



**CONESTOGA-ROVERS  
& ASSOCIATES**

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## TRANSMITTAL

DATE: November 14, 2014

REFERENCE NO.: 240483

PROJECT NAME: 5755 Broadway, Oakland

TO: Jerry Wickham  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**RECEIVED**  
By Alameda County Environmental Health at 11:45 am, Nov 17, 2014

Please find enclosed:  Draft  Final  
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QUANTITY	DESCRIPTION
1	Groundwater Monitoring Report - Third Quarter 2014

As Requested  For Review and Comment  
 For Your Use

**COMMENTS:**  
If you have any questions regarding the contents of this document, please call the CRA project manager Peter Schaefer at (510) 420-3319 or the Shell program manager Perry Pineda at (425) 413-1164.

Copy to: Perry Pineda, Shell Oil Products US (electronic copy)  
Clint Mercer, SC Fuels (lessee), 1800 West Katella Avenue, Suite 400, Orange, CA 92867  
Orkin, Inc. (property owner), PO Box 2128, Santa Fe Springs, CA 90670

Completed by: Peter Schaefer Signed: *Peter Schaefer*

Filing: Correspondence File



Mr. Jerry Wickham  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**Shell Oil Products US**  
Soil and Groundwater Focus Delivery Group  
20945 S. Wilmington Avenue  
Carson, CA 90810  
**Tel** (425) 413 1164  
**Fax** (425) 413 0988  
**Email** perry.pineda@shell.com  
**Internet** <http://www.shell.com>

Re: 5755 Broadway  
Oakland, California  
SAP Code 135699  
Incident No. 98995756  
ACEH Case No. RO0000026

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 (425) 413-1164 with any questions or concerns.

Sincerely,  
Shell Oil Products US

A handwritten signature in black ink, appearing to read "Perry Pineda", is located below the typed name.

Perry Pineda  
Senior Environmental Program Manager



# GROUNDWATER MONITORING REPORT - THIRD QUARTER 2014

**SHELL-BRANDED SERVICE STATION  
5755 BROADWAY  
OAKLAND, CALIFORNIA**

**SAP CODE            135699  
INCIDENT NO.      98995756  
AGENCY NO.        RO0000026**

**NOVEMBER 14, 2014  
REF. NO. 240483 (23)**

This report is printed on recycled paper.

**Prepared by:  
Conestoga-Rovers  
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TABLE OF CONTENTS

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

LIST OF FIGURES  
(Following Text)

FIGURE 1	VICINITY MAP
FIGURE 2	GROUNDWATER CONTOUR AND CHEMICAL CONCENTRATION MAP

LIST OF TABLES  
(Following Text)

TABLE 1	GROUNDWATER DATA
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LIST OF APPENDICES

APPENDIX A	BLAINE TECH SERVICES, INC. - FIELD NOTES
APPENDIX B	TESTAMERICA LABORATORIES, INC. - ANALYTICAL REPORT

## 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	5755 Broadway, Oakland
Site Use	Shell-branded Service Station
Shell Project Manager	Perry Pineda
CRA Project Manager	Peter Schaefer
Lead Agency and Contact	ACEH, Jerry Wickham
Agency Case No.	RO0000026
Shell SAP Code	135699
Shell Incident No.	98995756

Date of most recent agency correspondence was September 22, 2014.

## 2.0 SITE ACTIVITIES, FINDINGS, AND DISCUSSION

### 2.1 CURRENT QUARTER'S ACTIVITIES

Blaine Tech Services, Inc. (Blaine) gauged and sampled the wells according to the established 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 report is presented in Appendix B.

CRA submitted a *Subsurface Investigation Report* on September 2, 2014, which detailed off-site soil vapor investigation results from the adjacent property located at 5606 Taft Avenue, Oakland.

Alameda County Environmental Health's (ACEH's) September 22, 2014 letter requested a case closure evaluation report by December 22, 2014.

**2.2        CURRENT QUARTER'S FINDINGS**

Groundwater Flow Direction	Southerly
Hydraulic Gradient	Averages 0.05
Depth to Water	4.18 to 5.74 feet below top of well casing

**2.3        PROPOSED ACTIVITIES**

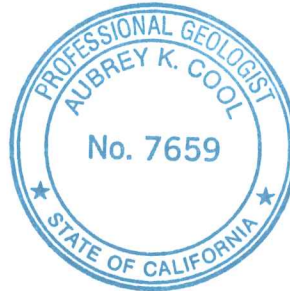
CRA will submit a case closure evaluation report by December 22, 2014.

Blaine will gauge and sample wells according to the established monitoring program for this site. This site is monitored semiannually during the first and third quarters, and CRA will issue groundwater monitoring reports semiannually following the sampling events.

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

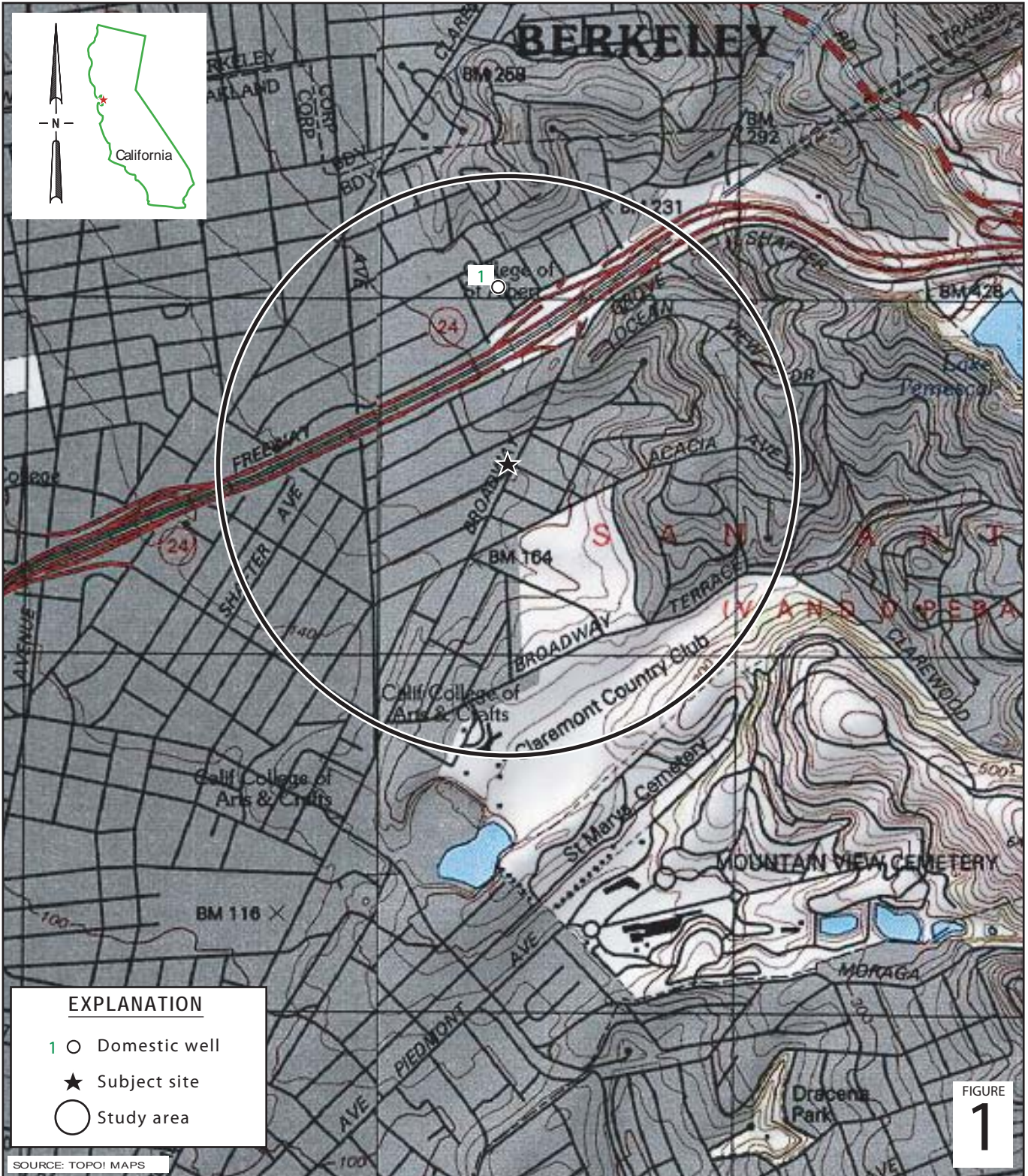
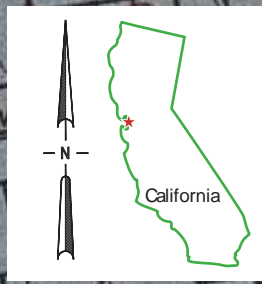
  
Peter Schaefer, CHG, CEG

  
Aubrey K. Cool, PG



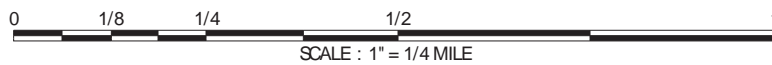


## FIGURES



I:\16-chars\2404--\240483-Oakland 5755 Broadway\240483-FIGURES\240483 VICINITY.AI

FIGURE 1



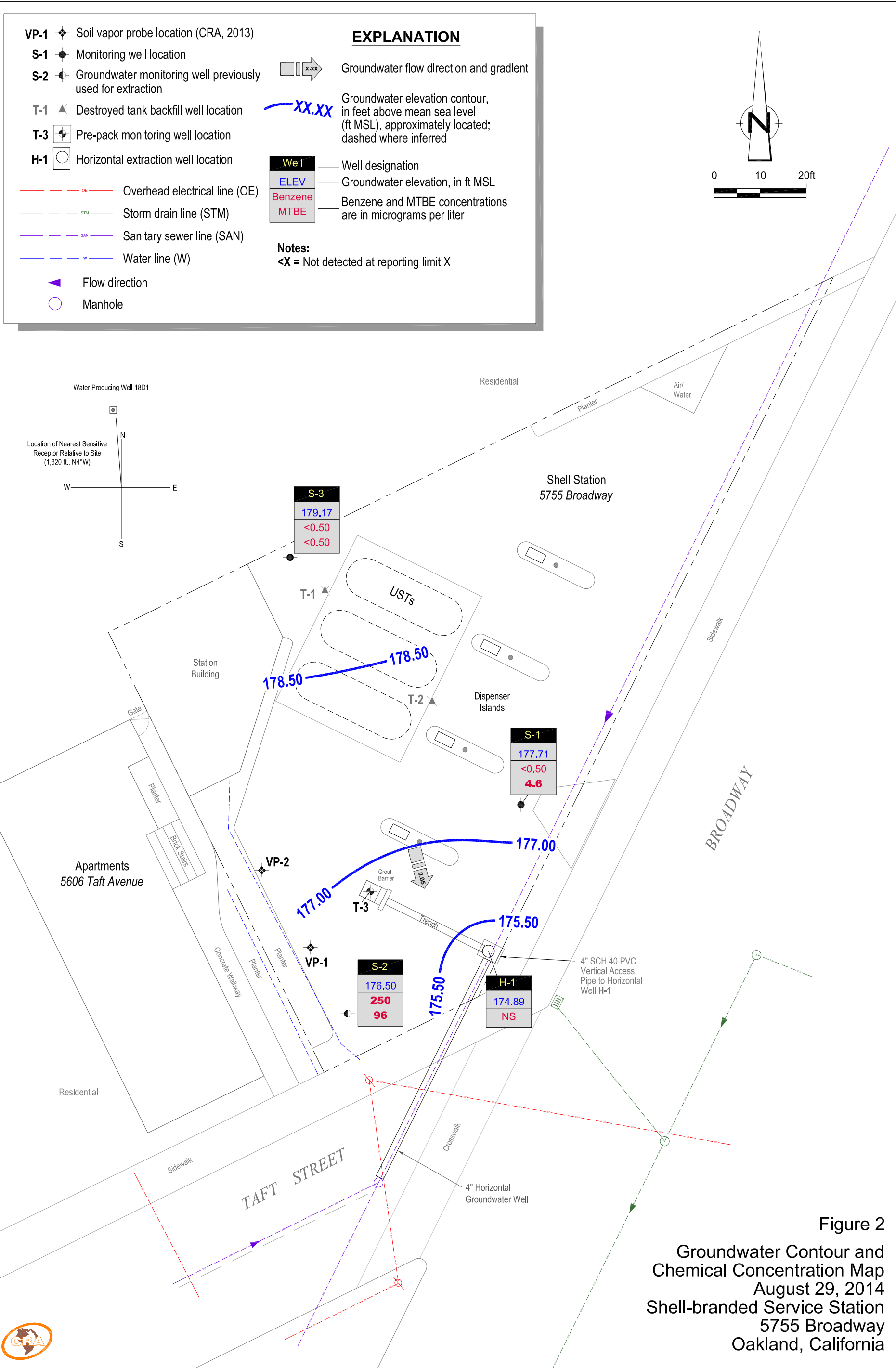
### Shell-branded Service Station

5755 Broadway  
Oakland, California



**CONESTOGA-ROVERS  
& ASSOCIATES**

### Vicinity Map



**Figure 2**  
 Groundwater Contour and  
 Chemical Concentration Map  
 August 29, 2014  
 Shell-branded Service Station  
 5755 Broadway  
 Oakland, California



