



**CONESTOGA-ROVERS  
& ASSOCIATES**

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**TRANSMITTAL**

DATE: May 28, 2014

REFERENCE NO.: 240897

PROJECT NAME: 4411 Foothill Boulevard, 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 4:22 pm, May 30, 2014

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 Originals  Other  
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 Overnight Courier  Other GeoTracker and Alameda County FTP

QUANTITY	DESCRIPTION
1	Groundwater Monitoring Report - First 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)  
Laura Wong, Phua Management (property owner representative) (electronic copy)

Completed by: Peter Schaefer Signed:

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: 4411 Foothill Boulevard  
Oakland, California  
SAP Code 135686  
Incident No. 98995746  
ACEH Case No. RO0000415

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 - FIRST QUARTER 2014

FORMER SHELL SERVICE STATION  
4411 FOOTHILL BOULEVARD  
OAKLAND, CALIFORNIA

SAP CODE            135686  
INCIDENT NO.      98995746  
AGENCY NO.        RO0000415

**MAY 28, 2014**

**REF. NO. 240897 (26)**

This report is printed on recycled paper.

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

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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	4411 Foothill Boulevard, Oakland
Site Use	Strip Mall
Shell Project Manager	Perry Pineda
CRA Project Manager	Peter Schaefer
Lead Agency and Contact	ACEH, Jerry Wickham
Agency Case No.	RO0000415
Shell SAP Code	135686
Shell Incident No.	98995746

Date of most recent agency correspondence was March 26, 2014.

## 2.0 SITE ACTIVITIES, FINDINGS, AND DISCUSSION

### 2.1 CURRENT QUARTER'S ACTIVITIES

On June 7, 2013, CRA sent survey questionnaires to three property owners and four occupants of properties located directly down-gradient from the site to identify any domestic or irrigation wells, the depth of any basements, how the basements are used, the type of floor in the basements, and whether any sumps are present in the basements. To date, no questionnaires have been returned to CRA. Alameda County Environmental Health's (ACEH's) March 26, 2014 letters to the adjacent property owners also requested this information. CRA understands that, to date, ACEH has received a response from one of the down-gradient property owners.

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 groundwater monitoring field notes are presented in Appendix A and the laboratory report is presented in Appendix B.

## **2.2        CURRENT QUARTER'S FINDINGS**

Groundwater Flow Direction	Southwesterly
Hydraulic Gradient	0.01
Depth to Water	8.57 to 9.11 feet below top of well casing

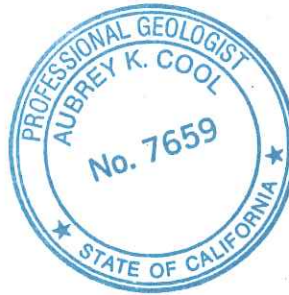
## **2.3        PROPOSED ACTIVITIES**

Blaine will gauge and sample wells according to the modified monitoring program for this site. The site is monitored quarterly, and CRA will issue groundwater monitoring reports quarterly.

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

*Peter Schaefer*  
Peter Schaefer, CEG, CHG

*Aubrey K Cool*  
Aubrey K. Cool, PG





## FIGURES

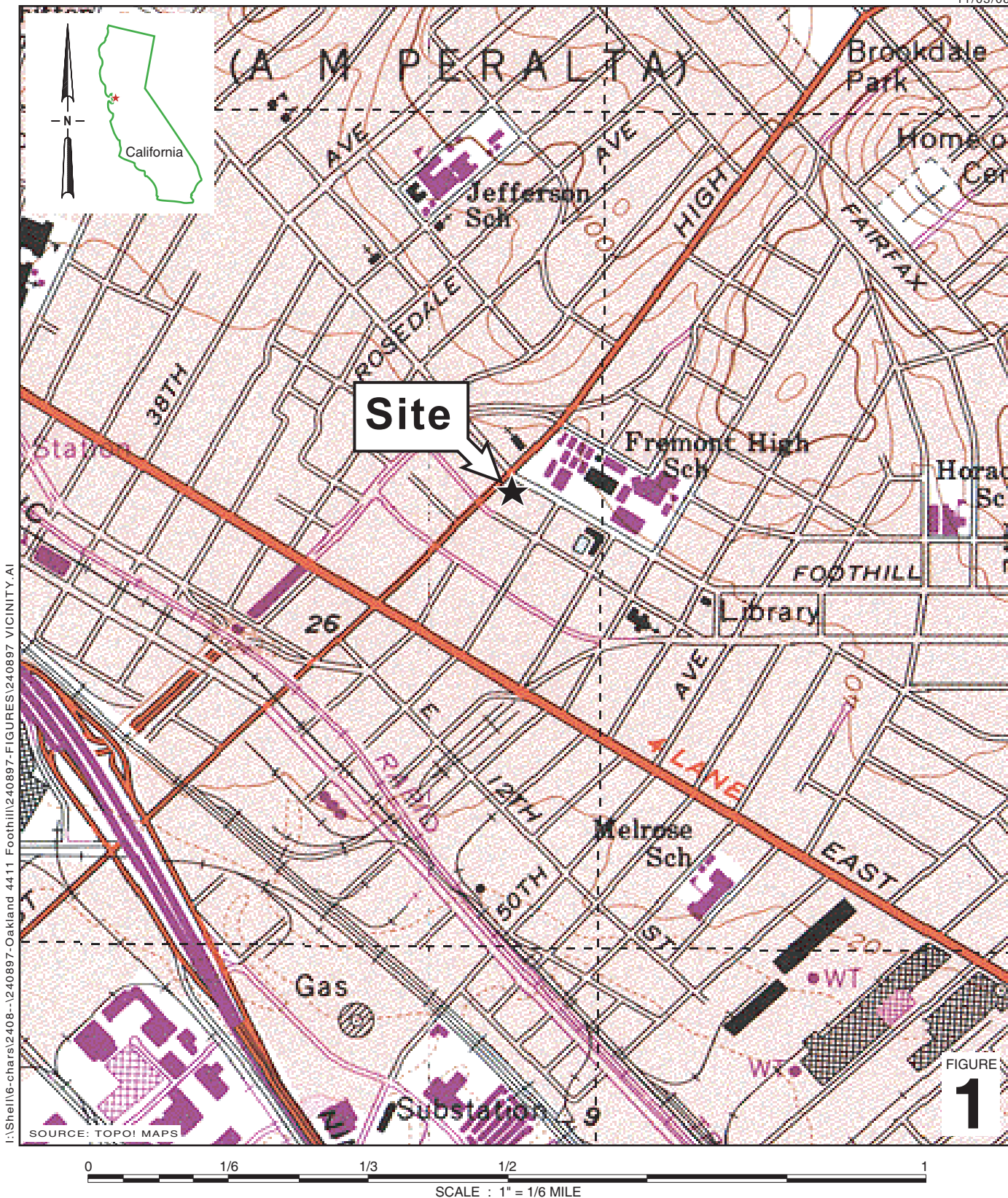


FIGURE 1

**Former Shell Service Station**  
 4411 Foothill Boulevard  
 Oakland, California



**CONESTOGA-ROVERS & ASSOCIATES**

**Vicinity Map**

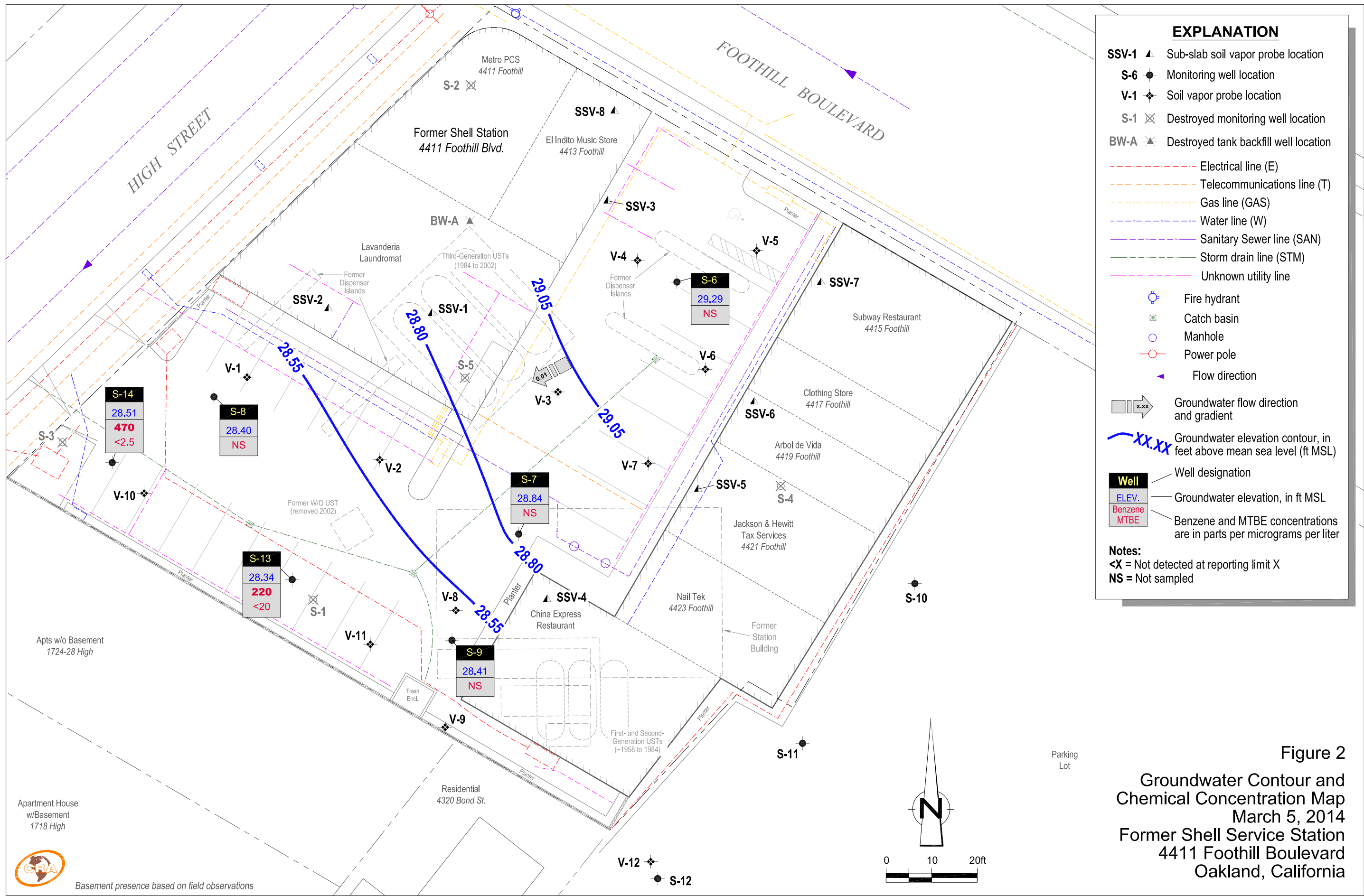


Figure 2  
 Groundwater Contour and  
 Chemical Concentration Map  
 March 5, 2014  
 Former Shell Service Station  
 4411 Foothill Boulevard  
 Oakland, California

