



**CONESTOGA-ROVERS  
& ASSOCIATES**

5900 Hollis Street, Suite A  
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**TRANSMITTAL**

DATE: August 12, 2009 REFERENCE NO.: 240414  
PROJECT NAME: 540 Hegenberger Road, Oakland  
TO: Jerry Wickham  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**RECEIVED**  
8:50 am, Aug 17, 2009  
Alameda County  
Environmental Health

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 Originals  Other  
 Prints  
Sent via:  Mail  Same Day Courier  
 Overnight Courier  Other GeoTracker and Alameda County FTP

QUANTITY	DESCRIPTION
1	Groundwater Monitoring Report - Second Quarter 2009

As Requested  For Review and Comment  
 For Your Use  \_\_\_\_\_  
 \_\_\_\_\_

**COMMENTS:**  
If you have any questions regarding the content of this document, please contact Peter Schaefer at (510) 420-3319.

Copy to: Denis Brown, Shell Oil Products US, 20945 S. Wilmington Avenue, Carson, CA 90810  
SF Data Room (electronic copy)

Completed by: Peter Schaefer Signed: *Peter Schaefer*

Filing: Correspondence File



Jerry Wickham  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**Denis L. Brown**  
**Shell Oil Products US**  
HSE - Environmental Services  
20945 S. Wilmington Ave.  
Carson, CA 90810-1039  
**Tel** (707) 865 0251  
**Fax** (707) 865 2542  
**Email** [denis.l.brown@shell.com](mailto:denis.l.brown@shell.com)

Re: Shell-branded Service Station  
540 Hegenberger Road  
Oakland, California  
SAP Code 135694  
Incident No. 98995752  
ACHCSA Case No. RO0000223

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.

If you have any questions or concerns, please call me at (707) 865-0251.

Sincerely,

A handwritten signature in black ink, appearing to read "Denis L. Brown", is written over a horizontal line.

Denis L. Brown  
Project Manager



## **GROUNDWATER MONITORING REPORT - SECOND QUARTER 2009**

**SHELL-BRANDED SERVICE STATION  
540 HEGENBERGER ROAD  
OAKLAND, CALIFORNIA**

**SAP CODE           135694  
INCIDENT NO.    98995752  
AGENCY NO.      RO0000223**

**AUGUST 12, 2009**  
**REF. NO. 240414 (4)**  
This report is printed on recycled paper.

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

5900 Hollis Street, Suite A  
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REPORT

## 1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) in accordance with the quarterly reporting requirements of 23 CCR 2652d.

### 1.1 SITE INFORMATION

Site Address	540 Hegenberger Road, Oakland
Site Use	Shell-branded Service Station
Shell Project Manager	Denis Brown
CRA Project Manager	Peter Schaefer
Lead Agency and Contact	ACHCSA, Jerry Wickham
Agency Case No.	RO0000223
Shell SAP Code	135694
Shell Incident No.	98995752

Date of most recent agency correspondence July 24, 2009.

## **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) and a groundwater contour and chemical concentration map (Figure 2). Blaine's report, presenting the analytical data, is included in Appendix A.

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

Groundwater Flow Direction	Variable
Hydraulic Gradient	Variable
Depth to Water	4.52 to 7.90 feet below top of well casing

### **2.3 PROPOSED ACTIVITIES FOR NEXT QUARTER**

Blaine will gauge and sample wells according to the revised monitoring program detailed below. Per Alameda County Health Care Services Agency's July 24, 2009 letter and State Water Resources Control Board Resolution 2009-0042 adopted May 19, 2009, we will implement a semiannual monitoring and reporting schedule at the site, with sampling activities conducted during the first and third quarters.

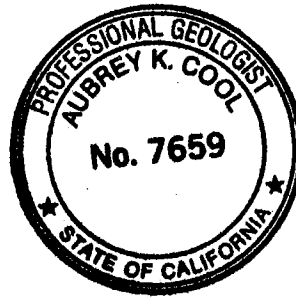
All of Which is Respectfully Submitted,  
CONESTOGA-ROVERS & ASSOCIATES



Peter Schaefer, CHG, CEG



Aubrey K. Cool, PG

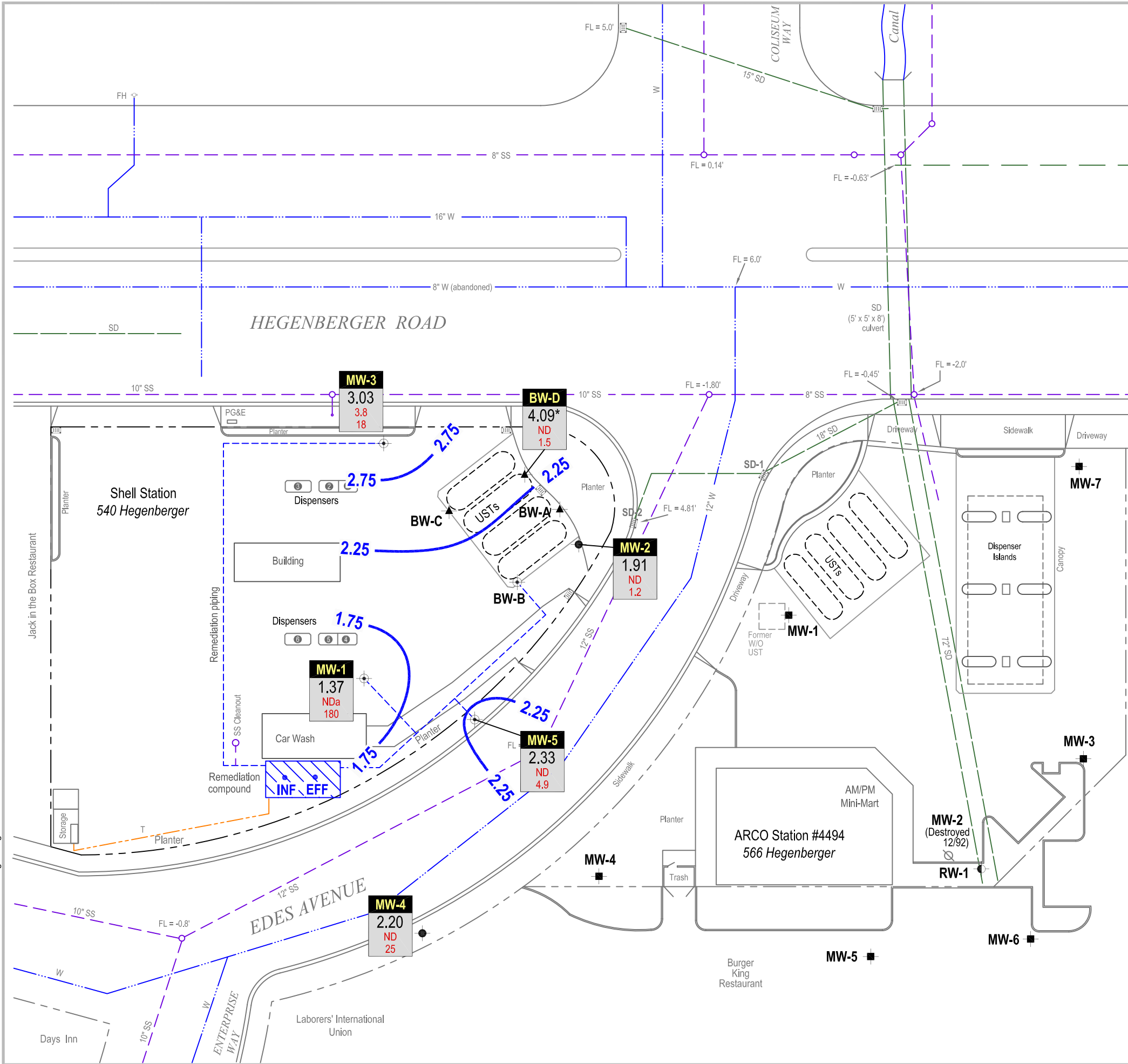




## FIGURES



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### EXPLANATION

- MW-2 ● Monitoring well location (Shell)
- BW-A ▲ Tank backfill well location (Shell)
- MW-1 ⊕ Groundwater extraction well location (Shell)
- MW-1 ■ Monitoring well location (ARCO)
- RW-1 ⊕ Recovery well location (ARCO)
- MW-2 ⊗ Destroyed well location (ARCO)
- - - Sanitary sewer main (SS)
- Water line (W)
- - - Telephone line (T)
- - - Storm drain (SD)
- ▶ Flow direction
- FH ⊕ Fire hydrant
- FL = 5.0' Flowline elevation (msl)
- INF ● GWE sample location
- XX.XX Groundwater elevation contour, in feet above msl, dashed where inferred.

Well	ELEV	Benzene	MTBE
MW-3	3.03	3.8	18
BW-D	4.09*	ND	1.5
MW-2	1.91	ND	1.2
MW-1	1.37	NDa	180
MW-5	2.33	ND	4.9
MW-4	2.20	ND	25

**Notes:**  
 ND = Not detected  
 \* = Data not used in contouring

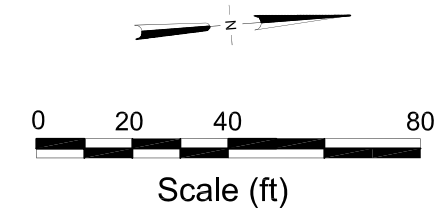


FIGURE 2

Groundwater Contour and Chemical Concentration Map

Shell-branded Service Station  
540 Hegenberger Road  
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

June 11, 2009

APPENDIX A

BLAINE TECH SERVICES, INC. -  
GROUNDWATER MONITORING REPORT

# BLAINE TECH SERVICES

GROUNDWATER SAMPLING SPECIALISTS

SINCE 1985

June 30, 2009

Denis Brown  
Shell Oil Products US  
20945 South Wilmington Avenue  
Carson, CA 90810

Second Quarter 2009 Groundwater Monitoring at  
Shell-branded Service Station  
540 Hegenberger Road  
Oakland, CA

Monitoring performed on June 11, 2009

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## Groundwater Monitoring Report **090611-AC-1**

This report covers the routine monitoring of groundwater wells at this Shell-branded facility. In accordance with standard procedures that conform to Regional Water Quality Control Board requirements, routine field data collection includes depth to water, total well depth, thickness of any separate immiscible layer, water column volume, calculated purge volume (if applicable), elapsed evacuation time (if applicable), total volume of water removed (if applicable), and standard water parameter instrument readings. Sample material is collected, contained, stored, and transported to the laboratory in conformance with EPA standards. Purgewater (if applicable) is, likewise, collected and transported to the Martinez Refining Company.

Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL CONCENTRATIONS**. The full analytical report for the most recent samples and the field data sheets are attached to this report.

At a minimum, Blaine Tech Services, Inc. field personnel are certified on completion of a forty-hour Hazardous Materials and Emergency Response training course per 29 CFR 1910.120. Field personnel are also enrolled in annual eight-hour refresher courses.

SAN JOSE

SACRAMENTO

LOS ANGELES

SAN DIEGO

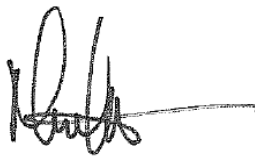
SEATTLE

1680 ROGERS AVENUE SAN JOSE, CA (408) 573-0555 FAX (408) 573-7771 LIC. 746684 [www.blainetech.com](http://www.blainetech.com)

Blaine Tech Services, Inc. conducts sampling and documentation assignments of this type as an independent third party. Our activities at this site consisted of objective data and sample collection only. No interpretation of analytical results, defining of hydrological conditions or formulation of recommendations was performed.

Please call if you have any questions.

Yours truly,

A handwritten signature in black ink, appearing to read "Mike Ninokata", with a long horizontal flourish extending to the right.

Mike Ninokata  
Project Manager

MN/tm

attachments: Cumulative Table of WELL CONCENTRATIONS  
Certified Analytical Report  
Field Data Sheets

cc: Anni Kreml  
Conestoga-Rovers & Associates  
5900 Hollis Street, Suite A  
Emeryville, CA 94608

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-1 (a)	8/26/1998	2,700	28	55	59	39	33,000	NA	NA	NA	NA	NA	NA	10.54	7.91	2.63	1.8
MW-1 (b)	8/26/1998	<1,000	22	<10	<10	<10	17,000	NA	NA	NA	NA	NA	NA	10.54	7.91	2.63	2.2
MW-1	12/28/1998	<5,000	<50.0	<50.0	<50.0	<50.0	153,000	33,000	NA	NA	NA	NA	NA	10.54	8.75	1.79	1.9
MW-1	3/29/1999	<2,000	<20.0	<20.0	<20.0	<20.0	693,000	NA	NA	NA	NA	NA	NA	10.54	8.32	2.22	2.0
MW-1	6/22/1999	20,000	<200	<200	<200	<200	150,000	NA	NA	NA	NA	NA	NA	10.54	9.05	1.49	1.7
MW-1	9/30/1999	<2,500	<25.0	<25.0	<25.0	<25.0	30,900	NA	NA	NA	NA	NA	NA	10.54	8.35	2.19	2.6
MW-1	11/19/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.54	9.58	0.96	NA
MW-1	11/24/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.54	9.65	0.89	NA
MW-1	12/2/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.54	9.55	0.99	NA
MW-1	12/10/1999	<50.0	29.7	<20.0	<20.0	<20.0	76,300	NA	NA	NA	NA	NA	NA	10.54	8.86	1.68	1.2
MW-1	3/2/2000	<2,500	<25.0	<25.0	<25.0	<25.0	27,600	NA	NA	NA	NA	NA	NA	10.54	8.83	1.71	3.2
MW-1	6/8/2000	<2,000	<20.0	<20.0	<20.0	<20.0	59,000	67,600	NA	NA	NA	NA	NA	10.54	7.78	2.76	1.9
MW-1	9/5/2000	<10,000	411	<100	<100	<100	71,100	115,000 e	NA	NA	NA	NA	NA	10.54	7.84	2.70	NA
MW-1	12/15/2000	35,600	1,310	<50.0	<50.0	<50.0	136,000	f	NA	NA	NA	NA	NA	10.54	7.65	2.89	NA
MW-1	3/9/2001	<10,000	1,390	<100	<100	<100	89,600	164,000	NA	NA	NA	NA	NA	10.54	6.44	4.10	NA
MW-1	6/27/2001	<5,000	<50	<50	<50	<50	NA	19,000	NA	NA	NA	NA	NA	10.54	8.46	2.08	NA
MW-1	9/19/2001	<5,000	<50	<50	<50	<50	NA	52,000	NA	NA	NA	NA	NA	10.54	8.10	2.44	NA
MW-1	12/31/2001	<5,000	<25	<25	<25	<25	NA	17,000	NA	NA	NA	NA	NA	10.54	7.31	3.23	NA
MW-1	3/14/2002	<20,000	<200	<200	<200	<200	NA	60,000	NA	NA	NA	NA	NA	10.54	7.68	2.86	NA
MW-1	6/25/2002	<5,000	<50	<50	<50	<50	NA	34,000	NA	NA	NA	NA	NA	10.54	8.40	2.14	NA
MW-1	9/19/2002	<2,500	<25	<25	<25	<25	NA	18,000	NA	NA	NA	NA	NA	10.52	8.58	1.94	NA
MW-1	12/12/2002	<5,000	<50	<50	<50	<50	NA	30,000	NA	NA	NA	NA	NA	10.52	8.41	2.11	NA
MW-1	1/2/2003	NA	<0.50	<0.50	<0.50	<1.0	NA	NA	NA	NA	NA	NA	NA	10.52	7.45	3.07	NA
MW-1	03/20/2003 g	3,800	<25	<25	<25	<25	5,500	NA	NA	NA	NA	NA	NA	10.52	8.21	2.31	NA
MW-1	6/23/2003	<10,000	<100	<100	<100	<200	NA	35,000	NA	NA	NA	NA	NA	10.52	9.02	1.50	NA
MW-1	9/22/2003	<5,000	<50	<50	<50	<100	NA	15,000	NA	NA	NA	NA	NA	10.52	15.74	-5.22	NA
MW-1	12/3/2003	<1,300	<13	<13	<13	<25	NA	3,600	NA	NA	NA	NA	NA	10.52	18.35 h	NA	NA
MW-1	3/18/2004	<250	<2.5	<2.5	<2.5	<5.0	NA	570	NA	NA	NA	NA	NA	10.52	7.32	3.20	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-1	5/25/2004	<250	<2.5	<2.5	<2.5	<5.0	NA	250	NA	NA	NA	NA	NA	10.52	6.80	3.72	NA
MW-1	9/22/2004	<2,000	<20	<20	<20	<40	NA	170	<80	<80	<80	20,000	<2,000	10.52	6.55	3.97	NA
MW-1	12/22/2004	<500	<5.0	<5.0	<5.0	<10	NA	57	NA	NA	NA	NA	NA	10.52	6.44	4.08	NA
MW-1	2/23/2005	<2,000	<20	<20	<20	<40	NA	110	NA	NA	NA	NA	NA	10.52	5.79	4.73	NA
MW-1	6/27/2005	<250	<2.5	<2.5	<2.5	<5.0	NA	16	NA	NA	NA	NA	NA	10.52	6.43	4.09	NA
MW-1	8/31/2005	<250	<2.5	<2.5	<2.5	<5.0	NA	32	<10	<10	<10	4,000	<250	9.27	6.38	2.89	NA
MW-1	12/14/2005	<50.0	<0.500	2.03	<0.500	<0.500	NA	30.4	NA	NA	NA	NA	NA	9.27	6.46	2.81	NA
MW-1	3/8/2006	417	1.87	<0.500	<0.500	0.830	NA	17.8	NA	NA	NA	3,380	NA	9.27	6.21	3.06	NA
MW-1	6/14/2006	728	282	1.61	4.16	9.82	NA	109	NA	NA	NA	2,950	NA	9.27	6.86	2.41	NA
MW-1	9/27/2006	817	<0.500	<0.500	<0.500	<0.500	NA	122	<0.500	<0.500	<0.500	1,420	<50.0	9.27	7.70	1.57	NA
MW-1	11/30/2006	150	<0.50	<0.50	<0.50	<1.0	NA	54	NA	NA	NA	3,200	NA	9.27	7.59	1.68	NA
MW-1	3/6/2007	150 k	<0.50 k	<1.0 k	<0.50 k	<1.0 k	NA	40 k	NA	NA	NA	3,600 k	NA	9.27	6.38	2.89	NA
MW-1	6/11/2007	340	<5.0	<10	<10	<10	NA	23	NA	NA	NA	14,000	NA	9.27	7.88	1.39	NA
MW-1	9/26/2007	190 m,n	<2.5	<5.0	<5.0	<5.0	NA	490	<10	<10	<10	460	<500	9.27	7.03	2.24	NA
MW-1	12/28/2007	<50 m	<0.50	<1.0	<1.0	<1.0	NA	120	NA	NA	NA	710	NA	9.27	7.40	1.87	NA
MW-1	3/31/2008	360	<0.50	<1.0	<1.0	<1.0	NA	350	NA	NA	NA	890	NA	9.27	7.41	1.86	NA
MW-1	6/23/2008	280	<2.5	<5.0	<5.0	<5.0	NA	180	NA	NA	NA	620	NA	9.27	6.80	2.47	NA
MW-1	9/22/2008	90	<0.50	<1.0	<1.0	<1.0	NA	6.1	<2.0	<2.0	<2.0	1,400	<100	9.27	7.18	2.09	NA
MW-1	12/16/2008	NA	<0.50	<1.0	<1.0	<1.0	NA	190	NA	NA	NA	820	NA	9.27	7.17	2.10	NA
MW-1	2/27/2009	290	<0.50	<1.0	<1.0	<1.0	NA	140	NA	NA	NA	820	NA	9.27	5.82	3.45	NA
<b>MW-1</b>	<b>6/11/2009</b>	<b>220</b>	<b>&lt;1.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>NA</b>	<b>180</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>1,200</b>	<b>NA</b>	<b>9.27</b>	<b>7.90</b>	<b>1.37</b>	<b>NA</b>

MW-2 (a)	8/26/1998	<250	3.2	<2.5	<2.5	<2.5	4,000	NA	NA	NA	NA	NA	NA	9.21	7.18	2.03	2.4
MW-2 (b)	8/26/1998	<250	3.1	<2.5	<2.5	<2.5	4,800	NA	NA	NA	NA	NA	NA	9.21	7.18	2.03	2.7
MW-2 (D)(b)	8/26/1998	<250	4.8	<2.5	<2.5	6.0	3,300	NA	NA	NA	NA	NA	NA	9.21	7.18	2.03	2.7
MW-2	12/28/1998	<50.0	<0.500	<0.500	<0.500	<0.500	28.8	NA	NA	NA	NA	NA	NA	9.21	7.34	1.87	2.1
MW-2	3/29/1999	235	<0.500	<0.500	<0.500	3.4	101	NA	NA	NA	NA	NA	NA	9.21	6.85	2.36	2.0
MW-2	6/22/1999	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	9.21	7.10	2.11	1.9



