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3:15 pm, Nov 08, 2007

Alameda County  
Environmental Health



**Denis L. Brown**

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

**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: Former Shell Service Station  
510 East 14<sup>th</sup> Street (506-510 International Boulevard)  
Oakland, California  
SAP Code 135695  
Incident No. 97601734  
ACHCSA Case No. RO0002853

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 that reads "Denis L. Brown". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Denis L. Brown  
Project Manager



**CONESTOGA-ROVERS  
& ASSOCIATES**

19449 Riverside Drive, Suite 230, Sonoma, California 95476  
Telephone: 707-935-4850 Facsimile: 707-935-6649  
www.CRAworld.com

November 7, 2007

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

Re: **Groundwater Monitoring Report – Third Quarter 2007**  
Shell-branded Service Station  
510 East 14th Street (506-510 International Boulevard)  
Oakland, California  
SAP Code 135695  
Incident No. 97601734  
Agency Case No. RO0002853

Dear Mr. Wickham:

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.

If you have any questions regarding the contents of this document, please call Dennis Baertschi at (707) 268-3813.

Sincerely,  
**Conestoga-Rovers & Associates**

Dennis Baertschi  
Project Manager

Ana Friel, PG



cc: Mr. Denis Brown, Shell

Equal  
Employment  
Opportunity Employer



**CONESTOGA-ROVERS  
& ASSOCIATES**

Mr. Jerry Wickham  
November 7, 2007

## **GROUNDWATER MONITORING REPORT – THIRD QUARTER 2007**

<b>Site Address</b>	<u>510 East 14<sup>th</sup> Street (506-510 International Boulevard)</u>
<b>Site Use</b>	<u>Shell-branded Service Station</u>
<b>Shell Project Manager</b>	<u>Denis Brown</u>
<b>Consultant and Contact Person</b>	<u>CRA, Dennis Baertschi</u>
<b>Lead Agency and Contact</b>	<u>ACHCSA, Jerry Wickham</u>
<b>Agency Case No.</b>	<u>RO0002853</u>
<b>Shell SAP Code</b>	<u>135695</u>
<b>Shell Incident No.</b>	<u>97601734</u>
<b>Date of Most Recent Agency Correspondence</b>	<u>November 1, 2006</u>

### **Current Quarter's Activities**

1. Blaine Tech Services, Inc. (Blaine) gauged and sampled wells according to the established monitoring program for this site.
2. CRA prepared a vicinity map (Figure 1) and a groundwater contour and chemical concentration map (Figure 2). The Blaine report, presenting the analytical data, is included in Attachment A.

### **Current Quarter's Findings**

<b>Groundwater Flow Direction</b>	<u>Predominantly southwesterly</u>
<b>Hydraulic Gradient</b>	<u>0.02</u>
<b>Depth to Water</b>	<u>9.01 to 10.90 feet below top of well casing</u>

### **Proposed Activities for Next Quarter**

1. Blaine will gauge and sample wells during the second month of the quarter, according to the established monitoring program for this site, and CRA will prepare a report.