## TABLE

TABLE 1

**GROUNDWATER DATA  
FORMER SHELL SERVICE STATION  
4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA**

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (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)	1,2- DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-1	12/18/1992	---	41,000	3,100	1,100	1,200	8,700	---	---	---	---	---	---	---	---	38.31	9.06	---	---
S-1	05/26/1993	6,000	39,000	1,300	4,700	1,500	7,800	---	---	---	---	---	---	---	---	38.31	---	---	---
S-1	05/28/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.31	12.13	26.18	---
S-1	06/03/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.31	8.89	29.42	---
S-1	06/08/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.31	8.80	29.51	---
S-1	09/21/1993	5,900	34,000	480	5,000	3,800	18,000	---	---	---	---	---	---	---	---	38.31	10.40	27.91	---
S-1	12/14/1993	13,000	25,000	1,100	5,000	2,200	11,000	---	---	---	---	---	---	---	---	38.31	9.66	28.65	---
S-1	03/17/1994	1,600	57,000	1,300	5,400	2,100	11,000	---	---	---	---	---	---	---	---	38.31	8.20	30.11	---
S-1	06/16/1994	3,000	57,000	1,600	6,000	2,000	13,000	---	---	---	---	---	---	---	---	38.31	9.41	28.90	---
S-1	09/22/1994	<250	39,000	1,300	2,100	1,500	7,100	---	---	---	---	---	---	---	---	38.31	11.13	27.18	---
S-1	12/15/1994	3,100 g	30,000	1,100	4,700	1,600	10,000	---	---	---	---	---	---	---	---	38.31	7.15	31.16	---
S-1	03/30/1995	3,100 a,g	30,000 a	1,400 a	4,000 a	1,500 a	11,000 a	---	---	---	---	---	---	---	---	38.31	6.09	32.22	---
S-1	06/20/1995	2,100	28,000	1,100	2,300	1,100	8,300	---	---	---	---	---	---	---	---	38.31	7.30	31.01	---
S-1	09/20/1995	2,600	40,000	840	3,600	1,300	8,600	---	---	---	---	---	---	---	---	38.31	10.02	28.29	---
S-1	12/06/1995	6,400 g	38,000	920	3,200	1,500	9,400	---	---	---	---	---	---	---	---	38.31	11.64	26.67	---
S-1	03/21/1996	---	48,000	700	4,200	1,100	8,600	---	---	---	---	---	---	---	---	38.31	6.87	31.44	---
S-1	09/06/1996	4,100	41,000	830	2,600	2,100	12,000	<250	---	---	---	---	---	---	---	38.31	10.50	27.81	---
S-1	12/19/1996	2,500	40,000	540	3,100	1,900	9,800	920	---	---	---	---	---	---	---	38.31	8.24	30.07	---
S-1	03/17/1997	4,700	42,000	610	2,700	1,700	11,000	3,500	---	---	---	---	---	---	---	38.31	7.26	31.05	---
S-1	06/11/1997	4,000	28,000	540	960	1,300	5,300	220	---	---	---	---	---	---	---	38.31	10.69	27.62	---
S-1 (D)	06/11/1997	3,900	30,000	580	1,000	1,400	5,400	<125	---	---	---	---	---	---	---	38.31	10.69	27.62	---
S-1	09/17/1997	4,400	27,000	310	1,200	1,900	9,000	170	---	---	---	---	---	---	---	38.31	10.26	28.05	---
S-1 (D)	09/17/1997	4,400	27,000	270	1,200	1,900	9,000	170	---	---	---	---	---	---	---	38.31	10.26	28.05	---
S-1	12/11/1997	3,400	21,000	350	820	1,500	6,500	<125	---	---	---	---	---	---	---	38.31	6.96	31.35	---
S-1	03/16/1998	2,500	25,000	250	820	670	5,000	<125	---	---	---	---	---	---	---	38.31	6.00	32.31	---
S-1 (D)	03/16/1998	---	26,000	250	840	720	5,100	<125	---	---	---	---	---	---	---	38.31	6.00	32.31	5.3/3.7
S-1	06/23/1998	230	<1,000	280	14	23	15	6,100	7,800	---	---	---	---	---	---	38.31	6.31	32.00	3.8/2.4
S-1	09/01/1998	2,300	26,000	370	620	1,300	33	1,400	120	---	---	---	---	---	---	38.31	9.17	29.14	1.4/2.6
S-1	12/30/1998	1,970	29,900	174	732	1,680	5,740	182	---	---	---	---	---	---	---	38.31	8.99	29.32	1.6/2.0
S-1	03/30/1999	1,150	14,200	1,360	260	1,070	3,580	<500	90.0	---	---	---	---	---	---	38.31	6.10	32.21	1.2/1.8
S-1	03/31/1999	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.31	7.84	30.47	---
S-1	06/14/1999	4,280	20,200	135	407	825	5,000	705	---	---	---	---	---	---	---	38.31	7.94	30.37	1.4/2.1
S-1	09/30/1999	3,120	18,300	189	531	1,250	4,740	322	---	---	---	---	---	---	---	38.31	10.04	28.27	4.3/2.0
S-1	12/22/1999	444 g	2,450	50.2	97.5	139	458	133	---	---	---	---	---	---	---	38.31	9.42	28.89	1.8/2.3
S-1	03/09/2000	1,200 g	1,230 a	21.2 a	115 a	116 a	411 a	45.1 a	---	---	---	---	---	---	---	38.30	6.21	32.09	2.0/2.9
S-1	06/20/2000	352 g	755	26.0	48.4	43.1	230	71.5	---	---	---	---	---	---	---	38.30	9.18	29.12	2.0/2.4
S-1	09/05/2000	783 g	2,980	43.5	117	168	871	192	---	---	---	---	---	---	---	38.30	10.14	28.16	0.6/0.3
S-1	12/04/2000	238 g	399	5.34	14.6	36.2	106	24.9	---	---	---	---	---	---	---	38.30	10.10	28.20	8.6/9.8
S-1	12/12/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.30	9.22	29.08	---
S-1	03/08/2001	1,390 g	2,940	49.6	52.9	21.8	749	87.6	---	---	---	---	---	---	---	38.30	5.84	32.46	2.7 b

TABLE 1

**GROUNDWATER DATA  
FORMER SHELL SERVICE STATION  
4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA**

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (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)	1,2- DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-1	06/07/2001	1,400	10,000	120	370	680	2,400	150	---	---	---	---	---	---	---	38.30	8.80	29.50	6.2/2.2
S-1	09/13/2001	<200	240	1.8	8.9	16	53	---	17	---	---	---	---	---	---	38.30	10.25	28.05	7.8/8.9
S-1	11/19/2001	<300	1,400	14	42	110	260	---	27	---	---	---	---	---	---	38.30	9.87	28.43	7.7/7.3
S-1	03/18/2002	<300	7,500	40	370	560	2,000	---	20	---	---	---	---	---	---	38.30	5.08	33.22	5.6/6.1
S-1	06/19/2002	180	1,000	4.7	36	68	250	---	14	---	---	---	---	---	---	38.30	9.26	29.04	---
S-1	09/11/2002	<350	2,100	8.1	68	180	820	---	7.1	---	---	---	---	---	---	38.30	10.54	27.76	6.5
S-1	12/11/2002	<500	4,100	16	93	310	900	---	<20	---	---	---	---	---	---	38.04	9.97	28.07	8.0
S-1	03/11/2003	<1,600	14,000	71	470	1,000	3,300	---	<50	---	---	---	---	---	---	38.04	7.31	30.73	5.2
S-1	06/10/2003	110 g	1,700	7.7	44	190	340	---	4.5	---	---	---	---	---	---	38.04	8.14	29.90	14.0
S-1	09/09/2003	96 g	3,200	11	110	350	1,100	---	5.8	---	---	---	---	---	---	38.04	9.31	28.73	7.5
S-1	12/09/2003	1,000 g	6,000	20	170	530	1,700	---	6.1	---	---	---	---	---	---	38.04	7.24	30.80	28.6
S-1	03/09/2004	300 g	390	5.8	30	67	160	---	5.6	---	---	---	---	---	---	38.04	5.56	32.48	6.4
S-1	06/08/2004	2,500 g	5,600	11	140	660	1,900	---	5.0	---	---	---	---	---	---	38.04	8.82	29.22	30.0
S-1	09/07/2004	130 e	<50	<0.50	<0.50	<0.50	<1.0	---	0.75	<5.0	<2.0	<2.0	<2.0	---	---	38.04	9.84	28.20	14.4
S-1	12/06/2004	Unable to sample		---	---	---	---	---	---	---	---	---	---	---	---	38.04	9.20	28.84	---
S-1	12/15/2004	120 e	560	2.2	26	67	220	---	1.4	---	---	---	---	---	---	38.04	5.39	32.65	31.7
S-1	03/07/2005	460 e	12,000	12	310	830	2,600	---	<5.0	---	---	---	---	---	---	38.04	5.77	32.27	16.1
S-1	06/10/2005	1,200 e	13,000	25	310	1,200	3,300	---	<10	---	---	---	---	---	---	38.04	5.39	32.65	0.17
S-1	07/14/2005	Well destroyed		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-2	05/28/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.79	9.51	29.28	---
S-2	06/03/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.79	9.51	29.28	---
S-2	06/08/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.79	9.57	29.22	---
S-2	06/29/1993	---	1,300	290	35	38	130	---	---	---	---	---	---	---	---	38.79	---	---	---
S-2	09/21/1993	---	3,300	870	24	190	120	---	---	---	---	---	---	---	---	38.79	10.54	28.25	---
S-2	12/14/1993	---	1,300	400	16	36	27	---	---	---	---	---	---	---	---	38.79	9.76	29.03	---
S-2	03/17/1994	---	4,500	610	27	92	110	---	---	---	---	---	---	---	---	38.79	9.92	28.87	---
S-2 (D)	03/17/1994	---	4,000	610	26	93	120	---	---	---	---	---	---	---	---	38.79	9.92	28.87	---
S-2	06/16/1994	---	2,800	690	45	97	140	---	---	---	---	---	---	---	---	38.79	10.11	28.68	---
S-2	09/22/1994	---	4,000	630	94	64	230	---	---	---	---	---	---	---	---	38.79	10.51	28.28	---
S-2	12/15/1994	---	1,600	450	300	67	130	---	---	---	---	---	---	---	---	38.79	9.12	29.67	---
S-2	03/30/1995	---	8,200 a	2,800 a	190 a	240 a	700 a	---	---	---	---	---	---	---	---	38.79	7.86	30.93	---
S-2	06/20/1995	---	9,600	2,600	160	170	500	---	---	---	---	---	---	---	---	38.79	9.51	29.28	---
S-2	09/20/1995	---	4,200	920	45	98	140	---	---	---	---	---	---	---	---	38.79	10.06	28.73	---
S-2	12/06/1995	---	<5,000	790	67	64	130	---	---	---	---	---	---	---	---	38.79	10.52	28.27	---
S-2	03/21/1996	---	3,700	850	45	96	170	---	---	---	---	---	---	---	---	38.79	8.60	30.19	---
S-2	09/06/1996	---	2,400	500	33	39	84	490	---	---	---	---	---	---	---	38.79	10.50	28.29	---
S-2	12/19/1996	---	1,200	330	15	24	31	430	---	---	---	---	---	---	---	38.79	9.40	29.39	---
S-2	03/17/1997	---	4,100	780	42	110	120	2,200	---	---	---	---	---	---	---	38.79	9.82	28.97	---
S-2	06/11/1997	---	760	120	<5.0	7.0	7.6	900	---	---	---	---	---	---	---	38.79	10.18	28.61	---