## TABLE



TABLE 1

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
5755 BROADWAY, OAKLAND, CALIFORNIA**

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE		TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to	GW	DO
							8020 (µg/L)	8260 (µg/L)						Water (ft TOC)	Elevation (ft MSL)	Reading (mg/L)
S-1	07/03/1985	2,400 a	240 a	9.8 a	380 a,b	380 a,b	---	---	---	---	---	---	---	---	---	---
S-1	08/15/1989	170 a	0.6 a	<0.5 a	<1.5 a	<1.5 a	---	---	---	---	---	---	---	---	---	---
S-1	10/05/1989	---	---	---	---	---	---	---	---	---	---	---	100.00 c	3.80	96.20	---
S-1	11/13/1989	90 a	1.2 a	<0.5 a	<1.5 a	<1.5 a	---	---	---	---	---	---	100.00	3.72	96.28	---
S-1	01/18/1990	<50 a	57 a	3.1 a	5.7 a	10 a	---	---	---	---	---	---	100.00	2.87	97.13	---
S-1	02/20/1990	---	---	---	---	---	---	---	---	---	---	---	100.00	2.71	97.29	---
S-1	04/11/1990	520 a	120 a	2.2 a	0.44 a	6.0 a	---	---	---	---	---	---	100.00	3.36	96.64	---
S-1	07/27/1990	<30 a	2.7 a	0.31 a	<0.3 a	0.47 a	---	---	---	---	---	---	100.00	3.60	96.40	---
S-1	10/17/1990	<30 a	0.99 a	<0.3 a	<0.3 a	<0.3 a	---	---	---	---	---	---	100.00	4.09	95.91	---
S-1	01/25/1991	<30	<0.3	<0.3	<0.3	<0.3	---	---	---	---	---	---	100.00	3.88	96.12	---
S-1	06/03/1991	<30	<0.3	<0.3	<0.3	<0.3	---	---	---	---	---	---	100.00	3.51	96.49	---
S-1	08/30/1991	<30	<0.3	<0.3	<0.3	<0.3	---	---	---	---	---	---	100.00	4.24	95.76	---
S-1	11/22/1991	<30	2.3	<0.46	0.3	<0.65	---	---	---	---	---	---	100.00	4.29	95.71	---
S-1	03/13/1992	<30	<0.52	<0.3	<0.3	<0.3	---	---	---	---	---	---	100.00	2.87	97.13	---
S-1	05/28/1992	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	100.00	3.79	96.21	---
S-1	08/19/1992	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	100.00	4.43	95.57	---
S-1	11/18/1992	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	100.00	4.34	95.66	---
S-1	02/10/1993	51	1.4	<0.5	<0.5	<0.5	---	---	---	---	---	---	100.00	4.20	95.80	---
S-1 (D)	02/10/1993	<50	1.2	<0.5	<0.5	<0.5	---	---	---	---	---	---	100.00	---	---	---
S-1	06/11/1993	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	100.00	3.39	96.61	---
S-1	08/03/1993	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	100.00	3.69	96.31	---
S-1	11/02/1993	70 d	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	100.00	4.26	95.74	---
S-1	12/16/1993	---	---	---	---	---	---	---	---	---	---	---	100.00	2.73	97.27	---
S-1	02/01/1994	60 d	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	100.00	3.38	96.62	---
S-1	05/04/1994	<50	1.1	<0.5	<0.5	<0.5	---	---	---	---	---	---	100.00	3.00	97.00	---
S-1	08/18/1994	<50	0.60	<0.5	<0.5	<0.5	---	---	---	---	---	---	100.00	3.70	96.30	---
S-1 (D)	08/18/1994	60 d	0.50	<0.5	<0.5	<0.5	---	---	---	---	---	---	100.00	---	---	---
S-1	11/09/1994	<50	4.0	<0.5	<0.5	<0.5	---	---	---	---	---	---	100.00	2.52	97.48	---
S-1	02/22/1995	50	0.80	0.70	<0.5	1.3	---	---	---	---	---	---	100.00	4.08	95.92	---
S-1	05/02/1995	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	100.00	2.58	97.42	---

TABLE 1

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
5755 BROADWAY, OAKLAND, CALIFORNIA**

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE		TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to	GW	DO
							8020 (µg/L)	8260 (µg/L)						Water (ft TOC)	Elevation (ft MSL)	Reading (mg/L)
S-1	08/30/1995	<50	1.7	<0.5	<0.5	<0.5	---	---	---	---	---	---	100.00	3.48	96.52	---
S-1	11/28/1995	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	100.00	3.99	96.01	---
S-1	02/02/1996	<50	11	<0.5	0.9	<0.5	---	---	---	---	---	---	100.00	2.00	98.00	---
S-1	03/09/1996	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	100.00	3.38	96.62	---
S-1	08/22/1996	<50	1.5	<0.5	<0.5	<0.5	130	---	---	---	---	---	100.00	3.43	96.57	---
S-1	11/07/1996	<50	<0.5	<0.5	<0.5	<0.5	57	---	---	---	---	---	100.00	3.70	96.30	4.33
S-1	02/20/1997	<50	0.64	<0.50	<0.50	1.6	6.5	---	---	---	---	---	100.00	3.60	96.40	2
S-1	05/30/1997	<50	<0.50	<0.50	<0.50	<0.50	46	---	---	---	---	---	100.00	3.47	96.53	7
S-1 (D)	05/30/1997	<50	<0.50	<0.50	<0.50	<0.50	47	---	---	---	---	---	100.00	---	---	---
S-1	08/21/1997	<50	<0.50	<0.50	<0.50	0.84	26	---	---	---	---	---	100.00	3.01	96.99	3.1
S-1	11/03/1997	<50	<0.50	1.1	<0.50	1.3	190	---	---	---	---	---	100.00	3.66	96.34	2
S-1	01/20/1998	110	7.9	2.8	4.4	13	53	---	---	---	---	---	100.00	1.84	98.16	4.6
S-1 (D)	01/20/1998	130	9.2	6.9	5.2	15	93	---	---	---	---	---	100.00	---	---	---
S-1	02/16/1999	<50	<0.50	<0.50	<0.50	<0.50	8.6	---	---	---	---	---	100.00	2.43	97.57	2.2
S-1	09/07/1999	---	---	---	---	---	---	---	---	---	---	---	100.00	2.84	97.16	---
S-1	02/02/2000	<50.0	<0.500	<0.500	<0.500	<0.500	202	---	---	---	---	---	100.00	3.10	96.90	2.1
S-1	04/26/2000	---	---	---	---	---	---	---	---	---	---	---	100.00	2.91	97.09	---
S-1	07/25/2000	<50.0	<0.500	<0.500	<0.500	<0.500	811	---	---	---	---	---	100.00	3.21	96.79	1.8
S-1	11/15/2000	---	---	---	---	---	---	---	---	---	---	---	100.00	3.18	96.82	---
S-1	02/12/2001	<50.0	<0.500	<0.500	<0.500	<0.500	209	---	---	---	---	---	100.00	1.34	98.66	2.2
S-1	06/07/2001	---	---	---	---	---	---	---	---	---	---	---	100.00	1.27	98.73	---
S-1	08/31/2001	<50	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	100.00	3.16	96.84	4.0
S-1	12/05/2001	---	---	---	---	---	---	2.6	---	---	---	---	100.00	1.90	98.10	---
S-1	01/31/2002	<50	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	100.00	2.67	97.33	---
S-1	06/04/2002	---	---	---	---	---	---	---	---	---	---	---	100.00	1.87	98.13	---
S-1	07/25/2002	<50	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	100.00	2.01	97.99	---
S-1	11/07/2002	---	---	---	---	---	---	---	---	---	---	---	181.89	3.01	178.88	---
S-1	11/14/2002	---	---	---	---	---	---	---	---	---	---	---	181.89	3.40	178.49	---
S-1	01/30/2003	<50	<0.50	<0.50	<0.50	<0.50	---	27	---	---	---	---	181.89	2.12	179.77	---
S-1	06/03/2003	---	---	---	---	---	---	---	---	---	---	---	181.89	1.83	180.06	---

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
5755 BROADWAY, OAKLAND, CALIFORNIA**

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE		TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to	GW	DO
							8020 (µg/L)	8260 (µg/L)						Water (ft TOC)	Elevation (ft MSL)	Reading (mg/L)
S-1	08/27/2003	<50	0.50	1.5	<0.50	2.0	---	130	---	---	---	---	181.89	3.32	178.57	---
S-1	11/25/2003	---	---	---	---	---	---	---	---	---	---	---	181.89	3.28	178.61	---
S-1	02/05/2004	270	2.4	6.4	5.8	19	---	8.3	---	---	---	---	181.89	2.09	179.80	---
S-1	04/21/2004	---	---	---	---	---	---	---	---	---	---	---	181.89	2.61	179.28	---
S-1	08/12/2004	<500	<5.0	<5.0	<5.0	<10	---	1,100	<50	<20	<20	<20	181.89	3.70	178.19	---
S-1	11/08/2004	---	---	---	---	---	---	---	---	---	---	---	181.89	3.04	178.85	---
S-1	05/16/2005	<50	<0.50	<0.50	<0.50	<1.0	---	4.9	---	---	---	---	181.89	3.10	178.79	---
S-1	08/16/2005	<50	<0.50	<0.50	<0.50	<1.0	---	64	52	<2.0	<2.0	<2.0	181.89	0.73	181.16	---
S-1	11/03/2005	---	---	---	---	---	---	---	---	---	---	---	181.89	3.49	178.40	---
S-1	02/16/2006	<50.0	<0.500	<0.500	<0.500	<0.500	---	22.7	---	---	---	---	181.89	0.73	181.16	---
S-1	05/05/2006	---	---	---	---	---	---	---	---	---	---	---	181.89	0.71	181.18	---
S-1	08/21/2006	<50.0	0.630	<0.500	<0.500	1.71	---	44.6	<10.0	<0.500	<0.500	<0.500	181.89	3.34	178.55	---
S-1	11/13/2006	---	---	---	---	---	---	---	---	---	---	---	181.89	2.55	179.34	---
S-1	01/30/2007	<50	<0.50	<0.50	<0.50	<1.0	---	24	---	---	---	---	181.89	0.91	180.98	---
S-1	05/23/2007	---	---	---	---	---	---	---	---	---	---	---	181.89	2.50	179.39	---
S-1	08/09/2007	<50 i	0.35 j	<1.0	<1.0	<1.0	---	33	<10	<2.0	<2.0	<2.0	181.89	0.81	181.08	---
S-1	11/13/2007	---	---	---	---	---	---	---	---	---	---	---	181.89	0.55	181.34	---
S-1	02/13/2008	<50 i	0.56	<1.0	<1.0	<1.0	---	2.9	---	---	---	---	181.89	0.45	181.44	---
S-1	05/20/2008	---	---	---	---	---	---	---	---	---	---	---	181.89	1.00	180.89	---
S-1	08/04/2008	66	<0.50	<1.0	<1.0	<1.0	---	3.6	<10	<2.0	<2.0	<2.0	181.89	0.72	181.17	---
S-1	12/02/2008	---	---	---	---	---	---	---	---	---	---	---	181.89	0.89	181.00	---
S-1	01/23/2009	<50	<0.50	<1.0	<1.0	2.1	---	4.8	---	---	---	---	181.89	0.81	181.08	---
S-1	05/05/2009	---	---	---	---	---	---	---	---	---	---	---	181.89	0.81	181.08	---
S-1	08/07/2009	53	0.86	<1.0	<1.0	<1.0	---	34	11	<2.0	<2.0	<2.0	181.89	4.33	177.56	---
S-1	02/03/2010	140	15	48	1.6	15	---	2.4	---	---	---	---	181.89	0.62	181.27	---
S-1	08/31/2010	<50	<0.50	<1.0	<1.0	<1.0	---	6.3	<10	<2.0	<2.0	<2.0	181.89	1.00	180.89	---
S-1	02/10/2011	<50	<0.50	<0.50	<0.50	<1.0	---	1.9	---	---	---	---	181.89	0.51	181.38	---
S-1	07/22/2011	<50	<0.50	<0.50	<0.50	<1.0	---	1.0	<10	<1.0	<1.0	<1.0	181.89	0.98	180.91	---
S-1	02/07/2012	<50	<0.50	<0.50	<0.50	<1.0	---	1.3	---	---	---	---	181.89	0.80	181.09	---
S-1	07/19/2012	<50	0.90	<0.50	<0.50	<1.0	---	2.8	<10	<0.50	<0.50	<0.50	181.89	3.49	178.40	---