**CONESTOGA-ROVERS  
& ASSOCIATES**

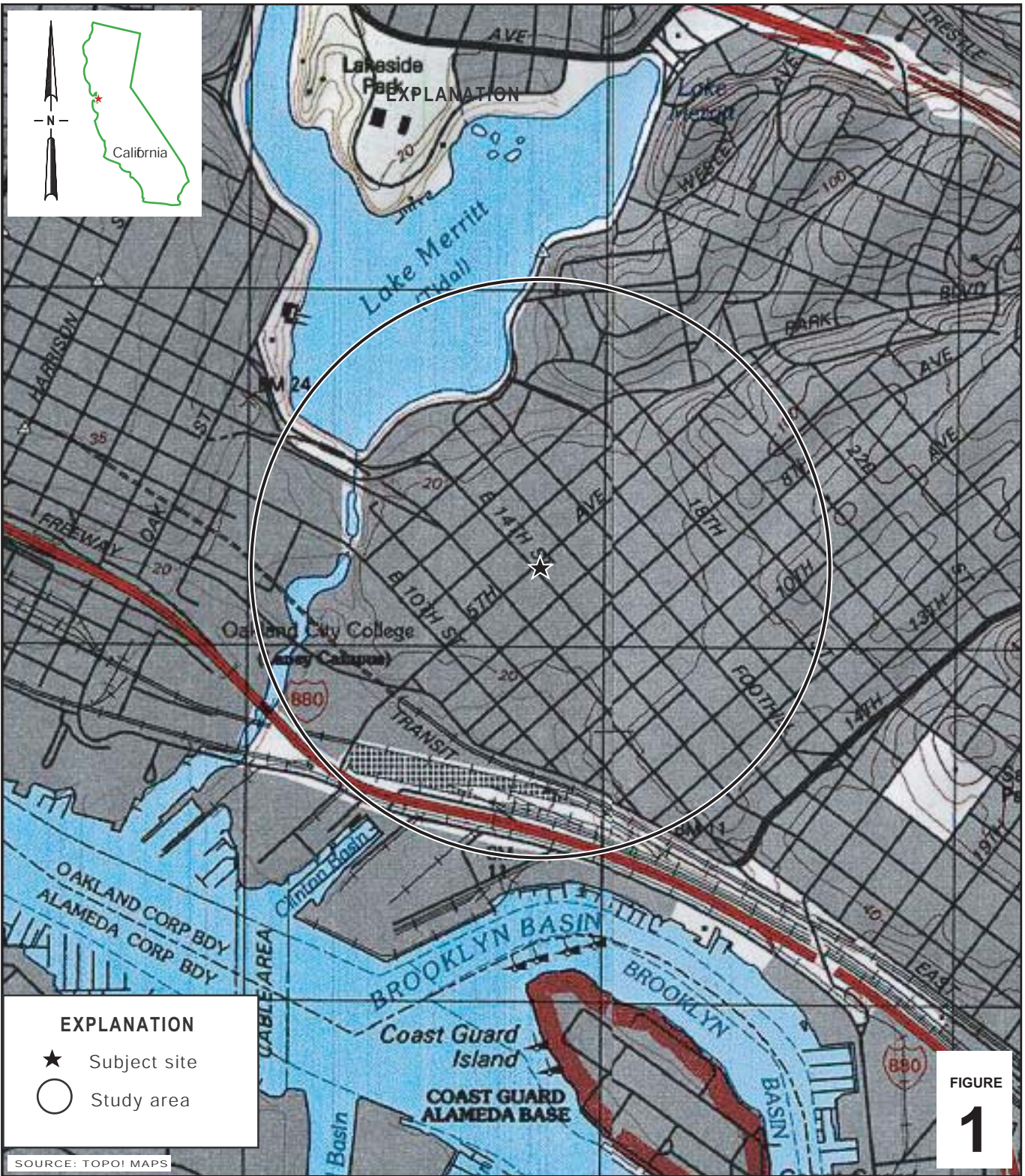
Mr. Jerry Wickham  
November 7, 2007

Figures:       1 - Vicinity Map  
                  2 - Groundwater Contour and Chemical Concentration Map

Attachment:    A - Blaine Tech Services, Inc. - Groundwater Monitoring Report

Conestoga-Rovers & Associates (CRA) prepared this document for use by our client and appropriate regulatory agencies. It is based partially on information available to CRA from outside sources and/or in the public domain, and partially on information supplied by CRA and its subcontractors. CRA makes no warranty or guarantee, expressed or implied, included or intended in this document, with respect to the accuracy of information obtained from these outside sources or the public domain, or any conclusions or recommendations based on information that was not independently verified by CRA. This document represents the best professional judgment of CRA. None of the work performed hereunder constitutes or shall be represented as a legal opinion of any kind or nature.

I:\Sonoma.Shell\Oakland 510 E. 14th (506-510 International Blvd)\QMR\2007\3Q07\510 14th St Oakland 3Q07.doc