TABLE 1

**GROUNDWATER DATA  
FORMER SHELL SERVICE STATION  
4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA**

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (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)	1,2- DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-2	09/17/1997	---	1,500	230	8.6	40	27	480	---	---	---	---	---	---	---	38.79	9.90	28.89	---
S-2	12/11/1997	---	1,300	240	15	33	57	280	---	---	---	---	---	---	---	38.79	8.27	30.52	---
S-2	03/16/1998	---	1,100	830	48	<10	<10	4,700	4,800	---	---	---	---	---	---	38.79	7.97	30.82	7.0/4.3
S-2	06/23/1998	---	720	46	6.8	50	68	50	8.8	---	---	---	---	---	---	38.79	8.20	30.59	4.2/3.8
S-2 (D)	06/23/1998	---	810	49	7.1	50	70	49	8.8	---	---	---	---	---	---	38.79	8.20	30.59	4.2/3.8
S-2	09/01/1998	---	<2,000	170	<20	<20	<20	9,300	12,000	---	---	---	---	---	---	38.79	9.85	28.94	1.9/1.6
S-2	12/30/1998	---	<5,000	369	<50	<50	<50	14,300	---	---	---	---	---	---	---	38.79	9.84	28.95	2.0/1.8
S-2	03/30/1999	---	<2,000	234	<20.0	27.4	36.9	49,200	53,000	---	---	---	---	---	---	38.79	8.41	30.38	2.1/1.8
S-2	03/31/1999	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.79	8.67	30.12	---
S-2	06/14/1999	---	<1,000	175	<10.0	<10.0	11.1	67,500	---	---	---	---	---	---	---	38.79	9.80	28.99	---
S-2	09/30/1999	177 g	678	135	8.22	14.9	25.8	17,100	17,000 a	---	---	---	---	---	---	38.79	10.58	28.21	5.1/4.8
S-2	12/22/1999	142 g	316	55.8	10.1	5.26	10.4	9,410	8,810	---	---	---	---	---	---	38.79	10.13	28.66	9.6/5.2
S-2	03/09/2000	630 g	2,670	1,190 a	62.7	84.1	125	29,200 a	31,400 a	---	---	---	---	---	---	38.78	7.88	30.90	7.6/5.0
S-2	06/20/2000	401 g	<5,000	348	<50.0	50.4	127	35,800	33,900 a	---	---	---	---	---	---	38.78	10.27	28.51	1.9/2.2
S-2	09/05/2000	373 g	<5,000	106	<50.0	<50.0	<50.0	25,800	37,100 a	---	---	---	---	---	---	38.78	10.19	28.59	0.5/1.6
S-2	12/04/2000	1,730 g	<250	4.37	<2.50	<2.50	<2.50	4,500	5,130 a	---	---	---	---	---	---	38.78	10.30	28.48	10.6/9.4
S-2	12/12/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.78	9.66	29.12	---
S-2	03/08/2001	<51.3	<2,500	318	45.7	53.5	88.5	15,500	17,500	---	---	---	---	---	---	38.78	8.57	30.21	2.7 b
S-2	06/07/2001	11,000	18,000	450	170	390	2,200	13,000	18,000	---	---	---	---	---	---	38.78	9.39	29.39	1.1/2.0
S-2	09/13/2001	<5,000	13,000	140	110	350	1,400	---	9,200	---	---	---	---	---	---	38.78	10.34	28.44	11.0/4.5
S-2	11/19/2001	8,700	15,000	71	27	86	330	---	7,500	---	---	---	---	---	---	38.78	9.90	28.88	5.0/3.1
S-2	03/18/2002	14,000	3,700	93	<20	35	100	---	7,500	---	---	---	---	---	---	38.78	9.91	28.87	0.9/4.2
S-2	06/19/2002	<2,000	2,100	92	<10	24	50	---	4,700	---	---	---	---	---	---	38.78	9.98	28.80	---
S-2	09/11/2002	<450	2,100	54	<5.0	19	55	---	1,900	---	---	---	---	---	---	38.78	10.25	28.53	3.5
S-2	12/11/2002	1,900	570	9.4	<2.5	7.2	14	---	1,100	---	---	---	---	---	---	38.47	9.99	28.48	2.0
S-2	03/11/2003	<1,800	2,900	150	5.5	54	84	---	870	---	---	---	---	---	---	38.47	9.25	29.22	2.4
S-2	06/10/2003	840 g	2,200	83	<5.0	22	52	---	970	---	---	---	---	---	---	38.47	9.20	29.27	5.0
S-2	09/09/2003	270 g	1,200	57	<2.5	11	33	---	740	---	---	---	---	---	---	38.47	9.70	28.77	3.7
S-2	12/09/2003	1,900 g	3,100	84	<5.0	45	90	---	660	---	---	---	---	---	---	38.47	9.31	29.16	24.21
S-2	03/09/2004	990 g	1,600	140	<5.0	31	49	---	610	---	---	---	---	---	---	38.47	8.24	30.23	2.6
S-2	06/08/2004	400 g	640	40	<2.5	4.2	6.6	---	460	---	---	---	---	---	---	38.47	9.40	29.07	8.2
S-2	09/07/2004	240 e	<100	6.6	<1.0	1.3	2.3	---	140	450	<4.0	<4.0	<4.0	---	---	38.47	9.78	28.69	2.4
S-2	12/06/2004	140 g	260	26	<1.0	2.0	<2.0	---	270	---	---	---	---	---	---	38.47	9.45	29.02	8.5
S-2	03/07/2005	450 e	2,300	100	<5.0	11	<10	---	570	---	---	---	---	---	---	38.47	7.82	30.65	16.7
S-2	06/10/2005	550 g	<2,500	200	<25	<25	<50	---	630	---	---	---	---	---	---	38.47	8.37	30.10	0.70
S-2	07/14/2005	Well destroyed		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-3	05/28/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.33	8.45	28.88	---
S-3	06/03/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.33	8.36	28.97	---
S-3	01/19/1900	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.33	8.41	28.92	---

TABLE 1

**GROUNDWATER DATA  
FORMER SHELL SERVICE STATION  
4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA**

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (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)	1,2- DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-3	06/29/1993	---	29,000	1,500	1,800	950	6,200	---	---	---	---	---	---	---	---	37.33	---	---	---
S-3	09/21/1993	---	15,000	900	2,200	2,600	11,000	---	---	---	---	---	---	---	---	37.33	10.08	27.25	---
S-3	12/14/1993	---	20,000	1,100	2,400	1,800	8,500	---	---	---	---	---	---	---	---	37.33	8.80	28.53	---
S-3	03/17/1994	---	14,000	580	190	750	1,700	---	---	---	---	---	---	---	---	37.33	8.34	28.99	---
S-3	06/16/1994	---	20,000	700	690	1,400	4,100	---	---	---	---	---	---	---	---	37.33	9.12	28.21	---
S-3 (D)	06/16/1994	---	19,000	680	560	1,300	3,700	---	---	---	---	---	---	---	---	37.33	---	---	---
S-3	09/22/1994	---	24,000	630	1,100	1,400	5,700	---	---	---	---	---	---	---	---	37.33	10.27	27.06	---
S-3 (D)	09/22/1994	---	25,000	720	1,100	1,500	6,100	---	---	---	---	---	---	---	---	37.33	---	---	---
S-3	12/15/1994	---	18,000	520	800	1,100	4,200	---	---	---	---	---	---	---	---	37.33	7.81	29.52	---
S-3 (D)	12/15/1994	---	23,000	1,000	1,900	2,000	8,600	---	---	---	---	---	---	---	---	37.33	---	---	---
S-3	03/30/1995	---	8,800 a	360 a	730 a	700 a	3,700 a	---	---	---	---	---	---	---	---	37.33	7.06	30.27	---
S-3 (D)	03/30/1995	---	7,600 a	330 a	570 a	600 a	2,600 a	---	---	---	---	---	---	---	---	37.33	---	---	---
S-3	06/20/1995	---	9,600	510	170	960	1,700	---	---	---	---	---	---	---	---	37.33	8.15	29.18	---
S-3 (D)	06/20/1995	---	9,800	500	170	950	1,700	---	---	---	---	---	---	---	---	37.33	---	---	---
S-3	09/20/1995	---	21,000	400	560	1,300	4,600	---	---	---	---	---	---	---	---	37.33	9.32	28.01	---
S-3	12/06/1995	---	24,000	630	1,400	1,400	6,000	---	---	---	---	---	---	---	---	37.33	10.53	26.80	---
S-3 (D)	12/06/1995	---	22,000	630	1,200	1,400	5,500	---	---	---	---	---	---	---	---	37.33	---	---	---
S-3	03/21/1996	---	9,100	290	110	490	1,600	---	---	---	---	---	---	---	---	37.33	7.32	30.01	---
S-3 (D)	03/21/1996	---	11,000	310	250	540	2,100	---	---	---	---	---	---	---	---	37.33	---	---	---
S-3	09/06/1996	---	15,000	440	300	1,100	3,000	500	---	---	---	---	---	---	---	37.33	10.10	27.23	---
S-3 (D)	09/06/1996	---	11,000	490	170	820	1,500	700	---	---	---	---	---	---	---	37.33	---	---	---
S-3	12/19/1996	---	12,000	600	380	850	2,500	380	---	---	---	---	---	---	---	37.33	8.36	28.97	---
S-3 (D)	12/19/1996	---	12,000	590	380	830	2,500	540	---	---	---	---	---	---	---	37.33	8.36	28.97	---
S-3	03/17/1997	---	12,000	520	140	740	1,400	320	---	---	---	---	---	---	---	37.33	8.57	28.76	---
S-3 (D)	03/17/1997	---	9,600	500	100	680	1,100	<250	---	---	---	---	---	---	---	37.33	8.57	28.76	---
S-3	06/11/1997	---	9,600	510	94	740	1,100	410	---	---	---	---	---	---	---	37.33	9.26	28.07	---
S-3	09/17/1997	---	21,000	140	560	1,800	7,200	130	---	---	---	---	---	---	---	37.33	9.62	27.71	---
S-3	12/11/1997	---	24,000	530	970	1,600	6,900	950	---	---	---	---	---	---	---	37.33	7.34	29.99	---
S-3 (D)	12/11/1997	---	29,000	520	1,000	1,600	7,300	970	---	---	---	---	---	---	---	37.33	7.34	29.99	---
S-3	03/16/1998	---	29,000	840	810	1,700	6,000	<250	---	---	---	---	---	---	---	37.33	5.75	31.58	3.0/3.4
S-3	06/23/1998	---	3,800	90	220	240	1,400	<50	---	---	---	---	---	---	---	37.33	5.98	31.35	4.2/2.0
S-3	09/01/1998	---	9,600	480	120	870	1,800	490	<50	---	---	---	---	---	---	37.33	8.98	28.35	1.9/2.8
S-3 (D)	09/01/1998	---	9,200	420	110	800	1,700	110	<50	---	---	---	---	---	---	37.33	8.98	28.35	1.9/2.8
S-3	12/30/1998	---	7,660	240	103	410	834	64.9	---	---	---	---	---	---	---	37.33	9.11	28.22	1.8/1.6
S-3	03/30/1999	---	2,070	195	10.0	<5.00	48.6	354	64.6	---	---	---	---	---	---	37.33	6.95	30.38	1.3/1.5
S-3	03/31/1999	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.33	7.48	29.85	---
S-3	06/14/1999	---	1,250	37.4	17.4	110	109	118	---	---	---	---	---	---	---	37.33	8.85	28.48	---
S-3	09/30/1999	2,020 g	8,270	226	113	686	1,440	184	---	---	---	---	---	---	---	37.33	9.66	27.67	3.5/2.8
S-3	12/22/1999	2,270 g	9,530	207	132	603	1,450	616	---	---	---	---	---	---	---	37.33	9.50	27.83	0.98/0.8
S-3	03/09/2000	1,600 g	2,290 a	84.5 a	17.0 a	104 a	105 a	29.3 a	---	---	---	---	---	---	---	37.30	6.25	31.05	1.0/1.4



