.11		13.45		
S-6	05/15/2006	188,000	24,800	20,700	2,540	12,400		<25.0							30.56	19.80		10.76		
S-6	08/23/2006	133,000	24,900	16,100	2,280	10,500		<0.500							30.56	20.45		10.11		
S-6	11/15/2006	66,000	19,000	8,400	1,900	7,400		<400							30.56	20.41		10.15		

Well ID	Date	TPHg (µg/L)	В (µg/L)	Т (µg/L)	Е (µg/L)	Х (µg/L)	МТВЕ 8020 (µg/L)	МТВЕ 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-6	01/30/2007	88,000	18,000	9,600	1,900	7,200		<100							30.56	20.47		10.09		
S-6	05/29/2007	56,000 f	17,000	6,700	1,700	5,400		<20							30.56	20.40		10.16		
S-6	08/15/2007	57,000 f,g	15,000	6,800	1,600	6,100		<100							30.56	20.49		10.07		
S-6	11/28/2007	42,000 f	13,000	5,000	1,300	5,000		<100							30.56	20.65		9.91		
S-6	02/08/2008	35,000 f	12,000	5,000	1,200	4,050		<100					<50	<100	30.56	20.31		10.25		
S-6	05/08/2008	45,000 f	15,000	6,100	1,400	5,000		<100					<50	<100	30.56	20.63		9.93		
S-6	08/14/2008	37,000	11,000	5,200	1 <b>,2</b> 00	4,600		<100					<50	<100	30.56	20.65		9.91		
S-6	11/11/2008	37,000 i	15,000 i	6,200 i	1,200 i	3,390 i		<10 i					<5.0 i	<10 i	30.56	20.79		9.77		
S-6	11/11/2008	14,000 j	5,200 j	680 j	400 j	1,060 j		<50 j					<25 j	<50 j	30.56	20.79		9.77		
S-6	01/05/2009	53,000	9,400	3,600	890	3,100		<100					<50	<100	30.56	21.66		8.90		
S-6	04/09/2009	Unable to	-										 <e0< td=""><td></td><td>30.56</td><td>20.20</td><td></td><td> 10.36</td><td></td><td></td></e0<>		30.56	20.20		 10.36		
S-6	04/21/2009	13,000	3,700	1,100	270	750		<100					<50	<100	30.56 30.56	20.20		9.90	1.13	-73
S-6	07/23/2009	15,000	4,400	1,100	360	1,000									30.56 30.56	20.86		9.70	0.58	16
S-6	10/01/2009	21,000	5,100	1,300	420	1,200									30.56	20.36		10.20		
S-6	01/28/2010	8,700	2,600	250	200	400									30.56	20.68		9.88	1.08	64
S-6	05/20/2010	4,400	1,600	82	85 540	150 1,600	· (								30.56	20.78		9.78	1.55	-88
S-6	08/31/2010	19,000 15,000	4,700 3,900	1,300 1,500	560 520	1,800									30.56	19.92		10.64	2.35	123
S-6	12/29/2010 02/01/2011	15,000 16,000	3,900 4,000	1,500 1,700	600	1,800									30.56	19.05		11.51	0.61	-143
S-6 S-6	02/01/2011 04/25/2011	23,000	4,000 7,800	3,500	960	3,000									30.56	17.73		12.83	0.76	-112
5-6 S-6	$\frac{04}{25}\frac{2011}{2011}$	23,000 17,000	5,500	1,500	600	1,600									30.56	17.62		12.94	0.77	-26
S-6	10/28/2011	42,000	11,000	4,500	1,600	5,900									30.56	18.12		12.44	4.64	-9
S-6	05/07/2012	38,000	14,000	4,800	1,300	4,400									30.56	17.50		13.06	2.32	116
S-6	08/31/2012	96,000	6,700	2,500	1,900	6,200									30.56	18.42		12.14	0.62	146
S-6	12/11/2012	31,000	8,300	3,700	1,000	3,700									30.56	20.00		10.56	0.92/0.65	102/-16
S-8	12/22/1994	600	120	32	5.2	34									27.21	24.87		2.34		
S-8	04/20/1995	460	180	23	5.2	21									27.21	23.90		3.31		
S-8	10/04/1995	830	210	38	11	42									27.21	24.48		2.73		
S-8	01/03/1996	350	61	12	2.5	12									27.21	24.62		2.59		
S-8 (D)	01/03/1996	340	54	12	2.4	12									27.21			 2.89		
S-8	04/11/1996	570	140	37	12	47	<6.2								27.21	24.32				
S-8	07/11/1996	980	98	32	9.1	160	<12								27.21 27.21	24.10 25.38		3.11 1.83		
S-8	10/02/1996	280	62	13	3.3	25	15								27.21 27.21					
S-8 (D)	10/02/1996	490	110	24	7.0	45	22	<2.0							27.21 27.21	 23.91		3.30		
S-8	01/22/1997	400	90	13	4.9	25	12								27.21	23.62		3.59		
S-8	07/21/1997	2,900	380	110	26 22	260 200	85 120								27.21					
S-8 (D)	07/21/1997	3,200	420	120 140	32 42	300 330	130 160								27.21	23.52		3.69		
S-8	01/22/1998	3,800	790 780	140 120	42 33	330 300	160 160					*			27.21					
S-8 (D)	01/22/1998	3,500 3,600	780 1,800	120 <25	33 <25	300 <25	<125								27.21	21.52		5.69		
S-8	07/08/1998 07/08/1998	3,600 4,000	1,800	<25 <25	<25 <25	<25 31	<125 <125								27.21					
S-8 (D)	07/00/1990	4,000	1,000	~20	~20	51	~120								1					

Well ID	Date	TPHg (µg/L)	Β (μg/L)	Τ (μg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-8	10/26/1998														27.21	22.01		5.20		
S-8	01/28/1999	2,000	630	6.2	24	51	43								27.21	23.03		4.18		
S-8	04/23/1999	1,050	408	< 5.00	<5.00	6.65	<50.0								27.21	22.15		5.06		
S-8	07/29/1999	955	344	<2.50	6.90	16.2	<25.0								27.21	21.95		5.26		
S-8	11/01/1999	1,800	550	6.45	15.0	40.4	<50.0								27.21	22.55		4.66		
S-8	01/07/2000	1,300	600	11	29	48	<13								27.21	22.87		4.34		
S-8	04/11/2000	342	101	4.42	4.24	14.7	21.4								27.21	21.86		5.35		
S-8	07/19/2000	579	228	6.37	6.45	25	<12.5								27.21	21.93		5.28		
S-8	10/12/2000	947	340	8.64	3.26	38.3	<12.5	<2.00							27.21	22.92		4.29		
S-8	01/09/2001	1,090	394	<10.0	<10.0	33.3	57.6								27.21	23.19		4.02		
S-8	04/06/2001	671	182	12.5	16.4	47.1	42.5							·	27.21	22.46		4.75		
S-8	07/25/2001	500	70	6.7	11	23		<5.0							27.21	22.50		4.71		
S-8	11/01/2001	1,900	250	28	39	180		<5.0							27.21	22.44		4.77		
S-8	01/17/2002	830 d	140 d	11 d	12 d	89 d		<5.0 d							27.21	21.82		5.39		
S-8	05/08/2002	210 d	34 d	1.7 d	4.1 d	15 d		<5.0 d							27.21	21.35		5.86		
S-8	07/18/2002	650	68	2.8	9.7	42		<5.0							35.85	21.53		14.32		
S-8	10/15/2002	1,000	160	4.2	7.7	74		< 0.50							35.85	21.97		13.88		
S-8	01/02/2003	440	55	1.8	2.9	31		<0.50							35.85	21.95		13.90		
S-8	04/15/2003														35.85	21.73		14.12		
S-8	07/14/2003	60	6.8	<0.50	0.98	4.9		<0.50							35.85	21.40		14.45		
S-8	10/20/2003														35.85	21.94		13.91		
S-8	01/22/2004	210	19	0.52	3.6	17		<0.50							35.85	21.40		14.45		
S-8	04/19/2004														35.85	20.83		15.02		
S-8	07/13/2004	420	77	0.82	14	31		<0.50							35.85	21.05		14.80		
S-8	10/28/2004														35.85	21.77		14.08		
S-8	01/17/2005	490	85	0.89	13	28		< 0.50							35.85	20.92		14.93		
S-8	04/14/2005														35.85	21.57		14.28		
S-8	07/28/2005	64	12	<0.50	1.5	1.6		<0.50							35.85	21.62		14.23		
S-8	10/05/2005														35.85	21.11		14.74		
S-8	02/09/2006	<50.0	2.79	<0.500	<0.500	< 0.500		<0.500							35.85	20.18		15.67		
S-8	05/15/2006														35.85	20.53		15.32		
S-8	08/23/2006	<50.0	<0.500	<0.500	< 0.500	<0.500		<0.500							35.85	21.49		14.36		
S-8	11/15/2006														35.85	22.05		13.80		
S-8	01/30/2007	<50	<0.50	<0.50	<0.50	<1.0		<0.50							35.85	22.41		13.44		
S-8	05/29/2007														35.85	22.65		13.20		
S-8	08/15/2007	65 f,g	7.4	<1.0	<1.0	<1.0		<1.0							35.85	22.88		12.97		
S-8	11/28/2007														35.85	23.20		12.65		
S-8	02/08/2008	350 f	22	<1.0	4.8	2.6		1.2					<0.50	<1.0	35.85	22.72		13.13		
S-8	05/08/2008														35.85	22.91		12.94		
S-8	08/14/2008	420	28	<1.0	6.3	1.4		<1.0					<0.50	<1.0	35.85	23.12		12.73		
S-8	11/11/2008	330 i	37 i	<1.0 i	5.1 i	<1.0 i		<1.0 i					<0.50 i	<1.0 i	35.85	23.37		12.48	1.6	28
S-8	11/11/2008	480 j	29 j	<1.0 j	5.4 j	<1.0 j									35.85	23.37		12.48	2.2	103

.

Well ID	Date	TPHg (µg/L)	В (µg/L)	Т (µg/L)	E (µg/L)	X (µg/L)	МТВЕ 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-8	12/18/2008	340	38	<1.0	5.4	<1.0									35.83	23.31		12.52		
S-8	01/05/2009	170	15	<1.0	1.2	<1.0									35.83	23.28		12.55		
S-8	01/15/2009	260	45	<1.0	3.2	<1.0									35.83	23.05		12.78		
S-8	02/12/2009	88	7.2	<1.0	<1.0	<1.0									35.83	23.34		12.49		
S-8	03/12/2009	12,000	1,700	2,100	200	2,400									35.83	22.90		12.93		
S-8	04/09/2009	170	< 0.50	<1.0	<1.0	<1.0									35.83	23.10		12.73		594
S-8	07/23/2009	140	0.55	<1.0	<1.0	<1.0									35.83	23.02		12.81	2.38	-54
S-8	10/01/2009	140	0.68	<1.0	<1.0	<1.0									35.83	23.31		12.52	4.34	359
S-8	01/28/2010	<50	< 0.50	<1.0	<1.0	<1.0									35.83	22.80		13.03		
S-8	05/20/2010	<50	< 0.50	<1.0	<1.0	<1.0									35.83	23.55		12.28	0.64	42
S-8	08/31/2010	<50	< 0.50	<1.0	<1.0	<1.0									35.83	23.48		12.35	0.54	-72
S-8	12/29/2010	79	0.83	<1.0	<1.0	<1.0									35.83	23.18		12.65	0.74	133
S-8	02/01/2011	<50	< 0.50	< 0.50	<0.50	<1.0									35.83	22.57		13.26	1.68	104
S-8	04/25/2011	<50	1.1	< 0.50	< 0.50	<1.0									35.83	21.26		14.57	1.78	12
S-8	07/28/2011	50	2.4	< 0.50	<0.50	<1.0									35.83	20.94		14.89	0.89	186
S-8	10/28/2011	<50	0.61	< 0.50	<0.50	<1.0									35.83	21.09		14.74	2.78	349
S-8	05/07/2012	<50	4.3	1.4	0.59	1.0									35.83	21.23		14.60	2.42	209
S-9	12/22/1994	2,600	400	150	42	310									26.06	24.37		1.69		
S-9	04/20/1995	1,900	400	130	51	200									26.06	23.49		2.57		
S-9	10/04/1995	3,200	590	260	68	280									26.06	24.01		2.05		
S-9	01/03/1996	Well inacc	essible												26.06					
S-9	04/11/1996	2,100	440	1,500	42	210	<25								26.06	23.61		2.45		
S-9	07/11/1996	5,200	940	450	120	520	<50								26.06	23.78		2.28		
S-9 (D)	07/11/1996	4,800	890	430	110	500	<50								26.06					
S-9	10/02/1996	3,000	680	220	56	270	<62								26.06	24.31		1.75		
S-9	01/22/1997	1,500	230	71	36	130	<12								26.06	23.08		2.98		
S-9	07/21/1997	3,400	590	57	19	210	96								26.06	22.83		3.23		
S-9	01/22/1998	2,600	300	46	<10	270	62								26.06	21.96		4.10		
S-9	07/08/1998	820	150	6.2	7.5	57	<10								26.06	20.85		5.21		
S-9	10/26/1998						· ´		·						26.06	21.39		4.67		
S-9	01/28/1999	<50	1.0	< 0.50	<0.50	< 0.50	<2.5								26.06	22.32		3.74		
S-9	04/23/1999														26.06	21.41		4.65		
S-9	07/29/1999	117	7.77	0.817	0.683	5.05	<5.00								26.06	21.25		4.81		
S-9	11/01/1999														26.06	21.92		4.14		
S-9	01/07/2000	<50	1.2	< 0.50	< 0.50	< 0.50	<2.5								26.06	22.11		3.95		
S-9	04/11/2000														26.06	21.14		4.92		
S-9		Well inacc													26.06					
S-9	10/12/2000														26.06	22.24		3.82		
5-9 S-9	10/12/2000 01/09/2001	<50.0	1.45	< 0.500	< 0.500	< 0.500	<2.50								26.06	22.52		3.54		
5-9 S-9	01/09/2001 04/06/2001	<50.0		~0.500	<0.500	<0.500	~2.50								26.06	23.61		2.45		
5-9 S-9	04/08/2001														26.06					
3-9	07/23/2001	wen mace	Costore.												_0.00					

Well ID	Date	TPHg (µg/L)	В (µg/L)	Т (µg/L)	Ε (μg/L)	X (µg/L)	MTBE 8020 (µg/L)	МТВЕ 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-9	08/13/2001	Well inacc	essible												26.06					
S-9	11/01/2001														26.06	21.78		4.28		
S-9	01/17/2002	<50 d	<0.50 d	<0.50 d	<0.50 d	<0.50 d		<5.0 d							26.06	21.15		4.91		
S-9	05/08/2002														26.06	20.56		5.50		
S-9	07/18/2002	<50	< 0.50	< 0.50	<0.50	<0.50		<5.0							34.70	20.88		13.82		
S-9	10/15/2002														34.70	21.41		13.29		
S-9	01/02/2003	<50	<0.50	<0.50	<0.50	< 0.50		<5.0							34.70	21.35		13.35		
S-9	04/15/2003														34.70	21.14		13.56		
S-9	07/14/2003	<50	<0.50	< 0.50	< 0.50	<1.0		<0.50							34.70	20.80		13.90		
S-9	10/20/2003														34.70	21.33		13.37		
S-9	01/22/2004	<50	<0.50	<0.50	< 0.50	<1.0		<0.50							34.70	20.77		13.93		
S-9	04/19/2004														34.70	20.06		14.64		
S-9	07/13/2004	<50	< 0.50	< 0.50	< 0.50	<1.0		<0.50							34.70	20.44		14.26		
S-9	10/28/2004														34.70	21.02		13.68		
S-9	01/17/2005	<50	< 0.50	<0.50	<0.50	<1.0		< 0.50							34.70	20.18		14.52		
S-9	04/14/2005														34.70	21.85		12.85		
S-9	07/28/2005	360	190	1.8	1.1	3.9		<0.50	<5.0	<2.0	<2.0	<2.0			34.70	21.22		13.48		
S-9	10/05/2005						-								34.70	20.63		14.07		
S-9	02/09/2006	<50.0	0.94	< 0.500	< 0.500	< 0.500		< 0.500							34.70	19.23		15.47		
S-9	05/15/2006														34.70	20.28		14.42		
S-9	08/23/2006	7,000	1,740	55.6	193	278		<0.500	<10.0	< 0.500	< 0.500	< 0.500			34.70	21.31		13.39		
S-9	11/15/2006														34.70	21.79		12.91		
S-9	01/30/2007	12,000	2,200	250	480	980		<0.50							34.70	22.08		12.62		
S-9	05/29/2007														34.70	22.22		12.48		
S-9	08/15/2007	9,800 f,g	2,400	100	410	602		<10	<100	<20	<20	<20			34.70	22.43		12.27		
S-9	11/28/2007														34.70	22.75		11.95		
S-9	02/08/2008	69 f	2.2	<1.0	<1.0	<1.0		<1.0					<0.50	<1.0	34.70	22.31		12.39		
S-9	05/08/2008														34.70	22.49		12.21		
S-9	08/14/2008	<50	<0.50	<1.0	<1.0	<1.0		<1.0					<0.50	<1.0	34.70	22.70		12.00		
S-9	11/11/2008	<50 i	2.4 i	<1.0 i	<1.0 i	<1.0 i		<1.0 i					<0.50 i	<1.0 i	34.70	22.90		11.80	1.1	92
S-9	11/11/2008	550 j	74 j	12 j	22 j	55.3 j									34.70	22.90		11.80	3.6	98
S-9	12/18/2008	1,500	280	43	71	182									34.34	22.81		11.53		
S-9	01/05/2009	1,000	230	24	45	64									34.34	22.75		11.59		
S-9	01/15/2009	2,100	560	75	100	245									34.34	22.37		11.97		
S-9	02/12/2009	500	120	19	26	50									34.34	22.61		11.73		
S-9	03/12/2009	810	200	30	50	110									34.34	22.22		12.12		
S-9	04/09/2009	2,300	450	60	110	260									34.34	22.12		12.22	0.65	79
S-9	05/18/2009	1,500	200	35	61	180									34.34	22.09		12.25	2.71	173
S-9	07/23/2009	1,700	430	49	110	190									34.34	22.48		11.86	0.21	346
S-9	10/01/2009	1,200	180	12	58	93									34.34	22.84		11.50	1.37	146
S-9	11/09/2009	1,400	260	21	67	81									34.34	22.63		11.71	0.42	
S-9	12/01/2009	1,100	110	11	26	59									34.34	22.44		11.90	1.09	133