\\SONS11\SWRED\SONOMA\_SELL\OAKLAND\_506\_INTERNATIONAL\FIGURES\VICINITY.A1

**EXPLANATION**

- ★ Subject site
- Study area

FIGURE  
**1**

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

**Shell-branded Service Station**  
506 International Boulevard (506 E. 14th St.)  
Oakland, California



**CONESTOGA-ROVERS  
& ASSOCIATES**

**Vicinity Map**

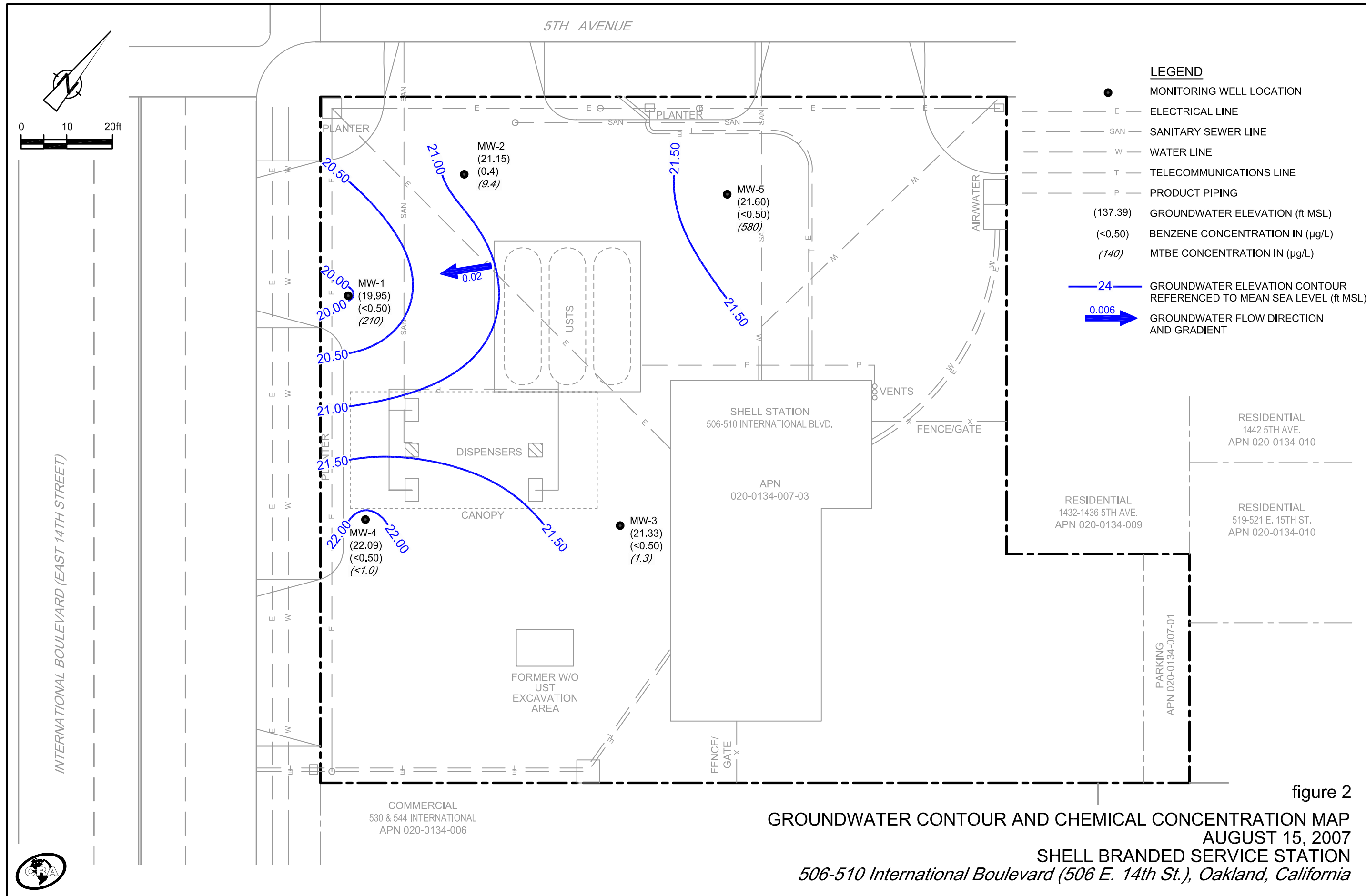


figure 2

**GROUNDWATER CONTOUR AND CHEMICAL CONCENTRATION MAP**  
 AUGUST 15, 2007  
 SHELL BRANDED SERVICE STATION  
 506-510 International Boulevard (506 E. 14th St.), Oakland, California



**Attachment A**

**Blaine Tech Services, Inc  
Groundwater Monitoring Report**

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**BLAINE**  
TECH SERVICES INC.

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GROUNDWATER SAMPLING SPECIALISTS  
SINCE 1985

September 17, 2007

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

Third Quarter 2007 Groundwater Monitoring at  
Shell-branded Service Station  
510 E. 14th Street  
Oakland, CA

Monitoring performed on August 15, 2007

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Groundwater Monitoring Report **070815-WW-2**

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.



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,

Mike Ninokata  
Project Manager

MN/jb

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

cc: Dennis Baertschi  
Conestoga-Rovers & Associates  
19449 Riverside Dr., Suite 230  
Sonoma, CA 95476

**WELL CONCENTRATIONS**  
**Shell Service Station**  
**510 E. 14th Street**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
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MW-1	08/24/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.85	10.98	19.87
MW-1	08/29/2006	242	<0.500	<0.500	<0.500	<0.500	255	<0.500	<0.500	<0.500	54.1	<0.500	<0.500	30.85	10.98	19.87
MW-1	11/13/2006	140 a	<2.5	<2.5	<2.5	<2.5	300	<2.5	<2.5	<2.5	<100	NA	NA	30.85	11.05	19.80
MW-1	02/09/2007	100	<0.50	0.86	<0.50	<1.0	160	<2.0	<2.0	<2.0	95	NA	NA	30.85	9.61	21.24
MW-1	06/01/2007	<50 b	<0.50	<1.0	<1.0	<1.0	160	<2.0	<2.0	<2.0	<10	NA	NA	30.85	10.67	20.18
<b>MW-1</b>	<b>08/15/2007</b>	<b>&lt;50 b</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>210</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>5.8 c</b>	<b>NA</b>	<b>NA</b>	<b>30.85</b>	<b>10.90</b>	<b>19.95</b>