**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-2	9/30/1999	<50.0	<0.500	<0.500	<0.500	<0.500	1,700	NA	NA	NA	NA	NA	NA	9.21	8.06	1.15	1.0
MW-2	12/10/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	9.21	8.61	0.60	1.4
MW-2	3/2/2000	<500	11.5	<5.00	<5.00	<5.00	5,280	NA	NA	NA	NA	NA	NA	9.21	6.33	2.88	0.4
MW-2	6/8/2000	<50.0	0.670	<0.500	<0.500	<0.500	3,160	NA	NA	NA	NA	NA	NA	9.21	6.87	2.34	1.6
MW-2	9/5/2000	<1,000	<10.0	<10.0	<10.0	<10.0	9,600	NA	NA	NA	NA	NA	NA	9.21	6.79	2.42	NA
MW-2	12/15/2000	<200	<2.00	<2.00	<2.00	<2.00	6,320	NA	NA	NA	NA	NA	NA	9.21	6.76	2.45	NA
MW-2	3/9/2001	<500	<5.00	<5.00	<5.00	<5.00	17,200	NA	NA	NA	NA	NA	NA	9.21	6.28	2.93	NA
MW-2	6/27/2001	<100	1.4	<1.0	<1.0	<2.0	NA	470	NA	NA	NA	NA	NA	9.21	7.12	2.09	NA
MW-2	9/19/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	330	NA	NA	NA	NA	NA	9.21	7.17	2.04	NA
MW-2	12/31/2001	<100	<1.0	<1.0	<1.0	<1.0	NA	420	NA	NA	NA	NA	NA	9.21	6.24	2.97	NA
MW-2	3/14/2002	<250	4.5	3.3	<2.5	<2.5	NA	1,600	NA	NA	NA	NA	NA	9.21	6.72	2.49	NA
MW-2	6/25/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	110	NA	NA	NA	NA	NA	9.21	7.23	1.98	NA
MW-2	9/19/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	90	NA	NA	NA	NA	NA	9.19	7.48	1.71	NA
MW-2	12/12/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	170	NA	NA	NA	NA	NA	9.19	7.33	1.86	NA
MW-2	03/20/2003 g	56	<0.50	<0.50	<0.50	<0.50	58	NA	NA	NA	NA	NA	NA	9.19	7.65	1.54	NA
MW-2	6/23/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	44	NA	NA	NA	NA	NA	9.19	8.72	0.47	NA
MW-2	9/22/2003	<250	<2.5	<2.5	<2.5	<5.0	NA	37	NA	NA	NA	NA	NA	9.19	8.84	0.35	NA
MW-2	12/3/2003	<250	<2.5	<2.5	<2.5	<5.0	NA	99	NA	NA	NA	NA	NA	9.19	8.95	0.24	NA
MW-2	3/18/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	24	NA	NA	NA	NA	NA	9.19	7.19	2.00	NA
MW-2	5/25/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	53	NA	NA	NA	NA	NA	9.19	8.40	0.79	NA
MW-2	9/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	24	<2.0	<2.0	<2.0	100	<50	9.19	7.08	2.11	NA
MW-2	12/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	39	NA	NA	NA	NA	NA	9.19	7.09	2.10	NA
MW-2	2/23/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	38	NA	NA	NA	NA	NA	9.19	6.50	2.69	NA
MW-2	6/27/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	28	NA	NA	NA	NA	NA	9.19	7.17	2.02	NA
MW-2	8/31/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	5.5	<2.0	<2.0	<2.0	19	<50	9.19	7.21	1.98	NA
MW-2	12/14/2005	<50.0	<0.500	2.16	<0.500	<0.500	NA	5.33	NA	NA	NA	NA	NA	9.19	7.13	2.06	NA
MW-2	3/8/2006	<50.0	<0.500	<0.500	<0.500	0.560	NA	18.8	NA	NA	NA	<10.0	NA	9.19	6.02	3.17	NA
MW-2	6/14/2006	<50.0	<0.500	0.680	<0.500	<0.500	NA	2.17	NA	NA	NA	<10.0	NA	9.19	7.19	2.00	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-2	9/27/2006	276	<0.500	<0.500	<0.500	<0.500	NA	5.29	<0.500	<0.500	<0.500	30	<50.0	9.19	7.45	1.74	NA
MW-2	11/30/2006	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	<5.0	NA	9.19	7.30	1.89	NA
MW-2	3/6/2007	<50 k	<0.50 k	<1.0 k	<0.50 k	<1.0 k	NA	0.87 k	NA	NA	NA	<5.0 k	NA	9.19	6.70	2.49	NA
MW-2	6/11/2007	<50	<0.50	<1.0	<1.0	<1.0	NA	<1.0	NA	NA	NA	<10	NA	9.19	7.14	2.05	NA
MW-2	9/26/2007	<50 m	<0.50	<1.0	<1.0	<1.0	NA	2.1	<2.0	<2.0	<2.0	<10	<100	9.19	7.34	1.85	NA
MW-2	12/28/2007	<50 m	<0.50	<1.0	<1.0	<1.0	NA	0.57 l	NA	NA	NA	<10	NA	9.19	6.79	2.40	NA
MW-2	3/31/2008	<50	<0.50	<1.0	<1.0	<1.0	NA	1.4	NA	NA	NA	<10	NA	9.19	7.09	2.10	NA
MW-2	6/23/2008	<50	<0.50	<1.0	<1.0	<1.0	NA	1.5	NA	NA	NA	<10	NA	9.19	7.00	2.19	NA
MW-2	9/22/2008	<50	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	<100	9.19	7.28	1.91	NA
MW-2	12/16/2008	NA	<0.50	<1.0	<1.0	<1.0	NA	2.6	NA	NA	NA	<10	NA	9.19	7.22	1.97	NA
MW-2	2/27/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	<1.0	NA	NA	NA	<10	NA	9.19	6.00	3.19	NA
<b>MW-2</b>	<b>6/11/2009</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>NA</b>	<b>1.2</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>&lt;10</b>	<b>NA</b>	<b>9.19</b>	<b>7.28</b>	<b>1.91</b>	<b>NA</b>