Well ID	Date	TPHg (µg/L)	В (µg/L)	Τ (μg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	МТВЕ 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)	DO (mg/L)	ORP (1nV)
S-9	01/28/2010	860	130	9.3	38	79				-					34.34	22.35		11.99	1.95	
S-9	05/20/2010	1,900	340	27	100	210									34.34	22.40		11.94	0.17	138
S-9	06/22/2010	1,400	240	30	65	130									34.34	22.64		11.70	2.16	577
S-9	08/31/2010	760	130	13	54	110		<1.0	<10	<2.0	<2.0	<2.0			34.34	22.92		11.42	1.53	415
S-9	12/29/2010	290	55	3.3	18	41									34.34	22.62		11.72	1.64	163
S-9	02/01/2011	640	99	7.8	38	72									34.34	21.88		12.46	1.34	0
S-9	04/25/2011	590	120	9.1	29	77									34.34	20.34		14.00	0.62	98 ·
S-9	07/28/2011	1,700	280	47	88	230		<1.0	<10	<1.0	<1.0	<1.0			34.34	20.10		14.24	2.17	73
S-9	10/28/2011	1,900	370	32	110	260		'							34.34	20.54		13.80	2.18	122
S-9	05/07/2012	970	200	14	46	100		<2.5	<50	<2.5	<2.5	<2.5			34.34	20.49		13.85	0.91	78
S-9	1 <b>2/11/201</b> 2	610	160	22	32	95									34.34	22.28		12.06	1.28/1.53	93/76
S-10	12/22/1994	420	27	8.0	18	45									28.04	25.84		2.20		
S-10	04/20/1995	820	49	3.7	97	52									28.04	24.92		3.12		
S-10	10/04/1995	240	6.5	1.1	16	12									28.04	25.47		2.57		
S-10	01/03/1996	1,100	27	4.9	110	70									28.04	25.60		2.44		
S-10	04/11/1996	530	19	1.6	82	52	<5.0								28.04	25.27	·	2.77		
S-10	07/11/1996	570	16	3.2	53	53	<2.5								28.04	25.46		2.58		
S-10	10/02/1996	270	8.2	0.77	24	23	3.3								28.04	25.81		2.23		
S-10	01/22/1997	160	4.8	0.73	16	11	<2.5								28.04	24.74		3.30		
S-10	07/21/1997	530	5.7	0.70	29	69	<2.5								28.04	24.50		3.54		
S-10	01/22/1998	1,500	15	<5.0	88	130	<25								28.04	24.44		3.60		
S-10	07/08/1998	530	4.8	1.1	47	51	<2.5								28.04	22.36		5.68		
S-10	10/26/1998														28.04	22.81		5.23		
S-10	01/28/1999	630	4.6	0.98	<0.50	59	<2.5								28.04	23.82		4.22		
S-10	04/23/1999				10	·									28.04	22.96		5.08		
S-10	07/29/1999	728	3.4	<1.00	41.8	38.0	<10.0								28.04	22.63		5.41		
S-10	11/01/1999														28.04	23.02		5.02		
S-10	01/07/2000	870	8.5	1.3	110	110	<2.5								28.04	23.33		4.71		
S-10	04/11/2000														28.04	22.64		5.40		
S-10	07/19/2000	612	3.75	< 0.500	41.6	43.6	<2.50								28.04	23.04		5.00		
S-10	10/12/2000														28.04	23.92		4.12		
S-10	01/09/2001	647	7.62	1.01	66.2	42.4	<2.50								28.04	24.13		3.91		
S-10	04/06/2001														28.04	25.37		2.67		
S-10	07/25/2001	340	1.5	< 0.50	42	19		<5.0	,						28.04	25.35		2.69		
S-10	11/01/2001														28.04	23.22		4.82		
S-10	01/17/2002	1,100 d	3.5 d	<0.50 d	55 d	46 d		<5.0 d							28.04	22.72		5.32		
S-10	05/08/2002														28.04	22.35		5.69		
S-10	07/18/2002	750	1.8	< 0.50	42	26		<5.0							36.35	22.05		14.30		
S-10	10/15/2002														36.35	22.51		13.84		
S-10	01/02/2003	<b>44</b> 0	1.8	< 0.50	14	24		<5.0							36.35	22.50		13.85		
S-10	04/15/2003														36.35	22.32		14.03		

Well ID	Date	TPHg (µg/L)	В (µg/L)	Т (µg/L)	E (µg/L)	X (µg/L)	МТВЕ 8020 (µg/L)	МТВЕ 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)	DO (1ng/L)	ORP (mV)
S-10	07/14/2003	210	0.86	< 0.50	13	12		< 0.50							36.35	21.99		14.36		
S-10	10/20/2003														36.35	22.53		13.82		
S-10	01/22/2004	280	0.88	< 0.50	10	11		< 0.50							36.35	22.02		14.33		
S-10	04/19/2004														36.35	21.43		14.92		
S-10	07/13/2004	770	1.5	< 0.50	70	42		< 0.50							36.35	21.68		14.67		
S-10	10/28/2004														36.35	22.37		13.98		
S-10	01/17/2005	1,100	1.5	<0.50	73	51		<0.50							36.35	21.45		14.90		
S-10	04/14/2005														36.35	22.18		14.17		
S-10	07/28/2005	260	< 0.50	<0.50	19	9.7		<0.50	<5.0	<2.0	<2.0	<2.0	'		36.35	22.25		14.10		
S-10	10/05/2005								•						36.35	21.70		14.65		
S-10	02/09/2006	630	<0.500	<0.500	13.8	13.8		<0.500							36.35	20.37		15.98		
S-10	05/15/2006														36.35	21.31		15.04 14.23		
S-10	08/23/2006	<50.0	< 0.500	<0.500	14.5	3.4		<0.500	<10.0	<0.500	<0.500	<0.500			36.35	22.12		14.25 13.67		
S-10	11/15/2006														36.35 36.35	22.68 23.09		13.07		
S-10	01/30/2007	120	<0.50	<0.50	7.0	3.3		<0.50							36.35 36.35	23.09		13.15		
S-10	05/29/2007														36.35 36.35	23.20 23.48		12.87		
S-10	08/15/2007	64 f,g	0.15 h	<1.0	1.4	0.72 h		<1.0	<10	<2.0	<2.0	<2.0			36.35 36.35	23.40		12.53		
S-10	11/28/2007												 <0.50	<1.0	36.35 36.35	23.32		13.04		
S-10	02/08/2008	61 f	<0.50	<1.0	<1.0	<1.0		<1.0					<0.50	~1.0	36.35	23.55		12.80		
S-10	05/08/2008												< 0.50	<1.0	36.35	23.75		12.60		
S-10	08/14/2008	58	<0.50	<1.0	2.7	<1.0		<1.0					-0.50		36.35	23.08		13.27		
S-10	11/11/2008														36.35	24.00		12.35		
S-10	12/18/2008	<50	<0.50	<1.0	<1.0	<1.0									36.35	23.87		12.48		
S-10	01/05/2009	<50	<0.50	<1.0	<1.0	<1.0 <1.0									36.35	23.66		12.69		
S-10	01/15/2009	<50	<0.50	<1.0	1.1 3.4	<1.0 <1.0									36.35	23.96		12.39		
S-10	02/12/2009	56	<0.50 <0.50	<1.0 <1.0	5.4 4.9	<1.0 <1.0									36.35	23.44		12.91		
S-10	03/12/2009	53													36.35	23.26		13.09		
S-10	04/09/2009		 <0.50	 <1.0	5.7	<1.0									36.35	23.56		12.79	0.06	112
S-10	07/23/2009 10/01/2009	66 76	<0.50 <0.50	<1.0 <1.0	4.6	<1.0 <1.0									36.35	23.80		12.55	1.26	206
S-10 S-10	$\frac{10}{01}\frac{2009}{2010}$	100	<0.50	<1.0 <1.0	3.6	<1.0									36.35	23.30		13.05		
S-10 S-10	01/28/2010	100 52	<0.50	<1.0 <1.0	1.9	<1.0									36.35	24.04		12.31	0.68	59
S-10 S-10	03/20/2010	<50	<0.50 0.69	<1.0	1.9	<1.0		<1.0	<10	<2.0	<2.0	<2.0			36.35	24.24		12.11	0.51	-3
S-10 S-10	12/29/2010	< <u>50</u> 95	< 0.50	<1.0	3.4	1.4									36.35	23.89		12.46	0.43	87
S-10	$\frac{12}{29}$ 2010 $\frac{02}{01}$	69	<0.50	< 0.50	2.2	<1.0									36.35	23.25		13.10	2.08	117
S-10	04/25/2011	55	0.51	< 0.50	2.9	<1.0									36.35	21.87		14.48	1.32	21
S-10 S-10	04/23/2011 07/28/2011	<50	< 0.51	<1.0	0.92	<1.0		<1.0	<10	<1.0	<1.0	<1.0		100 M	36.35	21.39		14.96	0.32	227
S-10	10/28/2011	<50 52	<0.50	< 0.50	2.7	<1.0									36.35	21.68		14.67	2.68	327
S-10 S-10	05/07/2012	52 50	0.84	< 0.50	1.5	<1.0		< 0.50	<10	<0.50	< 0.50	<0.50			36.35	22.00		14.35	2.51	220
5-10	00/07/2012	00	0.01	-0.00	2.0															
S-12	12/17/2007														36.44	24.58		11.86		1
S-12	02/08/2008	55 f	<0.50	<1.0	<1.0	<1.0		<1.0					< 0.50	<1.0	36.44	24.32		12.12		
0-14	52, 00, 2000		5.00																	

Well ID	Date	TPHg	В	Т	Ε	X	MTBE 8020	MTBE 8260	TBA	DIPE	ETBE	TAME	EDC	EDB	тос	Depth to Water	SPH Thickness	GW Elevation	DO	ORP
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ft MSL)	(ft TOC)	(ft)	(ft MSL)	(mg/L)	(mV)
S-12	05/08/2008	<50 f	<0.50	<1.0	<1.0	<1.0		<1.0					<0.50	<1.0	36.44	24.51		11.93		
S-12	08/14/2008	<50	1.0	<1.0	<1.0	<1.0		<1.0					<0.50	<1.0	36.44	24.63		11.81		
S-12	11/11/2008	<50 i	0.95 i	<1.0 i	<1.0 i	<1.0 i		<1.0 i					<0.50 i	<1.0 i	36.44	24.85		11.59	0.2	37
S-12	11/11/2008	65 j	8.1 j	2.2 j	4.8 j	1.5 j									36.44	24.85		11.59	0.2	45
S-12	12/18/2008	<50	8.3	<1.0	1.8	<1.0									36.44	24.81		11.63		
S-12	01/05/2009	95	16	<1.0	3.2	<1.0									36.44	24.75		11.69		
S-12	01/15/2009	140	36	<1.0	12	<1.0									36.44	24.54		11.90		
S-12	02/12/2009	<50	5.0	<1.0	1.6	<1.0									36.44	24.81		11.63		
S-12	03/12/2009	<50	4.8	<1.0	1.5	<1.0									36.44	24.41		12.03		
S-12	04/09/2009	59	6.0	<1.0	1.6	<1.0									36.44	24.23		12.21	0.50	-3
S-12	07/23/2009	130	29	<1.0	13	<1.0									36.44	24.50		11.94	0.07	142
S-12	10/01/2009	130	25	<1.0	15	<1.0									36.44	24.76		11.68	0.74	135
S-12	01/28/2010	110	14	<1.0	19	<1.0									36.44	24.28		12.16		
S-12	05/20/2010	75	8.5	<1.0	7.0	<1.0									36.44	24.71		11.73	0.14	740
S-12	08/31/2010	<50	0.56	<1.0	<1.0	<1.0									36.44	25.08		11.36	1.18	180
S-12	12/29/2010	<50	0.98	<1.0	<1.0	<1.0									36.44	24.60		11.84	1.27	121 -2
S-12	02/01/2011	<50	1.8	<0.50	2.8	<1.0									36.44	23.94		12.50	2.06 0.28	-2 196
S-12	04/25/2011	<50	0.82	<0.50	1.7	<1.0									36.44	22.53		13.91 14.39	0.28 3.01	198
S-12	07/28/2011	<50	0.96	<0.50	2.8	<1.0									36.44	22.05		14.39 13.94	3.67	185 91
S-12	10/28/2011	99	15	< 0.50	14	<1.0									36.44	22.50 22.50		13.94	0.88	66
S-12	05/07/2012	180	25	<0.50	19	1.0									36.44	22.50			0.00	00
S-13	12/17/2007														35.16	23.33		11.83		
S-13	02/08/2008	1 <b>4</b> ,000 f	1,900	1,300	280	3,000		<10					<5.0	<10	35.16	23.01		12.15		
S-13	05/08/2008	18,000 f	2,800	3,400	550	3,500		<10					<5.0	<10	35.16	23.31		11.85		
S-13	08/14/2008	16,000	2,400	3,100	580	3,100		<20					<10	<20	35.16	23.31		11.85		
S-13	11/11/2008	16,000 i	2,400 i	2,800 i	270 i	2,500 i		<50 i					<25 i	<50 i	35.16	23.60		11.56	0.8	-48
S-13	11/11/2008	4 <b>,4</b> 00 j	560 j	630 j	88 j	530 j									35.16	23.60		11.56	1.2	-60
S-13	12/18/2008	3,900	530	560	76	510									35.05	23.61		11.44		
S-13	01/05/2009	8,200	700	670	67	1,000									35.05	23.54		11.51		
S-13	01/15/2009	5,400	610	610	48	950									35.05	23.10		11.95		
S-13	02/12/2009	6,300	800	1,000	110	870									35.05	22.36		12.69		
S-13	03/12/2009	14,000	1,700	2,300	190	2,400									35.05	23.20		11.85		
S-13	04/09/2009	35,000	510	7,800	1,000	4,300									35.05	23.02		12.03	25.9	433
S-13	05/18/2009	35,000	820	7,000	1,100	6,600									35.05	23.07		11.98	5.21	83 149
S-13	07/23/2009	18,000	1,800	3,000	480	2,500									35.05	23.51		11.54	1.23	148
S-13	10/01/2009	2,000	330	87	33	5.2									35.05	23.61		11.44	1.23	413
S-13	11/09/2009	15,000	1,100	1,500	300	1,800									35.05	23.41		11.64 11.00	0.71 16.3	 231
S-13	12/01/2009	1,600	210	190	34	36									35.05	23.15		11.90 12.11	16.3 2,18	231
S-13	01/28/2010	5,900	370	930	100	680									35.05	22.94		12.11 11.69	2.18 0.31	211
S-13	05/20/2010	400	35	120	9.5	52									35.05	23.36 23.20		11.89	1.10	412
S-13	06/22/2010	16,000	570	3,000	260	2,000									35.05	23.20		11.00	1.10	712

Well ID	Date	TPHg (µg/L)	В (µg/L)	Т (µg/L)	Е (µg/L)	X (µg/L)	МТВЕ 8020 (µg/L)	МТВЕ 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-13	08/31/2010	3,000	140	490	83	540									35.05	24.00		11.05	0.90	400
S-13	12/29/2010	8,700	600	1,700	260	1,700									35.05	23.48		11.57	0.69	231
S-13	02/01/2011	2,100	170	390	75	410									35.05	22.71		12.34	1.10	248
S-13	04/25/2011	6,000	600	1,800	270	1,300									35.05	21.15		13.90	0.19	69
S-13	07/28/2011	3,700	320	430	160	790									35.05	20.64		14.41	2.65	44
S-13	10/28/2011	8,100	600	830	380	1,700									35.05	21.47		13.58	3.67	1
S-13	05/07/2012	5,100	540	670	320	1,100									35.05	21.35		13.70	0.60	-176
S-13	12/11/2012	5,900	420	580	260	950									35.05	22.91		12.14	1.07/0.80	-70/-63
															04.04	22 ( 2		10.06		
S-14	12/17/2007														34.94	22.68		12.26		
S-14	02/08/2008	5,300 f	380	300	34	970		<10					<5.0	<10	34.94	22.82		12.12		
S-14	05/08/2008	4,300 f	750	270	30	520		<10					<5.0	<10	34.94	22.41		12.53		
S-14	Well destroyed																			
0.14P	44 (07 (0000														35.19	22.91		12.28		
S-14R	11/07/2008				 <25 i										35.19	23.13		12.06	0.60	115
S-14R	11/11/2008	8,500 i	680 i	270 i		1,110 i 470 j									35.19	23.13		12.06	1.5	116
S-14R	11/11/2008	4,300 j	270 j 530	190 j 640	43 j 79	470 J 1,010									34.95	22.80		12.15		
S-14R	12/18/2008	7,800 2,100	330 89	86	79 19	1,010									34.95	22.80		12.15		
S-14R	01/05/2009	2,100 4,800	430	540	83	730									34.95	22.57		12.38		
S-14R	01/15/2009	-	430 40	540 29	83 7.3	730 55									34.95	22.89		12.06		
S-14R	02/12/2009	1,000 350	40 22	29 18	7.3 3.3	33 29									34.95	22.39		12.56		
S-14R	03/12/2009 04/09/2009	2,300	22	240	3.3 47	250									34.95	22.35		12.60	0.30	430
S-14R	04/09/2009	2,300 750	230 51	48	17	67									34.95	22.20		12.75	5.63	93
S-14R	07/23/2009	600 ·	81	40 57	17	47									34.95	22.56		12.39	0.05	246
S-14R S-14R	10/01/2009	230	12	10	5.3	23									34.95	22.90		12.05	2.22	201
S-14R S-14R	11/09/2009	230 330	12 47	10 21	5.5 11	39									34.95	22.68		12.27	0.75	
S-14R S-14R	12/01/2009	330 420	38	21	11	39									34.95	22.62		12.33	0.45	110
S-14R S-14R	01/28/2010	420 270	45	27	11	32									34.95	22.38		12.57	3.75	
S-14R	05/20/2010	330	17	10	2.7	13									34.95	22.72		12.23	0.96	102
S-14R S-14R	08/31/2010	130	5.8	3.5	1.4	6.1									34.95	23.12		11.83	1.55	-13
S-14R	12/29/2010	480	56	30	13	52									34.95	22.75		12.20	0.48	375
S-14R S-14R	02/01/2011	570	56	32	20	59									34.95	22.10		12.85	0.58	143
S-14R	04/25/2011	860	100	59	41	97									34.95	20.80		14.15	0.81	-37
S-14R	07/28/2011	970	100	80	51	110									34.95	20.36		14.59	0.56	151
S-14R	10/28/2011	420	47	38	25	67									34.95	20.68		14.27	3.97	321
5-14R S-14R	05/07/2012	420 630	68	62	40	120									34.95	20.77		14.18	2.47	238
0110	00, 00, 2012	000		~=																
S-15	12/17/2007														35.34	23.00		12.34		
S-15	02/08/2008	55,000 f	6,700	13,000	1,100	9,800		<10					<5.0	<10	35.34	22.71		12.63		
S-15	05/08/2008	53,000 f	6,300	13,000	1,500	7,500		<200					<100	<200	35.34	22.91		12.43		
S-15	Well destroyed																			

Well ID	Date	TPHg (µg/L)	В (µg/L)	Т (µg/L)	Ε (μg/L)	X (µg/L)	MTBE 8020 (µg/L)	МТВЕ 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-16	12/17/2007														36.08	23.88		12.20		-
S-16	02/08/2008	6,000 f	670	730	88	1,290		<5.0					<2.5	<5.0	36.08	23.52		12.56		
S-16	05/08/2008	3,200 f	670	320	18	580		<10					<5.0	<10	36.08	23.69		12.39		
S-16	Well destroyed																			
S-17	06/19/2008														35.49	23.30		12.19		
S-17	06/25/2008	21,000	1,300	1,300	160	2,850		<5.0					<2.5	<5.0	35.49	23.33		12.16		
S-17	08/14/2008	14,000	1,700	1,700	310	2,250		<10					<5.0	<10	35.49	23.50		11.99		
S-17	11/11/2008	7,200 i	1,600 i	820 i	140 i	760 i		<5.0 i					<2.5 i	<5.0 i	35.49	23.70		11.79		
S-17	11/11/2008	32,000 j	2,500 j	3,100 j	820 j	4,000 j		<25 j					<12 j	<25 j	35.49	23.70		11.79		
S-17	01/05/2009	15,000	790	700	150	1,200		<10					<5.0	<10	35.50	23.66		11.84		
S-17	01/15/2009	2,300	220	170	19	300									35.50	23.37		12.13		
S-17	02/12/2009	4,700	750	200	37	23									35.50	23.66		11.84		
S-17	03/12/2009	3,300	640	370	81	290									35.50	23.24		12.26		
S-17	04/09/2009	1,300	200	110	37	100									35.50	23.20		12.30	0.69	429
S-17	05/18/2009	630	97	44	17	25									35.50	23.21		12.29	5.93	442
S-17	07/23/2009	3,900	480	410	160	480									35.50	23.70		11.80	0.15	34
S-17	10/01/2009	1,300	32	24	3.1	72					*****				35.50	23.64		11.86	1.30	204
S-17	11/09/2009	5 <i>,</i> 300	260	330	56	500									35.50	23.52		11.98	0.18	
S-17	12/01/2009	3 <i>,</i> 300	190	210	52	240									35.50	23.41		12.09	0.95	450
S-17	01/28/2010	3,500	260	250	85	310									35.50	23.21		12.29	1.93	
S-17	05/20/2010	370	18	<1.0	<1.0	<1.0									35.50	23.65		11.85	1.31	544 270
S-17	08/31/2010	1,900	120	110	52	260									35.50	23.92		11.58	1.32	370
S-17	12/29/2010	2,600	200	150	91	280									35.50	23.60		11.90	1.37	131 136
S-17	02/01/2011	950	100	72	47	130									35.50	22.91		12.59	1.40	82
S-17	04/25/2011	2,000	150	71	77	210									35.50	21.44		14.06	0.23	82 70
S-17	07/28/2011	3,400	270	98	170	370									35.50	21.06		14.44	1.45	221
S-17	10/28/2011	270	58	5.3	23	28		teri ati 🚥							35.50	21.51		13.99	1.19 0.62	221 84
S-17	05/07/2012	980	110	3.6	66	100									35.50	21.50		14.00	0.62	04
S-18	06/19/2008														35.04	22.94		12.10		
S-18	06/25/2008	58,000	2,200	5 <i>,</i> 600	880	10,200		<10					<5.0	<10	35.04	22.92		12.12	·	
S-18	08/14/2008	25,000	2,500	4,500	860	5,800		<50					<25	<50	35.04	23.08		11.96		
S-18	11/11/2008	24,000 i	2,400 i	3,300 i	820 i	3,800 i		<25 i					<12 i	<25 i	35.04	23.30		11.74		
S-18	11/11/2008	43,000 j	3,900 j	5,500 j	1,300 j	6,500 j		<50 j					<25 j	<50 j	35.04	23.30		11.74		
S-18	01/05/2009	20,000	830	1,000	290	1,400		<50					<25	<50	35.03	23.16		11.87		
S-18	01/15/2009	8,200	690	790	150	1,230									35.03	22.97		12.06		
S-18	02/12/2009	13,000	1,200	1,400	330	940									35.03	23.29		11.74		
S-18	03/12/2009	52,000	5,300	9,000	1,600	10,000									35.03	22.85		12.18		
S-18	04/09/2009	Insufficier													35.03	22.79		12.24		
S-18	05/18/2009	6,700	320	1,100	200	1,000									35.03	22.81		12.22	6.51	377