TABLE 1

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
5755 BROADWAY, OAKLAND, CALIFORNIA**

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE	MTBE	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to	GW	DO
							8020 (µg/L)	8260 (µg/L)						Water	Elevation	Reading
S-1	01/25/2013	<50	<0.50	<0.50	<0.50	<1.0	---	1.5	---	---	---	---	181.89	0.65	181.24	---
S-1	08/08/2013	<50	<0.50	<0.50	<0.50	<1.0	---	2.5	<10	<0.50	<0.50	<0.50	181.89	4.01	177.88	---
S-1	02/11/2014	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	181.89	0.55	181.34	---
<b>S-1</b>	<b>08/29/2014</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>---</b>	<b>4.6</b>	<b>&lt;10</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>181.89</b>	<b>4.18</b>	<b>177.71</b>	<b>---</b>
S-2	09/22/1989	260 a	15 a	2 a	1 a	13 a	---	---	---	---	---	---	---	---	---	---
S-2	10/05/1989	---	---	---	---	---	---	---	---	---	---	---	98.92	4.44	94.48	---
S-2	11/13/1989	910 a	64 a	5.8 a	13 a	84 a	---	---	---	---	---	---	98.92	4.44	94.48	---
S-2	01/18/1990	1,100 a	74 a	5.6 a	13 a	45 a	---	---	---	---	---	---	98.92	3.41	95.51	---
S-2	02/20/1990	---	---	---	---	---	---	---	---	---	---	---	98.92	3.19	95.73	---
S-2	04/11/1990	2,900 a	510 a	6.5 a	29 a	120 a	---	---	---	---	---	---	98.92	3.94	94.98	---
S-2	07/27/1990	700 a	210 a	2.5 a	18 a	33 a	---	---	---	---	---	---	98.92	4.13	94.79	---
S-2	10/17/1990	320 a	44 a	0.75 a	7.9 a	4.6 a	---	---	---	---	---	---	98.92	4.57	94.35	---
S-2	01/25/1991	450	140	1.8	6.2	15	---	---	---	---	---	---	98.92	4.52	94.40	---
S-2	06/03/1991	490	150	2.7	8.2	7.0	---	---	---	---	---	---	98.92	4.02	94.90	---
S-2	08/30/1991	70	0.37	<0.3	<0.3	<0.3	---	---	---	---	---	---	98.92	4.70	94.22	---
S-2	11/22/1991	1,600	110	9.3	29	150	---	---	---	---	---	---	98.92	4.72	94.20	---
S-2	03/13/1992	1,300	210	5.7	34	79	---	---	---	---	---	---	98.92	3.47	95.45	---
S-2	05/28/1992	100	28	<0.5	<0.5	<0.5	---	---	---	---	---	---	98.92	4.45	94.47	---
S-2	08/19/1992	470	42	<0.5	8.3	4.0	---	---	---	---	---	---	98.92	4.84	94.08	---
S-2	11/18/1992	490	43	39	17	29	---	---	---	---	---	---	98.92	4.73	94.19	---
S-2	02/10/1993	19,000	710	760	80	370	---	---	---	---	---	---	98.92	4.83	94.09	---
S-2	06/11/1993	33,000	3,100	1,600	370	1,100	---	---	---	---	---	---	98.92	3.74	95.18	---
S-2	08/03/1993	18,000	1,400	130	81	130	---	---	---	---	---	---	98.92	4.23	94.69	---
S-2 (D)	08/03/1993	19,000	1,400	140	86	150	---	---	---	---	---	---	98.92	---	---	---
S-2	11/02/1993	12,000 d	470	47	31	92	---	---	---	---	---	---	98.92	4.72	94.20	---
S-2 (D)	11/02/1993	13,000 d	530	47	35	96	---	---	---	---	---	---	98.92	---	---	---
S-2	12/16/1993	---	---	---	---	---	---	---	---	---	---	---	98.92	3.00	95.92	---
S-2	02/01/1994	31,000 d	430	46	50	130	---	---	---	---	---	---	98.92	3.48	95.44	---
S-2 (D)	02/01/1994	31,000 d	300	33	30	100	---	---	---	---	---	---	98.92	---	---	---



TABLE 1

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
5755 BROADWAY, OAKLAND, CALIFORNIA**

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE	MTBE	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to	GW	DO
							8020 (µg/L)	8260 (µg/L)						Water	Elevation	Reading
S-2	05/04/1994	3,900	1,200	31	53	71	---	---	---	---	---	---	98.92	3.26	95.66	---
S-2 (D)	05/04/1994	4,500	1,200	37	57	110	---	---	---	---	---	---	98.92	---	---	---
S-2	08/18/1994	24,000	600	8.3	15	27	---	---	---	---	---	---	98.92	3.98	94.94	---
S-2	11/09/1994	1,400 d	240	9.3	13	20	---	---	---	---	---	---	98.92	3.10	95.82	---
S-2 (D)	11/09/1994	1,800	260	8.5	13	21	---	---	---	---	---	---	98.92	---	---	---
S-2	02/22/1995	29,000	550	18	12	63	---	---	---	---	---	---	98.92	4.02	94.90	---
S-2 (D)	02/22/1995	28,000	530	17	10	60	---	---	---	---	---	---	98.92	---	---	---
S-2	05/02/1995	4,400	1,000	25	38	77	---	---	---	---	---	---	98.92	2.86	96.06	---
S-2 (D)	05/02/1995	4,400	1,000	26	41	83	---	---	---	---	---	---	98.92	---	---	---
S-2	08/30/1995	800	350	20	6.7	16	---	---	---	---	---	---	98.92	4.06	94.86	---
S-2 (D)	08/30/1995	960	220	22	12	48	---	---	---	---	---	---	98.92	---	---	---
S-2	11/28/1995	2,000	230	220	50	230	---	---	---	---	---	---	98.92	4.48	94.44	---
S-2 (D)	11/28/1995	2,100	240	230	51	230	---	---	---	---	---	---	98.92	---	---	---
S-2	02/02/1996	18,000	540	18	12	22	---	---	---	---	---	---	98.92	1.99	96.93	---
S-2 (D)	02/02/1996	11,000	600	18	13	28	---	---	---	---	---	---	98.92	---	---	---
S-2	03/09/1996	3,800	1,500	27	30	58	---	---	---	---	---	---	98.92	3.27	95.65	---
S-2 (D)	03/09/1996	3,500	1,300	24	21	53	---	---	---	---	---	---	98.92	---	---	---
S-2	08/22/1996	<20,000	490	<200	<200	<200	43,000	---	---	---	---	---	98.92	3.85	95.07	---
S-2 (D)	08/22/1996	<20,000	570	<200	<200	<200	59,000	51,000	---	---	---	---	98.92	---	---	---
S-2	11/07/1996	<5,000	290	<50	<50	<50	32,000	---	---	---	---	---	98.92	4.00	94.92	3.51
S-2 (D)	11/07/1996	<5,000	290	<50	<50	<50	32,000	---	---	---	---	---	98.92	---	---	---
S-2	02/20/1997	<10,000	520	<100	<100	<100	28,000	---	---	---	---	---	98.92	3.20	95.72	1
S-2 (D)	02/20/1997	<10,000	520	<100	<100	<100	35,000	---	---	---	---	---	98.92	---	---	---
S-2	05/30/1997	150	15	11	3.5	15	11	---	---	---	---	---	98.92	3.87	95.05	6
S-2	08/21/1997	1,600	220	<10	20	<10	18,000	---	---	---	---	---	98.92	3.29	95.63	3.3
S-2 (D)	08/21/1997	1,500	180	<10	16	<10	21,000	---	---	---	---	---	98.92	---	---	---
S-2	11/03/1997	1,000	94	<10	<10	<10	<50	---	---	---	---	---	98.92	4.02	94.90	1.8
S-2	01/20/1998	590	110	8.3	18	23	7,800	---	---	---	---	---	98.92	1.54	97.38	3.2
S-2	07/23/1998	2,600	840	<10	44	22	15,000	---	---	---	---	---	98.92	2.89	96.03	---
S-2	02/16/1999	680	140	6.1	10	18	19,000	---	---	---	---	---	98.92	1.86	97.06	2.0

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
5755 BROADWAY, OAKLAND, CALIFORNIA**