MW-2	08/24/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.96	9.91	21.05
MW-2	08/29/2006	2,130	1.18	0.660	1.67	0.960	206	<0.500	<0.500	<0.500	55.5	<0.500	<0.500	30.96	9.91	21.05
MW-2	11/13/2006	890	<0.50	1.4	4.1	4.5	37	<0.50	<0.50	<0.50	41	NA	NA	30.96	10.11	20.85
MW-2	02/09/2007	760	0.84	3.0	5.0	6.7	67	<2.0	<2.0	<2.0	210	NA	NA	30.96	8.73	22.23
MW-2	06/01/2007	3,300 b	0.48 c	0.98 c	12	3.89 c	39	<2.0	<2.0	<2.0	79	NA	NA	30.96	8.83	22.13
<b>MW-2</b>	<b>08/15/2007</b>	<b>3,500 b</b>	<b>0.40 c</b>	<b>0.78 c</b>	<b>11</b>	<b>3.4</b>	<b>9.4</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>58</b>	<b>NA</b>	<b>NA</b>	<b>30.96</b>	<b>9.81</b>	<b>21.15</b>

MW-3	08/24/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.02	10.00	22.02
MW-3	08/29/2006	<50.0	<0.500	<0.500	<0.500	<0.500	28.8	<0.500	<0.500	<0.500	11.9	<0.500	<0.500	32.02	10.00	22.02
MW-3	11/13/2006	<50	<0.50	<0.50	<0.50	<0.50	1.5	<0.50	<0.50	<0.50	<20	NA	NA	32.02	10.85	21.17
MW-3	02/09/2007	<50	<0.50	2.4	0.81	5.8	2.6	<2.0	<2.0	<2.0	<5.0	NA	NA	32.02	9.90	22.12
MW-3	06/01/2007	<50 b	<0.50	<1.0	<1.0	<1.0	0.98 c	<2.0	<2.0	<2.0	<10	NA	NA	32.02	9.72	22.30
<b>MW-3</b>	<b>08/15/2007</b>	<b>&lt;50 b</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>1.3</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;10</b>	<b>NA</b>	<b>NA</b>	<b>32.02</b>	<b>10.69</b>	<b>21.33</b>

MW-4	08/24/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.10	9.91	21.19
MW-4	08/29/2006	375	<0.500	<0.500	3.10	0.660	6.53	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	31.10	9.91	21.19
MW-4	11/13/2006	120	<0.50	<0.50	0.87	<0.50	4.6	<0.50	<0.50	<0.50	<20	NA	NA	31.10	10.05	21.05
MW-4	02/09/2007	130	<0.50	0.92	1.6	<1.0	5.2	<2.0	<2.0	<2.0	11	NA	NA	31.10	8.62	22.48
MW-4	06/01/2007	580 b	0.30 c	<1.0	5.5	0.57 c	3.4	<2.0	<2.0	<2.0	<10	NA	NA	31.10	6.94	24.16
<b>MW-4</b>	<b>08/15/2007</b>	<b>430 b</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>0.48 c</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;10</b>	<b>NA</b>	<b>NA</b>	<b>31.10</b>	<b>9.01</b>	<b>22.09</b>

**WELL CONCENTRATIONS**  
**Shell Service Station**  
**510 E. 14th Street**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
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MW-5	08/24/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.61	9.98	21.63
MW-5	08/29/2006	1,260	<0.500	<0.500	<0.500	<0.500	829	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	31.61	9.98	21.63
MW-5	11/13/2006	290 a	<5.0	<5.0	<5.0	<5.0	640	<5.0	<5.0	<5.0	<200	NA	NA	31.61	9.82	21.79
MW-5	02/09/2007	260	<0.50	1.1	<0.50	1.1	350	<2.0	<2.0	<2.0	270	NA	NA	31.61	9.41	22.20
MW-5	06/01/2007	<50 b	<1.0	<2.0	<2.0	<2.0	290	<4.0	<4.0	<4.0	<20	NA	NA	31.61	9.29	22.32
<b>MW-5</b>	<b>08/15/2007</b>	<b>&lt;50 b</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>580</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;10</b>	<b>NA</b>	<b>NA</b>	<b>31.61</b>	<b>10.01</b>	<b>21.60</b>

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by modified EPA Method 8260B.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B.

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 or tertiary butanol, analyzed by EPA Method 8260B

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

EDB = Ethylene Dibromide, analyzed by EPA Method 8260B

TOC = Top of Casing Elevation

GW = Groundwater

ug/L = Parts per billion

MSL = Mean sea level

ft. = Feet

<n = Below detection limit

NA = Not applicable

**WELL CONCENTRATIONS**  
**Shell Service Station**  
**510 E. 14th Street**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
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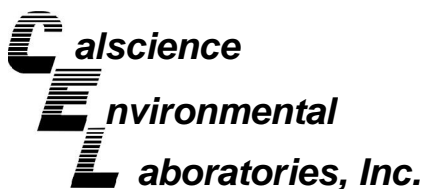
Notes:

a = the result for this hydrocarbon is elevated due to the presence of single analyte peak(s) in the quantitation range.