#### GROUNDWATER DATA FORMER SHELL SERVICE STATION 461 8TH STREET, OAKLAND, CALIFORNIA

							MTBE	MTBE							TOO	Depth to	SPH	GW	DO	0.0.0.0
Well ID	Date	TPHg	B	T	E	X	8020	8260	TBA	DIPE	ETBE	TAME	EDC	EDB	TOC	Water			DO (mg/L)	ORP (mV)
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ft MSL)	(ft TOC)	(ft)	(ft MSL)	(mg/L)	(mv)
S-18	07/23/2009	8,900	500	890	290	1,600									35.03	22.91		12.12	0.20	
S-18	10/01/2009	1,800	49	5.5	5.3	<5.0									35.03	23.65		11.38	6.25	557
S-18	11/09/2009	1,100	79	8.9	5.3	1.1									35.03	23.19		11.84	0.26	
S-18	12/01/2009	570	50	7.5	2.7	1.2									35.03	23.12		11.91	4.07	460
S-18	01/28/2010	1,200	170	91	18	68									35.03	22.86		12.17	1.90	
S-18	05/20/2010	3,900	500	690	79	240									35.03	23.12		11.91	1.77	169
S-18	06/22/2010	13,000	1,700	2,800	200	1,000									35.03	23.10		11.93	0.58	499
S-18	08/31/2010	6,600	970	1,100	230	1,000									35.03	23.55		11.48	1.23	258
S-18	12/29/2010	8,500	1,000	750	410	1,800									35.03	23.23		11.80	0.79	70
S-18	02/01/2011	2,100	210	190	87	180									35.03	22.52		12.51	1.13	220
S-18	04/25/2011	13,000	2,100	2,000	470	2,300									35.03	21.00		14.03	0.52	85
S-18	07/28/2011	8,200	1,200	1,000	290	1,200									35.03	20.56		14.47	1.57	27
S-18	10/28/2011	9,000	1,200	480	430	1,900									35.03	21.11		13.92	1.45	147
S-18	05/07/2012	4,700	710	310	310	870									35.03	21.20		13.83	0.55	-68
															24 50	<b>00 5</b> 0		10.05		
S-19	11/07/2008														34.78	22.73		12.05		
S-19	11/11/2008	7,100 i	500 i	600 i	25 i	1,010 i									34.78	22.87		11.91	1.0	62 71
S-19	11/11/2008	2,300 j	110 j	160 j	43 j	280 j	*****								34.78	22.87		11.91	1.3	
S-19	12/18/2008	2,900	190	300	41	420									34.57 34.57	22.60 22.56		11.97 12.01		
S-19	01/05/2009	3,400	230	250	50	380									34.57 34.57	22.36		12.01		
S-19	01/15/2009	3,100	340	540	70	440									34.57 34.57	22.51		12.20		
S-19	02/12/2009	1,300	130	180	37	190									34.57 34.57	22.58		11.55		
S-19	03/12/2009	880	110	150	30	160									34.57	22.44		12.15	0.57	106
S-19	04/09/2009	1,300	140	190	32 17	190 100									34.57 34.57	22.02		12.53	6.47	75
S-19	05/18/2009	780	69 77	87 59	17	38									34.57	22.40		12.00	0.06	31
S-19	07/23/2009 10/01/2009	400 1,500	160	59 170	33	120									34.57	22.66		11.91	0.52	301
S-19	10/01/2009 11/09/2009	1,600	140	160	33 41	120									34.57	22.44		12.13	0.26	
S-19 S-19	12/01/2009	1,600	140	180	45	170									34.57	22.62		11.95	0.79	161
S-19	$\frac{12}{01}\frac{2009}{2010}$	2,600	230	280	71	300									34.57	22.29		12.28	1.71	
S-19	05/20/2010	850	110	55	11	4.6									34.57	22.49		12.08	1.77	118
S-19	08/31/2010	580	79	92	22	50									34.57	22.86		11.71	1.02	297
S-19	12/29/2010	920	120	120	54	150									34.57	22.48		12.09	1.12	150
S-19	$\frac{12}{20} \frac{20}{2010}$	1,800	210	270	100	320									34.57	21.78		12.79	1.08	21
S-19	04/25/2011	2,100	290	360	140	470									34.57	20.42		14.15	0.25	115
S-19	07/28/2011	2,400	240	380	140	450									34.57	20.16		14.41	1.17	80
S-19	10/28/2011	3,600	210	420	190	750									34.57	20.41		14.16	1.73	160
S-19	05/07/2012	3,400	220	480	210	880									34.57	20.51		14.06	2.54	244
S-19	12/11/2012	1,700	110	240	100	440									34.57	22.05		12.52	0.89/2.21	81/52
	, ,																			
S-20	11/07/2008														34.50	22.80		11.70		
S-20	11/11/2008	13,000 i	1,300 i	1,600 i	80 i	1,920 i									34.50	22.90		11.60	0.8	-39

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Well ID	Date	TPHg (µg/L)	В (µg/L)	Т (µg/L)	E (µg/L)	X (µg/L)	МТВЕ 8020 (µg/L)	МТВЕ 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-20	11/11/2008	16,000 j	1,100 j	1,800 j	220 j	1,930 j									34.50	22.90		11.60	2.6	-64
S-20	01/05/2009	17,000	1,500	1,700	320	1,900									34.50	22.78		11.72		
S-20	02/12/2009	11,000	1,300	1,400	230	1,600									34.50	22.80		11.70	2.6	-64
S-20	03/12/2009	19,000	2,700	3,200	390	3,100									34.50	22.40		12.10		
S-20	04/09/2009	8,200	80	480	220	490				~~~					34.50	22.90		11.60	13.80	578
S-20	05/18/2009	21,000	970	1,500	630	4,800									34.50	22.42		12.08	4.58	197
S-20	07/23/2009	41,000	4,900	2,900	990	7,300									34.50	22.73		11.77	0.27	419
S-20	10/01/2009	1,800	140	39	33	39									34.50	23.00		11.50	0.85	533
S-20	11/09/2009	21,000	1,600	740	300	2,500			*****						34.50	22.72		11.78	1.67	
S-20	12/01/2009	12,000	1,100	450	160	1,200									34.50	22.61		11.89	1.38	347
S-20	01/28/2010	20,000	2,000	1,600	260	2,000							'		34.50	22.51		11.99	4.40	 555
S-20	05/20/2010	4,300	1,100	110	26	61									34.50 24.50	22.90 23.19		11.60 11.31	8.96 11.64	555 637
S-20	06/22/2010	7,100	1,300	550	120	550									34.50 24.50	23.19 23.13		11.31	0.94	529
S-20	08/31/2010	9,600	1,800	1,400	230	580									34.50 34.50	23.13 22.72		11.57 11.78	0.94	193
S-20	12/29/2010	19,000	2,000	3,100	860	3,200	~								34.50 34.50	22.72		11.78	1.03	390
S-20	02/01/2011	26,000	3,900	7,100	1,300	5,800									34.50 34.50	22.04		12.40 13.90	0.43	156
S-20	04/25/2011	41,000	6,600	11,000	2,000	9,800 6,200									34.50 34.50	20.00		13.90 14.20	1.25	-15
S-20	07/28/2011	34,000 17,000	4,200 1,500	5,300 1,900	1,400 1,000	6,300 3,400									34.50	20.78		13.72	1.28	431
S-20 S-20	10/28/2011 05/07/2012	9,900	760	1,300	790	2,000									34.50	20.54		13.96	1.92	-106
S-20 S-20	12/11/2012	9,900 9,700	630	1,200	790	1,500									34.50	22.29		12.21	0.82/1.67	-11/-43
0-20	1411/2012	5,700	000	1,000		1,000														·
S-21A	11/07/2008														35.81	23.73		12.08		
S-21A	11/11/2008	96,000 i	6,100 i	11,000 i	1,700 i	10,500 i									35.81	23.86		11.95	1.6	-42
S-21A	11/11/2008	87,000 j	6,300 j	13,000 j	1,700 j	10,300 j									35.81	23.86		11.95	1.8	-51
S-21A	12/18/2008	17,000	3,700	1,200	170	47									35.80	23.91		11.89		
S-21A	01/05/2009	28,000	3,100	2,900	450	1,100									35.80	23.78		12.02		
S-21A	01/15/2009	9,700	2,100	290	45	<25									35.80	23.53		12.27		
S-21A	02/12/2009	19,000	3,100	2,500	330	500									35.80	23.83		11.97		
S-21A	03/12/2009	31,000	2,600	3,800	810	3,700									35.80	23.35		12.45		
S-21A	04/09/2009	7,800	700	750	130	<25		·							35.80	24.00		11.80	0.91	304
S-21A	05/18/2009	15,000	1,800	2,200	390	1,900									35.80	23.46		12.34	2.37	529
S-21A	07/23/2009	51,000	4,800	7,100	1,100	7,000									35.80	23.85		11.95	0.14	-3
S-21A	10/01/2009	18,000	2,300	2,200	310	2,400									35.80	24.06		11.74	7.92	575
S-21A	11/09/2009	41,000	3,500	5,800	600	4,800									35.80	23.73		12.07	0.34	
S-21A	12/01/2009	43,000	3,100	6,700	640	4,900									35.80	23.60		12.20	2.55	350
S-21A	01/28/2010	65,000	3,900	9,900	970	6,600									35.80	23.54		12.26	1.43	 541
S-21A	05/20/2010	6,000	670	760	110	150									35.80	23.92		11.88 11.93	1.37 2.33	541 439
S-21A	06/22/2010	16,000	690	2,000	370	2,300									35.80	23.87		11.93 11.67	2.33 0.73	439 392
S-21A	08/31/2010	5,000	230	420	190	990									35.80	24.13 23.84		11.67 11.96	0.75	392 464
S-21A	12/29/2010	5,100	500	430	230	810									35.80 35.80	23.84 23.18		11.98	0.95	404 110
S-21A	02/01/2011	9,200	840	750	370	1,300						and the			33.00	23.10		12.02	0.01	110

Well ID	Date	TPHg (µg/L)	B (µg/L)	Т (µg/L)	Е (µg/L)	X (µg/L)	МТВЕ 8020 (µg/L)	МТВЕ 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-21A	04/25/2011	22,000	3,800	4,000	960	4,800									35.80	21.71		14.09	0.36	336
S-21A	07/28/2011	27,000	3,400	3,600	1,000	4,300									35.80	21.48		14.32	1.02	223
S-21A	10/28/2011	20,000	2,400	3,000	840	3,600									35.80	21.65		14.15	2.06	213
S-21A	05/07/2012	12,000	2,200	1,900	510	2,100									35.80	21.90		13.90	1.01	107
S-21A	12/11/2012	13,000	3,300	2,200	610	1 <b>,300</b>									35.80	22.60		13.20	1.35/1.49	82/80
S-21B	11/07/2008														35.79	23.68		12.11		
S-21B	11/11/2008	3,200 i	49 i	300 i	93 i	510 i								·	35.79	23.80		11.99	0.4	-108
S-21B	11/11/2008	7,500 j	67 j	470 j	150 j	960 j									35.79	23.80		11.99	5.6	-135
S-21B	12/18/2008	5,300	36	310	120	770									35.76	23.72		12.04		
S-21B	01/05/2009	5,400	35	200	93	600									35.76	23.70		12.06		
S-21B	01/15/2009	3,300	30	150	78	470									35.76	23.43		12.33		
S-21B	02/12/2009	2,800	12	100	69	450									35.76	23.81		11.95		
S-21B	03/12/2009	2,300	9.4	72	50	320									35.76	23.32		12.44		
S-21B	04/09/2009	890	14	55	19	140									35.76	23.20		12.56	0.56	453
S-21B	05/18/2009	390	6.8	14	12	27									35.76	23.24		12.52	1.62	458
S-21B	06/17/2009														35.76	23.40		12.36		
S-21B	07/23/2009	920	5.0	17	28	120									35.76	23.52		12.24	0.26	37
S-21B	10/01/2009	820	2.6	10	17	89									35.76	23.95		11.81	0.96	353
S-21B	01/28/2010	810	11	6.2	10	51									35.76	23.30		12.46		
S-21B	05/20/2010	120	1.4	2.6	2.0	2.7									35.76	23.46		12.30	1.63	206
S-21B	08/31/2010	500	0.81	3.4	6.9	32							10.00 M		35.76	24.04		11.72	0.72	45
S-21B	12/29/2010	310	< 0.50	1.9	4.5	21									35.76	23.59		12.17	0.40	191
S-21B	02/01/2011	270	< 0.50	2.0	4.0	16									35.76	23.08		12.68	0.51	10
S-21B	04/25/2011	250	< 0.50	1.9	4.6	16									35.76	21.86		13.90	1.43	72
S-21B	07/28/2011	270	< 0.50	0.84	3.0	11									35.76	21.32		14.44	2.86	127
S-21B	10/28/2011	220	< 0.50	0.53	2.3	9.2									35.76	21.52		14.24	0.96	153
S-21B	05/07/2012	170	<0.50	0.62	1.5	7.6									35.76	22.04		13.72	0.75	100
C 00 A	11 /07 /0008														35.08	22.91		12.17		
S-22A	11/07/2008			 11,000 i	2,200 i	 13,900 i									35.08	23.15		11.93	1.0	117
S-22A	11/11/2008	84,000 i	8,500 i												35.08	23.15		11.93	1.6	100
S-22A	11/11/2008	85,000 j	7,600 j	10,000 j	2,500 j 1,200	12,400 j 4,400									35.06	23.03		12.03		
S-22A	12/18/2008	42,000	6,300	6,600 5 200											35.06	23.03		12.03		
S-22A	01/05/2009	56,000	4,500 5,000	5,300	1,200	6,400 1,570									35.06	22.84		12.22		
S-22A	01/15/2009	25,000	5,900	4,400	740	1,570									35.06	23.15		11.91		
S-22A	02/12/2009	43,000	6,700	6,600	1,200	5,000									35.06	22.65		12.41		
S-22A	03/12/2009	35,000	4,600	4,600	980 680	4,600									35.06 35.06	22.88		12.18	8.41	556
S-22A	04/09/2009	22,000	120	1,900	680	3,400									35.06 35.06	22.83		12.10	2.46	539
S-22A	05/18/2009	25,000	4,700	1,300	590	3,700									35.06	22.03		12.05	0.18	167
S-22A	07/23/2009	40,000	5,100	4,800	700	4,900									35.06	23.01		12.00	4.08	523
S-22A	10/01/2009	12,000	1,400	600	88	500 1 200									35.06	23.14		11.92	1.74	
S-22A	11/09/2009	18,000	2,700	2,000	190	1,300									55.00	20.11		11./4	1.7 1	

Well ID	Date	TPHg (µg/L)	В (µg/L)	Т (µg/L)	E (µg/L)	X (µg/L)	МТВЕ 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-22A	12/01/2009	24,000	2,300	2,300	270	2,000									35.06	23.10		11.96	1.06	393
S-22A	01/28/2010	44,000	3,600	5,000	620	4,300									35.06	22.92		12.14	1.40	
S-22A	05/20/2010	3,100	38	<10	<10	<10									35.06	23.22		11.84	0.48	423
S-22A	06/22/2010	2,400	110	15	4.3	6.6									35.06	23.51		11.55	6.10	542
S-22A	08/31/2010	5,000	690	600	78	350									35.06	23.52		11.54	1.03	553
S-22A	12/29/2010	13,000	1,300	1,800	490	2,100									35.06	23.17		11.89	0.70	476
S-22A	02/01/2011	13,000	1,800	3,100	640	2,800									35.06	22.45		12.61	0.89	453
S-22A	04/25/2011	23,000	2,600	5,500	1,200	6,200									35.06	21.37		13.69	0.40	506
S-22A	07/28/2011	Well inacc	essible												35.06					
S-22A	10/28/2011	31,000	1,800	4,700	1,600	8,100									35.06	20.98		14.08	1.33	342
S-22A	05/07/2012	40,000	2,000	7,200	2,000	12,000									35.06	20.96		14.10	2.50	230
S-22A	12/11/2012	54,000	1,800	8,900	2,400	14,000									35.06	<b>23.</b> 42		11.64	0.99/1.96	-14/-21
S-22B	11/07/2008														35.15	23.06		12.09		
S-22B	11/11/2008	<50 i	<0.50 i	<1.0 i	<1.0 i	1.2 i									35.15	23.20		11.95	0.9	92
S-22B	11/11/2008	360 j	3.3 j	12 j	5.8 j	38 j									35.15	23.20		11.95	1.6	90
S-22B	12/18/2008	150	2.9	6.1	2.9	17.5									35.24	23.26		11.98		
S-22B	01/05/2009	110	1.9	5.0	2.6	11								-	35.24	28.12		7.12		
S-22B	01/15/2009	59	1.3	1.9	1.6	<1.0									35.24	22.90		12.34		
S-22B	02/12/2009	290	11	6.8	7.9	19									35.24	23.02		12.22		
S-22B	03/12/2009	390	4.4	4.6	3.8	12									35.24	22.86		12.38		
S-22B	04/09/2009	280	5.3	2.5	4.0	6.8									35.24	22.62		12.62	2.24	164
S-22B	05/18/2009	170	3.7	2.9	2.4	8.6									35.24	22.62		12.62	1.42	-171
S-22B	07/23/2009	160	8.9	5.7	3.8	12									35.24	22.65		12.59	0.15	28
S-22B	10/01/2009	300	2.4	1.0	1.2	<1.0									35.24	23.18		12.06	2.62	173
S-22B	01/28/2010	<50	< 0.50	<1.0	<1.0	<1.0									35.24	22.73		12.51		
S-22B	05/20/2010	230	< 0.50	<1.0	<1.0	<1.0									35.24	22.88		12.36	6.14	584
S-22B	08/31/2010	<50	0.57	<1.0	<1.0	<1.0									35.24	23.51		11.73	0.92	377
S-22B	12/29/2010	<50	< 0.50	<1.0	<1.0	<1.0				·					35.24	23.04		12.20	1.07	391
S-22B	02/01/2011	<50	0.55	< 0.50	< 0.50	<1.0									35.24	22.70		12.54	1.07	-3
S-22B	04/25/2011	<50	< 0.50	0.62	< 0.50	1.1									35.24	21.38		13.86	1.37	416
S-22B	07/28/2011	Well inacc	essible												35.24					
S-22B	10/28/2011	<50	< 0.50	<1.0	<1.0	<1.0									35.24	20.62		14.62	4.83	-12
S-22B	05/07/2012	<50	1.4	< 0.50	< 0.50	<1.0				645 M		·			35.24	21.08		14.16	2.84	127
																<b>2</b> 2 <b>2</b> 0		10 10		
S-23	11/07/2008														35.77	23.28		12.49		
S-23	11/11/2008	8,800 i	640 i	610 i	82 i	1,260 i									35.77	23.58		12.19		
S-23	11/11/2008	6,400 j	520 j	640 j	34 j	760 j									35.77	23.58		12.19		
S-23	01/05/2009	830	63	98	14	58									35.75	23.51		12.24		
S-23	02/12/2009	3,400	160	320	55	430									35.75	23.62		12.13 12.72		
S-23	03/12/2009	4,600	210	460	71	610									35.75	23.03			1.24	 567
S-23	04/09/2009	2,700	180	95	33	<5.0									35.75	22.98		12.77	1.24	307