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE		TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to	GW	DO
							8020 (µg/L)	8260 (µg/L)						Water (ft TOC)	Elevation (ft MSL)	Reading (mg/L)
S-2	09/07/1999	<2,000	248	<20.0	<20.0	<20.0	22,800	---	---	---	---	---	98.92	3.66	95.26	1.8
S-2	02/02/2000	103	0.825	<0.500	<0.500	<0.500	11,700	10,500	---	---	---	---	98.92	4.02	94.90	2.0
S-2	04/26/2000	4,040	799	<20.0	40.9	255	19,000	17,100 e	---	---	---	---	98.92	2.63	96.29	2.3
S-2	07/25/2000	1,120	195	5.94	5.62	11.3	26,600	21,100	---	---	---	---	98.92	3.42	95.50	0.6
S-2	11/15/2000	613 e	35.6 e	<5.00 e	<5.00 e	7.36 e	18,100 e	17,800 e	---	---	---	---	98.92	3.31	95.61	1.8
S-2	02/12/2001	9,010	1,430	<20.0	219	848	28,300	17,000	---	---	---	---	98.92	1.47	97.45	2.0
S-2	06/07/2001	31,000	1,000	<25	630	3,200	---	17,000	---	---	---	---	98.92	3.43	95.49	10.4
S-2	08/31/2001	50,000	950	<20	1,500	6,000	---	17,000	---	---	---	---	98.92	4.72	94.20	0.9
S-2	12/05/2001	49,000	590	7.2	1,400	4,900	---	11,000	---	---	---	---	98.92	1.53	97.39	---
S-2	01/31/2002	37,000	860	<25	1,100	4,000	---	14,000	---	---	---	---	98.92	2.13	96.79	---
S-2	06/04/2002	150,000	800	<20	1,200	4,000	---	9,200	---	---	---	---	98.92	2.24	96.68	---
S-2	07/25/2002	37,000	350	<20	660	2,400	---	10,000	---	---	---	---	98.92	2.03	96.89	---
S-2	11/14/2002	25,000	510	<25	590	2,000	---	10,000	---	---	---	---	180.79	3.17	177.62	---
S-2	01/02/2003	---	710	<25	560	2,074	---	---	---	---	---	---	180.79	2.15	178.64	---
S-2	01/30/2003	21,000	670	<20	360	1,200	---	9,300	---	---	---	---	180.79	2.09	178.70	---
S-2	06/03/2003	42,000	800	<50	660	1,500	---	9,600	---	---	---	---	180.79	3.08	177.71	---
S-2	08/27/2003	31,000	630	<100	510	1,200	---	15,000	---	---	---	---	180.79	2.55	178.24	---
S-2	11/25/2003 f	8,400 d	<50	<50	<50	<100	---	4,500	---	---	---	---	180.79	---	---	---
S-2	02/05/2004	Well inaccessible		---	---	---	---	---	---	---	---	---	180.79	---	---	---
S-2	02/10/2004 f	<2,500	130	<25	<25	<50	---	3,800	---	---	---	---	180.79	---	---	---
S-2	04/21/2004	4,700	100	<25	<25	<50	---	2,900	---	---	---	---	180.79	7.38	173.41	---
S-2	08/12/2004	2,600	63	<13	<13	<25	---	1,400	1,200	<50	<50	<50	180.79	g	---	---
S-2	11/08/2004	3,600	<25	<25	<25	<50	---	1,300	---	---	---	---	180.79	g	---	---
S-2	05/16/2005	73 h	<0.50	<0.50	<0.50	<1.0	---	3.3	---	---	---	---	180.79	3.33	177.46	---
S-2	08/16/2005	10,000	370	<13	60	63	---	1,300	2,900	<50	<50	<50	180.79	4.03	176.76	---
S-2	11/03/2005	1,010	31.4	<0.500	2.81	31.4	---	349	880	---	---	---	180.79	---	---	---
S-2	02/16/2006	5,350	79.0	<0.500	2.90	59.5	---	687	690	---	---	---	180.79	5.86	174.93	---
S-2	05/05/2006	5,240	148	<0.500	17.1	48.8	---	815	478	---	---	---	180.79	---	---	---
S-2	08/21/2006	4,640	162	0.910	25.8	27.2	---	519	711	<0.500	<0.500	0.780	180.79	4.72	176.07	---
S-2	11/13/2006	2,100	200	<5.0	58	21	---	820	1,300	---	---	---	180.79	3.44	177.35	---

TABLE 1

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
5755 BROADWAY, OAKLAND, CALIFORNIA**

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE		TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to	GW	DO
							8020 (µg/L)	8260 (µg/L)						Water (ft TOC)	Elevation (ft MSL)	Reading (mg/L)
S-2	01/30/2007	3,300	250	<5.0	59	17	---	1,100	1,600	---	---	---	180.79	2.32	178.47	---
S-2	05/23/2007	4,600 i	410	2.3 j	92	24.8 j	---	890	620	---	---	---	180.79	2.61	178.18	---
S-2	08/09/2007	4,100 i	320	<10	30	11	---	650	1,400	<20	<20	<20	180.79	3.72	177.07	---
S-2	11/13/2007	4,900 i	230	<10	33	12	---	540	590	<20	<20	<20	180.79	2.31	178.48	---
S-2	02/13/2008	4,800 i	560	<10	67	37	---	1,500	610	---	---	---	180.79	1.83	178.96	---
S-2	05/20/2008	5,400	340	<10	11	17	---	460	310	---	---	---	180.79	2.90	177.89	---
S-2	08/04/2008	4,800	240	<10	<10	<10	---	390	640	<20	<20	<20	180.79	3.95	176.84	---
S-2	12/02/2008	3,700	120	<5.0	<5.0	<5.0	---	280	810	---	---	---	180.79	4.13	176.66	---
S-2	01/23/2009	3,500	210	<10	26	<10	---	640	650	---	---	---	180.79	2.85	177.94	---
S-2	05/05/2009	3,200	190	<5.0	7.6	5.5	---	340	350	---	---	---	180.79	2.48	178.31	---
S-2	08/07/2009	3,100	76	<1.0	<1.0	2.3	---	81	310	<2.0	<2.0	<2.0	180.79	4.78	176.01	---
S-2	02/03/2010	4,000	180	<1.0	34	9.1	---	420	190	---	---	---	180.79	2.25	178.54	---
S-2	08/31/2010	3,400	120	<1.0	<1.0	1.8	---	83	380	<2.0	<2.0	<2.0	180.79	4.32	176.47	---
S-2	02/10/2011	3,600	220	<2.0	13	<4.0	---	330	450	---	---	---	180.79	2.51	178.28	---
S-2	07/22/2011	4,000	160	<1.2	5.0	6.4	---	200	270	<2.5	<2.5	<2.5	180.79	2.78	178.01	---
S-2	02/07/2012	3,800	130	<2.5	6.3	<5.0	---	200	170	---	---	---	180.79	2.53	178.26	---
S-2	07/19/2012	2,800	70	<1.3	<1.3	<2.5	---	120	170	<1.3	<1.3	<1.3	180.79	4.24	176.55	---
S-2	01/25/2013	4,100	230	<1.0	25	4.6	---	280	370	---	---	---	180.79	2.49	178.30	---
S-2	08/08/2013	3,800	130	<2.5	<2.5	<5.0	---	160	390	<2.5	<2.5	<2.5	180.79	4.07	176.72	---
S-2	02/11/2014	3,200	330	<2.5	4.5	<5.0	---	180	580	---	---	---	180.79	2.76	178.03	---
<b>S-2</b>	<b>08/29/2014</b>	<b>3,900</b>	<b>250</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;5.0</b>	---	<b>96</b>	<b>520</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>180.79</b>	<b>4.29</b>	<b>176.50</b>	---
S-3	09/22/1989	<50 a	<0.5 a	<0.5 a	<1.5 a	<1.5 a	---	---	---	---	---	---	---	---	---	---
S-3	10/05/1989	---	---	---	---	---	---	---	---	---	---	---	101.67	3.97	97.70	---
S-3	11/13/1989	<50 a	<0.5 a	<0.5 a	<1.5 a	<1.5 a	---	---	---	---	---	---	101.67	3.76	97.91	---
S-3	01/18/1990	<50 a	<0.5 a	<0.5 a	<0.5 a	<0.5 a	---	---	---	---	---	---	101.67	2.43	99.24	---
S-3	02/20/1989	---	---	---	---	---	---	---	---	---	---	---	101.67	2.27	99.40	---
S-3	04/11/1990	<50 a	<0.3 a	<0.3 a	<0.3 a	<0.3 a	---	---	---	---	---	---	101.67	2.88	98.79	---
S-3	07/27/1990	<50 a	<0.3 a	<0.3 a	<0.3 a	<0.3 a	---	---	---	---	---	---	101.67	3.55	98.12	---
S-3	10/17/1990	<50 a	<0.3 a	<0.3 a	<0.3 a	<0.3 a	---	---	---	---	---	---	101.67	4.29	97.38	---

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
5755 BROADWAY, OAKLAND, CALIFORNIA**

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE		TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to	GW	DO
							8020 (µg/L)	8260 (µg/L)						Water (ft TOC)	Elevation (ft MSL)	Reading (mg/L)
S-3	01/25/1991	<30	<0.3	<0.3	<0.3	<0.3	---	---	---	---	---	---	101.67	3.84	97.83	---
S-3	06/03/1991	<30	<0.3	0.3	0.3	0.3	---	---	---	---	---	---	101.67	3.25	98.42	---
S-3	08/03/1991	<30	<0.3	<0.3	<0.3	<0.3	---	---	---	---	---	---	101.67	4.73	96.94	---
S-3	11/22/1991	<30	<0.3	<0.3	<0.3	<0.3	---	---	---	---	---	---	101.67	4.81	96.86	---
S-3	03/13/1992	<30	<0.3	0.3	0.3	0.3	---	---	---	---	---	---	101.67	2.29	99.38	---
S-3	05/28/1992	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	101.67	3.62	98.05	---
S-3	08/19/1992	<50	<0.5	<0.5	<0.5	0.5	---	---	---	---	---	---	101.67	4.66	97.01	---
S-3	11/18/1992	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	101.67	4.51	97.16	---
S-3	02/10/1993	30	1.9	3.2	2.4	5.6	---	---	---	---	---	---	101.67	4.36	97.31	---
S-3	06/11/1993	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	101.67	2.91	98.76	---
S-3 (D)	06/11/1993	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	101.67	---	---	---
S-3	08/03/1993	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	101.67	3.70	97.97	---
S-3	11/02/1993	Well inaccessible		---	---	---	---	---	---	---	---	---	101.67	---	---	---
S-3	12/16/1993	---	---	---	---	---	---	---	---	---	---	---	101.67	2.12	99.55	---
S-3	02/01/1994	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	101.67	2.90	98.77	---
S-3	05/04/1994	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	101.67	2.54	99.13	---
S-3	08/18/1994	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	101.67	3.51	98.16	---
S-3	11/09/1994	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	101.67	2.44	99.23	---
S-3	02/22/1995	80	<0.5	0.50	<0.5	0.5	---	---	---	---	---	---	101.67	4.12	97.55	---
S-3	05/02/1995	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	101.67	2.83	98.84	---
S-3	08/30/1995	<50	0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	101.67	3.16	98.51	---
S-3	11/28/1995	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	101.67	3.87	97.80	---
S-3	02/02/1996	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	101.67	2.24	99.43	---
S-3	03/09/1996	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	101.67	3.05	98.62	---
S-3	08/22/1996	<50	0.8	<0.5	<0.5	<0.5	<2.5	---	---	---	---	---	101.67	2.85	98.82	4.6
S-3	11/07/1996	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---	---	---	---	---	101.67	3.35	98.32	4.6
S-3	02/20/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	101.67	3.00	98.67	1
S-3	05/30/1997	140	14	10	3.3	14	8.6	---	---	---	---	---	101.67	3.00	98.67	8
S-3	08/21/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	101.67	2.94	98.73	3.3
S-3	11/03/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	101.67	3.36	98.31	2.4

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
5755 BROADWAY, OAKLAND, CALIFORNIA**