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

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

Site surveyed September 7, 2006 by Virgil Chavez of Vallejo, CA.



August 28, 2007

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

Subject: **Calscience Work Order No.: 07-08-1370**  
**Client Reference: 510 E. 14th Street, Oakland, CA**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 8/18/2007 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 black ink, appearing to read "Danielle Gonsman", with a horizontal line extending to the right.

Calscience Environmental  
Laboratories, Inc.  
Danielle Gonsman  
Project Manager

## Analytical Report



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

Date Received: 08/18/07  
Work Order No: 07-08-1370  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: 510 E. 14th Street, Oakland, CA

Page 1 of 2

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
<b>MW-1</b>	<b>07-08-1370-1</b>	<b>08/15/07</b>	<b>Aqueous</b>	<b>GC 29</b>	<b>08/20/07</b>	<b>08/21/07</b>	<b>070820B03</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Gasoline	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	71	38-134			

<b>MW-2</b>	<b>07-08-1370-2</b>	<b>08/15/07</b>	<b>Aqueous</b>	<b>GC 29</b>	<b>08/20/07</b>	<b>08/21/07</b>	<b>070820B03</b>
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Gasoline	3500	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	113	38-134			

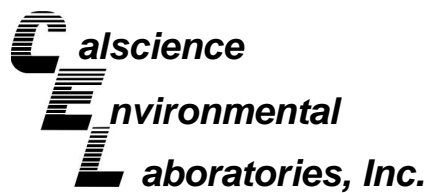
<b>MW-3</b>	<b>07-08-1370-3</b>	<b>08/15/07</b>	<b>Aqueous</b>	<b>GC 29</b>	<b>08/20/07</b>	<b>08/21/07</b>	<b>070820B03</b>
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Gasoline	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	64	38-134			

<b>MW-4</b>	<b>07-08-1370-4</b>	<b>08/15/07</b>	<b>Aqueous</b>	<b>GC 29</b>	<b>08/20/07</b>	<b>08/21/07</b>	<b>070820B03</b>
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Gasoline	430	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	80	38-134			

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



## Analytical Report



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

Date Received: 08/18/07  
Work Order No: 07-08-1370  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: 510 E. 14th Street, Oakland, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
<b>MW-5</b>	<b>07-08-1370-5</b>	<b>08/15/07</b>	<b>Aqueous</b>	<b>GC 29</b>	<b>08/20/07</b>	<b>08/21/07</b>	<b>070820B03</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Gasoline	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	66	38-134			

<b>Method Blank</b>	<b>099-12-436-808</b>	<b>N/A</b>	<b>Aqueous</b>	<b>GC 29</b>	<b>08/20/07</b>	<b>08/21/07</b>	<b>070820B03</b>
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
TPH as Gasoline	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	69	38-134			

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

## Analytical Report



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

Date Received: 08/18/07  
Work Order No: 07-08-1370  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: 510 E. 14th Street, Oakland, CA

Page 1 of 3

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
MW-1	07-08-1370-1	08/15/07	Aqueous	GC/MS EE	08/23/07	08/24/07	070823L02

Comment(s): -Results were evaluated to the MDL, concentrations  $\geq$  to the MDL but  $<$  RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		Methyl-t-Butyl Ether (MTBE)	210	10	2.6	10	
Ethylbenzene	ND	1.0	0.23	1		Tert-Butyl Alcohol (TBA)	5.8	10	5.4	1	J
Toluene	ND	1.0	0.27	1		Diisopropyl Ether (DIPE)	ND	2.0	0.33	1	
p/m-Xylene	ND	1.0	0.54	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	0.18	1	
o-Xylene	ND	1.0	0.17	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.1	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	137	74-140				1,2-Dichloroethane-d4	133	74-146			
Toluene-d8	98	88-112				1,4-Bromofluorobenzene	82	74-110			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
MW-2	07-08-1370-2	08/15/07	Aqueous	GC/MS EE	08/23/07	08/24/07	070823L02

Comment(s): -Results were evaluated to the MDL, concentrations  $\geq$  to the MDL but  $<$  RL, if found, are qualified with a "J" flag.