#### GROUNDWATER DATA FORMER SHELL SERVICE STATION 461 8TH STREET, OAKLAND, CALIFORNIA

							MTBE	MTBE								Depth to	SPH	GW		
Well ID	Date	TPHg	В	Т	Ε	X	8020	8260	TBA	DIPE	ETBE	TAME	EDC	EDB	тос	Water	Thickness	Elevation	DO	ORP
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ft MSL)	(ft TOC)	(ft)	(ft MSL)	(mg/L)	(mV)
S-23	05/18/2009	3,000	350	440	79	300									35.75	23.18		12.57	19.77	503
S-23	07/23/2009	2,900	180	400	67	340									35.75	23.48		12.27	0.21	133
S-23	10/01/2009	790	40	24	5.4	<1.0									35.75	23.82		11.93	8.64	428
S-23	11/09/2009	3,200	84	330	90	400									35.75	23.51		12.24	0.28	
S-23	12/01/2009	1,800	47	180	50	190									35.75	23.31		12.44	2.49	472
S-23	01/28/2010	3,000	100	450	110	650									35.75	23.25		12.50	1.74	
S-23	05/20/2010	900	8.2	<5.0	<5.0	<5.0									35.75	23.80		11.95	3.76	607
S-23	06/22/2010	640	11	22	9.0	11									35.75	24.40		11.35	12.96	572
S-23	08/31/2010	710	14	45	34	110									35.75	23.95		11.80	1.25	322
S-23	12/29/2010	1,300	45	82	56	240									35.75	23.61		12.14	1.39	313
S-23	02/01/2011	1,300	51	110	72	270									35.75	22.92		12.83	1.30	107
S-23	04/25/2011	1,300	53	110	81	400									35.75	21.62		14.13	0.96	321
S-23	07/28/2011	1,400	43	79	74	320									35.75	21.28		14.47	0.92	209
S-23	10/28/2011	1,600	43	83	92	370									35.75	21.50		14.25	1.82	161
S-23	05/07/2012	870	50	40	66	220									35.75	21.59		14.16	2.20	254
AS-1	12/17/2007														35.33	22.91		12.42		
AS-1	02/08/2008	130 f	1.1	3.4	<1.0	5.4		<1.0					<0.50	<1.0	35.33	22.62		12.71		
AS-1	05/08/2008	<50 f	< 0.50	<1.0	<1.0	<1.0		<1.0					< 0.50	<1.0	35.33	27.78		7.55		
OW 1	04/00/2000	Well dry																		
OW-1	04/09/2009	5																		
OW-1	05/18/2009	Well dry																		

#### Notes:

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B; prior to July 25, 2001, analyzed by EPA Method 8015 unless otherwise noted.

BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B; prior to July 25, 2001, analyzed by EPA Method 8020.

MTBE = Methyl tertiary-butyl ether analyzed by method noted

TBA = Tertiary-butyl alcohol 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

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

EDB = 1,2-Dibromoethane analyzed by EPA Method 8260B.

TOC = Top of casing elevation, in feet relative to mean sea level

SPH = Separate-phase hydrocarbon

GW = Groundwater

DO = Dissolved oxygen (pre-purge/post purge reading)

ORP = Oxygen redox potential (pre-purge/post purge reading)

 $\mu g/l = Micrograms per liter$ 

ft = Feet

MSL = Mean sea level

mg/L = Milligrams per liter

#### GROUNDWATER DATA FORMER SHELL SERVICE STATION 461 8TH STREET, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	В (µg/L)	Т (µg/L)	E (µg/L)	X (µg/L)	МТВЕ 8020 (µg/L)	MTBE 8260 (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)	DO (mg/L)	ORP (mV)
	etected at repo alyzed or ava	U	c																	
<ul> <li>a = Included in xylenes analysis</li> <li>b = Analyzed outside of EPA recommended holding time</li> <li>c = Depth to water measured from TOC; elevation unknown.</li> <li>d = Grab sampled</li> <li>e = Casing broken; TOC unknown.</li> <li>f = Analyzed by EPA Method 8015B (M)</li> <li>g = The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was</li> <li>based upon the specified standard.</li> <li>h = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.</li> </ul>																				
i = Pre-purg j = Post-pur	ge sample	i ui u concern		on the rep																
Site wells sı Site wells sı	uly 18, 2002, arveyed Marc arveyed Dece and S-19 thr	ch 5, 2002 by mber 18, 200	Virgil Cha )7 by Virgi	avez Land S l Chavez L	Surveying and Survey		avez Land	Surveying												

Well S-5 surveyed on November 11, 2008 by Virgil Chavez Land Surveying

Well S-5 surveyed on October 8, 2009 by Virgil Chavez Land Surveying

# APPENDIX A

# BLAINE TECH SERVICES, INC. – FIELD NOTES

WELL	GA	UGI	ĪG	D	ATA	r
		1 A A A				

Date 3(7

# Project # 12033 - WW 1

Client SHEL

Site 461 3th ST. OAKCAND. CA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (fl.)	Thickness of Immiscible Liquid (ft.)	Immiscibles Removed		Depth to well bottom (ft.)	Survey Point: TOB or	Notes
5-5	0840	4	ODAZ				14-68	29.74		
5-6	0919	Y	opor	grange and the second			12.42	34.77		
								<u> </u>		
							· · · · · · · · · · · · · · · · · · ·			
									· ·	
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						·				
							*** *** ******************************			

BLAINE TECH SERVICES, INC. SAN JOSE SACRAMENTO LOS ANGELES SAN DIEGO SEATTLE

		SHEL	WELL MO	NITOR	ING D	ATASHEET	· ·				
BTS #: 12	-0831-	PCI		Site: 461 8th ST, OAKCAND, CA							
Sampler: 1		3	J	Date: 8/31/12							
Well I.D.:	S-5	T	** ****	Well Diameter: 2 3 4 6 8							
Total Well	Depth (TI	)):29.7	÷.	Depth to Water (DTW): 14:68							
Depth to Fr	ee Produc	t:		Thickn	Thickness of Free Product (feet):						
Referenced	to:	PVC	Grade	D.O. M	leter (if	req'd):	үз) насн				
DTW with	80% Rech	arge [(H	leight of Water	Colum	n x 0.20)	)+DTW]: (7.	-69				
Purge Method:	Bailer Disposable B Positive Air I Electric Subr	Displaceme	ent Extrac Other	Waterra Peristaltic ction Pump	Well Diamete	Sampling Method: Other: <u>r Multiplier Well I</u> 0.04 4"	Disposable Bailer Extraction Port Dedicated Tubing				
<u>q. 8</u> (0 1 Case Volume	Gals.) X <u>Speci</u>	fied Volun	$\frac{1}{1000} = \frac{29.4}{\text{Calculated Vc}}$	Gals.	2" 3"	0.16 6" 0.37 Othe	1.47				
Time	Temp (°F)	pH	Cond. (mS or as)		oidity TUs)	Gals. Removed	Observations				
0850	669	6.61	371.5	243		9.8	995 0801				
OPL2-	66.8	6.25	376	59	<i>`6</i>	19.6	i c				
0954	66.3	6.15	413	>100	)0	29.4	\$ <sup>77</sup> **				
						······································					
· ·	· · .		· · · · · · · · · · · · · · · ·	·	Ann	· · ·	· · · · · · · · · · · · · · · · · · ·				
Did well dev	water?	Yes	No	Gallons	s actuall	y evacuated:	29.4				
Sampling D	ate: 8/3	1/12	Sampling Time	e: 09	00	Depth to Water	: 17.60				
Sample I.D.	: 5-6	ý		Labora	tory: 🧹	Test America (	Other				
Analyzed fo	r: TPH-G	BTEX	MTBE TPH-D	Oxygena	tes (5)	Other:	······································				
EB I.D. (if a	pplicable)	2 2	@ Time	Duplica	ate I.D. (	if applicable):					
Analyzed fo	r: TPH-G	BTEX	MTBE TPH-D	Oxygena	tes (5)	Other:					
D.O. (if req'	d): / Pr	e-purge:	1.38	<sup>mg</sup> /L	<sup>mg</sup> / <sub>L</sub> Post-purge:						
O.R.P. (if re	q'd): ( Pr	e-purge:	253	mV Post-purge:							

Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (800) 545-7558

SHELL WELL MC	NITORING DATA SHEET	
BTS #: 120831-PC1	Site: 461 8th ST, OAKLAND	, CA
Sampler: WW	Date: 8/31/12	
Well I.D.: S - 6	Well Diameter: 2 3 4 6 8	}
Total Well Depth (TD): ろイ.フチ	Depth to Water (DTW): 18 42	
Depth to Free Product:	Thickness of Free Product (feet):	
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI	НАСН
DTW with 80% Recharge [(Height of Water	Column x 0.20) + DTW]: 2(.69	
Purge Method: Bailer Disposable Bailer Positive Air Displacement Extra Electric Submersible Other	tion Pump E De Other:	Bailer sposable Bailer extraction Port edicated Tubing
$\frac{10.6}{1 \text{ Case Volume}} (\text{Gals.}) \times \frac{3}{\text{Specified Volumes}} = \frac{31.8}{\text{Calculated V}}$	Well DiameterMultiplierWell Diameter1"0.044"2"0.166"3"0.37Other	<u>Multiplier</u> 0.65 1.47 radius <sup>2</sup> * 0.163
TimeTemp (°F)pHCond.TimeTemp (°F)pH(mS or pS)	Turbidity (NTUs)Gals. RemovedC	Observations
0924 64:1. 7.83 705	64 10.6 odb	r-
0928 64.8 6.64 671	22 21.2	
093064.4664641	11 31.8 "	
	W-	
Did well dewater? Yes No	Gallons actually evacuated: 31-8	
Sampling Date: $8/3/12$ Sampling Tim	: 0940 Depth to Water: 19	= 19.27
Sample I.D.: S - 6	Laboratory: Test America Other	·
Analyzed for: TPH-G BTE MTBE TPH-D	Oxygenates (5) Other:	
EB I.D. (if applicable):	Duplicate I.D. (if applicable):	
Analyzed for: TPH-G BTEX MTBE TPH-D	Oxygenates (5) Other:	
D.O. (if req'd): Pre-purge: 0.62	<sup>mg</sup> / <sub>L</sub> Post-purge:	mg/L
D.R.P. (if req'd): Pre-purge: 14/	mV Post-purge:	

		1.32	17		R. R. 11							AUUKE	55 Y (	ol	o 51,			
DATE:	8/31	12										CITY &	STATE	ØA	* SI. * CAND, CA			
Well ID	Manwa	ay Gover	, Type, C	ondition	& Size	Well L: Pali	vations L ibeled / nted ierly*	(Grip	val Cap oper) lition	Well 1	.ock Gol		Well Sur	Pad / face dition	r Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed	V	tos of /ell dition	Repair Date and PM Initials
5-5	Standpipe	Flush	$) \bigcirc$	Р	NA	Ø	N	6	R	6	R	NL	O	Р	CONFINED SPACE	Y	N	
5-6	Standpipe	Flust	C	₽	Size (jnch)	Ø	N <sup>1</sup>	0	R	6	R	NL	Ø	Р	May TAG: 15/24 Thick STEEL LID.	Y	D	
	Standpipe	Flush	G	Р	Size (inch)	Y	N	Ģ	R	G	R	NL	G	р		Y	N	
	Standpipe	Flush	G	P	Size (inch)	Y	N	G	R	G	R	NL	G	р		Y	N	
	Standpipe	Flush	G	Р	Size (inch)	Y	N	G	R	G	R	NL	G	Р		Y	N	
	Standpipe	Flush	G	Р	Size (inch)	Y	N	G	R	G	R	NL	G	Р		Y	N	
	Standpipe	Flush	G	Р	Size (inch)	Y	N	G	R	G	R	NL	G	P		Y	N	
	Standpipe	Flush	G	Р	Size (inch)	γ	N	G	R	G	R	NL	G	P		Y	N	
	Standpipe	Flush	G	Р	Size (inch)	Y	N	Ģ	R	G	R	NŁ.	G	P	· · ·	Y.	. N	
	Standpipe	Flush	G	Р	Size (inch)	Y	N	G	R	Ģ	R	NL	G	P		Y	N	
	Standripe	Flush	G	Р	Size (inch)	Y	N	G	R	G	R	NL	G	Р		Y	N	
	risher-letterio-vice-				ΤΟΤΑ	L # CAP	S REPLA	CED =				= ΤΟΤΑ	L # OF L	OCKS R	EPLACED			
Condition of Abendo	Soil Boring F oned Monitor			Р	Gia	lfPi	DOR, Bor	ings/Well	IDs or Lo	cation De	scription					Y	N	L
	n Compound oxes that app		Condi	ition of Er	iclosure		on of Are Enclosure		Com	pound Se	curity	Emerg	ency Cont Visible	actinfo	Cleaning / Repairs Recommended and Conducted		tos of dition	Repair Date and PM initials
NA Build Building w/ Fe Fenced Co	ing ence Comp.	$\mathbb{P}$	G	Р	N/A	G	Þ	• N/A	G	P	N/A	Y	N	N/A		Y	. N	
Number of Drums On-site	er Does the	Label Re of the Go			ed Correcti riting Legib		Dn	im Condin	ion.		i Drams edita imental	10461986997958	s Located ess intern	12/19/2012/11/2019	Detailed Explanation of Any Issues Resolved	D	tos of um dition	Date Drums Removed from Site and PR Initials
0	Y	N	N/A	Y	N	N/A	G	P	N/A	Ŷ	N	Y	N	N/A		٠y	N	
G = Good (Acc	eptable)	R ≈ Rep	placed		i <del>nner mannen</del> d			kannen en		deserve an exactly		<del>Persona kati</del> ng		h	All environmental wells and the remediation compour			

P = Poor (needs attention) NL = No Lock Required

Note: All repairs other than locks and orippers require Shell PM approval prior to repair,

\* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations. Version 2.4, March 2008

юскеа, and secured upon my departure (unless otherwise noted anove).

WILLIAM WONG / BUAINE TECH SERVICES Print or type Name of Field Personnel & Consultant Company

and a second second

# WELL GAUGING DATA

Project # 121211 - PC1

\_ Date 12/11/12

Client <u>Shell</u>

5t. Onkland Site 461 8

				Well		Depth to	Thickness	Volume of Immiscibles			Survey Point:	1
				Size	Sheen /	Immiscible	Immiscible	Removed	Depth to water		TOB or	
	Well	ID	Time	(in.)	Odor	Liquid (ft.)	Liquid (ft.)	(ml)	(ft.)	bottom (ft.)	660	Notes
	5-	857 . Artic	08.92	ų					16.00	29.55	A CONTRACTOR OF	
	din m	ķ	0820	- Harris					20.00	34.80		
	6-		7.570	24					22.28	29.70	A POINT A REAL POINT	
	5-1	ĽŽ.	0805	4					22.91	32.49	and the second se	
	5-1	19	0454	4			-		22.05	34.55	and the second sec	
	5-2	Æ	05520	4				1999 - Sec.	22.29	34.85		:`
سبليتمدي	5-2	-14	6800	ų					22.60	26-49	Water and the second second	
the second second	5-2	24	0810	ų					23.42	26.60	J	
			-							1		
:											······	
<u></u>												
	· ·									· ·		

# SHELL WELL MONITORING DATA SHEET

BTS #: \	21211-PC			Site: 970°	13399	
Sampler:	PC			Date: 12-1	1-12	
Well I.D.:	5-5			Well Diameter	r: 2 3 🖗	68
	Depth (TD	): 29	55 *	Depth to Wate	er (DTW): 16.C	)0
Depth to F	ree Product	ë e		Thickness of I	Free Product (fee	et):
Reference	l to:	(PVC)	) Grade	D.O. Meter (if	Freq'd):	YSE HACH
DTW with	80% Recha	urge [(H	leight of Water	Column x 0.20	) + DTW]: (*	8.71
Purge Method:	Bailer Disposable Ba Positi <u>ve Air F</u> Electric Subm	isplaceme		Waterra Peristaltic tion Pump 		Disposable Bailer Extraction Port Dedicated Tubing Diameter Multiplier
8.8	(Gals.) X	5	= 26.4	Gals.	0.04 4" 0.16 6"	0.65 1.47
1 Case Volume		fied Volum	tes Calculated Vo	lume 3"	0.37 Othe	r radius <sup>2</sup> * 0.163
Time	Temp (°F)	pH	Cond. (mS of µS)	Turbidity (NTUs)	Gals. Removed	Observations
0901	65.4	5.97	494	461	9.0	Oder
0904	Lell	dewon	tavel C		Parl	
	±	.:		· ·		
		N <sup>1</sup>	· à		A	
0900	62.8	6.10	622	388	Grab	
Did well d	ewater?	Yes	No	Gallons actual	ly evacuated:	
Sampling ]	Date: 12-11	-12_	Sampling Time	e: 0906	Depth to Wate	r: \$8.7!
Sample I.I	).: S-5	*		Laboratory:	Test America	Other
Analyzed	for: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other: SEE	
EB I.D. (if	applicable)	 2	@ Time	Duplicate I.D.	(if applicable):	
Analyzed	for: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other:	
D.O. (if re	q'd): Pr	e-purge:	1.07	mg/L	Post-purge:	1,24 <sup>mg</sup> /
0.R.P. (if)	req'd): Pr	e-purge:	162	mV	Post-purge:	63 mV
ALE MINISTER AND A	The part of a		•	•		

Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (800) 545-7558

100 A.M.

	20 Circle 100 - 11 - 11 - 11 - 11 - 11 - 11 - 11	SREA		INI OKING	DATA SHEET	· · · · · · · · · · · · · · · · · · ·					
BTS #: 💦	21211-P	C 1		Site: 970	93399	· · · ·					
Sampler:	PC			Date: 12	-11-12	1. <u>1</u>					
Well I.D.:	5-6			Well Diame	ter: 2 3 4	6*8					
Total Well	Depth (TD	)):34.8	2	1	.ter (DTW): 20.						
Depth to Fr			<b>MUGUNALUUU III III III III III III III</b> III III	Thickness of Free Product (feet):							
Referenced	to:	PVC	) Grade .	D.O. Meter (	(if req'd):	YSI) HACH					
DTW with	80% Rech	arge [(H	leight of Water	· Column x 0.2	20) + DTW]: -2-	2.96					
	Bailer Disposable B Positive Air I ÆElectric Subn	Displaceme	nt Extra Other	Waterra Peristaltic ction Pump 	Sampling Method Other meter <u>Multiplier Well</u> 0.04 4"	Disposable Bailer Extraction Port Dedicated Tubing					
<u>9.6</u> 1 Case Volume	Gals.) X Speci	fied Volum	$= \frac{28.8}{\text{Calculated Vc}}$	Gals. 2" Jume 3"	0.16 6" 0.37 Oth	er radius <sup>2</sup> * 0.163					
Time	Temp (°F)	1 - 0	Cond. (mS of µS)	Turbidity (NTUs)	Gals. Removed	Observations					
1107	64.9	5.97	949.7	37.	4.6	eder					
1110	64.8	6.25	783.3	26	19-2	And the second se					
<u> ((13</u>	64.5	6-31	727-6	24	2.80						
					· ·						
Did well de	water?	Yes	ND .	Gallons actu	ally evacuated: <	28-8					
Sampling D	ate: 12-11	-12	Sampling Tim	e:1125	Depth to Wate	r: 22.39					
Sample I.D.	: S-6	4		Laboratory:	Tost America	Other					
Analyzed fo	or: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other: SEE	Coc					
EB I.D. (if a	applicable)	a 1	@ Time	Duplicate I.I	). (if applicable):						
Analyzed fo	or: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other:						
D.O. (if req'	d): Pr	e-purge:	0-92	mg/L	Post-purge:	0-65 mg/L					
O.R.P. (if re	eq'd): Pr	e-purge:	02	mV	Post-purge:	-16 mV					