TABLE 1

**GROUNDWATER DATA  
FORMER SHELL SERVICE STATION  
4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA**

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (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)	1,2- DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-3	06/20/2000	2,900 g	5,570	117	41.6	395	393	354	---	---	---	---	---	---	---	37.30	9.67	27.63	1.8/2.0
S-3	09/05/2000	1,600 g	6,930	127	85.5	354	535	509	---	---	---	---	---	---	---	37.30	9.49	27.81	1.1/1.9
S-3	12/04/2000	1,460 g	8,390	217	82.4	471	952	436	---	---	---	---	---	---	---	37.30	9.23	28.07	1.1/1.5
S-3	12/12/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.30	9.23	28.07	---
S-3	03/08/2001	1,720 g	19,400	465	772	1,230	3,830	160	---	---	---	---	---	---	---	37.30	8.17	29.13	1.1 c
S-3	06/07/2001	1,400	12,000	230	110	900	1,100	120	---	---	---	---	---	---	---	37.30	8.78	28.52	0.8/0.9
S-3	09/13/2001	<2,000	32,000	400	880	2,000	7,000	---	<100	---	---	---	---	---	---	37.30	9.93	27.37	3.7/2.9
S-3	11/19/2001	<2,000	26,000	160	210	990	4,100	---	<50	---	---	---	---	---	---	37.30	9.33	27.97	2.9/1.9
S-3	03/18/2002	810	3,800	61	120	130	620	---	5.0	---	---	---	---	---	---	37.30	7.03	30.27	1.1/4.7
S-3	06/19/2002	<500	3,200	48	81	160	360	---	9.4	---	---	---	---	---	---	37.30	8.92	28.38	---
S-3	09/11/2002	<1,100	16,000	230	570	980	3,900	---	<50	---	---	---	---	---	---	37.30	9.54	27.76	3.0
S-3	12/11/2002	<1,500	16,000	130	270	770	3,000	---	<50	---	---	---	---	---	---	36.85	9.23	27.62	1.6
S-3	03/11/2003	<1,500	8,100	29	110	190	1,700	---	<20	---	---	---	---	---	---	36.85	7.32	29.53	3.9
S-3	06/10/2003	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	---	36.85	---	---	---
S-3	09/09/2003	640 g	5,900	44	140	130	1,500	---	4.4	---	---	---	---	---	---	36.85	8.99	27.86	2.2
S-3	12/09/2003	1,500 g	27,000	130	460	550	4,900	---	<20	---	---	---	---	---	---	36.85	7.67	29.18	1.6
S-3	03/09/2004	1,700 g	11,000	24	100	230	3,200	---	<5.0	---	---	---	---	---	---	36.85	6.35	30.50	2.1
S-3	06/08/2004	1,100 g	1,700	11	34	29	420	---	<2.5	---	---	---	---	---	---	36.85	8.25	28.60	0.1
S-3	09/07/2004	310 e	850	13	0.99	23	17	---	7.0	<5.0	<2.0	<2.0	<2.0	---	---	36.85	9.05	27.80	0.1
S-3	12/06/2004	Unable to sample		---	---	---	---	---	---	---	---	---	---	---	---	36.85	7.70	29.15	---
S-3	12/15/2004	270 e	620	1.9	7.8	10	180	---	<0.50	---	---	---	---	---	---	36.85	5.83	31.02	2.4
S-3	03/07/2005	400 e	4,500	<0.50	7.7	30	350	---	<0.50	---	---	---	---	---	---	36.85	4.58	32.27	4.4
S-3	06/10/2005	130 g	850	<0.50	1.3	7.4	53	---	<0.50	---	---	---	---	---	---	36.85	5.40	31.45	0.17
S-3	07/14/2005	Well destroyed		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-4	03/29/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	39.06	8.37	30.69	---
S-4	03/31/2000	5,780 g	20,900	4,570	272	595	997	4,490	4,450 a	---	---	---	---	---	---	39.06	8.92	30.14	1.8/1.2
S-4	06/20/2000	244 g	19,500	4,590	309	723	1,290	3,740	---	---	---	---	---	---	---	39.06	8.77	30.29	2.7/2.9
S-4	09/05/2000	1,670 g	5,760	841	54.2	162	115	1,040	---	---	---	---	---	---	---	39.06	10.57	28.49	1.3/0.3
S-4	12/04/2000	1,050 g	3,990	949	<10.0	118	48.3	1,120	---	---	---	---	---	---	---	39.06	10.67	28.39	1.1/1.0
S-4	12/12/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	39.06	10.64	28.42	---
S-4	03/08/2001	5,840 g	20,100	5,210	105	381	281	2,520	---	---	---	---	---	---	---	39.06	8.44	30.62	1.0/0.9
S-4	06/07/2001	3,500	11,000	2,500	86	370	170	2,000	---	---	---	---	---	---	---	39.06	10.57	28.49	0.7/0.6
S-4	09/13/2001	<800	4,200	790	14	110	48	---	690	---	---	---	---	---	---	39.06	11.27	27.79	3.8/3.9
S-4	11/19/2001	<600	2,300	230	4.1	21	22	---	590	---	---	---	---	---	---	39.06	10.83	28.23	3.6/1.6
S-4	03/18/2002	Unable to sample		---	---	---	---	---	---	---	---	---	---	---	---	39.06	8.75	30.31	---
S-4	03/29/2002	---	14,000	1,700	30	280	250	---	960	---	---	---	---	---	---	39.06	8.85 d	30.21	3.0/3.1
S-4	06/19/2002	<1,500	4,700	620	9.5	84	37	---	490	---	---	---	---	---	---	---	10.37 d	---	---
S-4	09/11/2002	280	2,700	280	4.6	23	13	---	410	---	---	---	---	---	---	---	11.14	---	0.6
S-4	12/11/2002	<900	3,300	320	5.7	24	15	---	420	---	---	---	---	---	---	38.69	10.78	27.91	2.2

TABLE 1

**GROUNDWATER DATA  
FORMER SHELL SERVICE STATION  
4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA**

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (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)	1,2- DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-4	03/11/2003	<5,600	12,000	1,900	63	360	280	---	930	---	---	---	---	---	---	38.69	9.31	29.38	1.5
S-4	06/10/2003	3,100 g	13,000	2,400	86	650	380	---	1,100	---	---	---	---	---	---	38.69	9.77	28.92	0.8
S-4	09/09/2003	1,700 g	3,700	510	12	43	43	---	650	---	---	---	---	---	---	38.69	10.78	27.91	0.9
S-4	12/09/2003	390 g	3,900	150	4.2	7.5	13	---	510	---	---	---	---	---	---	38.69	10.20	28.49	0.1
S-4	03/09/2004	3,100 g	13,000	2,500	110	810	1,100	---	1,100	---	---	---	---	---	---	38.69	7.67	31.02	0.7
S-4	06/08/2004	1,400 g	6,100	870	30	120	150	---	420	---	---	---	---	---	---	38.69	10.27	28.42	0.3
S-4	09/07/2004	890 e	3,100	290	6.4	18	14	---	250	140	<10	<10	<10	---	---	38.69	10.91	27.78	0.1
S-4	12/06/2004	670 e	4,900	520	9.9	38	24	---	290	---	---	---	---	---	---	38.69	10.03	28.66	0.2
S-4	03/07/2005	2,900 e	28,000	2,300	130	690	770	---	770	---	---	---	---	---	---	38.69	6.20	32.49	0.2
S-4	06/10/2005	2,700 e	13,000	1,900	81	380	460	---	890	---	---	---	---	---	---	38.69	8.90	29.79	0.15
S-4	07/14/2005	Well destroyed		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-5	05/31/2002	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.54	---	---
S-5	06/19/2002	<2,000	16,000	2,600	320	180	1,600	---	5,300	---	---	---	---	---	---	---	9.87	---	---
S-5	09/11/2002	<1,200	8,800	1,500	64	89	120	---	5,600	---	---	---	---	---	---	---	10.28	---	0.9
S-5	12/11/2002	<1,000	4,400	280	61	130	130	---	4,000	---	---	---	---	---	---	---	9.87	---	2.9
S-5	03/11/2003	<900	2,300	28	5.6	59	15	---	2,400	---	---	---	---	---	---	38.05	8.26	29.79	1.6
S-5	06/10/2003	620 g	2,400	11	7.2	56	38	---	1,100	---	---	---	---	---	---	38.05	8.51	29.54	0.1
S-5	09/09/2003	660 g	3,700	23	14	44	150	---	440	---	---	---	---	---	---	38.05	9.44	28.61	0.1
S-5	12/09/2003	600 g	12,000	200	80	41	320	---	580	---	---	---	---	---	---	38.05	9.50	28.55	0.4
S-5	03/09/2004	550 g	2,300	130	3.5	6.9	13	---	250	---	---	---	---	---	---	38.05	7.04	31.01	0.2
S-5	06/08/2004	490 g	2,900	11	<2.5	8.9	18	---	120	---	---	---	---	---	---	38.05	8.87	29.18	0.2
S-5	09/07/2004	650 e	3,600	17	11	12	30	---	120	3,700	<10	<10	<10	---	---	38.05	9.45	28.60	0.1
S-5	12/06/2004	460 e	4,700	99	28	14	69	---	180	---	---	---	---	---	---	38.05	8.75	29.30	0.1
S-5	03/07/2005	360 e	4,700	440	<2.5	<2.5	<5.0	---	200	---	---	---	---	---	---	38.05	7.28	30.77	0.1
S-5	06/10/2005	240 e	1,200	1.3	<0.50	<0.50	1.2	---	80	---	---	---	---	---	---	38.05	7.26	30.79	0.25
S-5	07/14/2005	Well destroyed		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-6	02/22/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.86	8.18	29.68	---
S-6	03/02/2007	1,700	5,100 a	630 a	23	200	110	---	140	280	---	---	---	13	<0.50	37.86	7.73	30.13	---
S-6	05/23/2007	2,600	5,600 f	510	16	11	144	---	72	66	---	---	---	<2.5	<5.0	37.86	8.13	29.73	---
S-6	08/28/2007	6,100 g	13,000 f	650	32	480	242	---	78	320	6.1	<10	<10	<2.5	<5.0	37.86	8.44	29.42	---
S-6	11/13/2007	6,400 g	19,000 f	760	47	500	602	---	68	340	---	---	---	<5.0	<10	37.86	8.78	29.08	---
S-6	02/08/2008	2,200 g	6,800 f	380	14	130	87.0	---	75	200	---	---	---	<2.5	<5.0	37.86	7.06	30.80	---
S-6	05/20/2008	2,900 g	12,000 f	590	21	270	60	---	54	240	---	---	---	<2.5	<5.0	37.86	8.60	29.26	---
S-6	08/12/2008	7,100 g	22,000	890	75	450	1,170	---	71	200	<20	<20	<20	<5.0	<10	37.86	9.21	28.65	---
S-6	12/02/2008	4,600 g	26,000	1,500	170	670	1,500	---	87	260	---	---	---	<5.0	<10	37.86	8.72	29.14	---
S-6	02/05/2009	5,200 g	29,000	1,200	210	910	3,400	---	78	230	---	---	---	<5.0	<10	37.86	9.19	28.67	---
S-6	05/19/2009	1,900 g	8,600	660	22	120	110	---	94	460	---	---	---	<5.0	<10	37.86	8.26	29.60	---
S-6	09/29/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.86	6.70	31.16	---