MW-3 (a)	8/26/1998	2,300	180	330	<0.50	420	44,000	NA	NA	NA	NA	NA	NA	9.45	6.52	2.93	1.8
MW-3 (b)	8/26/1998	<50	<0.50	<0.50	<0.50	<0.50	52,000	75,000	NA	NA	NA	NA	NA	9.45	6.52	2.93	2.3
MW-3	12/28/1998	<5,00	139	<50.0	<50.0	<50.0	15,100	NA	NA	NA	NA	NA	NA	9.45	6.73	2.72	1.7
MW-3	3/29/1999	52,500	5,500	6,900	1,360	6,250	508,000	630,000 c	NA	NA	NA	NA	NA	9.45	6.21	3.24	2.1
MW-3	6/22/1999	58,000	6,600	9,850	1,640	6,950	677,000	653,000	NA	NA	NA	NA	NA	9.45	7.00	2.45	1.3
MW-3	9/30/1999	4,360	121	122	36.1	647	33,700	35,600	NA	NA	NA	NA	NA	9.45	6.84	2.61	0.6
MW-3	11/19/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.45	7.93	1.52	NA
MW-3	11/24/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.45	8.25	1.20	NA
MW-3	12/2/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.45	7.55	1.90	NA
MW-3	12/10/1999	4,220	973	26.3	273	584	88,200	NA	NA	NA	NA	NA	NA	9.45	7.28	2.17	2.5
MW-3	3/2/2000	65,300	5,210	10,300	2,650	15,100	56,800	59,800 e	NA	NA	NA	NA	NA	9.45	5.87	3.58	d
MW-3	6/8/2000	72,700	3,570	10,200	2,100	13,400	44,400	NA	NA	NA	NA	NA	NA	9.45	5.32	4.13	1.1
MW-3	9/5/2000	26,100	959	2,910	1,090	5,640	24,000	NA	NA	NA	NA	NA	NA	9.45	5.60	3.85	NA
MW-3	12/15/2000	5,190	438	8.39	483	530	19,100	11,800 f	NA	NA	NA	NA	NA	9.45	6.27	3.18	NA
MW-3	3/9/2001	5,880	472	42.2	392	1,290	41,800	NA	NA	NA	NA	NA	NA	9.45	5.71	3.74	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-3	6/27/2001	9,100	330	79	140	1,600	NA	31,000	NA	NA	NA	NA	NA	9.45	6.88	2.57	NA
MW-3	9/19/2001	790	14	18	17	67	NA	8,100	NA	NA	NA	NA	NA	9.45	6.70	2.75	NA
MW-3	12/31/2001	<5,000	220	<50	86	<50	NA	22,000	NA	NA	NA	NA	NA	9.45	5.92	3.53	NA
MW-3	3/14/2002	<2,500	<25	<25	<25	<25	NA	12,000	NA	NA	NA	NA	NA	9.45	6.25	3.20	NA
MW-3	6/25/2002	<10,000	160	<100	<100	<100	NA	42,000	NA	NA	NA	NA	NA	9.45	6.65	2.80	NA
MW-3	9/19/2002	<10,000	650	<100	280	360	NA	84,000	NA	NA	NA	NA	NA	9.45	6.51	2.94	NA
MW-3	12/12/2002	<10,000	170	<100	<100	<100	NA	45,000	NA	NA	NA	NA	NA	9.45	6.97	2.48	NA
MW-3	1/2/2003	NA	59	<5.0	5.3	<10	NA	NA	NA	NA	NA	NA	NA	9.45	5.90	3.55	NA
MW-3	03/20/2003 g	5,100	<50	<50	<50	<50	4,400	NA	NA	NA	NA	NA	NA	9.45	6.87	2.58	NA
MW-3	6/23/2003	<5,000	<50	<50	<50	<100	NA	8,100	NA	NA	NA	NA	NA	9.45	13.80	-4.35	NA
MW-3	9/22/2003	<250	<2.5	4.6	<2.5	<5.0	NA	470	NA	NA	NA	NA	NA	9.45	6.31	3.14	NA
MW-3	12/3/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	180	NA	NA	NA	NA	NA	9.45	14.77 h	NA	NA
MW-3	3/18/2004	<1,000	14	<10	<10	<20	NA	2,500	NA	NA	NA	NA	NA	9.45	6.07	3.38	NA
MW-3	5/25/2004	3,900	<10	66	23	470	NA	140	NA	NA	NA	NA	NA	9.45	14.63	-5.18	NA
MW-3	9/22/2004	<10,000	830	<100	290	450	NA	28,000	<400	<400	<400	13,000	<10,000	9.45	4.86	4.59	NA
MW-3	12/22/2004	94	<0.50	<0.50	<0.50	<1.0	NA	84	NA	NA	NA	NA	NA	9.45	6.93	2.52	NA
MW-3	2/23/2005	<50 i	<0.50	<0.50	<0.50	<1.0	NA	85	NA	NA	NA	NA	NA	9.45	5.68	3.77	NA
MW-3	6/27/2005	<2,500	96	<25	29	<50	NA	6,100	NA	NA	NA	NA	NA	9.45	4.80	4.65	NA
MW-3	8/31/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	300	<2.0	<2.0	<2.0	700	<50	8.33	5.07	3.26	NA
MW-3	12/14/2005	647	6.16	2.37	1.88	<0.500	NA	303 j	NA	NA	NA	NA	NA	8.33	5.65	2.68	NA
MW-3	3/8/2006	901	20.8	<0.500	5.55	0.980	NA	313	NA	NA	NA	1,660	NA	8.33	5.57	2.76	NA
MW-3	6/14/2006	1,240	61.0	<0.500	11.0	0.730	NA	680	NA	NA	NA	5,660	NA	8.33	5.68	2.65	NA
MW-3	9/27/2006	555	1.70	<0.500	<0.500	<0.500	NA	24.5	<0.500	<0.500	<0.500	1,370	<50.0	8.33	6.11	2.22	NA
MW-3	11/30/2006	990	32	<2.5	8.2	<5.0	NA	590	NA	NA	NA	13,000	NA	8.33	6.09	2.24	NA
MW-3	3/6/2007	2,900 k	57 k	<10 k	16 k	<10 k	NA	1,700 k	NA	NA	NA	46,000	NA	8.33	4.20	4.13	NA
MW-3	6/11/2007	1,900	110	<50	28 l	<50	NA	1,100	NA	NA	NA	42,000	NA	8.33	5.19	3.14	NA
MW-3	9/26/2007	<50 m	2.0	<1.0	0.38 l	<1.0	NA	11	<2.0	<2.0	<2.0	920	<100	8.33	5.54	2.79	NA
MW-3	12/28/2007	84 m	15	<1.0	0.52 l	<1.0	NA	91	NA	NA	NA	4,400	NA	8.33	4.68	3.65	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-3	3/31/2008	140	3.9	<1.0	<1.0	<1.0	NA	14	NA	NA	NA	1,600	NA	8.33	5.06	3.27	NA
MW-3	6/23/2008	180	<1.0	<2.0	<2.0	<2.0	NA	<2.0	NA	NA	NA	4,500	NA	8.33	5.00	3.33	NA
MW-3	9/22/2008	3,300	29	<10	<10	<10	NA	150	<20	<20	<20	52,000	<1,000	8.33	5.66	2.67	NA
MW-3	12/16/2008	NA	<25	<50	<50	<50	NA	59	NA	NA	NA	11,000	NA	8.33	5.50	2.83	NA
MW-3	2/27/2009	240	2.3	<2.0	<2.0	<2.0	NA	17	NA	NA	NA	1,800	NA	8.33	4.08	4.25	NA
<b>MW-3</b>	<b>6/11/2009</b>	<b>400</b>	<b>3.8</b>	<b>&lt;5.0</b>	<b>&lt;5.0</b>	<b>&lt;5.0</b>	<b>NA</b>	<b>18</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>5,800</b>	<b>NA</b>	<b>8.33</b>	<b>5.30</b>	<b>3.03</b>	<b>NA</b>

MW-4	9/25/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.88	7.64	2.24	NA
MW-4	12/15/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	9.88	7.55	2.33	NA
MW-4	3/9/2001	<50.0	<0.500	0.730	<0.500	0.529	3.16	NA	NA	NA	NA	NA	NA	9.88	7.04	2.84	NA
MW-4	6/27/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	9.88	7.76	2.12	NA
MW-4	9/19/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	9.88	7.69	2.19	NA
MW-4	12/31/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	9.88	7.08	2.80	NA
MW-4	3/14/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	9.88	7.57	2.31	NA
MW-4	6/25/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	9.88	8.50	1.38	NA
MW-4	9/19/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	9.88	8.22	1.66	NA
MW-4	12/12/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	9.88	8.08	1.80	NA
MW-4	03/20/2003 g	<50	<0.50	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA	NA	NA	9.88	7.92	1.96	NA
MW-4	6/23/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<5.0	NA	NA	NA	NA	NA	9.88	8.18	1.70	NA
MW-4	9/22/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	16	NA	NA	NA	NA	NA	9.88	8.28	1.60	NA
MW-4	12/3/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	15	NA	NA	NA	NA	NA	9.88	8.44	1.44	NA
MW-4	3/18/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	15	NA	NA	NA	NA	NA	9.88	7.52	2.36	NA
MW-4	5/25/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	20	NA	NA	NA	NA	NA	9.88	8.30	1.58	NA
MW-4	9/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	20	<2.0	<2.0	<2.0	<5.0	<50	9.88	7.72	2.16	NA
MW-4	12/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	20	NA	NA	NA	NA	NA	9.88	7.32	2.56	NA
MW-4	2/23/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	18	NA	NA	NA	NA	NA	9.88	6.95	2.93	NA
MW-4	6/27/2005	55	<0.50	<0.50	<0.50	<1.0	NA	14	NA	NA	NA	NA	NA	9.88	7.48	2.40	NA
MW-4	8/31/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	15	<2.0	<2.0	<2.0	11	<50	9.88	7.53	2.35	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-4	12/14/2005	<50.0	<0.500	2.04	<0.500	<0.500	NA	10.1	NA	NA	NA	NA	NA	9.88	7.54	2.34	NA
MW-4	3/8/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	5.73	NA	NA	NA	NA	NA	9.88	6.19	3.69	NA
MW-4	6/14/2006	<50.0	<0.500	0.590	<0.500	<0.500	NA	14.0	NA	NA	NA	NA	NA	9.88	7.63	2.25	NA
MW-4	9/27/2006	426	<0.500	<0.500	<0.500	<0.500	NA	16.5	<0.500	<0.500	<0.500	<10.0	<50.0	9.88	7.87	2.01	NA
MW-4	11/30/2006	<50	<0.50	<0.50	<0.50	<1.0	NA	16	NA	NA	NA	NA	NA	9.88	7.81	2.07	NA
MW-4	3/6/2007	<50 k	<0.50 k	<1.0 k	<0.50 k	<1.0 k	NA	17 k	NA	NA	NA	NA	NA	9.88	7.10	2.78	NA
MW-4	6/11/2007	<50	<0.50	<1.0	<1.0	<1.0	NA	22	NA	NA	NA	NA	NA	9.88	7.68	2.20	NA
MW-4	9/26/2007	<50 m	<0.50	<1.0	<1.0	<1.0	NA	17	<2.0	<2.0	<2.0	<10	<100	9.88	7.80	2.08	NA
MW-4	12/28/2007	59 m	<0.50	<1.0	<1.0	<1.0	NA	20	NA	NA	NA	NA	NA	9.88	7.19	2.69	NA
MW-4	3/31/2008	<50	<0.50	<1.0	<1.0	<1.0	NA	15	NA	NA	NA	NA	NA	9.88	6.46	3.42	NA
MW-4	6/23/2008	<50	<0.50	<1.0	<1.0	<1.0	NA	18	NA	NA	NA	NA	NA	9.88	7.34	2.54	NA
MW-4	9/22/2008	<50	<0.50	<1.0	<1.0	<1.0	NA	20	<2.0	<2.0	<2.0	<10	<100	9.88	7.68	2.20	NA
MW-4	12/16/2008	NA	<0.50	<1.0	<1.0	<1.0	NA	19	NA	NA	NA	NA	NA	9.88	7.55	2.33	NA
MW-4	2/27/2009	65	<0.50	<1.0	<1.0	<1.0	NA	27	NA	NA	NA	NA	NA	9.88	6.73	3.15	NA
<b>MW-4</b>	<b>6/11/2009</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>NA</b>	<b>25</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>9.88</b>	<b>7.68</b>	<b>2.20</b>	<b>NA</b>