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE		TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to	GW	DO
							8020 (µg/L)	8260 (µg/L)						Water (ft TOC)	Elevation (ft MSL)	Reading (mg/L)
S-3 (D)	11/03/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	101.67	---	---	---
S-3	01/20/1998	Well inaccessible		---	---	---	---	---	---	---	---	---	101.67	---	---	---
S-3	07/23/1998	---	---	---	---	---	---	---	---	---	---	---	101.67	2.69	98.98	---
S-3	02/16/1999	<50	<0.50	0.92	0.59	3.9	3.7	---	---	---	---	---	101.67	2.20	99.47	2.8
S-3	09/07/1999	---	---	---	---	---	---	---	---	---	---	---	101.67	2.81	98.86	---
S-3	02/02/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	---	---	---	---	---	101.67	3.97	97.70	2.7
S-3	04/26/2000	---	---	---	---	---	---	---	---	---	---	---	101.67	2.96	98.71	---
S-3	07/25/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	---	---	---	---	---	101.67	3.00	98.67	0.8
S-3	11/15/2000	---	---	---	---	---	---	---	---	---	---	---	101.67	2.86	98.81	---
S-3	02/12/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	---	---	---	---	---	101.67	2.47	99.20	2.3
S-3	06/07/2001	---	---	---	---	---	---	---	---	---	---	---	101.67	2.78	98.89	---
S-3	08/31/2001	<50	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	101.67	3.94	97.73	0.5
S-3	12/05/2001	---	---	---	---	---	---	---	---	---	---	---	101.67	2.05	99.62	---
S-3	01/31/2002	<50	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	101.67	2.29	99.38	---
S-3	06/04/2002	---	---	---	---	---	---	---	---	---	---	---	101.67	2.56	99.11	---
S-3	07/25/2002	<50	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	101.67	2.70	98.97	---
S-3	11/14/2002	---	---	---	---	---	---	---	---	---	---	---	183.54	3.43	180.11	---
S-3	01/30/2003	<50	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	183.54	2.16	181.38	---
S-3	01/30/2003	---	---	---	---	---	---	---	---	---	---	---	183.54	2.65	180.89	---
S-3	08/27/2003	<50	<0.50	<0.50	<0.50	<1.0	---	0.55	---	---	---	---	183.54	2.75	180.79	---
S-3	11/25/2003	---	---	---	---	---	---	---	---	---	---	---	183.54	2.85	180.69	---
S-3	02/05/2004	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	183.54	2.04	181.50	---
S-3	04/21/2004	---	---	---	---	---	---	---	---	---	---	---	183.54	2.50	181.04	---
S-3	08/12/2004	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	<5.0	<2.0	<2.0	<2.0	183.54	3.91	179.63	---
S-3	11/08/2004	---	---	---	---	---	---	---	---	---	---	---	183.54	2.84	180.70	---
S-3	05/16/2005	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	183.54	3.05	180.49	---
S-3	08/16/2005	<100	<1.0	<1.0	<1.0	<2.0	---	<1.0	<10	<4.0	<4.0	<4.0	183.54	3.42	180.12	---
S-3	11/03/2005	---	---	---	---	---	---	---	---	---	---	---	183.54	4.09	179.45	---
S-3	02/16/2006	<50.0	<0.500	<0.500	<0.500	<0.500	---	<0.500	---	---	---	---	183.54	2.25	181.29	---
S-3	05/05/2006	---	---	---	---	---	---	---	---	---	---	---	183.54	2.27	181.27	---

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
5755 BROADWAY, OAKLAND, CALIFORNIA**

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE	MTBE	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to	GW	DO
							8020 (µg/L)	8260 (µg/L)						Water	Elevation	Reading
S-3	08/21/2006	<50.0	<0.500	<0.500	<0.500	<0.500	---	<0.500	36.4	<0.500	<0.500	0.570	183.54	3.17	180.37	---
S-3	11/13/2006	---	---	---	---	---	---	---	---	---	---	---	183.54	3.42	180.12	---
S-3	01/30/2007	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	183.54	2.36	181.18	---
S-3	05/23/2007	---	---	---	---	---	---	---	---	---	---	---	183.54	2.65	180.89	---
S-3	08/09/2007	<50 i	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	<2.0	<2.0	<2.0	183.54	2.93	180.61	---
S-3	11/13/2007	---	---	---	---	---	---	---	---	---	---	---	183.54	2.04	181.50	---
S-3	02/13/2008	<50 i	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	183.54	2.03	181.51	---
S-3	05/20/2008	---	---	---	---	---	---	---	---	---	---	---	183.54	2.75	180.79	---
S-3	08/04/2008	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	<2.0	<2.0	<2.0	183.54	3.52	180.02	---
S-3	12/02/2008	---	---	---	---	---	---	---	---	---	---	---	183.54	3.68	179.86	---
S-3	01/23/2009	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	183.54	2.52	181.02	---
S-3	05/05/2009	---	---	---	---	---	---	---	---	---	---	---	183.54	2.02	181.52	---
S-3	08/07/2009	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	<2.0	<2.0	<2.0	183.54	4.61	178.93	---
S-3	02/03/2010	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	183.54	1.89	181.65	---
S-3	08/31/2010	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	<2.0	<2.0	<2.0	183.54	3.44	180.10	---
S-3	02/10/2011	<50	<0.50	<0.50	<0.50	<1.0	---	<1.0	---	---	---	---	183.54	1.91	181.63	---
S-3	07/22/2011	<50	<0.50	<0.50	<0.50	<1.0	---	<1.0	<10	<1.0	<1.0	<1.0	183.54	2.42	181.12	---
S-3	02/07/2012	<50	<0.50	<0.50	<0.50	<1.0	---	<1.0	---	---	---	---	183.54	1.97	181.57	---
S-3	07/19/2012	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	<10	<0.50	<0.50	<0.50	183.54	3.49	180.05	---
S-3	01/25/2013	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	183.54	2.30	181.24	---
S-3	08/08/2013	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	<10	<0.50	<0.50	<0.50	183.54	4.10	179.44	---
S-3	02/11/2014	<50	7.4	0.67	0.61	2.2	---	<0.50	---	---	---	---	183.54	1.62	181.92	---
<b>S-3</b>	<b>08/29/2014</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	---	<b>&lt;0.50</b>	<b>&lt;10</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>183.54</b>	<b>4.37</b>	<b>179.17</b>	---
H-1	12/05/2001	150	<0.50	8.3	1.6	16	---	52	---	---	---	---	---	1.43	---	---
H-1	01/31/2002	3,200	12	<0.50	5.7	3.7	---	650	---	---	---	---	---	2.34	---	---
H-1	06/04/2002	280,000	<10	150	62	9,500	---	<100	---	---	---	---	---	2.56	---	---
H-1	07/25/2002	8,200	2.2	46	5.3	99	---	<10	---	---	---	---	---	2.83	---	---
H-1	11/14/2002	1,700	2.1	2.6	1.5	14	---	380	---	---	---	---	180.63	3.74	176.89	---
H-1	01/02/2003	---	1.1	<0.50	<0.50	3.6	---	---	---	---	---	---	180.63	1.45	179.18	---

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
5755 BROADWAY, OAKLAND, CALIFORNIA**

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE		TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to	GW	DO
							8020 (µg/L)	8260 (µg/L)						Water (ft TOC)	Elevation (ft MSL)	Reading (mg/L)
H-1	01/30/2003	630	0.99	2.0	1.6	12	---	21	---	---	---	---	180.63	2.10	178.53	---
H-1	06/03/2003	55	<0.50	1.3	<0.50	2.4	---	2.6	---	---	---	---	180.63	3.38	177.25	---
H-1	08/27/2003	<50	0.55	<0.50	<0.50	1.2	---	2.8	---	---	---	---	180.63	4.10	176.53	---
H-1	11/25/2003	77 d	9.7	<0.50	<0.50	<1.0	---	21	---	---	---	---	180.63	3.72	176.91	---
H-1	02/05/2004	380	41	1.2	5.1	8.0	---	21	---	---	---	---	180.63	1.69	178.94	---
H-1	04/21/2004	640	27	0.63	2.0	2.3	---	33	---	---	---	---	180.63	2.14	178.49	---
H-1	08/12/2004	340	18	0.75	<0.50	1.7	---	43	---	---	---	---	180.63	4.78	175.85	---
H-1	11/08/2004	1,500	29	<1.0	1.7	<2.0	---	57	---	---	---	---	180.63	4.17	176.46	---
H-1	05/16/2005	150 h	<0.50	<0.50	<0.50	<1.0	---	48	---	---	---	---	180.63	4.16	176.47	---
H-1	08/16/2005	100 h	<0.50	<0.50	<0.50	<1.0	---	57	---	---	---	---	180.63	4.66	175.97	---
H-1	11/03/2005	<50.0	<0.500	<0.500	<0.500	<0.500	---	12.1	---	---	---	---	180.63	5.13	175.50	---
H-1	02/16/2006	4,230	<0.500	<0.500	37.7	80.5	---	7.12	---	---	---	---	180.63	1.87	178.76	---
H-1	05/05/2006	368	<0.500	<0.500	2.56	<0.500	---	22.2	---	---	---	---	180.63	2.21	178.42	---
H-1	08/21/2006	---	---	---	---	---	---	---	---	---	---	---	180.63	4.62	176.01	---
H-1	11/13/2006	---	---	---	---	---	---	---	---	---	---	---	180.63	3.89	176.74	---
H-1	01/30/2007	---	---	---	---	---	---	---	---	---	---	---	180.63	3.04	177.59	---
H-1	05/23/2007	330 i	7.9	0.32 j	0.48 j	0.61 j	---	74	---	---	---	---	180.63	3.38	177.25	---
H-1	08/09/2007	---	---	---	---	---	---	---	---	---	---	---	180.63	4.30	176.33	---
H-1	11/13/2007	---	---	---	---	---	---	---	---	---	---	---	180.63	1.97	178.66	---
H-1	02/13/2008	---	---	---	---	---	---	---	---	---	---	---	180.63	1.78	178.85	---
H-1	05/20/2008	230	19	<1.0	2.8	2.2	---	23	---	---	---	---	180.63	3.60	177.03	---
H-1	08/04/2008	---	---	---	---	---	---	---	---	---	---	---	180.63	3.27	177.36	---
H-1	12/02/2008	---	---	---	---	---	---	---	---	---	---	---	180.63	4.33	176.30	---
H-1	01/23/2009	---	---	---	---	---	---	---	---	---	---	---	180.63	2.03	178.60	---
H-1	05/05/2009	290	15	<1.0	7.1	4.2	---	36	---	---	---	---	180.63	2.76	177.87	---
H-1	08/07/2009	---	---	---	---	---	---	---	---	---	---	---	180.63	5.49	175.14	---
H-1	02/03/2010	2,700	85	1.5	130	62	---	24	---	---	---	---	180.63	2.45	178.18	---
H-1	08/31/2010	---	---	---	---	---	---	---	---	---	---	---	180.63	4.12	176.51	---
H-1	02/10/2011	1,800	51	1.3	120	65	---	36	---	---	---	---	180.63	3.10	177.53	---
H-1	07/22/2011	---	---	---	---	---	---	---	---	---	---	---	180.63	3.52	177.11	---

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
5755 BROADWAY, OAKLAND, CALIFORNIA**

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE	MTBE	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to	GW	DO
							8020 (µg/L)	8260 (µg/L)						Water	Elevation	Reading
H-1	02/07/2012	560	20	<0.50	26	6.0	---	23	---	---	---	---	180.63	2.68	177.95	---
H-1	07/19/2012	---	---	---	---	---	---	---	---	---	---	---	180.63	5.48	175.15	---
H-1	01/25/2013	260	3.5	<0.50	1.1	<1.0	---	20	---	---	---	---	180.63	3.69	176.94	---
H-1	08/08/2013	---	---	---	---	---	---	---	---	---	---	---	180.63	5.44	175.19	---
H-1	02/11/2014	580	53	0.72	13	19	---	27	---	---	---	---	180.63	2.21	178.42	---
<b>H-1</b>	<b>08/29/2014</b>	---	---	---	---	---	---	---	---	---	---	---	<b>180.63</b>	<b>5.74</b>	<b>174.89</b>	---
T-1	05/30/1997	---	---	---	---	---	---	---	---	---	---	---	---	2.65	---	---
T-1	08/21/1997	---	---	---	---	---	---	---	---	---	---	---	---	2.69	---	---
T-1	11/03/1997	---	---	---	---	---	---	---	---	---	---	---	---	3.09	---	---
T-1	01/20/1998	---	---	---	---	---	---	---	---	---	---	---	---	0.61	---	---
T-1	07/23/1998	---	---	---	---	---	---	---	---	---	---	---	---	2.32	---	---
T-1	02/16/1999	---	---	---	---	---	---	---	---	---	---	---	---	1.95	---	---
T-1	09/07/1999	---	---	---	---	---	---	---	---	---	---	---	---	2.48	---	---
T-1	02/02/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	---	---	---	---	---	---	2.66	---	2.5
T-1	04/26/2000	---	---	---	---	---	---	---	---	---	---	---	---	2.56	---	---
T-1	07/25/2000	---	---	---	---	---	---	---	---	---	---	---	---	2.60	---	---
T-1	11/15/2000	---	---	---	---	---	---	---	---	---	---	---	---	2.47	---	---
T-1	02/12/2001	---	---	---	---	---	---	---	---	---	---	---	---	1.20	---	---
T-1	06/07/2001	---	---	---	---	---	---	---	---	---	---	---	---	2.36	---	---
T-1	08/31/2001	---	---	---	---	---	---	---	---	---	---	---	---	3.45	---	---
T-1	01/09/2002	---	---	---	---	---	---	---	---	---	---	---	183.08	---	---	---
T-2	05/30/1997	---	---	---	---	---	---	---	---	---	---	---	---	1.81	---	---
T-2	08/21/1997	---	---	---	---	---	---	---	---	---	---	---	---	1.89	---	---
T-2	11/03/1997	---	---	---	---	---	---	---	---	---	---	---	---	2.25	---	---
T-2	01/20/1998	---	---	---	---	---	---	---	---	---	---	---	---	0.55	---	---
T-2	07/23/1998	---	---	---	---	---	---	---	---	---	---	---	---	1.21	---	---
T-2	02/16/1999	---	---	---	---	---	---	---	---	---	---	---	---	1.08	---	---
T-2	09/07/1999	---	---	---	---	---	---	---	---	---	---	---	---	0.72	---	---