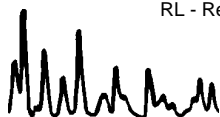
Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	0.40	0.50	0.14	1	J	Methyl-t-Butyl Ether (MTBE)	9.4	1.0	0.26	1	
Ethylbenzene	11	1.0	0.23	1		Tert-Butyl Alcohol (TBA)	58	10	5.4	1	
Toluene	0.78	1.0	0.27	1	J	Diisopropyl Ether (DIPE)	ND	2.0	0.33	1	
p/m-Xylene	3.4	1.0	0.54	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	0.18	1	
o-Xylene	ND	1.0	0.17	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.1	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	104	74-146			
Toluene-d8	106	88-112				1,4-Bromofluorobenzene	91	74-110			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
MW-3	07-08-1370-3	08/15/07	Aqueous	GC/MS EE	08/23/07	08/24/07	070823L02

Comment(s): -Results were evaluated to the MDL, concentrations  $\geq$  to the MDL but  $<$  RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		Methyl-t-Butyl Ether (MTBE)	1.3	1.0	0.26	1	
Ethylbenzene	ND	1.0	0.23	1		Tert-Butyl Alcohol (TBA)	ND	10	5.4	1	
Toluene	ND	1.0	0.27	1		Diisopropyl Ether (DIPE)	ND	2.0	0.33	1	
p/m-Xylene	ND	1.0	0.54	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	0.18	1	
o-Xylene	ND	1.0	0.17	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.1	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	135	74-140				1,2-Dichloroethane-d4	126	74-146			
Toluene-d8	99	88-112				1,4-Bromofluorobenzene	82	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: 08/18/07  
Work Order No: 07-08-1370  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: 510 E. 14th Street, Oakland, CA

Page 2 of 3

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
MW-4	07-08-1370-4	08/15/07	Aqueous	GC/MS EE	08/23/07	08/24/07	070823L02

Comment(s): -Results were evaluated to the MDL, concentrations  $\geq$  to the MDL but  $<$  RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.26	1	
Ethylbenzene	0.48	1.0	0.23	1	J	Tert-Butyl Alcohol (TBA)	ND	10	5.4	1	
Toluene	ND	1.0	0.27	1		Diisopropyl Ether (DIPE)	ND	2.0	0.33	1	
p/m-Xylene	ND	1.0	0.54	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	0.18	1	
o-Xylene	ND	1.0	0.17	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.1	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	129	74-140				1,2-Dichloroethane-d4	121	74-146			
Toluene-d8	100	88-112				1,4-Bromofluorobenzene	85	74-110			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
MW-5	07-08-1370-5	08/15/07	Aqueous	GC/MS EE	08/23/07	08/24/07	070823L02

Comment(s): -Results were evaluated to the MDL, concentrations  $\geq$  to the MDL but  $<$  RL, if found, are qualified with a "J" flag.

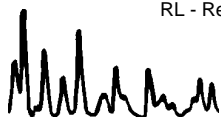
Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		Methyl-t-Butyl Ether (MTBE)	580	10	2.6	10	
Ethylbenzene	ND	1.0	0.23	1		Tert-Butyl Alcohol (TBA)	ND	10	5.4	1	
Toluene	ND	1.0	0.27	1		Diisopropyl Ether (DIPE)	ND	2.0	0.33	1	
p/m-Xylene	ND	1.0	0.54	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	0.18	1	
o-Xylene	ND	1.0	0.17	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.1	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	133	74-140				1,2-Dichloroethane-d4	125	74-146			
Toluene-d8	96	88-112				1,4-Bromofluorobenzene	82	74-110			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	099-10-006-22,545	N/A	Aqueous	GC/MS EE	08/23/07	08/24/07	070823L02

Comment(s): -Results were evaluated to the MDL, concentrations  $\geq$  to the MDL but  $<$  RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.26	1	
Ethylbenzene	ND	1.0	0.23	1		Tert-Butyl Alcohol (TBA)	ND	10	5.4	1	
Toluene	ND	1.0	0.27	1		Diisopropyl Ether (DIPE)	ND	2.0	0.33	1	
p/m-Xylene	ND	1.0	0.54	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	0.18	1	
o-Xylene	ND	1.0	0.17	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.1	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	126	74-140				1,2-Dichloroethane-d4	117	74-146			
Toluene-d8	96	88-112				1,4-Bromofluorobenzene	79	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: 08/18/07  
Work Order No: 07-08-1370  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: 510 E. 14th Street, Oakland, CA

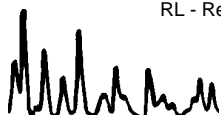
Page 3 of 3

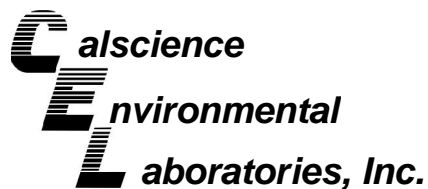
Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-10-006-22,587</b>	<b>N/A</b>	<b>Aqueous</b>	<b>GC/MS EE</b>	<b>08/28/07</b>	<b>08/28/07</b>	<b>070828L01</b>