TABLE 1

**GROUNDWATER DATA  
FORMER SHELL SERVICE STATION  
4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA**

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (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)	1,2- DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-6	12/23/2009	1,800 g	4,800	550	12	38	16	---	170	290	<20	<20	<20	<5.0	<10	37.86	6.01	31.85	---
S-6	03/16/2010	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.86	5.65	32.21	---
S-6	06/21/2010	2,700 g	8,300	360	11	67	56	---	130	250	---	---	---	<2.5	<5.0	37.86	8.89	28.97	---
S-6	12/28/2010	2,200 g	6,100	290	11	60	41	---	49	210	5.5	<4.0	<4.0	<1.0	<2.0	37.86	7.63	30.23	---
S-6	12/23/2011	2,400	12,000	760	24	76	49	---	61	320	<10	<10	<10	<5.0	<5.0	37.86	8.34	29.52	---
S-6	12/28/2012	1,400	6,500	350	12	14	<10	---	68	200	<5.0	<5.0	<5.0	---	---	37.86	6.50	31.36	---
S-6	09/19/2013	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.86	8.53	29.33	---
S-6	12/23/2013	2,600	16,000	970	43	340	260	---	45	200	7.0	<5.0	<5.0	---	---	37.86	8.77	29.09	---
<b>S-6</b>	<b>03/05/2014</b>	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>37.86</b>	<b>8.57</b>	<b>29.29</b>	---
S-7	02/22/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.58	7.39	30.19	---
S-7	03/02/2007	2,500	100,000 a	32,000 a	9,700 a	2,900 a	14,000 a	---	310 a	480	---	---	---	150	<0.50	37.58	7.42	30.16	---
S-7	05/23/2007	3,700	82,000 f,g	24,000	8,100	2,800	13,000	---	190	<200	---	---	---	<10	<20	37.58	8.38	29.20	---
S-7	08/28/2007	4,500 g	96,000 f	23,000	7,000	2,900	12,200	---	190 h	<2,000	<400	<400	<400	<100	<200	37.58	9.32	28.26	---
S-7	11/13/2007	25,000 g	100,000 f	22,000	6,500	3,000	12,400	---	<200	<2,000	---	---	---	<100	<200	37.58	9.60	27.98	---
S-7	02/08/2008	4,000 g	74,000 f	29,000	9,300	3,100	13,700	---	500	<2,000	---	---	---	<100	<200	37.58	6.57	31.01	---
S-7	05/20/2008	1,600 g	69,000 f	20,000	5,500	2,500	9,800	---	260	<2,000	---	---	---	<100	<200	37.58	9.00	28.58	---
S-7	08/12/2008	4,900 g	120,000	25,000	8,400	2,800	11,700	---	<200	<2,000	<400	<400	<400	<100	<200	37.58	9.81	27.77	---
S-7	12/02/2008	4,300 g	120,000	24,000	8,400	3,600	15,000	---	320	<2,000	---	---	---	<100	<200	37.58	9.91	27.67	---
S-7	02/05/2009	3,800 g	99,000	25,000	7,600	2,500	12,000	---	370	<2,000	---	---	---	<100	<200	37.58	9.30	28.28	---
S-7	05/19/2009	3,300 g	64,000	16,000	4,400	2,100	7,100	---	250	<2,000	---	---	---	<100	<200	37.58	8.30	29.28	---
S-7	09/29/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.57	6.13	31.44	---
S-7	12/23/2009	3,900 g	98,000	25,000	7,100	2,100	9,000	---	400	<2000	<400	<400	<400	<100	<200	37.57	5.32	32.25	---
S-7	03/16/2010	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.57	4.82	32.75	---
S-7	06/21/2010	2,400 g	42,000	11,000	2,300	1,300	4,600	---	180	<1,000	---	---	---	<50	<100	37.57	8.19	29.38	---
S-7	12/28/2010	3,500 g	48,000	13,000	3,700	1,800	7,200	---	160	<1,000	<200	<200	<200	<50	<100	37.57	7.05	30.52	---
S-7	12/23/2011	3,200	40,000	11,000	3,300	1,400	6,600	---	<200	<2,000	<200	<200	<200	<100	<100	37.57	8.02	29.55	---
S-7	12/28/2012	2,200	26,000	6,200	2,000	1,000	5,000	---	<100	<2,000	<100	<100	<100	---	---	37.57	5.88	31.69	---
S-7	09/19/2013	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.57	9.08	28.49	---
S-7	12/23/2013	1,600	28,000	9,900	1,200	750	3,300	---	<100	<2,000	<100	<100	<100	---	---	37.57	9.63	27.94	---
<b>S-7</b>	<b>03/05/2014</b>	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>37.57</b>	<b>8.73</b>	<b>28.84</b>	---
S-8	02/22/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.05	6.65	30.40	---
S-8	03/02/2007	2,300	72,000 a	12,000 a	5,600 a	2,900 a	15,000 a	---	120	230	---	---	---	150	<2.5	37.05	6.60	30.45	---
S-8	05/23/2007	5,800	69,000 f,g	12,000	6,700	3,100	19,500	---	160	280	---	---	---	<10	<20	37.05	7.91	29.14	---
S-8	08/28/2007	6,700 g	69,000 f	11,000	4,800	3,100	16,800	---	170	<1,000	<200	<200	<200	<50	<100	37.05	8.79	28.26	---
S-8	11/13/2007	21,000 g	84,000 f	10,000	5,000	3,300	18,300	---	290	<1,000	---	---	---	<50	<100	37.05	8.93	28.12	---
S-8	02/08/2008	4,500 g	54,000 f	11,000	5,500	3,500	18,200	---	200	<1,000	---	---	---	<50	<100	37.05	6.26	30.79	---
S-8	05/20/2008	2,200 g	67,000 f	10,000	5,400	3,900	19,600	---	160	<1,000	---	---	---	<50	<100	37.05	7.40	29.65	---
S-8	08/12/2008	5,200 g	77,000	9,300	3,200	2,500	14,300	---	210	<1,000	<200	<200	<200	<50	<100	37.05	9.10	27.95	---

TABLE 1

**GROUNDWATER DATA  
FORMER SHELL SERVICE STATION  
4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA**

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (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)	1,2- DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-8	12/02/2008	3,600 g	70,000	9,500	2,700	2,500	12,300	---	290	1,200	---	---	---	<50	<100	37.05	9.39	27.66	---
S-8	02/05/2009	3,500 g	74,000	10,000	3,500	2,600	15,000	---	240	<1,000	---	---	---	<50	<100	37.05	8.75	28.30	---
S-8	05/19/2009	340 g	69,000	8,200	3,700	2,900	14,000	---	<100	<1,000	---	---	---	<50	<100	37.05	7.56	29.49	---
S-8	09/29/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.05	5.82	31.23	---
S-8	12/23/2009	4,400 g	58,000	7,800	2,000	2,100	11,000	---	170	<1000	<200	<200	<200	<50	<100	37.05	7.02	30.03	---
S-8	03/16/2010	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.05	4.26	32.79	---
S-8	06/21/2010	3,900 g	74,000	11,000	3,900	3,000	15,000	---	160	<1,000	---	---	---	<50	<100	37.05	7.77	29.28	---
S-8	12/28/2010	4,900 g	57,000	8,700	2,700	2,900	14,000	---	200	<1,000	<200	<200	<200	<50	<100	37.05	6.93	30.12	---
S-8	12/23/2011	4,300	55,000	9,500	3,000	3,700	15,000	---	<200	<2,000	<200	<200	<200	<100	<100	37.05	8.77	28.28	---
S-8	12/28/2012	3,500	55,000	8,300	2,600	3,600	15,000	---	180	<1,000	<50	<50	<50	---	---	37.05	5.92	31.13	---
S-8	09/19/2013	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.05	9.08	27.97	---
S-8	12/23/2013	2,800	55,000	11,000	2,400	3,400	12,000	---	210	<1,000	<50	<50	<50	---	---	37.05	9.49	27.56	---
<b>S-8</b>	<b>03/05/2014</b>	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>37.05</b>	<b>8.65</b>	<b>28.40</b>	---
S-9	02/22/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.52	7.59	29.93	---
S-9	03/02/2007	1,400	12,000	150	200	1,200	2,500	---	5.8	<50	---	---	---	<5.0	<5.0	37.52	7.30	30.22	---
S-9	05/23/2007	2,300	8,200 f	13	38	2.5 h	1,453	---	5.2 h	<100	---	---	---	<5.0	<10	37.52	8.43	29.09	---
S-9	08/28/2007	2,800 g	9,500 f	21	49	540	789	---	<10	<100	<20	<20	<20	<5.0	<10	37.52	9.59	27.93	---
S-9	11/13/2007	2,100 g	12,000 f	19	35	450	499	---	<10	<100	---	---	---	<5.0	<10	37.52	9.91	27.61	---
S-9	02/08/2008	1,900 g	10,000 f	18	67	1,100	1,451	---	<10	<100	---	---	---	<5.0	<10	37.52	6.40	31.12	---
S-9	05/20/2008	1,500 g	11,000 f	150	770	13,000	17,460	---	<100	<1,000	---	---	---	<50	<100	37.52	8.79	28.73	---
S-9	08/12/2008	2,000 g	9,400	16	59	700	834	---	<10	<100	<20	<20	<20	<5.0	<10	37.52	10.00	27.52	---
S-9	12/02/2008	1,300 g	14,000	10	62	980	1,139	---	<10	<100	---	---	---	<5.0	<10	37.52	10.22	27.30	---
S-9	02/05/2009	1,400 g	6,300	11	33	480	600	---	<10	<100	---	---	---	<5.0	<10	37.52	9.49	28.03	---
S-9	05/19/2009	1,500 g	12,000	11	64	940	880	---	<5.0	<50	---	---	---	<2.5	<5.0	37.52	8.20	29.32	---
S-9	09/29/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.52	5.51	32.01	---
S-9	12/23/2009	200 g	890	1.4	<1.0	16	14	---	<1.0	<10	<2.0	<2.0	<2.0	<0.50	<1.0	37.52	4.61	32.91	---
S-9	03/16/2010	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.52	5.95	31.57	---
S-9	06/21/2010	520 g	1,300	2.4	4.2	180	26	---	<1.0	<10	---	---	---	<0.50	<1.0	37.52	8.29	29.23	---
S-9	12/28/2010	1,100 g	7,200	3.8	12	650	510	---	<5.0	<50	<10	<10	<10	<2.5	<5.0	37.52	7.04	30.48	---
S-9	12/23/2011	1,300	6,500	6.7	16	240	200	---	<4.0	<40	<4.0	<4.0	<4.0	<2.0	<2.0	37.52	8.48	29.04	---
S-9	12/28/2012	490	2,600	3.4	5.6	91	87	---	<1.3	<25	<1.3	<1.3	<1.3	---	---	37.52	5.90	31.62	---
S-9	09/19/2013	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	---	37.52	---	---	---
S-9	12/23/2013	660	4,600	4.1	15	15	130	---	<0.50	<10	<0.50	<0.50	<0.50	---	---	37.52	9.88	27.64	---
<b>S-9</b>	<b>03/05/2014</b>	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>37.52</b>	<b>9.11</b>	<b>28.41</b>	---
S-10	09/22/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.43	4.98	32.45	---
S-10	09/29/2009	<50	320	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	---	---	---	<0.50	<1.0	37.43	5.07	32.36	---
S-10	12/23/2009	<50	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	<2.0	<2.0	<2.0	<0.50	<1.0	37.43	4.48	32.95	---
S-10	03/16/2010	<50	140	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	---	---	---	<0.50	<1.0	37.43	4.47	32.96	---