**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
5755 BROADWAY, OAKLAND, CALIFORNIA**

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE		TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to	GW	DO
							8020 (µg/L)	8260 (µg/L)						Water (ft TOC)	Elevation (ft MSL)	Reading (mg/L)
T-2	02/02/2000	1,540	53.4	20.8	11.4	21.8	1,330	---	---	---	---	---	---	0.98	---	3.0
T-2	04/26/2000	---	---	---	---	---	---	---	---	---	---	---	---	1.02	---	---
T-2	07/25/2000	815	17.6	10.8	1.63	3.47	133	---	---	---	---	---	---	1.80	---	0.8
T-2	11/15/2000	---	---	---	---	---	---	---	---	---	---	---	---	1.68	---	---
T-2	02/12/2001	310	7.48	7.76	0.693	2.28	301	---	---	---	---	---	---	1.45	---	1.6
T-2	06/07/2001	---	---	---	---	---	---	---	---	---	---	---	---	1.57	---	---
T-2	08/31/2001	720	30	0.67	<0.50	2.3	---	540	---	---	---	---	---	2.69	---	0.8
T-2	12/05/2001	---	---	---	---	---	---	---	---	---	---	---	---	0.58	---	---
T-2	01/31/2002	---	---	---	---	---	---	---	---	---	---	---	---	1.32	---	---
T-2	02/04/2002	1,000	41	30	4.6	20	---	1,200	---	---	---	---	---	1.46	---	---
T-2	06/04/2002	---	---	---	---	---	---	---	---	---	---	---	---	1.50	---	---
T-2	07/25/2002	660	11	0.59	<0.50	2.6	---	97	---	---	---	---	---	1.53	---	---
T-2	11/14/2002	---	---	---	---	---	---	---	---	---	---	---	182.30	2.39	179.91	---
T-2	01/30/2003	560	11	<0.50	<0.50	0.53	---	160	---	---	---	---	182.30	1.01	181.29	---
T-2	06/03/2003	---	---	---	---	---	---	---	---	---	---	---	182.30	1.55	180.75	---
T-2	08/27/2003	180 d	1.6	<0.50	<0.50	<1.0	---	10	---	---	---	---	182.30	1.60	180.70	---
T-2	11/25/2003	---	---	---	---	---	---	---	---	---	---	---	182.30	1.64	180.66	---
T-2	02/05/2004	940	110	10	2.4	14	---	67	---	---	---	---	182.30	0.66	181.64	---
T-2	04/21/2004	---	---	---	---	---	---	---	---	---	---	---	182.30	1.50	180.80	---
T-2	08/12/2004	450	<0.50	<0.50	<0.50	<1.0	---	33	---	---	---	---	182.30	2.72	179.58	---
T-2	11/08/2004	---	---	---	---	---	---	---	---	---	---	---	182.30	1.72	180.58	---
T-3	05/30/1997	---	---	---	---	---	---	---	---	---	---	---	---	2.31	---	---
T-3	08/21/1997	---	---	---	---	---	---	---	---	---	---	---	---	1.57	---	---
T-3	11/03/1997	---	---	---	---	---	---	---	---	---	---	---	---	3.50	---	---
T-3	01/20/1998	---	---	---	---	---	---	---	---	---	---	---	---	0.76	---	---
T-3	07/23/1998	---	---	---	---	---	---	---	---	---	---	---	---	0.82	---	---
T-3	02/16/1999	---	---	---	---	---	---	---	---	---	---	---	---	0.55	---	---
T-3	09/07/1999	---	---	---	---	---	---	---	---	---	---	---	---	2.89	---	---
T-3	02/02/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	---	---	---	---	---	---	3.02	---	2.9

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
5755 BROADWAY, OAKLAND, CALIFORNIA**

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE		TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to	GW	DO
							8020 (µg/L)	8260 (µg/L)						Water (ft TOC)	Elevation (ft MSL)	Reading (mg/L)
T-3	04/26/2000	---	---	---	---	---	---	---	---	---	---	---	---	2.81	---	---
T-3	07/25/2000	---	---	---	---	---	---	---	---	---	---	---	---	3.00	---	---
T-3	11/15/2000	---	---	---	---	---	---	---	---	---	---	---	---	1.70	---	---
T-3	02/12/2001	---	---	---	---	---	---	---	---	---	---	---	---	2.11	---	---
T-3	06/07/2001	---	---	---	---	---	---	---	---	---	---	---	---	1.68	---	---
T-3	08/31/2001	---	---	---	---	---	---	---	---	---	---	---	---	3.14	---	---
T-3	01/09/2002	---	---	---	---	---	---	---	---	---	---	---	180.95	---	---	---

Notes:

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B; prior to June 7, 2001, analyzed by EPA Method 8015 unless otherwise noted.

BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B; prior to June 7, 2001, analyzed by EPA Method 8020 unless otherwise noted.

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

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

SPH = Separate-phase hydrocarbon

GW = Groundwater

DO = Dissolved oxygen

µg/L = Micrograms per liter

ft = Feet

MSL = Mean sea level

mg/L = Milligrams per liter

<x = Not detected at reporting limit x

--- = Not analyzed or not available

(D) = Duplicate sample

a = Analytical method unknown

**GROUNDWATER DATA  
SHELL-BRANDED SERVICE STATION  
5755 BROADWAY, OAKLAND, CALIFORNIA**

<i>Well ID</i>	<i>Date</i>	<i>TPHg</i> ( $\mu\text{g/L}$ )	<i>B</i> ( $\mu\text{g/L}$ )	<i>T</i> ( $\mu\text{g/L}$ )	<i>E</i> ( $\mu\text{g/L}$ )	<i>X</i> ( $\mu\text{g/L}$ )	<i>MTBE</i> <i>8020</i> ( $\mu\text{g/L}$ )	<i>MTBE</i> <i>8260</i> ( $\mu\text{g/L}$ )	<i>TBA</i> ( $\mu\text{g/L}$ )	<i>DIPE</i> ( $\mu\text{g/L}$ )	<i>ETBE</i> ( $\mu\text{g/L}$ )	<i>TAME</i> ( $\mu\text{g/L}$ )	<i>TOC</i> ( <i>ft MSL</i> )	<i>Depth to</i> <i>Water</i> ( <i>ft TOC</i> )	<i>GW</i> <i>Elevation</i> ( <i>ft MSL</i> )	<i>DO</i> <i>Reading</i> ( <i>mg/L</i> )
----------------	-------------	------------------------------------	---------------------------------	---------------------------------	---------------------------------	---------------------------------	---	---	-----------------------------------	------------------------------------	------------------------------------	------------------------------------	---------------------------------	--	--	--

b = Ethylbenzene and total xylenes combined

c = Temporary datum of 100.00 feet assigned to TOC

d = Chromatogram pattern indicated an unidentified hydrocarbon/Hydrocarbon does not match pattern of laboratory's standard.

e = Sample analyzed outside of EPA recommended hold time.

f= Sampled by client (Cambria Environmental Technology)

g = Unable to gauge depth to water

h = Quantity of unknown hydrocarbon(s) in sample based on gasoline.

i = Analyzed by EPA Method 8015B (M).

j = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.

Site wells surveyed January 9, 2002 by Virgil Chavez Land Surveying

APPENDIX A

BLAINE TECH SERVICES, INC. -  
FIELD NOTES

# WELL GAUGING DATA

Project # 140829-DNR Date 8/29/14 Client Shell

Site 5755 Broadway Oakland, Ca.

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
S-1	1031	3					4.18	11.31	↓	
S-2	1035	4				4.29	9.45			
S-3	1027	4				4.37	9.50			
11-1	1040	4				5.74	11.98			

### SHELL WELL MONITORING DATA SHEET

BTS #: 140829-D21	Site: 5755 Broadway Oakland Ca.
Sampler: <u>BZ</u>	Date: 8/29/14
Well I.D.: S-1	Well Diameter: 2 (3) 4 6 8
Total Well Depth (TD): 11.3)	Depth to Water (DTW): 4.18
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVG</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.6	

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: \_\_\_\_\_

$2.6 \text{ (Gals.)} \times 3 = 7.8 \text{ Gals.}$ <p>I Case Volume          Specified Volumes          Calculated Volume</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
1126	73.2	7.66	407	47	2.6	
<u>at well</u>	<u>dashed C</u>		4.5 gal.			
1215	72.7	7.89	422	151	—	

Did well dewater? Yes No          Gallons actually evacuated: 4.5

Sampling Date: 8/29/14          Sampling Time: 1215          Depth to Water: 4.54

Sample I.D.: S-1                                  Laboratory: Test America Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: See CC

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

## SHELL WELL MONITORING DATA SHEET

BTS #: 140824-Dn2	Site: 5755 Broadway Oakland, Ca.
Sampler: R2	Date: 8/29/14
Well I.D.: S-2	Well Diameter: 2 3 ④ 6 8
Total Well Depth (TD): 9.45	Depth to Water (DTW): 4.29
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.37	

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

$3.4 \text{ (Gals.)} \times 3 = 10.2 \text{ Gals.}$ 1 Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
1147	69.9	6.93	639	27	3.4	
Well dewatered			4.0 gal.			
1230	68.2	7.11	627	79	—	

Did well dewater?  Yes    No      Gallons actually evacuated: 4.0

Sampling Date: 8/29/14      Sampling Time: 1230      Depth to Water: 5.02

Sample I.D.: S-2      Laboratory: Test America      Other \_\_\_\_\_

Analyzed for: TPH-G    BTEX    MTBE    TPH-D    Oxygenates (5)    Other: See CC

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

Analyzed for: TPH-G    BTEX    MTBE    TPH-D    Oxygenates (5)    Other:

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

## SHELL WELL MONITORING DATA SHEET

BTS #: 140829-D02	Site: 5755 Broadway Oakland Ca.
Sampler: DM	Date: 8/29/14
Well I.D.: S-3	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 9.50	Depth to Water (DTW): 4.37
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.40	

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

$\underline{3.3} \text{ (Gals.)} \times \underline{3} = \underline{9.9} \text{ Gals.}$ 1 Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
1104	71.0	6.89	715	33	3.3	
* Well	dewatered	Ⓢ	5.0 gal.			
1200	71.2	7.02	774	41	—	

Did well dewater? Yes No      Gallons actually evacuated: 5.0

Sampling Date: 8/29/14      Sampling Time: 1200      Depth to Water: 5.09

Sample I.D.: S-3      Laboratory: Test America Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: See GC

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

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: \_\_\_\_\_

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





APPENDIX B

TESTAMERICA LABORATORIES INC. -  
ANALYTICAL REPORT

# 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: 440-87122-1

Client Project/Site: 5755 Broadway, Oakland, CA

For:

Conestoga-Rovers & Associates, Inc.