MW-5	6/18/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.36	NA	NA
MW-5	6/25/2002	<10,000	<100	<100	<100	<100	NA	60,000	NA	NA	NA	NA	NA	NA	8.30	NA	NA
MW-5	9/19/2002	<2,000	<20	<20	<20	<20	NA	7,200	NA	NA	NA	NA	NA	10.03	8.44	1.59	NA
MW-5	12/12/2002	<5,000	<50	<50	<50	<50	NA	33,000	NA	NA	NA	NA	NA	10.03	8.49	1.54	NA
MW-5	03/20/2003 g	12,000	<50	<50	<50	<50	15,000	NA	NA	NA	NA	NA	NA	10.03	8.23	1.80	NA
MW-5	6/23/2003	<1,000	<10	<10	<10	<20	NA	1,700	NA	NA	NA	NA	NA	10.03	16.70	-6.67	NA
MW-5	9/22/2003	<2,500	<25	<25	<25	<50	NA	4,400	NA	NA	NA	NA	NA	10.03	16.70	-6.67	NA
MW-5	12/3/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	70	NA	NA	NA	NA	NA	10.03	16.79	-6.76	NA
MW-5	3/18/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	43	NA	NA	NA	NA	NA	10.03	16.78	-6.75	NA
MW-5	5/25/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	30	NA	NA	NA	NA	NA	10.03	13.02	-2.99	NA
MW-5	9/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	20	<2.0	<2.0	<2.0	83	<50	10.03	5.91	4.12	NA
MW-5	12/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	67	NA	NA	NA	NA	NA	10.03	5.72	4.31	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-5	2/23/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	120	NA	NA	NA	NA	NA	10.03	4.41	5.62	NA
MW-5	6/27/2005	56	<0.50	<0.50	<0.50	<1.0	NA	46	NA	NA	NA	NA	NA	10.03	5.98	4.05	NA
MW-5	8/31/2005	<1,000	<10	<10	<10	<20	NA	69	<40	<40	<40	2,400	<1,000	9.03	6.60	2.43	NA
MW-5	12/14/2005	302	<0.500	2.02	<0.500	<0.500	NA	34.0	NA	NA	NA	NA	NA	9.03	5.00	4.03	NA
MW-5	3/8/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	34.6	NA	NA	NA	677	NA	9.03	4.18	4.85	NA
MW-5	6/14/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	30.4	NA	NA	NA	4,380	NA	9.03	6.10	2.93	NA
MW-5	9/27/2006	528	<0.500	<0.500	<0.500	<0.500	NA	28.6	<0.500	<0.500	<0.500	384	<50.0	9.03	6.94	2.09	NA
MW-5	11/30/2006	<50	<0.50	<0.50	<0.50	<1.0	NA	7.3	NA	NA	NA	380	NA	9.03	6.70	2.33	NA
MW-5	3/6/2007	76 k	<0.50 k	<1.0 k	<0.50 k	<1.0 k	NA	20 k	NA	NA	NA	1,200 k	NA	9.03	4.65	4.38	NA
MW-5	6/11/2007	<50	0.35 l	0.30 l	0.47 l	3.79 l	NA	21	NA	NA	NA	38	NA	9.03	6.28	2.75	NA
MW-5	9/26/2007	<50 m	<0.50	<1.0	<1.0	<1.0	NA	27	<2.0	<2.0	<2.0	2,400	<100	9.03	7.71	1.32	NA
MW-5	12/28/2007	<50 m	<0.50	<1.0	<1.0	<1.0	NA	6.5	NA	NA	NA	190	NA	9.03	5.86	3.17	NA
MW-5	3/31/2008	60	<0.50	<1.0	<1.0	<1.0	NA	15	NA	NA	NA	910	NA	9.03	6.29	2.74	NA
MW-5	6/23/2008	<50	<0.50	<1.0	<1.0	<1.0	NA	1.7	NA	NA	NA	200	NA	9.03	6.45	2.58	NA
MW-5	9/22/2008	160	<0.50	<1.0	<1.0	<1.0	NA	14	<2.0	<2.0	<2.0	3,000	<100	9.03	6.99	2.04	NA
MW-5	12/16/2008	NA	<0.50	<1.0	<1.0	<1.0	NA	4.4	NA	NA	NA	880	NA	9.03	6.34	2.69	NA
MW-5	2/27/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	4.7	NA	NA	NA	69	NA	9.03	4.35	4.68	NA
<b>MW-5</b>	<b>6/11/2009</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>NA</b>	<b>4.9</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>20</b>	<b>NA</b>	<b>9.03</b>	<b>6.70</b>	<b>2.33</b>	<b>NA</b>

C-1	9/19/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	1.44	NA	NA
C-1	3/29/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	2.59	NA	NA
C-1	6/25/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	3.72	NA	NA
C-1	9/19/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	3.08	NA	NA
C-1	12/12/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	0.64	NA	NA
C-1	03/20/2003 g	<50	<0.50	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA	NA	NA	NA	4.61	NA	NA

SD-1	9/19/2001	Unable to sample	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-1	3/29/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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SD-1	6/25/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-1	9/19/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-1	12/12/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-1	3/20/2003	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SD-2	9/19/2001	Unable to sample		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-2	3/29/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-2	6/25/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-2	9/19/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-2	12/12/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-2	3/20/2003	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

BW-A	6/22/1999	318	<0.50	<0.50	0.590	1.48	4,470	NA	NA	NA	NA	NA	NA	NA	4.71	NA	1.1
BW-A	6/25/2002	<500	<5.0	<5.0	<5.0	18	NA	3,100	NA	NA	NA	NA	NA	NA	5.14	NA	NA
BW-A	9/19/2002	<200	<2.0	<2.0	<2.0	<2.0	NA	<20	NA	NA	NA	NA	NA	NA	7.19	NA	NA
BW-A	12/12/2002	<500	<5.0	<5.0	<5.0	<5.0	NA	2,900	NA	NA	NA	NA	NA	NA	6.40	NA	NA
BW-A	03/20/2003 g	<2,500	<25	<25	<25	<25	<250	NA	NA	NA	NA	NA	NA	NA	5.36	NA	NA
BW-A	6/23/2003	<1,000	<10	<10	<10	<20	NA	<100	NA	NA	NA	NA	NA	NA	10.27	NA	NA
BW-A	9/22/2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.63	NA	NA	NA

BW-B	6/22/1999	<250	<2.5	<2.5	<2.5	<2.5	8,600	NA	NA	NA	NA	NA	NA	NA	5.90	NA	1.2
BW-B	6/27/2001	<5,000	<50	<50	<50	<50	NA	40,000	NA	NA	NA	NA	NA	NA	5.83	NA	NA
BW-B	12/31/2001	<2,000	<20	<20	<20	<20	NA	9,200	NA	NA	NA	NA	NA	NA	4.19	NA	NA
BW-B	3/14/2002	<2,000	<20	<20	<20	<20	NA	9,400	NA	NA	NA	NA	NA	NA	5.24	NA	NA
BW-B	6/25/2002	<2,000	<20	<20	<20	<20	NA	6,600	NA	NA	NA	NA	NA	NA	6.19	NA	NA
BW-B	9/19/2002	<500	<5.0	<5.0	<5.0	<5.0	NA	<50	NA	NA	NA	NA	NA	NA	8.46	NA	NA
BW-B	12/12/2002	<500	<5.0	<5.0	<5.0	<5.0	NA	1,700	NA	NA	NA	NA	NA	NA	7.46	NA	NA
BW-B	03/20/2003 g	170	<1.0	<1.0	<1.0	<1.0	190	NA	NA	NA	NA	NA	NA	NA	6.23	NA	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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BW-B	6/23/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	43	NA	NA	NA	NA	NA	NA	9.95	NA	NA
BW-B	9/22/2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.32	NA	NA	NA

BW-C	6/22/1999	<50	<0.50	<0.50	<0.50	0.98	11,000	NA	NA	NA	NA	NA	NA	NA	5.91	NA	1.6
BW-C	6/25/2002	<5,000	<50	<50	<50	<50	NA	20,000	NA	NA	NA	NA	NA	NA	6.49	NA	NA
BW-C	9/19/2002	<1,000	<10	<10	<10	<10	NA	400	NA	NA	NA	NA	NA	NA	8.52	NA	NA
BW-C	12/12/2002	<2,000	<20	<20	<20	<20	NA	8,000	NA	NA	NA	NA	NA	NA	7.57	NA	NA
BW-C	03/20/2003 g	270	<1.0	<1.0	<1.0	<1.0	250	NA	NA	NA	NA	NA	NA	NA	6.48	NA	NA
BW-C	6/23/2003	<1,000	<10	<10	<10	<20	NA	170	NA	NA	NA	NA	NA	NA	11.48	NA	NA
BW-C	9/22/2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.81	NA	NA	NA

BW-D	6/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	2,190	NA	NA	NA	NA	NA	NA	NA	4.78	NA	1.4
BW-D	6/25/2002	Well inaccessible			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BW-D	7/2/2002	<1,000	23	<10	<10	<10	NA	<100	NA	NA	NA	NA	NA	NA	6.36	NA	NA
BW-D	9/19/2002	<250	<2.5	<2.5	<2.5	<2.5	NA	<25	NA	NA	NA	NA	NA	NA	7.25	NA	NA
BW-D	12/12/2002	<5,000	<50	<50	<50	<50	NA	16,000	NA	NA	NA	NA	NA	NA	6.21	NA	NA
BW-D	03/20/2003 g	71	<0.50	<0.50	<0.50	<0.50	55	NA	NA	NA	NA	NA	NA	NA	5.23	NA	NA
BW-D	6/23/2003	<1,000	<10	<10	<10	<20	NA	<100	NA	NA	NA	NA	NA	NA	10.25	NA	NA
BW-D	9/22/2003	<100	<1.0	<1.0	<1.0	<2.0	NA	120	NA	NA	NA	NA	NA	NA	10.18	NA	NA
BW-D	12/3/2003	<1,300	110	<13	<13	29	NA	560	NA	NA	NA	NA	NA	NA	10.20	NA	NA
BW-D	3/18/2004	<50	0.67	<0.50	<0.50	<1.0	NA	12	NA	NA	NA	NA	NA	NA	3.42	NA	NA
BW-D	5/25/2004	<50	1.4	0.96	<0.50	<1.0	NA	1.7	NA	NA	NA	NA	NA	NA	8.83	NA	NA
BW-D	9/22/2004	<100	6.9	<1.0	2.1	4.2	NA	210	NA	NA	NA	NA	NA	NA	2.75	NA	NA
BW-D	12/22/2004	61	2.1	2.9	<0.50	3.6	NA	5.4	NA	NA	NA	NA	NA	NA	3.67	NA	NA
BW-D	2/23/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	1.2	NA	NA	NA	NA	NA	NA	2.88	NA	NA
BW-D	6/27/2005	53	<0.50	<0.50	<0.50	<1.0	NA	1.8	NA	NA	NA	NA	NA	NA	3.70	NA	NA
BW-D	8/31/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	1.4	NA	NA	NA	NA	NA	8.61	3.82	4.79	NA
BW-D	12/14/2005	<50.0	<0.500	2.78	<0.500	<0.500	NA	2.26	NA	NA	NA	NA	NA	8.61	3.59	5.02	NA