<b></b>		SHEL	) L WELL MO	NITORING D	ATA SHEET	
BTS #:	121211-P	C١		Site: 970°	13399 -	
Sampler:	PC		······································	Date: 17-1	1-12	
Well I.D.:	5-9		an a gu ann an Ann an Ann ann ann ann ann ann a	Well Diameter		6 8
Total Well	Depth (TI	)):及9.节	-0	Depth to Wate	er (DTW): 2.2.	2.8
Depth to F	ree Produc	t:	ne met de la constant	1	Free Product (fe	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Reference	d to:	PVC	Grade	D.O. Meter (if	·····	VS HACH
DTW with	80% Rech	arge [(H	eight of Water	Column x 0.20	)+DTW]:23	,te
Purge Method:	Bailer Disposable B Positive Air I Ælectric Subr	Displacemen	nt Extrac Other	Waterra Peristaltic ction Pump	Sampling Method	Disposable Bailer Extraction Port Dedicated Tubing
LL.B 1 Case Volume	(Gals.) XSpeci	<u>ح</u> fied Volum	$= \underbrace{\bigcup}_{i=1}^{n} $	Gals. 3"	er Multiplier Well 0.04 4" 0.16 6" 0.37 Othe	Diameter Multiplier 0.65 1.47 er radius <sup>2</sup> * 0.163
Time	Temp (°F)	pН	Cond. (mS o (µS)	Turbidity (NTUs)	Gals. Removed	Observations
0934	63,3	8.53	376.1	40	4.8	
0936	65.6	7.93	469.6	13	9.6	
0938	65.9	7.25	429.7	7	H.H.	·
						· · · · · · · · · · · · · · · · · · ·
Did well de	water?	Yes	6	Gallons actual	y evacuated: [4	(.4
Sampling D	)ate: 12-11	- 1 - 1	Sampling Time	e:1225	Depth to Wate	r: 22.28
Sample I.D	<u>: S-9</u>		÷~	Laboratory:	Test America	Other
Analyzed fo	or: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other: SEE	Coc
EB I.D. (if a	applicable)	•	@ Time	Duplicate I.D.		
Analyzed fo	or: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other:	·
D.O. (if req	'd): Pr	e-purge:	1,25	<sup>mg</sup> / <sub>L</sub> P	ost-purge:	1.53 <sup>mg</sup> /L
0.R.P. (if re	eq'd): Pr	e-purge:	93	mV P	ost-purge:	76 mV

#### BTS #: Site: 97093399 121211-PC1 Sampler: Date: PC 12-11-12 Well I.D.: 5-13 Well Diameter: 2 (4) 3 8 6 Total Well Depth (TD): 32,49 Depth to Water (DTW): 22.91 Thickness of Free Product (feet): Depth to Free Product: /PVC D.O. Meter (if req'd): Referenced to: Grade YSI HACH DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 24.93 Purge Method: Bailer Waterra Sampling Method: (Bailer) **Disposable Bailer** Peristaltic **Disposable** Bailer Positive Air Displacement **Extraction Pump** Extraction Port Other XElectric Submersible Dedicated Tubing Other: Well Diameter Multiplier Well Diameter Multiplier 1" 0.04 4\* 0.65 Z 2" 0.16 6" 1.47 Carl 18-6 (Gals.) X Gals. 3" radius<sup>2</sup> \* 0,163 0.37 Other Specified Volumes Calculated Volume Case Volume Cond. Turbidity Temp (°F) $(mS o(\mu S))$ Time (NTUs) pН Gals. Removed Observations 57 670 8531 79 2296 (a-2-67-36-24 $\mathbf{a}^{\mathbf{q}}$ 17.4 1020 2278 18 1032 (; T-6.05 18-6 77.52 Gallons actually evacuated: 18-6 Did well dewater? Yes No) Sampling Time: 1255 Sampling Date: 12-11-12 Depth to Water: 13.05 5-13 Sample I.D.: Laboratory: Test-America Other Analyzed for: TPH-G BTEX Oxygenates (5) Other: MTBE TPH-D SEE Coc a) Duplicate I.D. (if applicable): EB I.D. (if applicable): Time Analyzed for: TPH-G Oxygenates (5) BTEX MTBE TPH-D Other: mg/I mg/J D.O. (if req'd): Pre-purge: Post-purge: .07 0.80 O.R.P. (if req'd): Pre-purge: mV Post-purge: -63 mΜ -70

# SHELL WELL MONITORING DATA SHEET

~ ·		SHEL	L-WELL MO	NITORING D.	ATA SHEET	سر
BTS #: 17	21211-P	- i	• •	Site: 9709	3399	
Sampler:	PC			Date: 12-11	1-17	
Well I.D.:	5-19			Well Diameter	: 2 3 4	6 8
Total Well	Depth (TD	): <sup>•</sup> 34. <u>•</u>	<b>5</b> 5 .	Depth to Wate	r (DTW): 22.0	<b>G</b>
Depth to Fr	ee Product	* F #			ree Product (fe	
Referenced	to:	(PVC)	) Grade	D.O. Meter (if	req'd):	YSP HACH
DTW with	80% Rech	arge [(H	leight of Water	Column x 0.20)	)+DTW]: Qu	1.55
Purge Method:	Bailer Disposable B Positive Air I Electric Subn	Displaceme		Waterra Peristaltic tion Pump	Sampling Method	Disposable Bailer Extraction Port Dedicated Tubing
8-1 (( 1 Case Volume	Gals.) X Speci	<u>ج</u> fied Volum	$= \frac{24.3}{\text{Calculated Vo}}$	Gals. 1"	Multiplier         Well           0.04         4"           0.16         6"           0.37         Other	Diameter         Multiplier           0.65         1.47           er         radius <sup>2</sup> * 0.163
Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
UASI	65.6	6.93	574.6	5 <i>0</i>	8.1	
0957	65.8	6.76	506.4	27	6.2	
	66.3	6.57	500.9	10	2-4-3	1 
Did well dev	water?	Yes (	No	Gallons actuall	y evacuated: 🤿	1
Sampling D	ate: 12-11	- 12	Sampling Time	:1235	Depth to Wate	r: 22:18
Sample I.D.	: S-19			Laboratory:	TestAmerica	Other
Analyzed fo	r: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other: SEE	Coc
EB I.D. (if a	pplicable)	•	@ Time	Duplicate I.D. (		
Analyzed fo	r: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other:	· · ·
D.O. (if req'	d): Pr	e-purge:	0.89	<sup>mg</sup> / <sub>L</sub> P	ost-purge:	2.21 <sup>mg</sup> /L
O.R.P. (if re	q'd): Pr	e-purge:	8 (	mV P	ost-purge:	5z mV

		TVAL VALEING Ø.	TRAIN NARAAA	
BTS #: 121211-PC1	антааланы	Site: 9709	3399	
Sampler: PC		Date: 17-1	1-12	
Well I.D.: S-20	· · ·	Well Diameter	: 2 3 (4)	68
Total Well Depth (TD): 31	1.85	Depth to Wate	r (DTW): 22	29
Depth to Free Product:			ree Product (fe	
Referenced to:	දි) Grade	D.O. Meter (if	req'd):	KSL HACH
DTW with 80% Recharge	[(Height of Water	Column x 0.20	)+DTW]:24	-%7
Purge Method: Bailer Disposable Bailer Positive Air Displac KElectric Submersible	ement Extrac	Waterra Peristaltic ction Pump	Sampling Method Other	: Bailer Disposable Bailer Extraction Port Dedicated Tubing
		Well Diamete	er <u>Multiplier Well</u> 0.04 4"	Diameter Multiplier 0.65
<u>8-2</u> (Gals.) X <u>3</u>	= 24.6		0.16 6" 0.37 Othe	1.47 er radius <sup>2</sup> * 0.163
1 Case Volume Specified Vo		lume	0.37 (744	
Time Temp (°F) pF	$\begin{array}{c} \text{Cond.} \\ \text{(mS of } \mu \text{S)} \end{array}$	Turbidity (NTUs)	Gals. Removed	Observations
1145 65-6 6-5	16 2556	35	8.2	
1148 66.3 6.1	5 2694	12	i cingan sand i cingan i cing	
1151 6-8 6.1	9 2831	10	24.6	
	· · · · · · · · · · · · · · · · · · ·			
Did well dewater? Yes	 (ND)	Gallons actuall	y evacuated:	24-6
Sampling Date: 12-11-12	Sampling Time	- 1315	Depth to Wate	r: 22.39
Sample I.D.: S-20		Laboratory:	Test-America	Other
Analyzed for: TPH-G BTE	X MTBE TPH-D	Oxygenates (5)	Other: SEE	Coc
EB I.D. (if applicable):	@ Time	Duplicate I.D. (	2 2	
Analyzed for: TPH-G BTE	X MTBE TPH-D		Other:	-
D.O. (if req'd): Pre-purg	ge: 0-82	<sup>mg</sup> /L Po	ost-purge:	(.67 <sup>mg</sup> / <sub>L</sub>
O.R.P. (if req'd): Pre-purg	ge: -//	mV Po	ost-purge:	-43 mV

# SHELL WELL MONITORING DATA SHEET

#### SHELL WELL MONITORING DATA SHEET BTS #: 121211-PC1 Site: 9709 3399 Sampler: PC Date: 12-11-12 Well I.D.: S-ALA Well Diameter: A) - 2 3 6 8 Total Well Depth (TD): 2 (0349 Depth to Water (DTW): 27-60 Depth to Free Product: Thickness of Free Product (feet); Referenced to: /PVC D.O. Meter (if reg'd): Grade YSI HACH DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 23.78 Purge Method: Bailer Waterra Sampling Method: Bailer **Disposable Bailer** Peristaltic **Disposable Bailer** Positive Air Displacement Extraction Pump Extraction Port Electric Submersible Other Dedicated Tubing Other: Well Diameter Well Diameter Multiplier Multiplier 1" 0.04 4" 0.65 3 2" 6° 0.16 1.47 (Gals.) X Gals. 3" 0.37 radius<sup>2</sup> \* 0.163 Other Case Volume Specified Volumes Calculated Volume Cond. Turbidity Temp (°F) $(mS of \mu S)$ Time (NTUs) Gals. Removed Observations 6. 24 829 3925 1015 оЦ ~ ateres 1010 5269 1245 >(000) <u>64.4</u> $b.o^{1}$ Did well dewater? Gallons actually evacuated: 3 (Yes) No Sampling Time: 1245 Sampling Date: 12-11-12 Depth to Water: 1350 Sample I.D.: Laboratory: Test America Other Analyzed for: TPH-G BTEX MTBE Oxygenates (5) Other: TPH-D SEE Coc

Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (800) 545-7558

Oxygenates (5)

mg/1

mV

Duplicate I.D. (if applicable):

Other:

Post-purge:

Post-purge:

mg/

m٧

149

80

a,

MTBE

Time

,36

TPH-D

EB I.D. (if applicable):

TPH-G

Pre-purge:

BTEX

Pre-purge:

Analyzed for:

D.O. (if req'd):

O.R.P. (if reg'd):

- ·	,	SHEL	L WELL MU	ITORING D	ATA SHEET	د					
BTS #: 17	21211-P			Site: 9709	3399						
Sampler:	PC		·	Date: 17-1	1-12						
Well I.D.:	5-2.2	A		Well Diameter	: 2 3 4	68					
Total Well	Depth (TD	): Lle. (	dO	Depth to Wate	r (DTW):23.1	12					
Depth to Fr	ee Product	• p •		Thickness of Free Product (feet):							
Referenced	to:	PVC	) 'Grade	D.O. Meter (if	req'd):	(YSI) HACH					
DTW with 8	80% Rech	arge [(H	leight of Water	Column x 0.20	)+DTW]: Qu	-06 ·					
Purge Method:	Bailer Disposable B Positive Air I (Electric Subn	Displaceme tersible	Other	Waterra Periştaltic etion Pump	Sampling Method Other <u>r Multiplier Well</u> 0.04 4"	Disposable Bailer Extraction Port Dedicated Tubing					
$\frac{2}{1 \text{ Case Volume}}$ (C	Jais.) A	S fied Volum	$\underline{} = \underline{\cancel{0.3}}$	_ Gals. 2" lume 3"	0.16 6" 0.37 Othe	1.47 er radius <sup>2</sup> * 0.163					
Time	Temp (°F)	pН	Cond. (mS of µS)	Turbidity (NTUs)	Gals. Removed	Observations					
1096	65.7	FJ.d	523	95	2.1						
(057	well	dens	fered	*							
1305	63.5	645	6227	555							
Did well dev	water? 🤇	Yes	No	Gallons actuall	y evacuated:	3					
Sampling Da	ate: 12-11	- 1 2	Sampling Time	:1305	Depth to Wate	r: 22.69 4					
Sample I.D.:	S-2.	z.Ą		Laboratory:	and the second s	Other					
Analyzed for	r: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other: SEE	Coc					
EB I.D. (if a	pplicable)		@ Time	Duplicate I.D. (	*****						
Analyzed for	r: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other:	·					
D.O. (if req'o	l): Pro	e-purge:	0.99	<sup>mg</sup> / <sub>L</sub> Po	ost-purge:	.96 <sup>mg</sup> / <sub>L</sub>					
O.R.P. (if red	q'd): Pro	e-purge:	~[]]	mV Po	ost-purge:						

Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (800) 545-7558

ŝ

INCIDENT # 70933999 ADDRESSHUBTY St. C CITY & STATE Og Kland

DATE: 2

CA

Well ID	Mariwa	y Cover,	Type, Co	ondition	& Size	Well La Pair	beled / ited	pon Arri Well (Grip	Cap per)	Well L	ock Con	dition	141. A 61. 2 6 6 6 7 7 7 7 7	ace	Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed	Photo We Cond	0.076 A 64 6	Repair Date and PM Initials
5-5	Standpipe	Flush	G	p	Size (inch)	Prop	eniy N	Cond	R	Ð	R	NL	Conc ©	P	TOC IN Storm 16 West	Y	(M)	
5-6	Standpipe	Flush	G	Р	Size (inch)	Ø	N	3	R		R	NL	6	P	TOC in storm childert well in chuisty style box secure	Y	Ø	
5-9	Standpipe	Flush	C	P	Size (inch)	Ø	N	Ì	R	٢	R	NL	$\bigcirc$	P		Y	ap	
5-13	Standpipe	Flush	٢	Р	Size (inch)	$\mathfrak{O}$	N	6	R	6	R	NL		q		Y	©	
5-19	Standpipe	Flush	$(\mathfrak{O})$	Р	Size (inch)	$\odot$	N	6	R	$\textcircled{\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	R	NL	O	Р		Y	Ø	
5-20	Standpipe	Flush	Ø	q	Size (inch)	Ý	N	6	R	Ô	R	NL.	6	Р		Y	6	
5-214	Standpipe	Flush	Ø	P ~	Size (inch)	Ø	N	Ó	R	6	R	NL	٩	P		Ŷ	Ø	
5-274	Standpipe	Flush	G)	р	Size (inch)	$\overline{\mathbb{O}}$	N	6	R	6	R	NL.	6	Р		Y	Ô	
	Standpipe	Flush	G	p	Sizèr(inch)	Y	N	G	R	G	9	NL.	G	Р		Y.	. N	
	Standpipe	Flush	G	Ρ	Size (inch)	Y	N	G	R	G	R	NL	G	Р		Y	N	
	Standpipe	Flush	G	q	Size (inch)	γ	N	G	R	G	R	NŁ	G	Р		Y	N	
					τοτα	L # CAP	S REPL/	\CED =	Ø		$\odot$	= ΤΟΤΑ	L#OFL	OCKS RI	EPLACED			
Condition of S Abando	Soil Boring P med Monitori		G	Р		lf Pi	DOR Boi	ings/Well	IDs or Lo	cation De	scription:					Y	N	
Remediation (Check bo	i Compound oxes that app		Condi	tion of Ei	nclosure	04053004464260s	on of Are Enclosur	111 C	Com	pound Sec	surity	Emerg	ency Conl Visible	tact Info	Cleaning / Repairs Recommended and Conducted		os of dition	Repair Date and PM initials
NA Buildin Building w/ Fer Fenced Cor Traile	ng nce Comp, npound		G	D,	N/A	- G	P	NIA	2 G	р	NA	Y	N	MA		Y	N	
Number of Drums On-site	Does the	Label Re of the Co			led Carrecti Vriting Legit		Dr	um Condii	ion	<ul> <li>A state of the sta</li></ul>	i Drums ed to mental		s Located less Interf		Detailed Explanation of Any Issues Resolved	Dr	tos öf um dition	Date Drums Removed from Sits and PM Initials
$\Box$	Y	N	NA	Ý	N	N/A	G	Р	Nia	) v	N	Y	N	NIA	All environmental wells and the remediation compour	Y	N	

G = Good (Acceptable) R = Replaced

P = Poor (needs attention) NL = No Lock Required

Note: All repairs other than locks and grippers require Shell PM approval prior to repair,

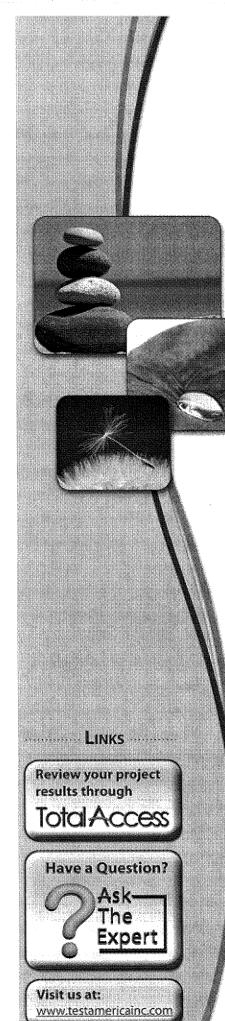
\* = Groundwater monitoring well covers must be painted and tabeled in accordance with applicable regulations. Version 2.4, March 2008

locked, and secured upon my departure (unless otherwise noted above).

Print or type Name of Field Personnel & Consultant Company

# APPENDIX B

# TESTAMERICA LABORATORIES, INC. – ANALYTICAL REPORTS



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# **ANALYTICAL REPORT**

TestAmerica Laboratories, Inc. TestAmerica Irvine 17461 Derian Ave Suite 100 Irvine, CA 92614-5817 Tel: (949)261-1022

TestAmerica Job ID: 440-22146-1 Client Project/Site: 461 8th St., Oakland, CA

For: Conestoga-Rovers & Associates, Inc. 5900 Hollis Street Suite A Emeryville, California 94608

Attn: Peter Schaefer

Khilp Somelle

Authorized for release by: 9/17/2012 4:56:55 PM

Philip Sanelle Project Manager I philip.sanelle@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Chain of Custody	13
Receipt Checklists	14

# Sample Summary

Client: Conestoga-Rovers & Associates, Inc. Project/Site: 461 8th St., Oakland, CA

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-22146-1	S-5	Water	08/31/12 09:00	09/01/12 10:00
440-22146-2	S-6	Water	08/31/12 09:40	09/01/12 10:00

#### Job ID: 440-22146-1

#### Laboratory: TestAmerica Irvine

Narrative

Job Narrative 440-22146-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/1/2012 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.0° C and 4.1° C.

#### GC/MS VOA

No analytical or quality issues were noted.

#### VOA Prep

No analytical or quality issues were noted.