5900 Hollis Street

Suite A

Emeryville, California 94608

Attn: Peter Schaefer



Authorized for release by:

9/10/2014 11:59:27 AM

Heather Clark, Project Manager I

(949)261-1022

[heather.clark@testamericainc.com](mailto:heather.clark@testamericainc.com)

### LINKS

Review your project  
results through

TotalAccess

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.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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11

12

13



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Sample Summary . . . . .	3
Case Narrative . . . . .	4
Client Sample Results . . . . .	5
Method Summary . . . . .	7
Lab Chronicle . . . . .	8
QC Sample Results . . . . .	9
QC Association Summary . . . . .	15
Definitions/Glossary . . . . .	16
Certification Summary . . . . .	17
Chain of Custody . . . . .	18
Receipt Checklists . . . . .	19

# Sample Summary

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 5755 Broadway, Oakland, CA

TestAmerica Job ID: 440-87122-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-87122-1	S-1	Ground Water	08/29/14 12:15	09/03/14 09:50
440-87122-2	S-2	Ground Water	08/29/14 12:30	09/03/14 09:50
440-87122-3	S-3	Ground Water	08/29/14 12:00	09/03/14 09:50

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# Case Narrative

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 5755 Broadway, Oakland, CA

TestAmerica Job ID: 440-87122-1

---

**Job ID: 440-87122-1**

---

**Laboratory: TestAmerica Irvine**

---

**Narrative**

---

**Job Narrative**  
**440-87122-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 9/3/2014 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1° C.

**GC/MS VOA**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**VOA Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

- 1
- 2
- 3
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- 13

# Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
 Project/Site: 5755 Broadway, Oakland, CA

TestAmerica Job ID: 440-87122-1

**Client Sample ID: S-1**

**Date Collected: 08/29/14 12:15**

**Date Received: 09/03/14 09:50**

**Lab Sample ID: 440-87122-1**

**Matrix: Ground Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	ND		50		ug/L			09/05/14 04:30	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane (Surr)	114		76 - 132					09/05/14 04:30	1
4-Bromofluorobenzene (Surr)	105		80 - 120					09/05/14 04:30	1
Toluene-d8 (Surr)	112		80 - 128					09/05/14 04:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/05/14 04:30	1
Isopropyl Ether (DIPE)	ND		0.50		ug/L			09/05/14 04:30	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			09/05/14 04:30	1
Ethylbenzene	ND		0.50		ug/L			09/05/14 04:30	1
<b>Methyl-t-Butyl Ether (MTBE)</b>	<b>4.6</b>		0.50		ug/L			09/05/14 04:30	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			09/05/14 04:30	1
tert-Butyl alcohol (TBA)	ND		10		ug/L			09/05/14 04:30	1
Toluene	ND		0.50		ug/L			09/05/14 04:30	1
Xylenes, Total	ND		1.0		ug/L			09/05/14 04:30	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	105		80 - 120					09/05/14 04:30	1
Dibromofluoromethane (Surr)	114		76 - 132					09/05/14 04:30	1
Toluene-d8 (Surr)	112		80 - 128					09/05/14 04:30	1

**Client Sample ID: S-2**

**Date Collected: 08/29/14 12:30**

**Date Received: 09/03/14 09:50**

**Lab Sample ID: 440-87122-2**

**Matrix: Ground Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	3900		250		ug/L			09/06/14 05:10	5
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane (Surr)	123		76 - 132					09/06/14 05:10	5
4-Bromofluorobenzene (Surr)	111		80 - 120					09/06/14 05:10	5
Toluene-d8 (Surr)	115		80 - 128					09/06/14 05:10	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	250		2.5		ug/L			09/06/14 05:10	5
Isopropyl Ether (DIPE)	ND		2.5		ug/L			09/06/14 05:10	5
Ethyl-t-butyl ether (ETBE)	ND		2.5		ug/L			09/06/14 05:10	5
Ethylbenzene	ND		2.5		ug/L			09/06/14 05:10	5
<b>Methyl-t-Butyl Ether (MTBE)</b>	<b>96</b>		2.5		ug/L			09/06/14 05:10	5
Tert-amyl-methyl ether (TAME)	ND		2.5		ug/L			09/06/14 05:10	5
<b>tert-Butyl alcohol (TBA)</b>	<b>520</b>		50		ug/L			09/06/14 05:10	5
Toluene	ND		2.5		ug/L			09/06/14 05:10	5
Xylenes, Total	ND		5.0		ug/L			09/06/14 05:10	5

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# Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
 Project/Site: 5755 Broadway, Oakland, CA

TestAmerica Job ID: 440-87122-1

## Client Sample ID: S-2

Date Collected: 08/29/14 12:30

Date Received: 09/03/14 09:50

## Lab Sample ID: 440-87122-2

Matrix: Ground Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		80 - 120		09/06/14 05:10	5
Dibromofluoromethane (Surr)	123		76 - 132		09/06/14 05:10	5
Toluene-d8 (Surr)	115		80 - 128		09/06/14 05:10	5

## Client Sample ID: S-3

Date Collected: 08/29/14 12:00

Date Received: 09/03/14 09:50

## Lab Sample ID: 440-87122-3

Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	ND		50		ug/L			09/06/14 04:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	120		76 - 132		09/06/14 04:39	1
4-Bromofluorobenzene (Surr)	108		80 - 120		09/06/14 04:39	1
Toluene-d8 (Surr)	114		80 - 128		09/06/14 04:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/06/14 04:39	1
Isopropyl Ether (DIPE)	ND		0.50		ug/L			09/06/14 04:39	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			09/06/14 04:39	1
Ethylbenzene	ND		0.50		ug/L			09/06/14 04:39	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			09/06/14 04:39	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			09/06/14 04:39	1
tert-Butyl alcohol (TBA)	ND		10		ug/L			09/06/14 04:39	1
Toluene	ND		0.50		ug/L			09/06/14 04:39	1
Xylenes, Total	ND		1.0		ug/L			09/06/14 04:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		80 - 120		09/06/14 04:39	1
Dibromofluoromethane (Surr)	120		76 - 132		09/06/14 04:39	1
Toluene-d8 (Surr)	114		80 - 128		09/06/14 04:39	1



# Method Summary

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 5755 Broadway, Oakland, CA

TestAmerica Job ID: 440-87122-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8260B/CA_LUFTM S	Volatile Organic Compounds by GC/MS	SW846	TAL IRV

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

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



# Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.  
 Project/Site: 5755 Broadway, Oakland, CA

TestAmerica Job ID: 440-87122-1

## Client Sample ID: S-1

Date Collected: 08/29/14 12:15

Date Received: 09/03/14 09:50

## Lab Sample ID: 440-87122-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	203887	09/05/14 04:30	WC	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTMS		1	10 mL	10 mL	203888	09/05/14 04:30	WC	TAL IRV

## Client Sample ID: S-2

Date Collected: 08/29/14 12:30

Date Received: 09/03/14 09:50

## Lab Sample ID: 440-87122-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	10 mL	10 mL	204186	09/06/14 05:10	AT	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTMS		5	10 mL	10 mL	204187	09/06/14 05:10	AT	TAL IRV

## Client Sample ID: S-3

Date Collected: 08/29/14 12:00

Date Received: 09/03/14 09:50

## Lab Sample ID: 440-87122-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	204186	09/06/14 04:39	AT	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTMS		1	10 mL	10 mL	204187	09/06/14 04:39	AT	TAL IRV

### Laboratory References:

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

# QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 5755 Broadway, Oakland, CA

TestAmerica Job ID: 440-87122-1

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

**Lab Sample ID: MB 440-203887/4**

**Matrix: Water**

**Analysis Batch: 203887**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/04/14 19:56	1
Isopropyl Ether (DIPE)	ND		0.50		ug/L			09/04/14 19:56	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			09/04/14 19:56	1
Ethylbenzene	ND		0.50		ug/L			09/04/14 19:56	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			09/04/14 19:56	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			09/04/14 19:56	1
tert-Butyl alcohol (TBA)	ND		10		ug/L			09/04/14 19:56	1
Toluene	ND		0.50		ug/L			09/04/14 19:56	1
Xylenes, Total	ND		1.0		ug/L			09/04/14 19:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		80 - 120		09/04/14 19:56	1
Dibromofluoromethane (Surr)	114		76 - 132		09/04/14 19:56	1
Toluene-d8 (Surr)	109		80 - 128		09/04/14 19:56	1

**Lab Sample ID: LCS 440-203887/5**

**Matrix: Water**

**Analysis Batch: 203887**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	26.3		ug/L		105	68 - 130
Isopropyl Ether (DIPE)	25.0	28.2		ug/L		113	58 - 139
Ethyl-t-butyl ether (ETBE)	25.0	22.3		ug/L		89	60 - 136
Ethylbenzene	25.0	24.8		ug/L		99	70 - 130
m,p-Xylene	50.0	49.3		ug/L		99	70 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	23.4		ug/L		94	63 - 131
o-Xylene	25.0	25.5		ug/L		102	70 - 130
Tert-amyl-methyl ether (TAME)	25.0	20.2		ug/L		81	57 - 139
tert-Butyl alcohol (TBA)	125	134		ug/L		108	70 - 130
Toluene	25.0	25.7		ug/L		103	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		80 - 120
Dibromofluoromethane (Surr)	115		76 - 132
Toluene-d8 (Surr)	113		80 - 128

**Lab Sample ID: 440-86924-A-2 MS**

**Matrix: Water**

**Analysis Batch: 203887**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	4.2		25.0	30.9		ug/L		107	66 - 130
Isopropyl Ether (DIPE)	4.4		25.0	33.1		ug/L		115	64 - 138
Ethyl-t-butyl ether (ETBE)	ND		25.0	22.7		ug/L		91	70 - 130
Ethylbenzene	ND		25.0	26.0		ug/L		104	70 - 130
m,p-Xylene	ND		50.0	51.5		ug/L		103	70 - 133
Methyl-t-Butyl Ether (MTBE)	19		25.0	43.7		ug/L		99	70 - 130

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# QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 5755 Broadway, Oakland, CA

TestAmerica Job ID: 440-87122-1

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

**Lab Sample ID: 440-86924-A-2 MS**

**Client Sample ID: Matrix Spike**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 203887**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
o-Xylene	ND		25.0	27.3		ug/L		109	70 - 133
Tert-amyl-methyl ether (TAME)	ND		25.0	21.6		ug/L		87	68 - 133
tert-Butyl alcohol (TBA)	260		125	412		ug/L		125	70 - 130
Toluene	ND		25.0	26.5		ug/L		104	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	109		80 - 120
Dibromofluoromethane (Surr)	112		76 - 132
Toluene-d8 (Surr)	112		80 - 128

**Lab Sample ID: 440-86924-A-2 MSD**

**Client Sample ID: Matrix Spike Duplicate**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 203887**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier					RPD	Limit
Benzene	4.2		25.0	30.3		ug/L		104	66 - 130	2	20
Isopropyl Ether (DIPE)	4.4		25.0	33.0		ug/L		114	64 - 138	0	25
Ethyl-t-butyl ether (ETBE)	ND		25.0	23.8		ug/L		95	70 - 130	4	25
Ethylbenzene	ND		25.0	24.9		ug/L		100	70 - 130	4	20
m,p-Xylene	ND		50.0	49.2		ug/L		98	70 - 133	5	25
Methyl-t-Butyl Ether (MTBE)	19		25.0	43.9		ug/L		100	70 - 130	0	25
o-Xylene	ND		25.0	26.2		ug/L		105	70 - 133	4	20
Tert-amyl-methyl ether (TAME)	ND		25.0	22.2		ug/L		89	68 - 133	3	30
tert-Butyl alcohol (TBA)	260		125	395		ug/L		112	70 - 130	4	25
Toluene	ND		25.0	26.2		ug/L		103	70 - 130	1	20