**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
BW-D	3/8/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	2.23	NA	NA	NA	NA	NA	8.61	3.61	5.00	NA
BW-D	6/14/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	18.1	NA	NA	NA	NA	NA	8.61	3.86	4.75	NA
BW-D	9/27/2006	410	<0.500	<0.500	<0.500	<0.500	NA	2.90	<0.500	<0.500	<0.500	78	<50.0	8.61	4.32	4.29	NA
BW-D	11/30/2006	<50	<0.50	<0.50	<0.50	<1.0	NA	1.3	NA	NA	NA	NA	NA	8.61	4.00	4.61	NA
BW-D	3/6/2007	<50 k	<0.50 k	<1.0 k	<0.50 k	<1.0 k	NA	1.4 k	NA	NA	NA	NA	NA	8.61	3.44	5.17	NA
BW-D	6/11/2007	<50	<0.50	<1.0	<1.0	<1.0	NA	0.95 l	NA	NA	NA	NA	NA	8.61	4.14	4.47	NA
BW-D	9/26/2007	<50 m	<0.50	<1.0	<1.0	<1.0	NA	1.1	NA	NA	NA	NA	NA	8.61	4.22	4.39	NA
BW-D	12/28/2007	<50 m	<0.50	<1.0	<1.0	<1.0	NA	1.4	NA	NA	NA	NA	NA	8.61	3.55	5.06	NA
BW-D	3/31/2008	<50	<0.50	<1.0	<1.0	<1.0	NA	2.3	NA	NA	NA	NA	NA	8.61	4.20	4.41	NA
BW-D	6/23/2008	<50	<0.50	<1.0	<1.0	<1.0	NA	1.1	NA	NA	NA	NA	NA	8.61	4.01	4.60	NA
BW-D	9/22/2008	<50	<0.50	<1.0	<1.0	<1.0	NA	<1.0	NA	NA	NA	<10	NA	8.61	4.21	4.40	NA
BW-D	12/16/2008	<50	<0.50	<1.0	<1.0	<1.0	NA	1.3	NA	NA	NA	NA	NA	8.61	3.69	4.92	NA
BW-D	2/27/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	<1.0	NA	NA	NA	NA	NA	8.61	3.14	5.47	NA
<b>BW-D</b>	<b>6/11/2009</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>NA</b>	<b>1.5</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>8.61</b>	<b>4.52</b>	<b>4.09</b>	<b>NA</b>

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

<b>Well ID</b>	<b>Date</b>	<b>TPPH</b> (ug/L)	<b>B</b> (ug/L)	<b>T</b> (ug/L)	<b>E</b> (ug/L)	<b>X</b> (ug/L)	<b>MTBE</b> <b>8020</b> (ug/L)	<b>MTBE</b> <b>8260</b> (ug/L)	<b>DIPE</b> (ug/L)	<b>ETBE</b> (ug/L)	<b>TAME</b> (ug/L)	<b>TBA</b> (ug/L)	<b>Ethanol</b> (ug/L)	<b>TOC</b> (MSL)	<b>Depth to</b> <b>Water</b> (ft.)	<b>GW</b> <b>Elevation</b> (MSL)	<b>DO</b> <b>Reading</b> (ppm)
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Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to June 27, 2001, analyzed by EPA Method 8015.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to June 27, 2001, analyzed by EPA Method 8020.

MTBE = Methyl tertiary butyl ether

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

TBA = Tertiary butyl alcohol, analyzed by EPA Method 8260B

TOC = Top of Casing Elevation

GW = Groundwater

DO = Dissolved Oxygen

ppm = Parts per million

ug/L = Parts per billion

MSL = Mean sea level

ft. = Feet

<n = Below detection limit

(D) = Duplicate sample

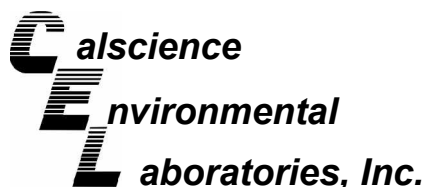
NA = Not applicable

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**540 Hegenberger Road**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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Notes:

- a = Pre-purge
  - b = Post purge
  - c = Lab confirmed MTBE by mistake. MTBE value at MW-1 should have been confirmed instead.
  - d = DO reading not taken.
  - e = Sample was analyzed outside of the EPA recommended holding time.
  - f = The second highest MTBE hit was mistakenly confirmed. MTBE for MW-1 should have been confirmed.
  - g = On March 20, 2003, all analyses run by EPA Method 8015/8020.
  - h = Depth to top of pump; pump prevented depth to water measurement.
  - i = The concentration reported reflects individual or discrete unidentified peaks not matching a typical fuel pattern.
  - j = Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to holding time requirements.
  - k = 1,1-Dichloroethene, a calibration check compound (CCC), was outside the 20%D method acceptance criteria in the CCV.
  - l = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
  - m = Analyzed by EPA Method 8015B (M).
  - n = 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.
- Ethanol analyzed by EPA Method 8260B.
- Site surveyed September 21, 2000 by Virgil Chavez Land Surveying of Vallejo, CA.
- C-1 is a canal sample location.
- SD-1 and SD-2 are storm drains.
- Wells MW-1 through MW-5 surveyed January 24 and June 19, 2002 by Virgil Chavez Land Surveying of Vallejo, CA.
- Wells MW-1, MW-3, MW-5, and BW-D surveyed on September 22, 2005 by Virgil Chavez Land Surveying of Vallejo, CA.
- Unmonitored backfilled wells BW-A, BW-B, and BW-C surveyed on September 22, 2005 by Virgil Chavez Land Surveying of Vallejo, CA.



June 29, 2009

Michael Ninokata  
Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

Subject: **CalScience Work Order No.: 09-06-1332**  
**Client Reference: 540 Hegenberger Rd., Oakland, CA**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/13/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard CalScience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in cursive script that reads "Jessie Lee".

CalScience Environmental  
Laboratories, Inc.  
Jessie Lee  
Project Manager

**Analytical Report**



Blaine Tech Services, Inc.  
 1680 Rogers Avenue  
 San Jose, CA 95112-1105

Date Received: 06/13/09  
 Work Order No: 09-06-1332  
 Preparation: EPA 5030B  
 Method: LUFT GC/MS / EPA 8260B  
 Units: ug/L

Project: 540 Hegenberger Rd., Oakland, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>MW-4</b>	<b>09-06-1332-4-B</b>	<b>06/11/09 10:05</b>	<b>Aqueous</b>	<b>GC/MS LL</b>	<b>06/19/09</b>	<b>06/20/09 07:07</b>	<b>090619L02</b>

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	25	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
Dibromofluoromethane	106	74-140			1,2-Dichloroethane-d4	104	74-146		
Toluene-d8	100	88-112			Toluene-d8-TPPH	101	88-112		
1,4-Bromofluorobenzene	96	74-110							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>BW-D</b>	<b>09-06-1332-6-B</b>	<b>06/11/09 11:50</b>	<b>Aqueous</b>	<b>GC/MS LL</b>	<b>06/19/09</b>	<b>06/20/09 08:01</b>	<b>090619L02</b>

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	1.5	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
Dibromofluoromethane	109	74-140			1,2-Dichloroethane-d4	108	74-146		
Toluene-d8	100	88-112			Toluene-d8-TPPH	101	88-112		
1,4-Bromofluorobenzene	99	74-110							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-767-2,046</b>	<b>N/A</b>	<b>Aqueous</b>	<b>GC/MS LL</b>	<b>06/19/09</b>	<b>06/20/09 03:32</b>	<b>090619L02</b>

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
Dibromofluoromethane	103	74-140			1,2-Dichloroethane-d4	103	74-146		
Toluene-d8	102	88-112			Toluene-d8-TPPH	103	88-112		
1,4-Bromofluorobenzene	99	74-110							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

**Analytical Report**



Blaine Tech Services, Inc.  
 1680 Rogers Avenue  
 San Jose, CA 95112-1105

Date Received: 06/13/09  
 Work Order No: 09-06-1332  
 Preparation: EPA 5030B  
 Method: LUFT GC/MS / EPA 8260B  
 Units: ug/L

Project: 540 Hegenberger Rd., Oakland, CA

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>MW-1</b>	<b>09-06-1332-1-B</b>	<b>06/11/09 13:05</b>	<b>Aqueous</b>	<b>GC/MS LL</b>	<b>06/19/09</b>	<b>06/20/09 06:14</b>	<b>090619L02</b>

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	1.0	2		Methyl-t-Butyl Ether (MTBE)	180	2.0	2	
Ethylbenzene	ND	2.0	2		Tert-Butyl Alcohol (TBA)	1200	20	2	
Toluene	ND	2.0	2		TPPH	220	100	2	
Xylenes (total)	ND	2.0	2						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
Dibromofluoromethane	107	74-140			1,2-Dichloroethane-d4	104	74-146		
Toluene-d8	100	88-112			Toluene-d8-TPPH	101	88-112		
1,4-Bromofluorobenzene	99	74-110							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>MW-2</b>	<b>09-06-1332-2-B</b>	<b>06/11/09 11:05</b>	<b>Aqueous</b>	<b>GC/MS LL</b>	<b>06/19/09</b>	<b>06/20/09 03:59</b>	<b>090619L02</b>

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	1.2	1.0	1	
Ethylbenzene	ND	1.0	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
Xylenes (total)	ND	1.0	1						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
Dibromofluoromethane	104	74-140			1,2-Dichloroethane-d4	106	74-146		
Toluene-d8	99	88-112			Toluene-d8-TPPH	100	88-112		
1,4-Bromofluorobenzene	97	74-110							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>MW-3</b>	<b>09-06-1332-3-C</b>	<b>06/11/09 12:20</b>	<b>Aqueous</b>	<b>GC/MS LL</b>	<b>06/20/09</b>	<b>06/21/09 08:04</b>	<b>090620L02</b>

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	3.8	2.5	5		Methyl-t-Butyl Ether (MTBE)	18	5.0	5	
Ethylbenzene	ND	5.0	5		Tert-Butyl Alcohol (TBA)	5800	100	10	
Toluene	ND	5.0	5		TPPH	400	250	5	
Xylenes (total)	ND	5.0	5						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
Dibromofluoromethane	110	74-140			1,2-Dichloroethane-d4	107	74-146		
Toluene-d8	100	88-112			Toluene-d8-TPPH	102	88-112		
1,4-Bromofluorobenzene	98	74-110							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

**Analytical Report**



Blaine Tech Services, Inc.  
 1680 Rogers Avenue  
 San Jose, CA 95112-1105

Date Received: 06/13/09  
 Work Order No: 09-06-1332  
 Preparation: EPA 5030B  
 Method: LUFT GC/MS / EPA 8260B  
 Units: ug/L

Project: 540 Hegenberger Rd., Oakland, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5	09-06-1332-5-B	06/11/09 12:47	Aqueous	GC/MS LL	06/19/09	06/20/09 07:35	090619L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	4.9	1.0	1	
Ethylbenzene	ND	1.0	1		Tert-Butyl Alcohol (TBA)	20	10	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
Xylenes (total)	ND	1.0	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	110	74-140			1,2-Dichloroethane-d4	107	74-146		
Toluene-d8	100	88-112			Toluene-d8-TPPH	101	88-112		
1,4-Bromofluorobenzene	99	74-110							