Comment(s): -Results were evaluated to the MDL, concentrations  $\geq$  to the MDL but  $<$  RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.26	1	
Ethylbenzene	ND	1.0	0.23	1		Tert-Butyl Alcohol (TBA)	ND	10	5.4	1	
Toluene	ND	1.0	0.27	1		Diisopropyl Ether (DIPE)	ND	2.0	0.33	1	
p/m-Xylene	ND	1.0	0.54	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	0.18	1	
o-Xylene	ND	1.0	0.17	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.1	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	105	74-140				1,2-Dichloroethane-d4	109	74-146			
Toluene-d8	96	88-112				1,4-Bromofluorobenzene	85	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

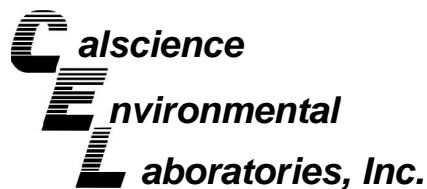
Date Received: 08/18/07  
Work Order No: 07-08-1370  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project 510 E. 14th Street, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
07-08-1354-4	Aqueous	GC 29	08/20/07	08/21/07	070820S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	99	96	68-122	3	0-18	

RPD - Relative Percent Difference , CL - Control Limit



## Quality Control - Spike/Spike Duplicate



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

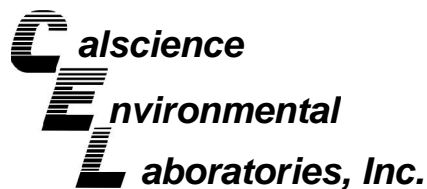
Date Received: 08/18/07  
Work Order No: 07-08-1370  
Preparation: EPA 5030B  
Method: EPA 8260B

Project 510 E. 14th Street, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-3	Aqueous	GC/MS EE	08/23/07	08/24/07	070823S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	105	102	88-118	3	0-7	
Carbon Tetrachloride	106	104	67-145	2	0-11	
Chlorobenzene	99	97	88-118	2	0-7	
1,2-Dibromoethane	104	104	70-130	0	0-30	
1,2-Dichlorobenzene	91	94	86-116	3	0-8	
1,1-Dichloroethene	96	93	70-130	3	0-25	
Ethylbenzene	103	101	70-130	3	0-30	
Toluene	101	99	87-123	2	0-8	
Trichloroethene	97	97	79-127	1	0-10	
Vinyl Chloride	94	94	69-129	0	0-13	
Methyl-t-Butyl Ether (MTBE)	99	101	71-131	2	0-13	
Tert-Butyl Alcohol (TBA)	83	96	36-168	15	0-45	
Diisopropyl Ether (DIPE)	107	105	81-123	3	0-9	
Ethyl-t-Butyl Ether (ETBE)	99	102	72-126	3	0-12	
Tert-Amyl-Methyl Ether (TAME)	104	106	72-126	1	0-12	
Ethanol	85	82	53-149	4	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

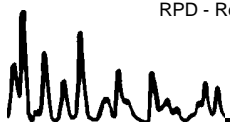
Date Received: 08/18/07  
Work Order No: 07-08-1370  
Preparation: EPA 5030B  
Method: EPA 8260B

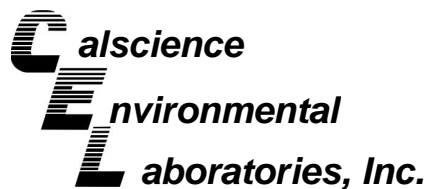
Project 510 E. 14th Street, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
07-08-1367-3	Aqueous	GC/MS EE	08/28/07	08/28/07	070828S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100	98	88-118	2	0-7	
Carbon Tetrachloride	90	89	67-145	1	0-11	
Chlorobenzene	101	98	88-118	3	0-7	
1,2-Dibromoethane	106	104	70-130	1	0-30	
1,2-Dichlorobenzene	99	103	86-116	3	0-8	
1,1-Dichloroethene	96	93	70-130	3	0-25	
Ethylbenzene	108	106	70-130	2	0-30	
Toluene	103	102	87-123	1	0-8	
Trichloroethene	96	95	79-127	1	0-10	
Vinyl Chloride	93	94	69-129	1	0-13	
Methyl-t-Butyl Ether (MTBE)	104	108	71-131	3	0-13	
Tert-Butyl Alcohol (TBA)	188	233	36-168	4	0-45	3
Diisopropyl Ether (DIPE)	105	105	81-123	0	0-9	
Ethyl-t-Butyl Ether (ETBE)	106	109	72-126	3	0-12	
Tert-Amyl-Methyl Ether (TAME)	111	112	72-126	1	0-12	
Ethanol	98	103	53-149	5	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

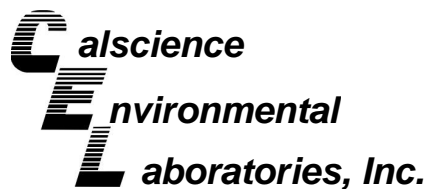
Date Received: N/A  
Work Order No: 07-08-1370  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: 510 E. 14th Street, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-436-808	Aqueous	GC 29	08/20/07	08/21/07	070820B03