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	107		80 - 120
Dibromofluoromethane (Surr)	113		76 - 132
Toluene-d8 (Surr)	114		80 - 128

**Lab Sample ID: MB 440-204186/4**

**Client Sample ID: Method Blank**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 204186**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.50		ug/L			09/05/14 19:05	1
Isopropyl Ether (DIPE)	ND		0.50		ug/L			09/05/14 19:05	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			09/05/14 19:05	1
Ethylbenzene	ND		0.50		ug/L			09/05/14 19:05	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			09/05/14 19:05	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			09/05/14 19:05	1
tert-Butyl alcohol (TBA)	ND		10		ug/L			09/05/14 19:05	1
Toluene	ND		0.50		ug/L			09/05/14 19:05	1
Xylenes, Total	ND		1.0		ug/L			09/05/14 19:05	1

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# QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 5755 Broadway, Oakland, CA

TestAmerica Job ID: 440-87122-1

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

Lab Sample ID: MB 440-204186/4

Matrix: Water

Analysis Batch: 204186

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	108		80 - 120		09/05/14 19:05	1
Dibromofluoromethane (Surr)	112		76 - 132		09/05/14 19:05	1
Toluene-d8 (Surr)	111		80 - 128		09/05/14 19:05	1

Lab Sample ID: LCS 440-204186/5

Matrix: Water

Analysis Batch: 204186

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl Ether (DIPE)	25.0	28.9		ug/L		115	58 - 139
Ethyl-t-butyl ether (ETBE)	25.0	27.0		ug/L		108	60 - 136
Ethylbenzene	25.0	24.6		ug/L		98	70 - 130
m,p-Xylene	50.0	48.7		ug/L		97	70 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	26.1		ug/L		104	63 - 131
o-Xylene	25.0	25.9		ug/L		104	70 - 130
Tert-amyl-methyl ether (TAME)	25.0	25.8		ug/L		103	57 - 139
tert-Butyl alcohol (TBA)	125	135		ug/L		108	70 - 130
Toluene	25.0	25.4		ug/L		102	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	111		80 - 120
Dibromofluoromethane (Surr)	112		76 - 132
Toluene-d8 (Surr)	113		80 - 128

Lab Sample ID: 440-87375-A-1 MS

Matrix: Water

Analysis Batch: 204186

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl Ether (DIPE)	ND		25.0	29.0		ug/L		116	64 - 138
Ethyl-t-butyl ether (ETBE)	ND		25.0	26.5		ug/L		106	70 - 130
Ethylbenzene	ND		25.0	23.7		ug/L		95	70 - 130
m,p-Xylene	ND		50.0	46.8		ug/L		94	70 - 133
Methyl-t-Butyl Ether (MTBE)	5.4		25.0	30.7		ug/L		101	70 - 130
o-Xylene	ND		25.0	25.0		ug/L		100	70 - 133
Tert-amyl-methyl ether (TAME)	ND		25.0	25.8		ug/L		103	68 - 133
tert-Butyl alcohol (TBA)	ND		125	132		ug/L		106	70 - 130
Toluene	ND		25.0	24.8		ug/L		99	70 - 130

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	108		80 - 120
Dibromofluoromethane (Surr)	118		76 - 132
Toluene-d8 (Surr)	113		80 - 128

# QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 5755 Broadway, Oakland, CA

TestAmerica Job ID: 440-87122-1

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

**Lab Sample ID: 440-87375-A-1 MSD**

**Matrix: Water**

**Analysis Batch: 204186**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Benzene	ND		25.0	26.8		ug/L		107	66 - 130	4	20
Isopropyl Ether (DIPE)	ND		25.0	30.4		ug/L		121	64 - 138	5	25
Ethyl-t-butyl ether (ETBE)	ND		25.0	27.8		ug/L		111	70 - 130	5	25
Ethylbenzene	ND		25.0	23.9		ug/L		96	70 - 130	1	20
m,p-Xylene	ND		50.0	47.1		ug/L		94	70 - 133	1	25
Methyl-t-Butyl Ether (MTBE)	5.4		25.0	32.5		ug/L		108	70 - 130	5	25
o-Xylene	ND		25.0	25.1		ug/L		100	70 - 133	1	20
Tert-amyl-methyl ether (TAME)	ND		25.0	27.2		ug/L		109	68 - 133	5	30
tert-Butyl alcohol (TBA)	ND		125	137		ug/L		109	70 - 130	3	25
Toluene	ND		25.0	25.9		ug/L		103	70 - 130	4	20
<b>MSD MSD</b>											
<b>Surrogate</b>	<b>%Recovery</b>		<b>Qualifier</b>	<b>Limits</b>							
4-Bromofluorobenzene (Surr)	106			80 - 120							
Dibromofluoromethane (Surr)	116			76 - 132							
Toluene-d8 (Surr)	113			80 - 128							

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

**Lab Sample ID: MB 440-203888/4**

**Matrix: Water**

**Analysis Batch: 203888**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Volatile Fuel Hydrocarbons (C4-C12)	ND		50		ug/L			09/04/14 19:56	1
<b>MB MB</b>									
<b>Surrogate</b>	<b>%Recovery</b>		<b>Qualifier</b>	<b>Limits</b>		<b>Prepared</b>		<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane (Surr)	114			76 - 132				09/04/14 19:56	1
4-Bromofluorobenzene (Surr)	108			80 - 120				09/04/14 19:56	1
Toluene-d8 (Surr)	109			80 - 128				09/04/14 19:56	1

**Lab Sample ID: LCS 440-203888/6**

**Matrix: Water**

**Analysis Batch: 203888**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Volatile Fuel Hydrocarbons (C4-C12)	500	474		ug/L		95	55 - 130
<b>LCS LCS</b>							
<b>Surrogate</b>	<b>%Recovery</b>		<b>Qualifier</b>	<b>Limits</b>			
Dibromofluoromethane (Surr)	113			76 - 132			
4-Bromofluorobenzene (Surr)	110			80 - 120			
Toluene-d8 (Surr)	113			80 - 128			

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# QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
 Project/Site: 5755 Broadway, Oakland, CA

TestAmerica Job ID: 440-87122-1

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

**Lab Sample ID: 440-86924-A-2 MS**

**Matrix: Water**

**Analysis Batch: 203888**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Volatile Fuel Hydrocarbons (C4-C12)	170		1730	1660		ug/L		87	50 - 145
<b>Surrogate</b>	<b>%Recovery</b>	<b>MS Qualifier</b>	<b>Limits</b>						
Dibromofluoromethane (Surr)	112		76 - 132						
4-Bromofluorobenzene (Surr)	109		80 - 120						
Toluene-d8 (Surr)	112		80 - 128						

**Lab Sample ID: 440-86924-A-2 MSD**

**Matrix: Water**

**Analysis Batch: 203888**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Volatile Fuel Hydrocarbons (C4-C12)	170		1730	1630		ug/L		85	50 - 145	2	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>MSD Qualifier</b>	<b>Limits</b>								
Dibromofluoromethane (Surr)	113		76 - 132								
4-Bromofluorobenzene (Surr)	107		80 - 120								
Toluene-d8 (Surr)	114		80 - 128								

**Lab Sample ID: MB 440-204187/4**

**Matrix: Water**

**Analysis Batch: 204187**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	ND		50		ug/L			09/05/14 19:05	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>MB Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane (Surr)	112		76 - 132					09/05/14 19:05	1
4-Bromofluorobenzene (Surr)	108		80 - 120					09/05/14 19:05	1
Toluene-d8 (Surr)	111		80 - 128					09/05/14 19:05	1

**Lab Sample ID: LCS 440-204187/6**

**Matrix: Water**

**Analysis Batch: 204187**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Volatile Fuel Hydrocarbons (C4-C12)	500	465		ug/L		93	55 - 130
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCS Qualifier</b>	<b>Limits</b>				
Dibromofluoromethane (Surr)	110		76 - 132				
4-Bromofluorobenzene (Surr)	108		80 - 120				
Toluene-d8 (Surr)	114		80 - 128				

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# QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
 Project/Site: 5755 Broadway, Oakland, CA

TestAmerica Job ID: 440-87122-1

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

**Lab Sample ID: 440-87375-A-1 MS**

**Matrix: Water**

**Analysis Batch: 204187**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	
Volatile Fuel Hydrocarbons (C4-C12)	ND		1730	1460		ug/L		84	50 - 145	
<b>Surrogate</b>	<b>%Recovery</b>	<b>MS Qualifier</b>	<b>MS</b>	<b>Limits</b>						
Dibromofluoromethane (Surr)	118			76 - 132						
4-Bromofluorobenzene (Surr)	108			80 - 120						
Toluene-d8 (Surr)	113			80 - 128						

**Lab Sample ID: 440-87375-A-1 MSD**

**Matrix: Water**

**Analysis Batch: 204187**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Volatile Fuel Hydrocarbons (C4-C12)	ND		1730	1510		ug/L		88	50 - 145	4	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>MSD Qualifier</b>	<b>MSD</b>	<b>Limits</b>							
Dibromofluoromethane (Surr)	116			76 - 132							
4-Bromofluorobenzene (Surr)	106			80 - 120							
Toluene-d8 (Surr)	113			80 - 128							



# QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.  
 Project/Site: 5755 Broadway, Oakland, CA

TestAmerica Job ID: 440-87122-1

## GC/MS VOA

### Analysis Batch: 203887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-86924-A-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-86924-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
440-87122-1	S-1	Total/NA	Ground Water	8260B	
LCS 440-203887/5	Lab Control Sample	Total/NA	Water	8260B	
MB 440-203887/4	Method Blank	Total/NA	Water	8260B	

### Analysis Batch: 203888

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-86924-A-2 MS	Matrix Spike	Total/NA	Water	8260B/CA_LUFT MS	
440-86924-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B/CA_LUFT MS	
440-87122-1	S-1	Total/NA	Ground Water	8260B/CA_LUFT MS	
LCS 440-203888/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
MB 440-203888/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

### Analysis Batch: 204186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-87122-2	S-2	Total/NA	Ground Water	8260B	
440-87122-3	S-3	Total/NA	Ground Water	8260B	
440-87375-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-87375-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 440-204186/5	Lab Control Sample	Total/NA	Water	8260B	
MB 440-204186/4	Method Blank	Total/NA	Water	8260B	

### Analysis Batch: 204187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-87122-2	S-2	Total/NA	Ground Water	8260B/CA_LUFT MS	
440-87122-3	S-3	Total/NA	Ground Water	8260B/CA_LUFT MS	
440-87375-A-1 MS	Matrix Spike	Total/NA	Water	8260B/CA_LUFT MS	
440-87375-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B/CA_LUFT MS	
LCS 440-204187/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
MB 440-204187/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

## Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 5755 Broadway, Oakland, CA

TestAmerica Job ID: 440-87122-1

### 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
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
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)

# Certification Summary

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 5755 Broadway, Oakland, CA

TestAmerica Job ID: 440-87122-1

## 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	06-30-15
Arizona	State Program	9	AZ0671	10-13-14 *
California	LA Cty Sanitation Districts	9	10256	01-31-15
California	State Program	9	2706	06-30-16
Guam	State Program	9	Cert. No. 12.002r	01-23-15
Hawaii	State Program	9	N/A	01-29-15 *
Nevada	State Program	9	CA015312007A	07-31-15
New Mexico	State Program	6	N/A	01-29-15
Northern Mariana Islands	State Program	9	MP0002	01-29-15
Oregon	NELAP	10	4005	01-29-15
USDA	Federal		P330-09-00080	06-06-15
USEPA UCMR	Federal	1	CA01531	01-31-15

\* Certification renewal pending - certification considered valid.

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## Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 440-87122-1

**Login Number: 87122**

**List Number: 1**

**Creator: Freitag, Kevin R**

**List Source: TestAmerica Irvine**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
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	
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