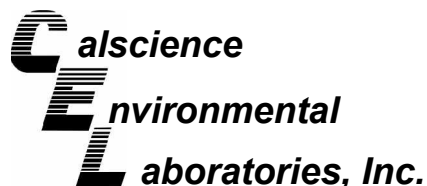
Method Blank	099-12-767-2,046	N/A	Aqueous	GC/MS LL	06/19/09	06/20/09 03:32	090619L02
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
Xylenes (total)	ND	1.0	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	103	74-140			1,2-Dichloroethane-d4	103	74-146		
Toluene-d8	102	88-112			Toluene-d8-TPPH	103	88-112		
1,4-Bromofluorobenzene	99	74-110							

Method Blank	099-12-767-2,057	N/A	Aqueous	GC/MS LL	06/20/09	06/21/09 00:26	090620L02
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Ethylbenzene	ND	1.0	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Toluene	ND	1.0	1		TPPH	ND	50	1	
Xylenes (total)	ND	1.0	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	107	74-140			1,2-Dichloroethane-d4	107	74-146		
Toluene-d8	100	88-112			Toluene-d8-TPPH	101	88-112		
1,4-Bromofluorobenzene	98	74-110							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



## Quality Control - Spike/Spike Duplicate



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

Date Received: 06/13/09  
Work Order No: 09-06-1332  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA  
8260B

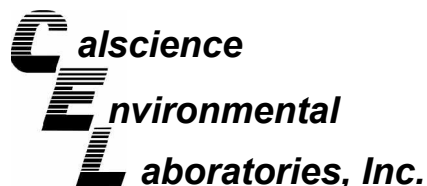
Project 540 Hegenberger Rd., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-2	Aqueous	GC/MS LL	06/19/09	06/20/09	090619S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	88	96	88-118	9	0-7	4
Carbon Tetrachloride	96	105	67-145	9	0-11	
Chlorobenzene	84	94	88-118	11	0-7	3,4
1,2-Dibromoethane	94	99	70-130	6	0-30	
1,2-Dichlorobenzene	87	92	86-116	5	0-8	
1,1-Dichloroethene	99	108	70-130	9	0-25	
Ethylbenzene	86	93	70-130	8	0-30	
Toluene	87	95	87-123	8	0-8	
Trichloroethene	82	91	79-127	10	0-10	
Vinyl Chloride	89	95	69-129	7	0-13	
Methyl-t-Butyl Ether (MTBE)	102	106	71-131	3	0-13	
Tert-Butyl Alcohol (TBA)	97	104	36-168	7	0-45	
Diisopropyl Ether (DIPE)	100	105	81-123	6	0-9	
Ethyl-t-Butyl Ether (ETBE)	100	107	72-126	6	0-12	
Tert-Amyl-Methyl Ether (TAME)	98	103	72-126	5	0-12	
Ethanol	98	109	53-149	10	0-31	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

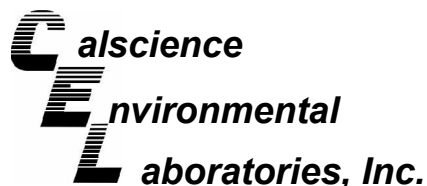
Date Received: 06/13/09  
Work Order No: 09-06-1332  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA  
8260B

Project 540 Hegenberger Rd., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-06-1564-8	Aqueous	GC/MS LL	06/20/09	06/21/09	090620S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	95	95	88-118	0	0-7	
Carbon Tetrachloride	106	106	67-145	1	0-11	
Chlorobenzene	89	91	88-118	2	0-7	
1,2-Dibromoethane	96	98	70-130	2	0-30	
1,2-Dichlorobenzene	91	93	86-116	2	0-8	
1,1-Dichloroethene	104	108	70-130	3	0-25	
Ethylbenzene	91	93	70-130	2	0-30	
Toluene	93	94	87-123	1	0-8	
Trichloroethene	88	88	79-127	0	0-10	
Vinyl Chloride	102	101	69-129	1	0-13	
Methyl-t-Butyl Ether (MTBE)	103	107	71-131	3	0-13	
Tert-Butyl Alcohol (TBA)	99	91	36-168	8	0-45	
Diisopropyl Ether (DIPE)	108	108	81-123	0	0-9	
Ethyl-t-Butyl Ether (ETBE)	107	107	72-126	0	0-12	
Tert-Amyl-Methyl Ether (TAME)	102	102	72-126	0	0-12	
Ethanol	116	92	53-149	23	0-31	

RPD - Relative Percent Difference , CL - Control Limit



## Quality Control - LCS/LCS Duplicate



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

Date Received: N/A  
Work Order No: 09-06-1332  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

Project: 540 Hegenberger Rd., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-767-2,046	Aqueous	GC/MS LL	06/19/09	06/20/09	090619L02		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	103	100	84-120	78-126	3	0-8	
Carbon Tetrachloride	120	113	63-147	49-161	6	0-10	
Chlorobenzene	98	95	89-119	84-124	3	0-7	
1,2-Dibromoethane	99	100	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	98	94	89-119	84-124	5	0-9	
1,1-Dichloroethene	118	112	77-125	69-133	5	0-16	
Ethylbenzene	102	100	80-120	73-127	2	0-20	
Toluene	102	99	83-125	76-132	2	0-9	
Trichloroethene	108	105	89-119	84-124	3	0-8	
Vinyl Chloride	108	104	63-135	51-147	4	0-13	
Methyl-t-Butyl Ether (MTBE)	107	104	82-118	76-124	3	0-13	
Tert-Butyl Alcohol (TBA)	103	102	46-154	28-172	1	0-32	
Diisopropyl Ether (DIPE)	110	106	81-123	74-130	3	0-11	
Ethyl-t-Butyl Ether (ETBE)	107	105	74-122	66-130	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	103	101	76-124	68-132	2	0-10	
Ethanol	112	111	60-138	47-151	1	0-32	
TPPH	100	97	65-135	53-147	2	0-30	

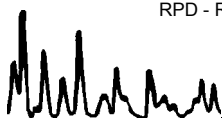
Total number of LCS compounds : 17

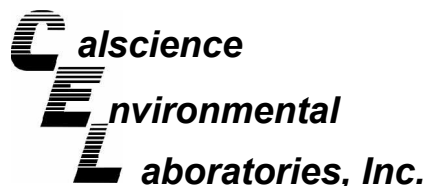
Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112-1105

Date Received: N/A  
Work Order No: 09-06-1332  
Preparation: EPA 5030B  
Method: LUFT GC/MS / EPA 8260B

Project: 540 Hegenberger Rd., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-767-2,057	Aqueous	GC/MS LL	06/20/09	06/20/09	090620L02		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	101	102	84-120	78-126	1	0-8	
Carbon Tetrachloride	112	115	63-147	49-161	3	0-10	
Chlorobenzene	95	97	89-119	84-124	2	0-7	
1,2-Dibromoethane	98	100	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	97	93	89-119	84-124	4	0-9	
1,1-Dichloroethene	114	117	77-125	69-133	3	0-16	
Ethylbenzene	98	99	80-120	73-127	2	0-20	
Toluene	100	101	83-125	76-132	1	0-9	
Trichloroethene	104	104	89-119	84-124	0	0-8	
Vinyl Chloride	106	114	63-135	51-147	8	0-13	
Methyl-t-Butyl Ether (MTBE)	104	105	82-118	76-124	0	0-13	
Tert-Butyl Alcohol (TBA)	100	99	46-154	28-172	1	0-32	
Diisopropyl Ether (DIPE)	107	109	81-123	74-130	2	0-11	
Ethyl-t-Butyl Ether (ETBE)	105	107	74-122	66-130	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	103	105	76-124	68-132	2	0-10	
Ethanol	105	110	60-138	47-151	5	0-32	
TPPH	98	97	65-135	53-147	1	0-30	

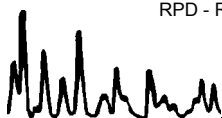
Total number of LCS compounds : 17

Total number of ME compounds : 0

Total number of ME compounds allowed : 1

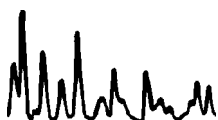
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 09-06-1332

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.



LAB (LOCATION)

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



# Shell Oil Products Chain Of Custody Record

**Please Check Appropriate Box:**

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

**Print Bill To Contact Name:** Peter Schaefer - 240414

**INCIDENT # (ENV SERVICES):** 9 8 9 9 5 7 5 2

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

CHECK IF NO INCIDENT # APPLIES

DATE: 6/11/09

PAGE: 1 of 1

**SAMPLING COMPANY:** Blaine Tech Services

**LOG CODE:** BTSS

**ADDRESS:** 1680 Rogers Ave, San Jose, CA 95112

**SITE ADDRESS: Street and City:** 540 Hegenberger Rd., Oakland

**State:** CA **GLOBAL ID NO:** T0600102123

**PROJECT CONTACT (Hardcopy or PDF Report to):** Michael Ninokata - Copy to Shell.Lab.Billing@croworld.com

**EDF DELIVERABLE TO (Name, Company, Office Location):** Anni Kreml, CRA, Emeryville

**PHONE NO:** (510) 420-3335 **E-MAIL:** Shelledf@croworld.com

**CONSULTANT PROJECT NO:** BTS # 090611-AC1

**TELEPHONE:** (408)573-0555 **FAX:** (408)573-7771 **E-MAIL:** mninokata@blainetech.com

**SAMPLER NAME(S) (Print):** A. Carothers

**LAB USE ONLY:** 09-06-1332

**TURNAROUND TIME (CALENDAR DAYS):**

STANDARD (14 DAY)  5 DAYS  3 DAYS  2 DAYS  24 HOURS

RESULTS NEEDED ON WEEKEND

LA - RWQCB REPORT FORMAT  UST AGENCY:

**REQUESTED ANALYSIS**

**SPECIAL INSTRUCTIONS OR NOTES :**

Run TPH-d w/Silica Gel Clean Up

SHELL CONTRACT RATE APPLIES

STATE REIMBURSEMENT RATE APPLIES

EDD NOT NEEDED

RECEIPT VERIFICATION REQUESTED

LAB USE ONLY	Field Sample Identification		SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	REQUESTED ANALYSIS											TEMPERATURE ON RECEIPT °C	Container PID Readings or Laboratory Notes										
			DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER		TPH - Purgeable (8260B)	TPH - Extractable (8015M)	BTEX (8260B)	5 Oxygenates (8260B)	MTBE (8260B)	TBA (8260B)	DIPE (8260B)	TAME (8260B)	ETBE (8260B)	1,2 DCA (8260B)	EDB (8260B)			Ethanol (8260B)	Methanol (8015M)								
	1	MW-1	6/11/09	1305	W	3						3	X	X	X	X																		
	2	MW-2	↓	1105	↓	↓						↓	X	X	X	X																		
	3	MW-3	↓	1220	↓	↓						↓	X	X	X	X																		
	4	MW-4	↓	1005	↓	↓						↓	X	X	X	X																		
	5	MW-5	↓	1247	↓	↓						↓	X	X	X	X																		
	6	BW-D	↓	1150	↓	↓						↓	X	X	X																			

Relinquished by: (Signature) <i>Ann Carothers</i>	Received by: (Signature) <i>Ann Carothers (sample custodian)</i>	Date: 6/11/09	Time: 1455
Relinquished by: (Signature) Shipped via GSO	Received by: (Signature)	Date: 6/12/09	Time: 1600

TK# 512052348

*fuldano*

Date: 6/13/09 Time: 8:45

# SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: BTS

DATE: 6/13/09

**TEMPERATURE:** (Criteria: 0.0°C – 6.0°C, not frozen)

Temperature 3.3°C - 0.2°C (CF) = 3.1°C     Blank     Sample

Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_).