Client: Conestoga-Rovers & Associates, Inc. Project/Site: 461 8th St., Oakland, CA

#### Lab Sample ID: 440-22146-1 Matrix: Water

Date Collected: 08/31/12 09:00 Date Received: 09/01/12 10:00

Client Sample ID: S-5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons	12000		1000		ug/L			09/13/12 06:21	20
(C4-C12)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	101		80 - 120			-		09/13/12 06:21	20
4-Bromofluorobenzene (Surr)	93		80 - 120					09/13/12 06:21	20
Toluene-d8 (Surr)	110		80 - 120					09/13/12 06:21	20
			DI	MDI	l lesit		Dressared	Analyzad	
				MO	11	_	<b>D</b>		
Analyte	Result	GC/MS) Qualifier	RL	MDL		D	Prepared	Analyzed	
Analyte Benzene	Result 330		10	MDL	ug/L	D	Prepared	09/13/12 06:21	Dil Fac
Analyte Benzene Ethylbenzene	Result 330 330		10 10	MDL	ug/L ug/L	D	Prepared	09/13/12 06:21 09/13/12 06:21	20 20
Analyte Benzene	Result 330		10	MDL	ug/L	D	Prepared	09/13/12 06:21	20 20
Analyte Benzene Ethylbenzene Toluene	Result 330 330		10 10	MDL	ug/L ug/L	<u>D</u>	Prepared	09/13/12 06:21 09/13/12 06:21	20 20 20
Analyte Benzene Ethylbenzene Toluene	Result 330 330 300		10 10 10	MDL	ug/L ug/L ug/L	<u>D</u>	Prepared	09/13/12 06:21 09/13/12 06:21 09/13/12 06:21	
Analyte Benzene Ethylbenzene Toluene Xylenes, Total	Result 330 330 300	Qualifier	10 10 10	MDL	ug/L ug/L ug/L	D	Prepared	09/13/12 06:21 09/13/12 06:21 09/13/12 06:21	20 20 20
Analyte Benzene Ethylbenzene Toluene Xylenes, Total	Result 330 330 300 850	Qualifier	10 10 10 20	MDL	ug/L ug/L ug/L	D		09/13/12 06:21 09/13/12 06:21 09/13/12 06:21 09/13/12 06:21	20 20 20 20 20 <i>Dil Fac</i>
Xylenes, Total S <i>urrogate</i>	Result 330 330 300 850 %Recovery	Qualifier	10 10 20 <i>Limits</i>	MDL	ug/L ug/L ug/L	<u>D</u> .		09/13/12 06:21 09/13/12 06:21 09/13/12 06:21 09/13/12 06:21 09/13/12 06:21 Analyzed	20 20 20 20

#### **Client Sample ID: S-6**

Date Collected: 08/31/12 09:40

Lab Sample ID: 440-22146-2

Matrix: Water

Date Received: 09/01/12 10:00

Method: 8260B/CA_LUFTMS - V	/olatile Organic	Compound	s by GC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	96000		10000		ug/L			09/13/12 06:51	200
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	98		80 - 120			-		09/13/12 06:51	200
4-Bromofluorobenzene (Surr)	87		80 - 120					09/13/12 06:51	200
Toluene-d8 (Surr)	109		80 - 120					09/13/12 06:51	200

Method: 8260B - Volatile Orga		,							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	6700		100		ug/L			09/13/12 06:51	200
Ethylbenzene	1900		100		ug/L			09/13/12 06:51	200
Toluene	2500		100		ug/L			09/13/12 06:51	200
Xylenes, Total	6200		200		ug/L			09/13/12 06:51	200
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		80 - 120			-		09/13/12 06:51	200
Dibromofluoromethane (Surr)	98		80 - 120					09/13/12 06:51	200
Toluene-d8 (Surr)	109		80 - 120					09/13/12 06:51	200

Lab Sample ID: 440-22146-1

#### **Client Sample ID: S-5**

Date Collected: 08/31/12 09:00 Date Received: 09/01/12 10:00

		~~								
	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	10 mL	10 mL	51537	09/13/12 06:21	YK	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTMS		20	10 mL	10 mL	51538	09/13/12 06:21	YΚ	TAL IRV

#### **Client Sample ID: S-6**

Date Collected: 08/31/12 09:40 Date Received: 09/01/12 10:00

Batch Batch Dil Initial Final Batch Prepared Prep Type Method Run Туре Factor Amount Amount Number or Analyzed Analyst Lab Total/NA 8260B Analysis 200 10 mL 10 mL 51537 09/13/12 06:51 ΥK TAL IRV Total/NA Analysis 8260B/CA\_LUFTMS 200 10 mL 10 mL 51538 09/13/12 06:51 ΥK TAL IRV

#### Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Matrix: Water

## Lab Sample ID: 440-22146-2 Matrix: Water

#### Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-51537/4 Matrix: Water Analysis Batch: 51537	мв	МВ					Client Sa	ample ID: Metho Prep Type: 1	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/12/12 20:41	1
Ethylbenzene	ND		0.50		ug/L			09/12/12 20:41	1
Toluene	ND		0.50		ug/L			09/12/12 20:41	1
Xylenes, Total	ND		1.0		ug/L			09/12/12 20:41	1
	МВ	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96	American American Antonio	80 - 120			-		09/12/12 20:41	1
Dibromofluoromethane (Surr)	96		80 - 120					09/12/12 20:41	1
Toluene-d8 (Surr)	108		80 - 120					09/12/12 20:41	1

### Lab Sample ID: LCS 440-51537/5

Matrix: Water Analysis Batch: 51537

	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	25.0	29.5		ug/L		118	70 - 120
Ethylbenzene	25.0	27.2		ug/L		109	75 - 125
m,p-Xylene	50.0	58.0		ug/L		116	75 <sub>-</sub> 125
o-Xylene	25.0	28.4		ug/L		114	75 - 125
Toluene	25.0	29.3		ug/L		117	70 - 120

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120
Toluene-d8 (Surr)	113		80 - 120

#### Lab Sample ID: 440-22123-A-16 MS Matrix: Water

Analysis Batch: 51537

	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	ND		25.0	29.4		ug/L		118	65 - 125
Ethylbenzene	ND		25.0	27.5		ug/L		110	65 <sub>-</sub> 130
m,p-Xylene	ND		50.0	57.9		ug/L		116	65 - 130
o-Xylene	ND		25.0	28.3		ug/L		113	65 <sub>-</sub> 125
Toluene	ND		25.0	29.1		ug/L		116	70 - 125
	MS	MS							

	113	1413	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120
Toluene-d8 (Surr)	112		80 - 120

Lab Sample ID: 440-22123-A- Matrix: Water Analysis Batch: 51537	16 MSD						Client	Sa	mple ID	: Matrix S Prep 1	pike Dup Type: To	
Analysis Baten. 01007	Sample	Sample	Spike	MSD	MSD					%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Benzene	ND		25.0	29.7		ug/L			119	65 - 125	1	20
Ethylbenzene	ND		25.0	28.4		ug/L			114	65 - 130	3	20

## Client Sample ID: Lab Control Sample Prep Type: Total/NA

# **Client Sample ID: Matrix Spike**

Prep Type: Total/NA

4-Bromofluorobenzene (Surr)

Toluene-d8 (Surr)

#### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-22123-A	-16 MSD						Client Sa	ample ID	: Matrix Sp	-	
Matrix: Water									Prep T	ype: To	tal/NA
Analysis Batch: 51537											
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
m,p-Xylene	ND		50.0	60.3		ug/L		121	65 _ 130	4	25
o-Xylene	ND		25.0	29.4		ug/L		118	65 - 125	4	20
Toluene	ND		25.0	29.4		ug/L		117	70 - 125	1	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	96		80 - 120								
Dibromofluoromethane (Surr)	93		80 - 120								
Toluene-d8 (Surr)	110		80 - 120								

#### Method: 8260B/CA\_LUFTMS - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 440-51538/4	+									client S	ample ID: Metho	
Matrix: Water											Prep Type: 1	otal/NA
Analysis Batch: 51538												
		BMB						_	_			
Analyte		lt Qualifier	RL		MDL			D	P	epared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	N	D	50			ug/L					09/12/12 20:41	1
	м	B MB										
Surrogate	%Recover	-	Limits						Pı	repared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	ç	96	80 - 120								09/12/12 20:41	-
4-Bromofluorobenzene (Surr)	g	96	80 - 120								09/12/12 20:41	-
Toluene-d8 (Surr)	10	08	80 - 120								09/12/12 20:41	1
Lab Sample ID: LCS 440-51538	/6							Clie	ent	Sample	ID: Lab Control	Sample
Matrix: Water											Prep Type: 1	
Analysis Batch: 51538											Tob Jbor	••••••
			Spike	LCS	LCS						%Rec.	
Analyte			Added	Result	Qual	ifier	Unit	1	D	%Rec	Limits	
Volatile Fuel Hydrocarbons			500	453			ug/L			91	55 - 130	
(C4-C12)							•					
	LCS L	cs										
Surrogate	%Recovery Q	ualifier	Limits									
Dibromofluoromethane (Surr)	96		80 - 120									
4-Bromofluorobenzene (Surr)	97		80 - 120									
Toluene-d8 (Surr)	111		80 - 120									
Lab Sample ID: 440-22123-A-16	S MS									Client	Sample ID: Matr	ix Spike
Matrix: Water											Prep Type: <sup>-</sup>	•
Analysis Batch: 51538												
,, <b>,</b>	Sample Sa	ample	Spike	MS	MS						%Rec.	
Analyte	Result Q	ualifier	Added	Result	Qua	lifier	Unit	1	D	%Rec	Limits	
Volatile Fuel Hydrocarbons	70		1730	1800			ug/L			101	50 _ 145	
(C4-C12)												
	MS M	S										
Surrogate	%Recovery Q	ualifier	Limits									
Dibromofluoromethane (Surr)	97		80 - 120									

80 - 120

80 - 120

99

112

# Method: 8260B/CA\_LUFTMS - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 440-22123-A Matrix: Water	-16 MSD					c	Client Sa	ample ID	): Matrix Sp Prep T	oike Dup Type: Tot	
Analysis Batch: 51538	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	• •	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Volatile Fuel Hydrocarbons (C4-C12)	70	······	1730	1720		ug/L		96	50 <sub>-</sub> 145	5	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
Dibromofluoromethane (Surr)	93		80 - 120								
4-Bromof/uorobenzene (Surr)	96		80 - 120								
Toluene-d8 (Surr)	110		80 - 120								

# **QC Association Summary**

Client: Conestoga-Rovers & Associates, Inc. Project/Site: 461 8th St., Oakland, CA

# GC/MS VOA

Analysis	Batch:	51537
----------	--------	-------

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22123-A-16 MS	Matrix Spike	Total/NA	Water	8260B	
440-22123-A-16 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
440-22146-1	S-5	Total/NA	Water	8260B	
440-22146-2	S-6	Total/NA	Water	8260B	
LCS 440-51537/5	Lab Control Sample	Total/NA	Water	8260B	
MB 440-51537/4	Method Blank	Total/NA	Water	8260B	
nalysis Batch: 51538					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batcl
440-22123-A-16 MS	Matrix Spike	Total/NA	Water	8260B/CA_LUFT	
				MS	
440-22123-A-16 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B/CA_LUFT	
440-22146-1	0.5	T-4-1/616	10/	MS	
440-22140-1	S-5	Total/NA	Water	8260B/CA_LUFT	
440-22146-2	S-6	Total/NA	Water	MS 8260B/CA LUFT	
		locality (	Water	MS	
LCS 440-51538/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT	
				MS	
MB 440-51538/4	Method Blank	Total/NA	Water	8260B/CA_LUFT	
				MS	

# **Definitions/Glossary**

#### Client: Conestoga-Rovers & Associates, Inc. Project/Site: 461 8th St., Oakland, CA

TestAmerica Job ID: 440-22146-1

Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
ф	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

#### Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arizona	State Program	9	AZ0671	10-13-12
California	LA Cty Sanitation Districts	9	10256	01-31-13
California	NELAC	9	1108CA	01-31-13
California	State Program	9	2706	06-30-14
Guam	State Program	9	Cert. No. 12.002r	01-23-13
Hawaii	State Program	9	N/A	01-31-13
Nevada	State Program	9	CA015312007A	09-30-12
New Mexico	State Program	6	N/A	01-31-12
Northern Mariana Islands	State Program	9	MP0002	01-31-13
Oregon	NELAC	10	4005	09-12-13
USDA	Federal		P330-09-00080	06-06-14

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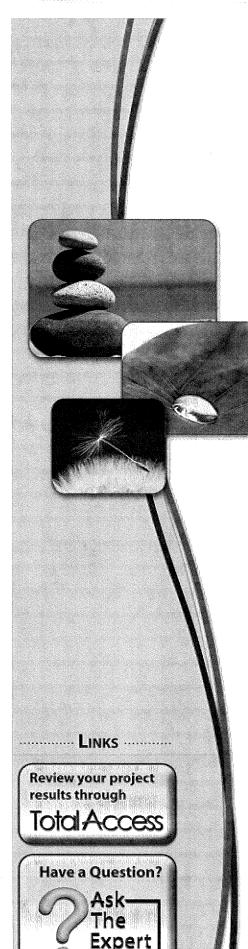
#### Client: Conestoga-Rovers & Associates, Inc.

#### Login Number: 22146 List Number: 1 Creator: Perez, Angel

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	William Wong/Pete Cornish/Mike Ninokata
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Job Number: 440-22146-1

List Source: TestAmerica Irvine



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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc. TestAmerica Irvine 17461 Derian Ave Suite 100 Irvine, CA 92614-5817 Tel: (949)261-1022

TestAmerica Job ID: 440-32627-1 Client Project/Site: 461 8th St., Oakland, CA

For: Conestoga-Rovers & Associates, Inc. 5900 Hollis Street Suite A Emeryville, California 94608

Attn: Peter Schaefer

Philip Samlle

Authorized for release by: 12/28/2012 12:11:04 PM

Philip Sanelle Project Manager I philip.sanelle@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Sample Summary

### Client: Conestoga-Rovers & Associates, Inc. Project/Site: 461 8th St., Oakland, CA

TestAmerica Job ID: 440-32627-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-32627-1	S-5	Water	12/11/12 09:06	12/13/12 09:50
440-32627-2	S-6	Water	12/11/12 11:25	12/13/12 09:50
440-32627-3	S-9	Water	12/11/12 12:25	12/13/12 09:50
440-32627-4	S-13	Water	12/11/12 12:55	12/13/12 09:50
440-32627-5	S-19	Water	12/11/12 12:35	12/13/12 09:50
440-32627-6	S-20	Water	12/11/12 13:15	12/13/12 09:50
440-32627-7	S-21A	Water	12/11/12 12:45	12/13/12 09:50
440-32627-8	S-22A	Water	12/11/12 13:05	12/13/12 09:50

TestAmerica Irvine

#### Job ID: 440-32627-1

#### Laboratory: TestAmerica Irvine

Narrative

Job Narrative 440-32627-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 12/13/2012 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.7° C.

#### GC/MS VOA

Method(s) 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 75012 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

VOA Prep

No analytical or quality issues were noted.

# **Client Sample Results**

Client: Conestoga-Rovers & Associates, Inc. Project/Site: 461 8th St., Oakland, CA TestAmerica Job ID: 440-32627-1

Client Sample ID: S-5							Lab Sam	ple ID: 440-3	2627-1
ate Collected: 12/11/12 09:06								Matrix	c: Wate
ate Received: 12/13/12 09:50									
Method: 8260B/CA_LUFTMS - V	olatile Organic	Compounds	s by GC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Volatile Fuel Hydrocarbons	14000		500		ug/L		· · · · · · · · · · · · · · · · · · ·	12/21/12 19:32	1
(C4-C12)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
Dibromofluoromethane (Surr)	93		80 - 120			-		12/21/12 19:32	1
4-Bromofluorobenzene (Surr)	107		80 - 120					12/21/12 19:32	1
= ( (2, (2, ))	110		80 - 120					12/21/12 19:32	1
Toluene-d8 (Surr)	110		80 - 120					12/21/12 19.32	
Ioluene-d8 (Surr) - -	110		80 - 120					12/21/12 19.52	,
Toluene-d8 (Surr) - Method: 8260B - Volatile Organi	c Compounds (	•						12/21/12 19.32	
-	c Compounds (	GC/MS) Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	
 Method: 8260B - Volatile Organi	c Compounds (	•		MDL	Unit ug/L	D	Prepared		Dil Fa
Method: 8260B - Volatile Organi Analyte	c Compounds ( Result	•	RL	MDL		D	Prepared	Analyzed	Dil Fa
Method: 8260B - Volatile Organi Analyte Benzene	c Compounds ( 	•		MDL	ug/L	D	Prepared	Analyzed	Dil Fa 1
Method: 8260B - Volatile Organi Analyte Benzene Ethylbenzene	c Compounds ( Result 420 550	•	<b>RL</b> 5.0 5.0	MDL	ug/L ug/L	<u>D</u>	Prepared	Analyzed 12/21/12 19:32 12/21/12 19:32	Dil Fa 1 1
Method: 8260B - Volatile Organi Analyte Benzene Ethylbenzene Toluene	c Compounds ( 	Qualifier	<b>RL</b> 5.0 5.0 5.0	MDL	ug/L ug/L ug/L	<u>D</u>	Prepared	Analyzed 12/21/12 19:32 12/21/12 19:32 12/21/12 19:32	Dil Fa 1 1 1
Method: 8260B - Volatile Organi Analyte Benzene Ethylbenzene Toluene Xylenes, Total	c Compounds ( <u>Result</u> 420 550 700 1500	Qualifier	<b>RL</b> 5.0 5.0 5.0 10	MDL	ug/L ug/L ug/L	D	· · · ·	Analyzed 12/21/12 19:32 12/21/12 19:32 12/21/12 19:32 12/21/12 19:32	Dil Fa 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Method: 8260B - Volatile Organi Analyte Benzene Ethylbenzene Toluene Xylenes, Total	c Compounds ( 	Qualifier	RL 5.0 5.0 5.0 10 <i>Limits</i>	MDL	ug/L ug/L ug/L	<u>D</u>	· · · ·	Analyzed 12/21/12 19:32 12/21/12 19:32 12/21/12 19:32 12/21/12 19:32 Analyzed	Dil Fa 1 1 1 1 Dil Fa

#### Client Sample ID: S-6

Date Collected: 12/11/12 11:25

## Lab Sample ID: 440-32627-2

Matrix: Water

#### Date Received: 12/13/12 09:50

Method: 8260B/CA_LUFTMS - '	Volatile Organic	Compound	s by GC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons	31000		10000		ug/L			12/21/12 20:53	200
(C4-C12)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	96		80 - 120			-		12/21/12 20:53	200
4-Bromofluorobenzene (Surr)	105		80 - 120					12/21/12 20:53	200

#### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	8300		100		ug/L			12/21/12 20:53	200
Ethylbenzene	1000		100		ug/L			12/21/12 20:53	200
Toluene	3700		100		ug/L			12/21/12 20:53	200
Xylenes, Total	3700		200		ug/L			12/21/12 20:53	200
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		80 - 120			-		12/21/12 20:53	200
Dibromofluoromethane (Surr)	96		80 - 120					12/21/12 20:53	200
Toluene-d8 (Surr)	111		80 - 120					12/21/12 20:53	200

Client: Conestoga-Rovers & Associates, Inc. Project/Site: 461 8th St., Oakland, CA TestAmerica Job ID: 440-32627-1

Lab Sample ID: 440-32627-3

Matrix: Water

#### Client Sample ID: S-9 Date Collected: 12/11/12 12:25 Date Received: 12/13/12 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons	610		130		ug/L			12/22/12 15:42	2.5
(C4-C12)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	95		80 - 120			-		12/22/12 15:42	2.5
4-Bromofluorobenzene (Surr)	103		80 _ 120					12/22/12 15:42	2.5
Toluene-d8 (Surr)	105		80 - 120					12/22/12 15:42	2.5

/ mary to	Rebail	quanner				ricparcu	Analyzeu	Dirrac
Benzene	160		1.3	ug/L			12/22/12 15:42	2.5
Ethylbenzene	32		1.3	ug/L			12/22/12 15:42	2.5
Toluene	22		1.3	ug/L			12/22/12 15:42	2.5
Xylenes, Total	95		2.5	ug/L			12/22/12 15:42	2.5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		80 - 120		-		12/22/12 15:42	2.5
Dibromofluoromethane (Surr)	95		80 - 120				12/22/12 15:42	2.5
Toluene-d8 (Surr)	105		80 - 120				12/22/12 15:42	2.5

#### Client Sample ID: S-13

Toluene-d8 (Surr)

Date Collected: 12/11/12 12:55

#### Lab Sample ID: 440-32627-4

Matrix: Water

Date Received: 12/13/12 09:50

Method: 8260B/CA_LUFTMS -	Volatile Organic	Compound	s by GC/MS						
Analyte	Result	Qualifier	RL.	MDL.	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons	5900		500		ug/L			12/21/12 21:48	10
(C4-C12)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	94		80 - 120			-		12/21/12 21:48	10
4-Bromofluorobenzene (Surr)	106		80 - 120					12/21/12 21:48	10