TABLE 1

**GROUNDWATER DATA  
FORMER SHELL SERVICE STATION  
4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA**

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (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)	1,2- DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-10	06/21/2010	<50	130	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	---	---	---	<0.50	<1.0	37.43	8.28	29.15	---
S-10	12/28/2010	<50	140	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	<2.0	<2.0	<2.0	<0.50	<1.0	37.43	7.09	30.34	---
S-10	12/23/2011	<47	130	<0.50	<0.50	<0.50	<1.0	---	<1.0	<10	<1.0	<1.0	<1.0	<0.50	<0.50	37.43	8.20	29.23	---
S-10	12/28/2012	<48	180	<0.50	<0.50	<0.50	<1.0	---	<0.50	<10	<0.50	<0.50	<0.50	---	---	37.43	6.10	31.33	---
S-10	09/19/2013	Well not monitored		---	---	---	---	---	---	---	---	---	---	---	---	37.43	---	---	---
S-10	12/23/2013	<48	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	<10	<0.50	<0.50	<0.50	---	---	37.43	9.15	28.28	---
S-11	09/22/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	36.44	4.50	31.94	---
S-11	09/29/2009	<50	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	---	---	---	<0.50	<1.0	36.44	3.88	32.56	---
S-11	12/23/2009	<50	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	<2.0	<2.0	<2.0	<0.50	<1.0	36.44	3.71	32.73	---
S-11	03/16/2010	<50	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	---	---	---	<0.50	<1.0	36.44	3.30	33.14	---
S-11	06/21/2010	<50	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	---	---	---	<0.50	<1.0	36.44	7.49	28.95	---
S-11	12/28/2010	<50	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	<2.0	<2.0	<2.0	<0.50	<1.0	36.44	5.96	30.48	---
S-11	12/23/2011	<47	<50	<0.50	<0.50	<0.50	<1.0	---	<1.0	<10	<1.0	<1.0	<1.0	<0.50	<0.50	36.44	7.28	29.16	---
S-11	12/28/2012	<48	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	<10	<0.50	<0.50	<0.50	---	---	36.44	5.00	31.44	---
S-11	09/19/2013	Well not monitored		---	---	---	---	---	---	---	---	---	---	---	---	36.44	---	---	---
S-11	12/23/2013	<48	<50	<0.50	<0.50	<0.50	<1.0	---	0.55	<10	<0.50	<0.50	<0.50	---	---	36.44	9.82	26.62	---
S-12	09/22/2009	Unable to access		---	---	---	---	---	---	---	---	---	---	---	---	36.00	---	---	---
S-12	09/25/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	36.00	5.10	30.90	---
S-12	09/29/2009	91 g	280	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	---	---	---	<0.50	<1.0	36.00	3.62	32.38	---
S-12	12/23/2009	120 g	340	<0.50	<1.0	<1.0	<1.0	---	<1.0	15	<2.0	<2.0	<2.0	<0.50	<1.0	36.00	2.91	33.09	---
S-12	03/16/2010	<50	78	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	---	---	---	<0.50	<1.0	36.00	2.78	33.22	---
S-12	06/21/2010	210 g	380	7.6	<1.0	<1.0	<1.0	---	4.8	50	---	---	---	<0.50	<1.0	36.00	8.48	27.52	---
S-12	12/28/2010	81	410	<0.50	<1.0	<1.0	<1.0	---	<1.0	30	2.4	<2.0	<2.0	<0.50	<1.0	36.00	5.60	30.40	---
S-12	12/23/2011	140	490	<0.50	<0.50	<0.50	<1.0	---	<1.0	14	1.4	<1.0	<1.0	<0.50	<0.50	36.00	7.01	28.99	---
S-12	12/28/2012	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	---	36.00	---	---	---
S-12	09/19/2013	Well not monitored		---	---	---	---	---	---	---	---	---	---	---	---	36.00	---	---	---
S-12	12/23/2013	80	180	<0.50	<0.50	<0.50	<1.0	---	1.7	51	3.7	<0.50	<0.50	---	---	36.00	8.35	27.65	---
S-13	09/06/2013	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.19	9.34	27.85	---
S-13	09/19/2013	---	25,000	210	420	520	7,600	---	<20	<400	<20	<20	<20	---	---	37.19	9.33	27.86	---
S-13	12/23/2013	---	32,000	280	750	1,900	9,000	---	<10	<200	<10	<10	<10	---	---	37.19	9.82	27.37	---
<b>S-13</b>	<b>03/05/2014</b>	---	<b>24,000</b>	<b>220</b>	<b>660</b>	<b>1,300</b>	<b>6,700</b>	---	<b>&lt;20</b>	<b>&lt;400</b>	<b>&lt;20</b>	<b>&lt;20</b>	<b>&lt;20</b>	---	---	<b>37.19</b>	<b>8.85</b>	<b>28.34</b>	---
S-14	09/06/2013	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.14	9.28	27.86	---
S-14	09/19/2013	---	7,600	360	48	140	490	---	8.8	<50	<2.5	<2.5	<2.5	---	---	37.14	9.41	27.73	---
S-14	12/23/2013	---	10,000	620	77	610	670	---	<5.0	<100	<5.0	<5.0	<5.0	---	---	37.14	9.71	27.43	---
<b>S-14</b>	<b>03/05/2014</b>	---	<b>8,000</b>	<b>470</b>	<b>79</b>	<b>450</b>	<b>630</b>	---	<b>&lt;2.5</b>	<b>&lt;50</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	---	---	<b>37.14</b>	<b>8.63</b>	<b>28.51</b>	---

**GROUNDWATER DATA  
FORMER SHELL SERVICE STATION  
4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA**

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (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)	1,2- DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
BW-A	09/30/1999	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10.55	---	2.3
BW-A	12/22/1999	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.52	---	2.2
BW-A	03/09/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3.99	---	1.5
BW-A	06/20/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.69	---	2.4
BW-A	09/05/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.43	---	1.0
BW-A	12/04/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.96	---	1.3
BW-A	12/12/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.71	---	---
BW-A	03/08/2001	1,370 g	<2,500	46.6	<25.0	<25.0	<25.0	10,600	11,700	---	---	---	---	---	---	---	6.38	---	0.9/1.4
BW-A	06/07/2001	960	1,100	<10	<10	<10	17	7,200	---	---	---	---	---	---	---	---	9.82	---	3.6/0.8
BW-A	09/13/2001	460	<2,000	<20	<20	<20	<50	---	13,000	---	---	---	---	---	---	---	10.49	---	3.3/1.7
BW-A	11/19/2001	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.89	---	---

Notes:

- TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method 8015; after February 22, 2007, analyzed with silica gel cleanup.
- TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to September 13, 2001, analyzed by EPA Method 8015 unless otherwise noted.
- BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B; prior to September 13, 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
- 1,2-DCA = 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
- 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
- x/x = Pre-purge/post-purge DO reading

- a = Sample analyzed outside the EPA recommended holding time.
- b = Post-purge DO reading.
- c = Pre-purge DO reading.
- d = Estimated depth to water.
- e = Hydrocarbon reported is in the early diesel range and does not match the laboratory's standard.
- f = Analyzed by EPA Method 8015B (M).

**GROUNDWATER DATA  
FORMER SHELL SERVICE STATION  
4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA**

<i>Well ID</i>	<i>Date</i>	<i>TPHd</i> ( <i>µg/L</i> )	<i>TPHg</i> ( <i>µg/L</i> )	<i>B</i> ( <i>µg/L</i> )	<i>T</i> ( <i>µg/L</i> )	<i>E</i> ( <i>µg/L</i> )	<i>X</i> ( <i>µg/L</i> )	<i>MTBE</i> <i>8020</i> ( <i>µg/L</i> )	<i>MTBE</i> <i>8260</i> ( <i>µg/L</i> )	<i>TBA</i> ( <i>µg/L</i> )	<i>DIPE</i> ( <i>µg/L</i> )	<i>ETBE</i> ( <i>µg/L</i> )	<i>TAME</i> ( <i>µg/L</i> )	<i>1,2-</i> <i>DCA</i> ( <i>µg/L</i> )	<i>EDB</i> ( <i>µg/L</i> )	<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> )
----------------	-------------	--------------------------------	--------------------------------	-----------------------------	-----------------------------	-----------------------------	-----------------------------	-----------------------------------------------	-----------------------------------------------	-------------------------------	--------------------------------	--------------------------------	--------------------------------	----------------------------------------------	-------------------------------	---------------------------------	------------------------------------------------------	----------------------------------------------------	------------------------------------------------

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 based upon the specified standard.

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

Prior to December 12, 2002, depth to water referenced to top of well box elevation.  
 Wells S-1 through S-4 surveyed February 3, 2000 by Virgil Chavez Land Surveying  
 Wells S-1 through S-4 surveyed March 5, 2002 by Virgil Chavez Land Surveying  
 Well S-5 surveyed May 29, 2003 by Virgil Chavez Land Surveying  
 Wells S-6 through S-9 surveyed February 21, 2007 by Virgil Chavez Land Surveying  
 Wells S-6 through S-12 surveyed October 26, 2009 by Virgil Chavez Land Surveying  
 Wells S-13 and S-14 surveyed on September 14, 2013 by Virgil Chavez Land Surveying

APPENDIX A

BLAINE TECH SERVICES, INC. -  
FIELD NOTES



## WELL GAUGING DATA

Project # 140305-DC1      Date 3/5/14      Client SHELL

Site 4411 FOOTHILL BLVD, 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-6	0702	4					8.57	19.29	↓	
S-7	0711	4				8.73	19.35			
S-8	0714	4				8.65	19.56			
S-9	0658	4				9.11	19.44			
S-13	0708	4				8.85	19.22			
S-14	0705	4				8.63	19.20			

## SHELL WELL MONITORING DATA SHEET

BTS #: 140305-DX1	Site: 98995746
Sampler: DC	Date: 3/5/14
Well I.D.: <del>MW 13</del> <sup>(DC)</sup> S-13	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth (TD): 19.22	Depth to Water (DTW): 8.85
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]: 10.92	

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: \_\_\_\_\_

$6.7 \text{ (Gals.)} \times 3 = 20.1 \text{ Gals.}$ 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
0805	62.7	7.00	1000	5	7.0	ODOR
0808	63.1	6.98	1004	10	14.0	↓
	WELL	DEWATERED		<u>(C)</u> 15.0	GAL	
1015	64.1	7.26	984	8	GRAB	ODOR

Did well dewater? (Yes) No      Gallons actually evacuated: 15.0

Sampling Date: 3/5/14      Sampling Time: 1017      Depth to Water: 16.21 (>2 HRS)

Sample I.D.: ~~MW 13~~ <sup>(DC)</sup> S-13      Laboratory: (Test America) Other \_\_\_\_\_

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

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 #: 140305-DC1		Site: 98995746	
Sampler: DC		Date: 3/5/14	
Well I.D.: <del>MJ-14</del> S-14		Well Diameter: 2 3 <input checked="" type="checkbox"/> 4 6 8 ___	
Total Well Depth (TD): 19.20		Depth to Water (DTW): 8.63	
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]: <u>9.9</u> <u>10.74</u>			

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

$6.9 \text{ (Gals.)} \times 3 = 20.7 \text{ Gals.}$ l Case Volume      Specified Volumes      Calculated Volume			<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>		Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier																	
1"	0.04	4"	0.65																	
2"	0.16	6"	1.47																	
3"	0.37	Other	radius <sup>2</sup> * 0.163																	

Time	Temp (°F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	Gals. Removed	Observations
0747	63.2	7.08	964	9	7.0	ODOR
0749	63.7	6.99	929	5	14.0	↓
	WELL	DEWATERED		16.0 GAL	<u>21.0</u> @	
0953	64.0	7.19	889	11	GRAB	

Did well dewater?  Yes No      Gallons actually evacuated: 16.0

Sampling Date: 3/5/14      Sampling Time: 0955      Depth to Water: 14.97 (> 2 HRS)