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature:     Air     Filter     Metals Only     PCBs Only    Initial: JD

**CUSTODY SEALS INTACT:**

Cooler     \_\_\_\_\_     No (Not Intact)     Not Present     N/A    Initial: JD

Sample     \_\_\_\_\_     No (Not Intact)     Not Present    Initial: SO

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> COC not relinquished. <input type="checkbox"/> No date relinquished. <input type="checkbox"/> No time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Correct containers and volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

**Solid:**     4ozCGJ     8ozCGJ     16ozCGJ     Sleeve     EnCores®     TerraCores®     \_\_\_\_\_

**Water:**     VOA     VOA<sup>3</sup>h     VOAna<sub>2</sub>     125AGB     125AGBh     125AGBp     1AGB     1AGBna<sub>2</sub>     1AGBs

500AGB     500AGJ     500AGJs     250AGB     250CGB     250CGBs     1PB     500PB     500PBna

250PB     250PBn     125PB     125PBz<sub>na</sub>     100PB     100PBna<sub>2</sub>     \_\_\_\_\_     \_\_\_\_\_     \_\_\_\_\_

**Air:**     Tedlar®     Summa®     \_\_\_\_\_    **Other:**     \_\_\_\_\_    **Checked/Labeled by:** SO

**Container:**    C: Clear    A: Amber    P: Plastic    G: Glass    J: Jar (Wide-mouth)    B: Bottle (Narrow-mouth)    **Reviewed by:** WSC

**Preservative:**    h: HCL    n: HNO<sub>3</sub>    na<sub>2</sub>: Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>    Na: NaOH    p: H<sub>3</sub>PO<sub>4</sub>    s: H<sub>2</sub>SO<sub>4</sub>    z<sub>na</sub>: ZnAc<sub>2</sub>+NaOH    f: Field-filtered    **Scanned by:** SO



# SHELL WELL MONITORING DATA SHEET

BTS #: <u>090611-AC1</u>	Site: <u>540 Hegenberger Rd, Oakland, CA</u>
Sampler: <u>AC</u>	Date: <u>6/11/09</u>
Well I.D.: <u>MW-1</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth (TD): <u>22.68</u>	Depth to Water (DTW): <u>7.90</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>10.85</u>	

Purge Method: <input checked="" type="checkbox"/> Bailer	Watterra	Sampling Method: <input checked="" type="checkbox"/> Bailer
<input type="checkbox"/> Disposable Bailer	<input type="checkbox"/> Peristaltic	<input type="checkbox"/> Disposable Bailer
<input type="checkbox"/> Positive Air Displacement	<input type="checkbox"/> Extraction Pump	<input type="checkbox"/> Extraction Port
<input type="checkbox"/> Electric Submersible	Other _____	<input type="checkbox"/> Dedicated Tubing
		Other: _____

$\frac{2.4 \text{ (Gals.)} \times 3}{1 \text{ Case Volume Specified Volumes}} = \frac{7.2 \text{ Gals.}}{\text{Calculated Volume}}$	<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. <sup>at</sup> (mS or <del>µS</del> )	Turbidity (NTUs)	Gals. Removed	Observations
1229	65.8	7.6	12.89	473	2.4	<sup>at</sup> black, cloudy
1231	66.0	7.3	14.40	>1000	4.8	grey, cloudy
1233	66.3	7.1	19.80	>1000	7.2	
1239	66.0	7.2	15.60	>1000	9.6	called PM about 10% requirements
1241	66.0	7.2	14.87	>1000	11.8	black, cloudy <sup>DTW 13.94</sup>

Did well dewater? Yes  No  Gallons actually evacuated: 11.8  
 Sampling Date: 6/11/09 Sampling Time: 1305 Depth to Water: 10.80  
wa; Fed

Sample I.D.: MW-1 Laboratory: CalScience Columbia Other \_\_\_\_\_

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

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



**SHEET - WELL MONITORING DATA SHEET**

BTS #: <u>090611-AC1</u>	Site: <u>540 Hegenberger Rd, Oakland, CA</u>
Sampler: <u>AC</u>	Date: <u>6/11/09</u>
Well I.D.: <u>MW-2</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth (TD): <u>19.88</u>	Depth to Water (DTW): <u>7.28</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>9.80</u>	

Purge Method: <input checked="" type="checkbox"/> Bailer	Watterra	Sampling Method: <input checked="" type="checkbox"/> Bailer
<input type="checkbox"/> Disposable Bailer	<input type="checkbox"/> Peristaltic	<input type="checkbox"/> Disposable Bailer
<input type="checkbox"/> Positive Air Displacement	<input type="checkbox"/> Extraction Pump	<input type="checkbox"/> Extraction Port
<input type="checkbox"/> Electric Submersible	Other _____	<input type="checkbox"/> Dedicated Tubing
		Other: _____

<u>2</u> (Gals.) X <u>3</u> = <u>6</u> 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
1054	65.1	7.8	517.2	391	2	<i>slightly cloudy</i>
1056	65.2	7.7	670.5	>1000	4	<i>cloudy</i>
1058	65.0	7.5	751.2	>1000	6	<i>"</i>

Did well dewater?    Yes <input checked="" type="checkbox"/> No	Gallons actually evacuated: <u>6</u>
Sampling Date: <u>6/11/09</u> Sampling Time: <u>1105</u> Depth to Water: <u>8.10</u>	
Sample I.D.: <u>MW-2</u> Laboratory: <u>CalScience</u> Columbia    Other _____	
Analyzed for:    TPH-G    BTEX    MTBE    TPH-D    Oxygenates (5)    Other: <u>See CDC</u>	
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 OIL WELL MONITORING DATA SHEET

BTS #: 090611-AC1	Site: 540 Hegenberger Rd, Oakland, CA
Sampler: AC	Date: 6/11/09
Well I.D.: MW-3	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): 18.42	Depth to Water (DTW): 5.30
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]: 7.92	

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

$\frac{2 \text{ (Gals.)} \times 3 \text{ Specified Volumes}}{1 \text{ Case Volume}} = 6 \text{ Gals. Calculated Volume}$	<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
1201	66.9	7.3	<del>5782</del> 5782	>1000	2642	black
1203	66.8	7.3	<del>8368</del> 8368	>1000	4	"
1205	66.8	7.4	9245	>1000	6	" DTW 9.85

Did well dewater? Yes  No  Gallons actually evacuated: 6

Sampling Date: 6/11/09 Sampling Time: 1220 Depth to Water: 7.85 <sup>wasted</sup>

Sample I.D.: MW-3 Laboratory: CalScience Columbia Other \_\_\_\_\_

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

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 #: <u>090611-AC1</u>	Site: <u>540 Heegenberger Rd, Oakland</u>
Sampler: <u>AC</u>	Date: _____
Well I.D.: <u>MW-5</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth (TD): <u>18.45</u>	Depth to Water (DTW): <u>6.70</u>
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>9.05</u>	

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

Other: \_\_\_\_\_

$\frac{7.6 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = \frac{22.8}{\text{Calculated Volume}} \text{ Gals.}$	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <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
0911	67.1	7.8	695.9	27	7.6	clean
0913	66.8	7.4	751.7	94	15.2	"
Dewatered @ 16 gals						
1311 <sup>h</sup>						
1247	68.2	8.2	948.1	215	—	slightly cloudy

Did well dewater?  Yes     No      Gallons actually evacuated: 16

Sampling Date: 6/11/09    Sampling Time: 1247    Depth to Water: 13.10 <sup>2 hr.</sup>

Sample I.D.: MW-5      Laboratory: CalScience Columbia Other \_\_\_\_\_

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

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	

# SHELF WELL MONITORING DATA SHEET

BTS #: <u>090611-AC1</u>	Site: <u>540 Hegenberger Rd, Oakland, CA</u>
Sampler: <u>AC</u>	Date: <u>6/11/09</u>
Well I.D.: <u>BW-D</u>	Well Diameter: 2 3 4 6 8 <u>12</u>
Total Well Depth (TD): <u>12.30</u>	Depth to Water (DTW): <u>4.52</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>6.07</u>	

Purge Method: Bailer	Water: Water	Sampling Method: <input checked="" type="checkbox"/> Bailer
Disposable Bailer	Peristaltic	Disposable Bailer
Positive Air Displacement	Extraction Pump	Extraction Port
<input checked="" type="checkbox"/> Electric Submersible	Other _____	Dedicated Tubing
		Other: _____

$\frac{45.7 \text{ (Gals.)} \times 3}{1 \text{ Case Volume}} = \frac{137.1 \text{ Gals.}}{\text{Specified Volumes}} = \text{Calculated Volume}$	<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
1128	68.0	7.4	510.8	23	45.7	clear
1136	68.5	7.1	513.9	17	91.4	"
1144	69.0	7.1	518.8	14	137.1	"

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>137.1</u>	
Sampling Date: <u>6/11/09</u>	Sampling Time: <u>1150</u>	Depth to Water: <u>5.05</u>
Sample I.D.: <u>BW-D</u>	Laboratory: <u>CalScience</u> Columbia Other _____	
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: <u>See COC</u>		
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	