#### Method: 8260B - Volatile Organic Compounds (GC/MS)

111

Analyte	Result Q	ualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	420	5.0		ug/L			12/21/12 21:48	10
Ethylbenzene	260	5.0		ug/L			12/21/12 21:48	10
Toluene	580	5.0		ug/L			12/21/12 21:48	10
Xylenes, Total	950	10		ug/L			12/21/12 21:48	10
Surrogate	%Recovery Q	ualifier Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106	80 - 120			-		12/21/12 21:48	10
Dibromofluoromethane (Surr)	94	80 - 120					12/21/12 21:48	10

80 - 120

10

12/21/12 21:48

Lab Sample ID: 440-32627-5

Matrix: Water

# Client Sample ID: S-19

Date Collected: 12/11/12 12:35 Date Received: 12/13/12 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons	1700		250		ug/L			12/22/12 16:09	5
(C4-C12)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	94		80 - 120			-		12/22/12 16:09	5
4-Bromofluorobenzene (Surr)	102		80 - 120					12/22/12 16:09	5
Toluene-d8 (Surr)	104		80 - 120					12/22/12 16:09	5

Method: 8260B - Volatile Orga	nic Compounds (	GC/MS)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	110		2.5		ug/L			12/22/12 16:09	5
Ethylbenzene	100		2.5		ug/L			12/22/12 16:09	5
Toluene	240		2.5		ug/L			12/22/12 16:09	5
Xylenes, Total	440		5.0		ug/L			12/22/12 16:09	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		80 - 120			-		12/22/12 16:09	5
Dibromofluoromethane (Surr)	94		80 - 120					12/22/12 16:09	5
Toluene-d8 (Surr)	104		80 - 120					12/22/12 16:09	5

#### Client Sample ID: S-20

#### Lab Sample ID: 440-32627-6

Matrix: Water

Date Collected: 12/11/12 13:15

Date Received: 12/13/12 09:50

Method: 8260B/CA_LUFTMS -	Volatile Organic	Compound	s by GC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons	9700		1300		ug/L			12/21/12 22:43	25
(C4-C12)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	95		80 - 120			-		12/21/12 22:43	25
4-Bromofluorobenzene (Surr)	105		80 - 120					12/21/12 22:43	25

nic Compounds ((	GC/MS)							
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
630		13		ug/L			12/21/12 22:43	25
720		13		ug/L			12/21/12 22:43	25
1000		13		ug/L			12/21/12 22:43	25
1500		25		ug/L			12/21/12 22:43	25
%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
105		80 - 120					12/21/12 22:43	25
95		80 - 120					12/21/12 22:43	25
113		80 - 120					12/21/12 22:43	25
	Result           630           720           1000           1500           %Recovery           105           95	720 1000 1500 <u>%Recovery</u> <u>Qualifier</u> 105 95	Result         Qualifier         RL           630         13           720         13           1000         13           1500         25           %Recovery         Qualifier         Limits           105         80-120           95         80-120	Result         Qualifier         RL         MDL           630         13         13           720         13         13           1000         13         25           %Recovery         Qualifier         Limits           1005         80 - 120         95	Result         Qualifier         RL         MDL         Unit           630         13         ug/L           720         13         ug/L           1000         13         ug/L           1500         25         ug/L           %Recovery         Qualifier         Limits           105         80 - 120           95         80 - 120	Result         Qualifier         RL         MDL         Unit         D           630         13         ug/L         ug/L	Result         Qualifier         RL         MDL         Unit         D         Prepared           630         13         ug/L         ug/L <tdu< td=""><td>Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed           630         13         ug/L         12/21/12 22:43         12/21/12 22:43         12/21/12 22:43           720         13         ug/L         12/21/12 22:43         12/21/12 22:43           1000         13         ug/L         12/21/12 22:43           1500         25         ug/L         12/21/12 22:43           %Recovery         Qualifier         Limits         Prepared         Analyzed           1005         80 - 120         80 - 120         12/21/12 22:43           95         80 - 120         12/21/12 22:43         12/21/12 22:43</td></tdu<>	Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed           630         13         ug/L         12/21/12 22:43         12/21/12 22:43         12/21/12 22:43           720         13         ug/L         12/21/12 22:43         12/21/12 22:43           1000         13         ug/L         12/21/12 22:43           1500         25         ug/L         12/21/12 22:43           %Recovery         Qualifier         Limits         Prepared         Analyzed           1005         80 - 120         80 - 120         12/21/12 22:43           95         80 - 120         12/21/12 22:43         12/21/12 22:43

Client: Conestoga-Rovers & Associates, Inc. Project/Site: 461 8th St., Oakland, CA

Lab Sample ID: 440-32627-7

Matrix: Water

## Client Sample ID: S-21A Date Collected: 12/11/12 12:45

Date Received: 12/13/12 09:50

Method: 8260B/CA_LUFTMS - Vo	olatile Organic Co	ompounds l	oy GC/MS						
Analyte	Result G	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons	13000		2000		ug/L			12/22/12 01:50	40
(C4-C12)									

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromof/uoromethane (Surr)	92		80 - 120		12/22/12 01:50	40
4-Bromofluorobenzene (Surr)	107		80 _ 120		12/22/12 01:50	40
Toluene-d8 (Surr)	112		80 - 120		12/22/12 01:50	40

#### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	3300		20		ug/L			12/22/12 01:50	40
Ethylbenzene	610		20		ug/L			12/22/12 01:50	40
Toluene	2200		20		ug/L			12/22/12 01:50	40
Xylenes, Total	1300		40		ug/L			12/22/12 01:50	40
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		80 - 120					12/22/12 01:50	40
Dibromofluoromethane (Surr)	92		80 - 120					12/22/12 01:50	40
Toluene-d8 (Surr)	112		80 - 120					12/22/12 01:50	40

#### **Client Sample ID: S-22A**

Date Collected: 12/11/12 13:05

#### Lab Sample ID: 440-32627-8

Matrix: Water

Date Received: 12/13/12 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	54000		5000		ug/L			12/22/12 03:18	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	100		80 - 120			-		12/22/12 03:18	100
4-Bromofluorobenzene (Surr)	106		80 _ 120					12/22/12 03:18	100
Toluene-d8 (Surr)	112		80 - 120					12/22/12 03:18	100

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Analyte	Result Qua	alifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1800	50	in	ug/Ľ			12/22/12 03:18	100
Ethylbenzene	2400	50		ug/L			12/22/12 03:18	100
Toluene	8900	50		ug/L			12/22/12 03:18	100
Xylenes, Total	14000	100		ug/L			12/22/12 03:18	100
Surrogate	%Recovery Qua	alifier Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106	80 _ 120			-		12/22/12 03:18	100
Dibromofluoromethane (Surr)	100	80 - 120					12/22/12 03:18	100
Toluene-d8 (Surr)	112	80 - 120					12/22/12 03:18	100

Client: Conestoga-Rovers & Associates, Inc. Project/Site: 461 8th St., Oakland, CA

State Sciences

Date Collected: Date Received:								Lab Samp		10-32627-1 Aatrix: Wate
Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	10 mL	10 mL	75012	12/21/12 19:32	MP	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTMS		10	10 mL	10 mL	75013	12/21/12 19:32	MP	TAL IRV
Client Sample	e ID: S-6							Lab Samp	le ID: 44	40-32627-;
Date Collected: Date Received:									N	latrix: Wate
	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		200	10 mL	10 mL	75012	12/21/12 20:53	MP	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTMS		200	10 mL	10 mL	75013	12/21/12 20:53	MP	TAL IRV
Client Sample	e ID: S-9							Lab Samp	le ID: 44	40-32627-
Date Collected: Date Received:	12/11/12 12:							•		latrix: Wate
Dren Tune	Batch	Batch	<b>D</b>	Dil	Initial	Final	Batch	Prepared		
Prep Type Total/NA	<b>Type</b> Analysis	Method 8260B	Run	- Factor 2.5			Number 75104	or Analyzed	Analyst YK	– Lab TAL IRV
Total/NA	Analysis	8260B/CA_LUFTMS		2.5	10 mL	10 mL	75104	12/22/12 15:42	YK	TAL IRV
Date Collected:	12/11/12 12:							Lab Samp		
Date Collected:	12/11/12 12:							Lab Samp		
Date Collected: Date Received:	12/11/12 12:			Dil	Initial	Final	Batch	Lab Samp		
Date Collected: Date Received: Prep Type	12/11/12 12: 12/13/12 09: Batch Type	50 Batch Method	Run	Factor	Amount	Amount	Number	Prepared or Analyzed	Analyst	latrix: Wate
Date Collected: Date Received:	12/11/12 12: 12/13/12 09: Batch	50 Batch	Run					Prepared	N	flatrix: Wate
Date Collected: Date Received: Prep Type	12/11/12 12: 12/13/12 09: Batch Type	50 Batch Method	Run	Factor	Amount	Amount	Number	Prepared or Analyzed	Analyst	Aatrix: Wate
Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample	12/11/12 12: 12/13/12 09: Batch Type Analysis Analysis e ID: S-19	50 Batch Method 8260B 8260B/CA_LUFTMS	Run	Factor 10	Amount 10 mL	Amount 10 mL	Number 75012	Prepared or Analyzed 12/21/12 21:48	Analyst MP MP Die ID: 44	<b>Lab</b> TAL IRV TAL IRV TAL IRV
Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected:	12/11/12 12: 12/13/12 09: Batch Type Analysis Analysis e ID: S-19 12/11/12 12:	50 Batch Method 8260B 8260B/CA_LUFTMS	Run	Factor 10	Amount 10 mL	Amount 10 mL	Number 75012	Prepared or Analyzed 12/21/12 21:48 12/21/12 21:48	Analyst MP MP Die ID: 44	<b>Lab</b> TAL IRV TAL IRV TAL IRV
Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected:	12/11/12 12: 12/13/12 09: Batch Type Analysis Analysis e ID: S-19 12/11/12 12: 12/13/12 09:	50 Batch Method 8260B 8260B/CA_LUFTMS 35 50	Run	- Factor 10 10	Amount 10 mL 10 mL	Amount 10 mL 10 mL	Number 75012 75013	Prepared or Analyzed 12/21/12 21:48 12/21/12 21:48 Lab Samp	Analyst MP MP Die ID: 44	<b>Lab</b> TAL IRV TAL IRV TAL IRV
Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected:	12/11/12 12: 12/13/12 09: Batch Type Analysis Analysis e ID: S-19 12/11/12 12:	50 Batch Method 8260B 8260B/CA_LUFTMS	Run	Factor 10	Amount 10 mL	Amount 10 mL	Number 75012	Prepared or Analyzed 12/21/12 21:48 12/21/12 21:48	Analyst MP MP Die ID: 44	<b>Lab</b> TAL IRV TAL IRV TAL IRV
Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received:	12/11/12 12: 12/13/12 09: Batch Type Analysis Analysis e ID: S-19 12/11/12 12: 12/13/12 09: Batch	50 Batch Method 8260B 8260B/CA_LUFTMS 35 50 Batch		Factor 10 10 Dil	Amount 10 mL 10 mL	Amount 10 mL 10 mL	Number 75012 75013 Batch	Prepared or Analyzed 12/21/12 21:48 12/21/12 21:48 Lab Samp Prepared	Analyst MP MP Die ID: 44	Matrix: Wate Lab TAL IRV TAL IRV 40-32627- Matrix: Wate
Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type	12/11/12 12: 12/13/12 09: Batch Type Analysis Analysis e ID: S-19 12/11/12 12: 12/13/12 09: Batch Type	50 Batch Method 8260B 8260B/CA_LUFTMS 35 50 Batch Method		Dil Factor	Amount 10 mL 10 mL Initial Amount	Amount 10 mL 10 mL Final Amount	Number 75012 75013 Batch Number	Prepared or Analyzed 12/21/12 21:48 12/21/12 21:48 Lab Samp Prepared or Analyzed	Analyst MP MP Die ID: 44 M	Matrix: Wate Lab TAL IRV TAL IRV 40-32627- Matrix: Wate Lab
Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA	12/11/12 12: 12/13/12 09: Batch Type Analysis Analysis e ID: S-19 12/11/12 12: 12/13/12 09: Batch Type Analysis Analysis Analysis	50 Batch Method 8260B 8260B/CA_LUFTMS 35 50 Batch Method 8260B		Factor       10       10       10       Dil       Factor       5	Amount 10 mL 10 mL Initial Amount 10 mL	Amount 10 mL 10 mL Final Amount 10 mL	Number 75012 75013 Batch Number 75104	Prepared or Analyzed 12/21/12 21:48 12/21/12 21:48 Lab Samp Prepared or Analyzed 12/22/12 16:09	Analyst MP MP Die ID: 44 M Analyst YK YK	Atrix: Wate Lab TAL IRV TAL IRV 40-32627- Aatrix: Wate Lab TAL IRV TAL IRV
Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected:	12/11/12 12: 12/13/12 09: Batch Type Analysis Analysis e ID: S-19 12/11/12 12: 12/13/12 09: Batch Type Analysis Analysis e ID: S-20 12/11/12 13:	50 Batch Method 8260B 8260B/CA_LUFTMS 35 50 Batch Method 8260B 8260B/CA_LUFTMS		Factor       10       10       10       Dil       Factor       5	Amount 10 mL 10 mL Initial Amount 10 mL	Amount 10 mL 10 mL Final Amount 10 mL	Number 75012 75013 Batch Number 75104	Prepared or Analyzed 12/21/12 21:48 12/21/12 21:48 Lab Samp Prepared or Analyzed 12/22/12 16:09 12/22/12 16:09	Analyst MP MP Die ID: 44 M Analyst YK YK YK	Atrix: Wate Lab TAL IRV TAL IRV 40-32627- Aatrix: Wate Lab TAL IRV TAL IRV TAL IRV
Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA	12/11/12 12: 12/13/12 09: Batch Type Analysis Analysis e ID: S-19 12/11/12 12: 12/13/12 09: Batch Type Analysis Analysis e ID: S-20 12/11/12 13: 12/13/12 09:	50 Batch Method 8260B 8260B/CA_LUFTMS 35 50 Batch Method 8260B 8260B/CA_LUFTMS 8260B/CA_LUFTMS		Factor           10           10           10           10           5	Amount 10 mL 10 mL 10 mL 10 mL 10 mL 10 mL	Amount 10 mL 10 mL Final Amount 10 mL 10 mL	Number           75012           75013           Batch           Number           75104           75105	Prepared or Analyzed 12/21/12 21:48 12/21/12 21:48 Lab Samp Prepared or Analyzed 12/22/12 16:09 12/22/12 16:09 Lab Samp	Analyst MP MP Die ID: 44 M Analyst YK YK YK	Atrix: Wate Lab TAL IRV TAL IRV 40-32627- Atrix: Wate Lab TAL IRV TAL IRV TAL IRV 40-32627-
Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected:	12/11/12 12: 12/13/12 09: Batch Type Analysis Analysis e ID: S-19 12/11/12 12: 12/13/12 09: Batch Type Analysis Analysis e ID: S-20 12/11/12 13:	50 Batch Method 8260B 8260B/CA_LUFTMS 35 50 Batch Method 8260B 8260B/CA_LUFTMS		Factor       10       10       10       Dil       Factor       5	Amount 10 mL 10 mL Initial Amount 10 mL	Amount 10 mL 10 mL Final Amount 10 mL	Number 75012 75013 Batch Number 75104	Prepared or Analyzed 12/21/12 21:48 12/21/12 21:48 Lab Samp Prepared or Analyzed 12/22/12 16:09 12/22/12 16:09	Analyst MP MP Die ID: 44 M Analyst YK YK YK	Atrix: Wate

TestAmerica Irvine

Client: Conestoga-Rovers & Associates, Inc. Project/Site: 461 8th St., Oakland, CA

2/11/12 13:15	ient Sample te Collected: * te Received: *	Lab Samp		<b>40-32627-</b> 6 Natrix: Water						
Batch B	rep Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
	otal/NA	8260B/CA_LUFTMS		25	10 mL	10 mL	75013	12/21/12 22:43	MP	TAL IRV
D: S-21A	ient Sample	λ				·		Lab Samp	le ID: 44	40-32627-7
2/11/12 12:45	te Collected:	45							٨	Aatrix: Water
/13/12 09:50	te Received:	50								
									N	/la

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		40	10 mL	10 mL	75037	12/22/12 01:50	WC	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTMS		40	10 mL	10 mL	75038	12/22/12 01:50	WC	TAL IRV

## Client Sample ID: S-22A

Date Collected: 12/11/12 13:05 Date Received: 12/13/12 09:50 Lab Sample ID: 440-32627-8

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		100	10 mL	10 mL	75037	12/22/12 03:18	WC	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTMS		100	10 mL	10 mL	75038	12/22/12 03:18	WC	TAL IRV

### Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

75 \_ 125

75 - 125

70 - 120

**Client Sample ID: S-5** 

Prep Type: Total/NA

### Method: 8260B - Volatile Organic Compounds (GC/MS)

_ Lab Sample ID: MB 440-75012/4 Matrix: Water									Client S	ample ID: Metho Prep Type: T	
Analysis Batch: 75012											
	MB	MB									
Analyte	Result	Qualifier	RL		MDL Unit		D	Р	repared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L					12/21/12 18:10	1
Ethylbenzene	ND		0.50		ug/L					12/21/12 18:10	1
Toluene	ND		0.50		ug/L					12/21/12 18:10	1
Xylenes, Total	ND		1.0		ug/L					12/21/12 18:10	1
	MB	МВ									
Surrogate	%Recovery	Qualifier	Limits					PI	repared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		80 - 120							12/21/12 18:10	1
Dibromofluoromethane (Surr)	93		80 - 120							12/21/12 18:10	1
Toluene-d8 (Surr) _	109		80 - 120							12/21/12 18:10	1
_ Lab Sample ID: LCS 440-75012/5							Clie	ent	Sample	ID: Lab Control	Sample
Matrix: Water									•	Prep Type: 1	-
Analysis Batch: 75012											
-			Spike	LCS	LCS					%Rec.	
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits	
Benzene			25.0	19.2		ug/L		-	77	70 _ 120	
Ethylbenzene			25.0	23.5		ug/L			94	75 <sub>-</sub> 125	

			-9	
m,p-Xylene	50.0	51.1	ug/L	102
o-Xylene	25.0	26.0	ug/L	104
Toluene	25.0	22.7	ug/L	91
LCS LCS				

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120
Toluene-d8 (Surr)	112		80 - 120

#### Lab Sample ID: 440-32627-1 MS Matrix: Water

matrixi mator									1100 13	
Analysis Batch: 75012										
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	420		250	579		ug/L		65	65 <sub>-</sub> 125	
Ethylbenzene	550		250	693	F	ug/L		57	65 _ 130	
m,p-Xylene	1200		500	1580		ug/L		67	65 - 130	
o-Xylene	260		250	482		ug/L		90	65 _ 125	
Toluene	700		250	853	F	ug/L		61	70 - 125	
	MS	MS								
Surrogate	%Recovery	Qualifier	Limits							

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		80 - 120
Dibromofluoromethane (Surr)	95		80 - 120
Toluene-d8 (Surr)	113		80 - 120

Client: Conestoga-Rovers & Associates, Inc. Project/Site: 461 8th St., Oakland, CA