Sample I.D.: ~~MJ-14~~ S-14      Laboratory: Test America Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: SEE C0C

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

INCIDENT # 98995746

ADDRESS 4411 FOOTMILL BLVD

DATE: 3/5/14

CITY & STATE OAKLAND, CA

Well ID	Observations Upon Arrival													Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed	Photos of Well Condition		Repair Date and PM Initials					
	Manway Cover, Type, Condition & Size					Well Labeled / Painted Properly*		Well Cap (Gripper) Condition		Well Lock Condition			Well Pad / Surface Condition									
S-6	Standpipe	Flush	G	P	Size (inch) 12	Y	N	G	R	G	R	NL	G	P		Y	N					
S-7	Standpipe	Flush	G	P	Size (inch) 12	Y	N	G	R	G	R	NL	G	P		Y	N					
S-8	Standpipe	Flush	G	P	Size (inch) 12	Y	N	G	R	G	R	NL	G	P	2 1/2 TASS STRAPPED	Y	N					
S-9	Standpipe	Flush	G	P	Size (inch) 12	Y	N	G	R	G	R	NL	G	P		Y	N					
S-13	Standpipe	Flush	G	P	Size (inch) 12	Y	N	G	R	G	R	NL	G	P		Y	N					
S-14	Standpipe	Flush	G	P	Size (inch) 12	Y	N	G	R	G	R	NL	G	P		Y	N					
	Standpipe	Flush	G	P	Size (inch)	Y	N	G	R	G	R	NL	G	P		Y	N					
	Standpipe	Flush	G	P	Size (inch)	Y	N	G	R	G	R	NL	G	P		Y	N					
	Standpipe	Flush	G	P	Size (inch)	Y	N	G	R	G	R	NL	G	P		Y	N					
	Standpipe	Flush	G	P	Size (inch)	Y	N	G	R	G	R	NL	G	P		Y	N					
TOTAL # CAPS REPLACED =						0		0			= TOTAL # OF LOCKS REPLACED											
Condition of Soil Boring Patches or Abandoned Monitoring Wells:		G	P	N/A		If POOR, Borings/Well IDs or Location Description:													Y	N		
Remediation Compound Type (Check boxes that apply)		Condition of Enclosure			Condition of Area Inside Enclosure			Compound Security			Emergency Contact Info Visible			Cleaning / Repairs Recommended and Conducted				Photos of Condition		Repair Date and PM Initials		
NA		G			G			G			Y							Y				
Building		G			G			G			Y							Y				
Building w/ Fence Comp.		G			G			G			Y							Y				
Fenced Compound		G			G			G			Y							Y				
Trailer		G			G			G			Y							Y				
Number of Drums On-site		Does the Label Reveal the Source of the Contents			Labeled Correctly and Writing Legible			Drum Condition			Confirm Drums Related to Environmental		Drums Located to Min Business Interference			Detailed Explanation of Any Issues Resolved				Photos of Drum Condition		Date Drums Removed from Site and PM Initials
0		Y			Y			G			Y		Y							Y		

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 labeled in accordance with applicable regulations.

Version 2.4, March 2008

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

*DOUG WHITCHARD* *BTS*

Print or type Name of Field Personnel & Consultant Company

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: 440-72691-1

Client Project/Site: 4411 Foothill Blvd., Oakland

For:


Conestoga-Rovers & Associates, Inc.

5900 Hollis Street

Suite A

Emeryville, California 94608

Attn: Peter Schaefer



Authorized for release by:

3/24/2014 4:39:39 PM

Heather Clark, Project Manager I

(949)261-1022

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

### LINKS

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results through

TotalAccess

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[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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# Sample Summary

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-72691-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-72691-1	S-13	Ground Water	03/05/14 10:17	03/08/14 10:15
440-72691-2	S-14	Ground Water	03/05/14 09:55	03/08/14 10:15

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## Case Narrative

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-72691-1

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**Job ID: 440-72691-1**

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**Laboratory: TestAmerica Irvine**

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### Narrative

**Job Narrative**  
**440-72691-1**

### Comments

No additional comments.

### Receipt

The samples were received on 3/8/2014 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.6° 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.

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# Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-72691-1

**Client Sample ID: S-13**

**Lab Sample ID: 440-72691-1**

**Date Collected: 03/05/14 10:17**

**Matrix: Ground Water**

**Date Received: 03/08/14 10:15**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Volatile Fuel Hydrocarbons (C4-C12)</b>	<b>2400</b>		2000		ug/L			03/18/14 16:43	40
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane (Surr)	112		76 - 132					03/18/14 16:43	40
4-Bromofluorobenzene (Surr)	114		80 - 120					03/18/14 16:43	40
Toluene-d8 (Surr)	117		80 - 128					03/18/14 16:43	40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>220</b>		20		ug/L			03/18/14 16:43	40
<b>Toluene</b>	<b>660</b>		20		ug/L			03/18/14 16:43	40
<b>Ethylbenzene</b>	<b>1300</b>		20		ug/L			03/18/14 16:43	40
<b>Xylenes, Total</b>	<b>6700</b>		40		ug/L			03/18/14 16:43	40
Methyl-t-Butyl Ether (MTBE)	ND		20		ug/L			03/18/14 16:43	40
tert-Butyl alcohol (TBA)	ND		400		ug/L			03/18/14 16:43	40
Isopropyl Ether (DIPE)	ND		20		ug/L			03/18/14 16:43	40
Ethyl-t-butyl ether (ETBE)	ND		20		ug/L			03/18/14 16:43	40
Tert-amyl-methyl ether (TAME)	ND		20		ug/L			03/18/14 16:43	40
<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)	114		80 - 120					03/18/14 16:43	40
Dibromofluoromethane (Surr)	112		76 - 132					03/18/14 16:43	40
Toluene-d8 (Surr)	117		80 - 128					03/18/14 16:43	40

**Client Sample ID: S-14**

**Lab Sample ID: 440-72691-2**

**Date Collected: 03/05/14 09:55**

**Matrix: Ground Water**

**Date Received: 03/08/14 10:15**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Volatile Fuel Hydrocarbons (C4-C12)</b>	<b>8000</b>		250		ug/L			03/18/14 17:12	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)	106		76 - 132					03/18/14 17:12	5
4-Bromofluorobenzene (Surr)	111		80 - 120					03/18/14 17:12	5
Toluene-d8 (Surr)	112		80 - 128					03/18/14 17:12	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>470</b>		2.5		ug/L			03/18/14 17:12	5
<b>Toluene</b>	<b>79</b>		2.5		ug/L			03/18/14 17:12	5
<b>Ethylbenzene</b>	<b>450</b>		2.5		ug/L			03/18/14 17:12	5
<b>Xylenes, Total</b>	<b>630</b>		5.0		ug/L			03/18/14 17:12	5
Methyl-t-Butyl Ether (MTBE)	ND		2.5		ug/L			03/18/14 17:12	5
tert-Butyl alcohol (TBA)	ND		50		ug/L			03/18/14 17:12	5
Isopropyl Ether (DIPE)	ND		2.5		ug/L			03/18/14 17:12	5
Ethyl-t-butyl ether (ETBE)	ND		2.5		ug/L			03/18/14 17:12	5
Tert-amyl-methyl ether (TAME)	ND		2.5		ug/L			03/18/14 17:12	5

TestAmerica Irvine

# Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-72691-1

**Client Sample ID: S-14**

**Date Collected: 03/05/14 09:55**

**Date Received: 03/08/14 10:15**

**Lab Sample ID: 440-72691-2**

**Matrix: Ground Water**

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
4-Bromofluorobenzene (Surr)	111		80 - 120		03/18/14 17:12	5
Dibromofluoromethane (Surr)	106		76 - 132		03/18/14 17:12	5
Toluene-d8 (Surr)	112		80 - 128		03/18/14 17:12	5

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# Method Summary

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-72691-1

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: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-72691-1

## Client Sample ID: S-13

Date Collected: 03/05/14 10:17

Date Received: 03/08/14 10:15

## Lab Sample ID: 440-72691-1

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		40	10 mL	10 mL	169828	03/18/14 16:43	YK	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTMS		40	10 mL	10 mL	169829	03/18/14 16:43	YK	TAL IRV

## Client Sample ID: S-14

Date Collected: 03/05/14 09:55

Date Received: 03/08/14 10:15

## Lab Sample ID: 440-72691-2

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	169828	03/18/14 17:12	YK	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTMS		5	10 mL	10 mL	169829	03/18/14 17:12	YK	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: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-72691-1

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

**Lab Sample ID: MB 440-169828/28**

**Matrix: Water**

**Analysis Batch: 169828**

**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			03/18/14 10:32	1
Toluene	ND		0.50		ug/L			03/18/14 10:32	1
Ethylbenzene	ND		0.50		ug/L			03/18/14 10:32	1
Xylenes, Total	ND		1.0		ug/L			03/18/14 10:32	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			03/18/14 10:32	1
tert-Butyl alcohol (TBA)	ND		10		ug/L			03/18/14 10:32	1
Isopropyl Ether (DIPE)	ND		0.50		ug/L			03/18/14 10:32	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			03/18/14 10:32	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			03/18/14 10:32	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		80 - 120		03/18/14 10:32	1
Dibromofluoromethane (Surr)	94		76 - 132		03/18/14 10:32	1
Toluene-d8 (Surr)	109		80 - 128		03/18/14 10:32	1

**Lab Sample ID: LCS 440-169828/5**

**Matrix: Water**

**Analysis Batch: 169828**

**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
Toluene	25.0	27.9		ug/L		112	70 - 130
Ethylbenzene	25.0	28.9		ug/L		116	70 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	23.1		ug/L		93	63 - 131
tert-Butyl alcohol (TBA)	125	134		ug/L		107	70 - 130
Isopropyl Ether (DIPE)	25.0	21.3		ug/L		85	58 - 139
Ethyl-t-butyl ether (ETBE)	25.0	21.9		ug/L		88	60 - 136
Tert-amyl-methyl ether (TAME)	25.0	23.6		ug/L		95	57 - 139
m,p-Xylene	50.0	60.4		ug/L		121	70 - 130
o-Xylene	25.0	29.6		ug/L		118	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132
Toluene-d8 (Surr)	108		80 - 128

**Lab Sample ID: 440-73155-A-1 MS**

**Matrix: Water**

**Analysis Batch: 169828**

**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	1.2		25.0	27.2		ug/L		104	66 - 130
Toluene	ND		25.0	28.3		ug/L		113	70 - 130
Ethylbenzene	0.58		25.0	28.0		ug/L		110	70 - 130
Methyl-t-Butyl Ether (MTBE)	1.2		25.0	25.8		ug/L		98	70 - 130
tert-Butyl alcohol (TBA)	33		125	165		ug/L		106	70 - 130
Isopropyl Ether (DIPE)	0.74		25.0	23.9		ug/L		92	64 - 138

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# QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-72691-1

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

**Lab Sample ID: 440-73155-A-1 MS**

**Matrix: Water**

**Analysis Batch: 169828**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Ethyl-t-butyl ether (ETBE)	ND		25.0	23.4		ug/L		94	70 - 130
Tert-amyl-methyl ether (TAME)	ND		25.0	25.2		ug/L		101	68 - 133
m,p-Xylene	ND		50.0	56.4		ug/L		112	70 - 133
o-Xylene	ND		25.0	28.5		ug/L		114	70 - 133

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	107		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132
Toluene-d8 (Surr)	109		80 - 128

**Lab Sample ID: 440-73155-A-1 MSD**

**Matrix: Water**

**Analysis Batch: 169828**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier					RPD	Limit
Benzene	1.2		25.0	26.9		ug/L		103	66 - 130	1	20
Toluene	ND		25.0	27.6		ug/L		110	70 - 130	2	20
Ethylbenzene	0.58		25.0	27.3		ug/L		107	70 - 130	3	20
Methyl-t-Butyl Ether (MTBE)	1.2		25.0	24.8		ug/L		95	70 - 130	4	25
tert-Butyl alcohol (TBA)	33		125	169		ug/L		109	70 - 130	2	25
Isopropyl Ether (DIPE)	0.74		25.0	23.0		ug/L		89	64 - 138	4	25
Ethyl-t-butyl ether (ETBE)	ND		25.0	23.1		ug/L		92	70 - 130	1	25
Tert-amyl-methyl ether (TAME)	ND		25.0	24.5		ug/L		98	68 - 133	3	30
m,p-Xylene	ND		50.0	55.4		ug/L		110	70 - 133	2	25
o-Xylene	ND		25.0	27.5		ug/L		110	70 - 133	3	20

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132
Toluene-d8 (Surr)	111		80 - 128

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

**Lab Sample ID: MB 440-169829/28**

**Matrix: Water**

**Analysis Batch: 169829**

**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			03/18/14 10:32	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	94		76 - 132		03/18/14 10:32	1
4-Bromofluorobenzene (Surr)	106		80 - 120		03/18/14 10:32	1
Toluene-d8 (Surr)	109		80 - 128		03/18/14 10:32	1

TestAmerica Irvine

# QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
 Project/Site: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-72691-1

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

**Lab Sample ID: LCS 440-169829/6**

**Matrix: Water**

**Analysis Batch: 169829**

**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	395		ug/L		79	55 - 130
<b>Surrogate</b>		<b>LCS %Recovery</b>	<b>LCS Qualifier</b>				<b>Limits</b>
Dibromofluoromethane (Surr)		95					76 - 132
4-Bromofluorobenzene (Surr)		107					80 - 120
Toluene-d8 (Surr)		109					80 - 128

**Lab Sample ID: 440-73155-A-1 MS**

**Matrix: Water**

**Analysis Batch: 169829**

**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	1430		ug/L		82	50 - 145
<b>Surrogate</b>		<b>MS %Recovery</b>		<b>MS Qualifier</b>					<b>Limits</b>
Dibromofluoromethane (Surr)		99							76 - 132
4-Bromofluorobenzene (Surr)		107							80 - 120
Toluene-d8 (Surr)		109							80 - 128

**Lab Sample ID: 440-73155-A-1 MSD**

**Matrix: Water**

**Analysis Batch: 169829**

**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	1380		ug/L		79	50 - 145	4	20
<b>Surrogate</b>		<b>MSD %Recovery</b>		<b>MSD Qualifier</b>					<b>Limits</b>		
Dibromofluoromethane (Surr)		99							76 - 132		
4-Bromofluorobenzene (Surr)		104							80 - 120		
Toluene-d8 (Surr)		111							80 - 128		



# QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.  
 Project/Site: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-72691-1

## GC/MS VOA

### Analysis Batch: 169828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-72691-1	S-13	Total/NA	Ground Water	8260B	
440-72691-2	S-14	Total/NA	Ground Water	8260B	
440-73155-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-73155-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 440-169828/5	Lab Control Sample	Total/NA	Water	8260B	
MB 440-169828/28	Method Blank	Total/NA	Water	8260B	

### Analysis Batch: 169829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-72691-1	S-13	Total/NA	Ground Water	8260B/CA_LUFT MS	
440-72691-2	S-14	Total/NA	Ground Water	8260B/CA_LUFT MS	
440-73155-A-1 MS	Matrix Spike	Total/NA	Water	8260B/CA_LUFT MS	
440-73155-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B/CA_LUFT MS	
LCS 440-169829/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
MB 440-169829/28	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	



## Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-72691-1

### 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
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: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-72691-1

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

\* Expired certification is currently pending renewal and is considered valid.

TestAmerica Irvine



440-72691 Chain of Custody



# Shell Oil Products Chain Of Custody Record

228

**Please Check Appropriate Box:**

ENV. SERVICES  
 MOTIVA RETAIL  
 SHELL RETAIL  
 MOTIVA SD&CM  
 CONSULTANT  
 LUBES  
 SHELL PIPELINE  
 OTHER

**Print Bill To Contact Name:**  
240897 Peter Schaefer

**PO #**

**INCIDENT # (ENV SERVICES)**  
9 8 9 9 5 7 4 6

**SAP #**  
1 3 5 6 8 6

CHECK IF NO INCIDENT # APPLIES

DATE 3/5/14

PAGE 1 of 1

**SAMPLING COMPANY:**  
Blaine Tech Services

**LOG CODE:**  
BTSS

**ADDRESS:**  
1680 Rogers Avenue, San Jose, CA

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

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

**SITE ADDRESS: Street and City:**  
4411 Foothill Boulevard, Oakland

**State:** CA

**GLOBAL ID NO.:** T0600101065

**EDF DELIVERABLE TO (Name, Company, Office Location):**  
Brenda Carter, CRA, Emeryville, CA

**PHONE NO.:** 510-420-3343

**E-MAIL:** ShellEDF@CRAWorld.com  
Shell-US-LabDataManagement@CRAworld.com

**CONSULTANT PROJECT NO.:** 240897-95-11.01

**SAMPLER NAME(S) (Print):**  
Doug Whitchard

**LAB USE ONLY**

**TURNAROUND TIME (CALENDAR DAYS):**  
 STANDARD (14 DAY)
  5 DAYS
  3 DAYS
  2 DAYS
  24 HOURS
  RESULTS NEEDED ON WEEKEND

LA - RWQCB REPORT FORMAT  JUST AGENCY:

**SPECIAL INSTRUCTIONS OR NOTES:**

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

SHELL CONTRACT RATE APPLIES  
 STATE REIMBURSEMENT RATE APPLIES  
 EDD NOT NEEDED  
 RECEIPT VERIFICATION REQUESTED

Copy final report to Shell.Lab.Billing@craworld.com, ShellEDF@craworld.com, Shell-US-LabDataManagement@CRAworld.com, and pschaefer@CRAWorld.com

Email Invoice to Shell.Lab.Billing@craworld.com

Run TPH-D with Silica Gel Clean Up

LAB USE ONLY	PROJECT NUMBER	DATE (MMDDYY)	SAMPLER INITIALS	WELL ID	TIME	MATRIX	PRESERVATIVE					NO. OF CONT.
							HCL	HNO3	H2SO4	NONE	OTHER	
WG	140305-DL	030514	DC	MW-13	1017	WG	X					3
WG	140305-DL	030514	DC	MW-14	0955	WG	X					3

REQUESTED ANALYSIS												TEMPERATURE ON RECEIPT, °C	
TPH-GRO, Purgeable (8260B)	TPH-DRO, Extractable (8016M)	BTEX (8260B)	BTEX + MTBE (8260B)	BTEX + MTBE + TBA (8260B)	BTEX + 6 OXYs (MTBE, TBA, DIPE, TAME, ETBE) (8260B)	VOCs Full list (8260E)	Single Compound: (8260B)	1,2 DCA (8260B)	EOB (8260B)	Ethanol (8260B)	Methanol (8016B)		
X	X				X								

Received by (Signature): <i>[Signature]</i>	Received by (Signature): <i>[Signature]</i>	Date: 3/5/14	Time: 1555
Received by (Signature): <i>[Signature]</i>	Received by (Signature): <i>[Signature]</i>	Date: 3/6/14	Time: 1110
Received by (Signature): <i>[Signature]</i>	Received by (Signature): <i>[Signature]</i>	Date: 3/7/14	Time: 1820
<i>[Signature]</i>	<i>[Signature]</i>	3/7/14 17:10	
<i>[Signature]</i>	<i>[Signature]</i>	3/8/14 1015	

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3/24/2014





# Shell Oil Products Chain Of Custody Record

**LAB (LOCATION)**

- CALSCIENCE (\_\_\_\_\_)
- SPL Houston (\_\_\_\_\_)
- XENCO (\_\_\_\_\_)
- TEST AMERICA (IRVINE)
- OTHER (\_\_\_\_\_)

**Please Check Appropriate Box:**

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

**Print Bill To Contact Name:** 240897 Peter Schaefer

**INCIDENT # (ENV SERVICES)** 9 8 9 9 5 7 4 6

**PO #** \_\_\_\_\_ **SAP #** \_\_\_\_\_

**DATE:** 3/5/14 **PAGE:** 1 of 1

**SAMPLING COMPANY:** Blaine Tech Services

**LOG CODE:** BTSS

**SITE ADDRESS:** Street and City: 4411 Foothill Boulevard, Oakland, CA

**State:** CA **GLOBAL ID NO.:** T0600101065

**EDF DELIVERABLE TO (Name, Company, Office Location):** Brenda Carter, CRA, Emeryville, CA

**PHONE NO.:** 510-420-3343 **E-MAIL:** ShellEDF@CRAWorld.com, Shell-US-LabDataManagement@CRAworld.com

**CONSULTANT PROJECT NO.:** 240897-95-11.01

**SAMPLER NAME(S) (Print):** DOUG WHITCHARD

**TURNAROUND TIME (CALENDAR DAYS):**

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

LA - RWQCB REPORT FORMAT  UST AGENCY:

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SHELL CONTRACT RATE APPLIES

STATE REIMBURSEMENT RATE APPLIES

EDD NOT NEEDED

RECEIPT VERIFICATION REQUESTED

Copy final report to Shell.Lab.Billing@craworld.com, ShellEDF@craworld.com, Shell-US-LabDataManagement@CRAworld.com, and pschaefer@CRAWorld.com

Email invoice to Shell.Lab.Billing@craworld.com

Run TPH-D with Silica Gel Clean Up

Matrix Codes - WG (groundwater), WS (surface water), WP (drinking water source), W (Trip or Temp Blank)

**REQUESTED ANALYSIS**

TPH-GRO, Purgeable (8260B)	TPH-DRO, Extractable (8015M)	BTEX (8260B)	BTEX + MTBE (8260B)	BTEX + MTBE + TBA (8260B)	BTEX + 5 OXY's (MTBE, TBA, DIPE, TAME, ETBE) (8260B)	VOCs Full list (8260B)	Single Compound: _____ (8260B)	1,2 DCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015B)	TEMPERATURE ON RECEIPT, °C
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LAB USE ONLY	SAMPLE ID					TIME	MATRIX	PRESERVATIVE					NO. OF CONT.	TPH-GRO, Purgeable (8260B)	TPH-DRO, Extractable (8015M)	BTEX (8260B)	BTEX + MTBE (8260B)	BTEX + MTBE + TBA (8260B)	BTEX + 5 OXY's (MTBE, TBA, DIPE, TAME, ETBE) (8260B)	VOCs Full list (8260B)	Single Compound: _____ (8260B)	1,2 DCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015B)	Container PID Readings or Laboratory Notes	
	PROJECT NUMBER	DATE (MMDDYY)	SAMPLER INITIALS	WELL ID	HCL			HNO3	H2SO4	NONE	OTHER																
	WG	140305-DL	030514	DC	1017	WG	X																				S-13
	WG	140305-DL	030514	DC	0955	WG	X																				S-14

Reinquished by: (Signature)	Received by: (Signature)	Date:	Time:
<i>[Signature]</i>	<i>[Signature]</i>	3/5/14	1555
Reinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Reinquished by: (Signature)	Received by: (Signature)	Date:	Time:

## Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 440-72691-1

**Login Number: 72691**

**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	