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-32627-1 MSI Matrix: Water	)										Client San Prep Typ	-	
Analysis Batch: 75012	Samula	Sama	10	Eniko		Men	MSD				%Rec.		RPE
A	Sample	-		Spike				11 14	-	0/ D = =		000	
Analyte	Result	Quain	ier	Added		580	Qualifier	Unit	D	%Rec		RPD 0	Limi
Benzene	420			250			-	ug/L		65 57	65 - 125 65 - 130		20
	550			250		692	F	ug/L		57	65 <sub>-</sub> 130	0	20
m,p-Xylene	1200			500		1580		ug/L		67	65 - 130	0	25
o-Xylene	260			250		493	-	ug/L		94	65 - 125	2	20
Toluene	700			250		849	F	ug/L		60	70 - 125	1	20
	MSD	MSD											
Surrogate	%Recovery	Qualit	fier	Limits									
4-Bromofluorobenzene (Surr)	105			80 - 120									
Dibromofluoromethane (Surr)	93			80 - 120									
Toluene-d8 (Surr)	112			80 - 120									
Lab Sample ID: MB 440-75037/4										Client S	Sample ID: Me	thod	Blank
Matrix: Water											Ргер Тур	e: To	tal/NA
Analysis Batch: 75037													
		MB	MB										
Analyte	R	esult	Qualifier		RL		MDL Unit		D	Prepared	Analyzed		Dil Fac
Benzene		ND			0.50		ug/L				12/21/12 20:	58	1
Ethylbenzene		ND			0.50		ug/L				12/21/12 20:	58	
Toluene		ND			0.50		ug/L				12/21/12 20:	58	
Xylenes, Total		ND			1.0		ug/L				12/21/12 20:	58	
_		MB											
Surrogate	%Reco	-	Qualifier	Lim						Prepared	Analyzed		Dil Fa
4-Bromofluorobenzene (Surr)		100			120						12/21/12 20:		
Dibromofluoromethane (Surr)		92			120						12/21/12 20:		
Toluene-d8 (Surr)		111		80 -	120						12/21/12 20:	58	
Lab Sample ID: LCS 440-75037/5	5								Clier	nt Sample	e ID: Lab Con		
Matrix: Water											Ргер Тур	e: To	tal/NA
Analysis Batch: 75037													
				Spike			LCS		_	~ -	%Rec.		
Analyte				Added			Qualifier	Unit	D		Limits		
Benzene				25.0		23.2		ug/L		93	70 - 120		
Ethylbenzene				25.0		26.6		ug/L		106	75 - 125		
m,p-Xylene				50.0		55.4		ug/L		111	75 - 125		
o-Xylene				25.0		27.0		ug/L		108	75 <sub>-</sub> 125		
Toluene				25.0		26.0		ug/L		104	70 - 120		
	LCS	LCS											
Surrogate	%Recovery		fier	Limits									
4-Bromofluorobenzene (Surr)	107			80 - 120	-								
Dibromofluoromethane (Surr)	99			80 - 120									
()	113			80 - 120									

Client: Conestoga-Rovers & Associates, Inc. Project/Site: 461 8th St., Oakland, CA

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-32627-7 MS Matrix: Water											Client Samp Prep Ty		
Analysis Batch: 75037	Sample S	amplo	Spiko	MC	MS						%Rec.		
Amelute			Spike				1-14		_	0/ D			
Analyte	Result 0	zuaimer	Added		Qualifie		Jnit		D	%Rec	Limits		
Benzene	3300		1000	3980			ıg/L			73	65 _ 125		
Ethylbenzene	610		1000	1580			ıg/L			97	65 - 130		
m,p-Xylene	1100		2000	3110			ıg/L			102	65 <sub>-</sub> 130		
o-Xylene	230		1000	1300			ig/L			106	65 <sub>-</sub> 125		
Toluene	2200		1000	3030		u	ıg/L			84	70 - 125		
	MS M	NS											
Surrogate	%Recovery (	Qualifier	Limits										
4-Bromofluorobenzene (Surr)	103		80 - 120										
Dibromofluoromethane (Surr)	95		80 - 120										
Toluene-d8 (Surr)	112		80 - 120										
- Lab Sample ID: 440-32627-7 MS Matrix: Water	D										Client Samı Prep Ty		
Analysis Batch: 75037													
	Sample S	-	Spike		MSD						%Rec.		RPE
Analyte	Result (	Qualifier	Added		Qualifie		Jnit		D	%Rec	Limits	RPD	Limi
Benzene	3300		1000	3980			ıg/L			73	65 - 125	0	20
Ethylbenzene	610		1000	1620			ıg/L			101	65 - 130	3	20
m,p-Xylene	1100		2000	3180			ıg/L			106	65 <sub>-</sub> 130	2	25
o-Xylene	230		1000	1350			ıg/L			111	65 - 125	4	20
Toluene	2200		1000	3060		ι	ıg/L			87	70 - 125	1	20
	MSD I	NSD											
Surrogate	%Recovery (	Qualifier	Limits										
4-Bromofluorobenzene (Surr)	104		80 - 120										
Dibromofluoromethane (Surr)	95		80 - 120										
Toluene-d8 (Surr)	110		80 - 120										
- Lab Sample ID: MB 440-75104/4										Client	Sample ID: N	lethod	Blank
Matrix: Water											Prep Ty		
Analysis Batch: 75104													
	I	MB MB											
Analyte	Res	sult Qualifier	RL		MDL U	nit		D	Ρ	repared	Analyze	d	Dil Fac
Benzene		ND	0.50		u	g/L					12/22/12 1	1:40	
Ethylbenzene		ND	0.50		u	g/L					12/22/12 1	1:40	
Toluene		ND	0.50		u	g/L					12/22/12 1	1:40	-
Xylenes, Total		ND	1.0		u	g/L					12/22/12 1	1:40	
		MB MB											
Surrogate	%Recov	ery Qualifier	Limits						Ρ	repared	Analyze	ed	Dil Fa
4-Bromofluorobenzene (Surr)		105	80 - 120								12/22/12 1	1:40	
Dibromofluoromethane (Surr)		96	80 - 120								12/22/12 1	1:40	
Toluene-d8 (Surr)		106	80 - 120								12/22/12 1		

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-75104/5 Matrix: Water Analysis Batch: 75104					Client	: Sample	ID: Lab Cont Prep Type	rol Sample e: Total/NA
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	25.0	21.7		ug/L		87	70 - 120	
Ethylbenzene	25.0	22.4		ug/L		90	75 <sub>-</sub> 125	
m,p-Xylene	50.0	45.4		ug/L		91	75 _ 125	
o-Xylene	25.0	23.6		ug/L		95	75 - 125	
Toluene	25.0	23.6		ug/L		94	70 - 120	
	CS.							

Spike

Added

25.0

25.0

MS MS

20.2

20.6

41.8

21.8

22.2

Result Qualifier

Unit

ug/L

ug/L

ug/L

ug/L

ug/L

	205	200	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	107		80 - 120

#### Lab Sample ID: 440-33154-G-7 MS Matrix: Water Analysis Batch: 75104

	Sample	Sample	
Analyte	Result	Qualifier	
Benzene	ND	· · ·	
Ethylbenzene	ND		

m,p-Xylene	ND		50.0
o-Xylene	ND		25.0
Toluene	ND		25.0
	MS	MS	
Curre note			
Surrogate	%Recovery	Qualitier	Limits
4-Bromofluorobenzene (Surr)	% <i>Recovery</i> 	Qualitier	Limits 80 - 120
		Qualifier	

#### Lab Sample ID: 440-33154-G-7 MSD Matrix: Water

Analysis Batch: 75104

······	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	ND		25.0	21.1		ug/L		84	65 _ 125	5	20
Ethylbenzene	ND		25.0	22.1		ug/L		88	65 _ 130	7	20
m,p-Xylene	ND		50.0	45.0		ug/L		. 90	65 _ 130	7	25
o-Xylene	ND		25.0	23.1		ug/L		93	65 _ 125	6	20
Toluene	ND		25.0	23.2		ug/L		93	70 _ 125	5	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)			80 - 120								
Dibromofluoromethane (Surr)	98		80 - 120								
Toluene-d8 (Surr)	107		80 - 120								

#### **Client Sample ID: Matrix Spike** Prep Type: Total/NA

%Rec.

Limits

65 \_ 125

65 \_ 130

65 \_ 130

65 - 125

70 - 125

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

%Rec

81

83

84

87

89

D

### Method: 8260B/CA\_LUFTMS - Volatile Organic Compounds by GC/MS

Lab Sample ID: LCS 440-75013/6 Matrix: Water									Client	t Sample	lD: Lab Cor Prep Ty		-
Analysis Batch: 75013													
				Spike		LCS					%Rec.		
Analyte			·····	Added			Qualifier	Unit	D	%Rec	Limits		
Volatile Fuel Hydrocarbons				500		512		ug/L		102	55 - 130		
(C4-C12)													
	LCS	LCS											
Surrogate	%Recovery	Qual	ifier	Limits									
Dibromofluoromethane (Surr)	92			80 - 120									
4-Bromofluorobenzene (Surr)	106			80 - 120									
Toluene-d8 (Surr)	111			80 - 120									
Lab Sample ID: 440-32627-1 MS											Client Sa	mple l	ID: S-{
Matrix: Water											Ргер Ту	pe: To	tal/NA
Analysis Batch: 75013													
	Sample	Sam	ple	Spike		MS	MS				%Rec.		
Analyte	Result	Qual	ifier	Added		Result	Qualifier	Unit	D	%Rec	Limits		
Volatile Fuel Hydrocarbons (C4-C12)	14000			17300		25500		ug/L		68	50 <sub>-</sub> 145		
		MS											
Surrogate	%Recovery	Qual	lifier	Limits									
Dibromofluoromethane (Surr)	95			80 - 120									
4-Bromofluorobenzene (Surr)	106			80 - 120									
Toluene-d8 (Surr)	113			80 - 120									
- Lab Sample ID: 440-32627-1 MSI	D										Client Sa	mple i	ID: S-{
Matrix: Water											Prep Ty	-	
Analysis Batch: 75013												-	
	Sample	Sam	ple	Spike		MSD	MSD				%Rec.		RPI
Analyte	Result	Qual	ifier	Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Volatile Fuel Hydrocarbons (C4-C12)	14000			17300		25600		ug/L		69	50 _ 145	0	20
	MSD	MSD	)										
Surrogate	%Recovery	Qua	lifier	Limits									
Dibromofluoromethane (Surr)	93			80 - 120									
4-Bromofluorobenzene (Surr)	105			80 - 120									
Toluene-d8 (Surr)	112			80 - 120									
Lab Sample ID: MB 440-75038/4										Client S	Sample ID: N	lethod	Blan
Matrix: Water											Prep Ty		
Analysis Batch: 75038												•	
		MB	MB										
Analyte	R	esult	Qualifier		RL		MDL Unit		DF	Prepared	Analyze	d	Dil Fa
Volatile Fuel Hydrocarbons (C4-C12)		ND			50		ug/L				12/21/12 20	0:58	
		ΜВ	МВ										
<b>-</b> <i>i</i>	%Rec		Qualifier	Limi	its				,	Prepared	Analyze	d	Dil Fa
Surrogate									,			-	
Surrogate Dibromofluoromethane (Surr)		92		80 -	120						12/21/12 2	0:58	
Surrogate Dibromofluoromethane (Surr) 4-Bromofluorobenzene (Surr)		92 100		- 80 80 -					_		12/21/12 2 12/21/12 2		

## Method: 8260B/CA\_LUFTMS - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 440-75038/ Matrix: Water	23								Cl	ient	Sampl	e ID: Lab Co Pren T	ontrol S ype: To	
Analysis Batch: 75038												перт	ype. ic	/lai/11/
Analysis Baten. 10000				Spike		LCS	LCS					%Rec.		
Analyte				Added			Qualifier	Unit		D	%Rec	Limits		
Volatile Fuel Hydrocarbons				500		463		ug/L		_	93	55 - 130		······
(C4-C12)														
	LCS	LCS												
Surrogate	%Recovery	Qual	ifier	Limits										
Dibromofluoromethane (Surr)	89	·		80 - 120										
4-Bromofluorobenzene (Surr)	103			80 - 120										
Toluene-d8 (Surr)	113			80 - 120										
Lab Sample ID: 440-32627-7 MS						,						Client Sam	ple ID:	S-21
Matrix: Water												Prep T	ype: To	otal/N/
Analysis Batch: 75038		-												
	Sample		-	Spike		MS				_		%Rec.		
Analyte	Result	Qual	ifier	Added			Qualifier	Unit		D	%Rec	Limits		
Volatile Fuel Hydrocarbons (C4-C12)	13000			69000		68000		ug/L			79	50 <sub>-</sub> 145		
	MS	MS												
Surrogate	%Recovery	Qual	lifier	Limits										
Dibromofluoromethane (Surr)	95			80 - 120										
4-Bromofluorobenzene (Surr)	103			80 - 120										
Toluene-d8 (Surr)	112			80 - 120										
Lab Sample ID: 440-32627-7 MS	D											Client Sam	ple ID:	S-21/
Matrix: Water													ype: To	
Analysis Batch: 75038														
	Sample	Sam	ple	Spike		MSD	MSD					%Rec.		RP
Analyte	Result	Qual	ifier	Added		Result	Qualifier	Unit		D	%Rec	Limits	RPD	Lim
Volatile Fuel Hydrocarbons (C4-C12)	13000			69000		68200		ug/L			80	50 <sub>-</sub> 145	0	2
	MSD	MSD	)											
Surrogate	%Recovery	Quai	lifier	Limits										
Dibromofluoromethane (Surr)	95			80 - 120										
4-Bromofluorobenzene (Surr)	104			80 - 120										
Toluene-d8 (Surr)	110			80 - 120										
- Lab Sample ID: MB 440-75105/4	Ļ										Client	Sample ID:	Method	i Blan
Matrix: Water												Prep 1	уре: То	otal/N
Analysis Batch: 75105														
Analyte	R		MB Qualifier		RL		MDL Unit		D	P	repared	Analyz	ed	Dil Fa
Volatile Fuel Hydrocarbons (C4-C12)		ND			50					•	. spared	12/22/12		DIF
		ΜВ	мв											
				_	•.						repared	Analyz	ad	Dil Fa
Surrogate	%Rec	overv	Qualifier	Lim	its					- <b>r</b>		Allaiva	eu	
Surrogate Dibromofluoromethane (Surr)	%Reco	overy 96	Qualifier	Limi 					-	F				
-	%Reco		Qualifier		120				-			12/22/12 12/22/12	11:40	0111

### Method: 8260B/CA\_LUFTMS - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 440-751	05/6						Client	Sample	ID: Lab Co		
Matrix: Water									Prep T	ype: Tot	al/N/
Analysis Batch: 75105											
			Spike	LCS					%Rec.		
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
Volatile Fuel Hydrocarbons (C4-C12)			500	460		ug/L		92	55 <sub>-</sub> 130		
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
Dibromofluoromethane (Surr)	95		80 - 120								
4-Bromofluorobenzene (Surr)	104		80 - 120								
Toluene-d8 (Surr)	108		80 - 120								
Lab Sample ID: 440-33154-G	6-7 MS							Client	Sample ID:	Matrix	Spik
Matrix: Water									Prep T	ype: Tot	al/N
Analysis Batch: 75105											
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Volatile Fuel Hydrocarbons (C4-C12)	ND		1730	1060		ug/L		62	50 <sub>-</sub> 145		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
Dibromofluoromethane (Surr)	98		80 - 120								
4-Bromofluorobenzene (Surr)	100		80 - 120								
Toluene-d8 (Surr)	107		80 - 120								
Lab Sample ID: 440-33154-0	6-7 MSD						Client Sa	ample IC	): Matrix Sp	ike Dup	lica
Matrix: Water									Prep T	ype: Tot	al/N
Analysis Batch: 75105											
	Sample	Sample	Spike	MSD	MSD				%Rec.		RF
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Lin
Volatile Fuel Hydrocarbons (C4-C12)	ND		1730	1120		ug/L		65	50 _ 145	5	
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
Dibromofluoromethane (Surr)	98		80 - 120								
4-Bromofluorobenzene (Surr)	103		80 - 120								

Client: Conestoga-Rovers & Associates, Inc. Project/Site: 461 8th St., Oakland, CA

### GC/MS VOA

#### Analysis Batch: 75012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-32627-1	<u> </u>	Total/NA	Water	8260B	
440-32627-1 MS	S-5	Total/NA	Water	8260B	
440-32627-1 MSD	S-5	Total/NA	Water	8260B	
440-32627-2	S-6	Total/NA	Water	8260B	
440-32627-4	S-13	Total/NA	Water	8260B	
440-32627-6	S-20	Total/NA	Water	8260B	
LCS 440-75012/5	Lab Control Sample	Total/NA	Water	8260B	
MB 440-75012/4	Method Blank	Total/NA	Water	8260B	

#### Analysis Batch: 75013

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
440-32627-1	S-5	Total/NA	Water	8260B/CA_LUFT	
				MS	
440-32627-1 MS	S-5	Total/NA	Water	8260B/CA_LUFT	
				MS	
440-32627-1 MSD	S-5	Total/NA	Water	8260B/CA_LUFT	
				MS	
440-32627-2	S-6	Total/NA	Water	8260B/CA_LUFT	
				MS	
440-32627-4	S-13	Total/NA	Water	8260B/CA_LUFT	
				MS	
440-32627-6	S-20	Total/NA	Water	8260B/CA_LUFT	
				MS	
LCS 440-75013/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT	
				MS	

#### Analysis Batch: 75037

Client Sample ID	Prep Type	Matrix	Method	Prep Batch
S-21A	Total/NA	Water	8260B	
S-21A	Total/NA	Water	8260B	
S-21A	Total/NA	Water	8260B	
S-22A	Total/NA	Water	8260B	
Lab Control Sample	Total/NA	Water	8260B	
Method Blank	Total/NA	Water	8260B	
	S-21A S-21A S-21A S-22A Lab Control Sample	S-21A     Total/NA       S-21A     Total/NA       S-21A     Total/NA       S-21A     Total/NA       S-22A     Total/NA       Lab Control Sample     Total/NA	S-21ATotal/NAWaterS-21ATotal/NAWaterS-21ATotal/NAWaterS-21ATotal/NAWaterS-22ATotal/NAWaterLab Control SampleTotal/NAWater	S-21ATotal/NAWater8260BS-21ATotal/NAWater8260BS-21ATotal/NAWater8260BS-21ATotal/NAWater8260BS-22ATotal/NAWater8260BLab Control SampleTotal/NAWater8260B

#### Analysis Batch: 75038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-32627-7	S-21A	Total/NA	Water	8260B/CA_LUFT	
				MS	
440-32627-7 MS	S-21A	Total/NA	Water	8260B/CA_LUFT	
				MS	
440-32627-7 MSD	S-21A	Total/NA	Water	8260B/CA_LUFT	
				MS	
440-32627-8	S-22A	Total/NA	Water	8260B/CA_LUFT	
				MS	
LCS 440-75038/23	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT	
				MS	
MB 440-75038/4	Method Blank	Total/NA	Water	8260B/CA_LUFT	
				MS	

#### Analysis Batch: 75104

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
440-32627-3	S-9	Total/NA	Water	8260B	
440-32627-5	S-19	Total/NA	Water	8260B	

### GC/MS VOA (Continued)

#### Analysis Batch: 75104 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
440-33154-G-7 MS	Matrix Spike	Total/NA	Water	8260B	
40-33154-G-7 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
_CS 440-75104/5	Lab Control Sample	Total/NA	Water	8260B	
MB 440-75104/4	Method Blank	Total/NA	Water	8260B	
nalysis Batch: 75105					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
140-32627-3	<u>S-9</u>	Total/NA	Water	8260B/CA_LUFT	
				MS	
40-32627-5	S-19	Total/NA	Water	8260B/CA_LUFT	
				MS	
40-33154-G-7 MS	Matrix Spike	Total/NA	Water	8260B/CA_LUFT	
				MS	
140-33154-G-7 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B/CA_LUFT	
				MS	
.CS 440-75105/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT	
				MS	
/IB 440-75105/4	Method Blank	Total/NA	Water	8260B/CA_LUFT	
				MS	

Client: Conestoga-Rovers & Associates, Inc. Project/Site: 461 8th St., Oakland, CA

### Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
F	MS or MSD exceeds the control limits

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¢.	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

#### Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-13
Arizona	State Program	9	AZ0671	10-13-13
California	LA Cty Sanitation Districts	9	10256	01-31-13
California	NELAP	9	1108CA	01-31-13
California	State Program	9	2706	06-30-14
Guam	State Program	9	Cert. No. 12.002r	01-23-13
Hawaii	State Program	9	N/A	01-31-13
Nevada	State Program	9	CA015312007A	07-31-13
New Mexico	State Program	6	N/A	01-31-13
Northern Mariana Islands	State Program	9	MP0002	01-31-13
Oregon	NELAP	10	4005	09-12-13
USDA	Federal		P330-09-00080	06-06-14
USEPA UCMR	Federal	1	CA01531	01-31-13

LAB (LOCATION)

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# Shell Oil Products Chain Of Custody Record

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Client: Conestoga-Rovers & Associates, Inc.

#### Login Number: 32627 List Number: 1

Creator: Kim, Will

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	Pete L.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 440-32627-1

A DESCRIPTION

List Source: TestAmerica Irvine