<u>Parameter</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
TPH as Gasoline	100	100	78-120	0	0-10	

RPD - Relative Percent Difference , CL - Control Limit



## Quality Control - LCS/LCS Duplicate



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

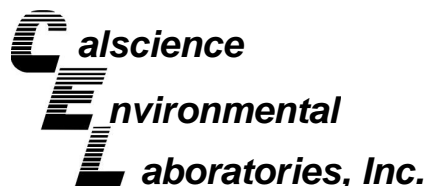
Date Received: N/A  
Work Order No: 07-08-1370  
Preparation: EPA 5030B  
Method: EPA 8260B

Project: 510 E. 14th Street, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-006-22,545	Aqueous	GC/MS EE	08/23/07	08/23/07	070823L02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	101	98	84-120	3	0-8	
Carbon Tetrachloride	101	100	63-147	1	0-10	
Chlorobenzene	98	96	89-119	3	0-7	
1,2-Dibromoethane	102	100	80-120	2	0-20	
1,2-Dichlorobenzene	93	93	89-119	0	0-9	
1,1-Dichloroethene	93	93	77-125	0	0-16	
Ethylbenzene	100	99	80-120	1	0-20	
Toluene	99	97	83-125	2	0-9	
Trichloroethene	98	95	89-119	3	0-8	
Vinyl Chloride	89	89	63-135	1	0-13	
Methyl-t-Butyl Ether (MTBE)	95	93	82-118	2	0-13	
Tert-Butyl Alcohol (TBA)	87	87	46-154	0	0-32	
Diisopropyl Ether (DIPE)	101	99	81-123	2	0-11	
Ethyl-t-Butyl Ether (ETBE)	93	93	74-122	0	0-12	
Tert-Amyl-Methyl Ether (TAME)	101	99	76-124	2	0-10	
Ethanol	84	81	60-138	4	0-32	

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: 07-08-1370  
Preparation: EPA 5030B  
Method: EPA 8260B

Project: 510 E. 14th Street, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-006-22,587	Aqueous	GC/MS EE	08/28/07	08/28/07	070828L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	107	104	84-120	3	0-8	
Carbon Tetrachloride	104	98	63-147	6	0-10	
Chlorobenzene	108	105	89-119	3	0-7	
1,2-Dibromoethane	110	108	80-120	2	0-20	
1,2-Dichlorobenzene	110	108	89-119	2	0-9	
1,1-Dichloroethene	105	100	77-125	5	0-16	
Ethylbenzene	118	114	80-120	3	0-20	
Toluene	109	107	83-125	2	0-9	
Trichloroethene	104	102	89-119	2	0-8	
Vinyl Chloride	98	90	63-135	8	0-13	
Methyl-t-Butyl Ether (MTBE)	107	106	82-118	1	0-13	
Tert-Butyl Alcohol (TBA)	126	113	46-154	11	0-32	
Diisopropyl Ether (DIPE)	111	109	81-123	2	0-11	
Ethyl-t-Butyl Ether (ETBE)	107	109	74-122	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	106	110	76-124	3	0-10	
Ethanol	116	101	60-138	13	0-32	

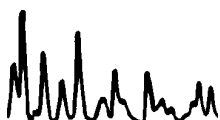
RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 07-08-1370
 

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<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 or Matrix Spike Duplicate 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.
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.





# SHELL Chain Of Custody Record

1370

- TA - Irvine, California
- TA - Morgan Hill, California
- TA - Sacramento, California
- TA - Nashville, Tennessee
- Calscience
- Other \_\_\_\_\_

NAME OF PERSON TO BILL: Denis Brown

INCIDENT # (ES ONLY)

ENVIRONMENTAL SERVICES

CHECK BOX TO VERIFY IF NO INCIDENT # APPLIES

9 7 6 0 1 7 3 4

DATE: 08-15-07

NETWORK DEV / FE

BILL CONSULTANT

PO #

SAP or CRMT #

PAGE: 1 of 1

COMPLIANCE

RMT/CRMT

SAMPLING COMPANY: <b>Blaine Tech Services</b>		LOG CODE: <b>BTSS</b>	SITE ADDRESS: Street and City <b>510 E. 14th Street, Oakland</b>		State <b>CA</b>	GLOBAL ID NO.: <b>T0600112421</b>
ADDRESS: <b>1680 Rogers Avenue, San Jose, CA 95112</b>			EDF DELIVERABLE TO (Name, Company, Office Location): <b>Dennis Baertshi, CRA, Eureka Office</b>	PHONE NO.: <b>707-268-3813</b>	E-MAIL: <b>sonomaedf@croworld.com</b>	CONSULTANT PROJECT NO.: <b>070815-AN2</b>
PROJECT CONTACT (Hardcopy or PDF Report to): <b>Michael Ninokata</b>			SAMPLER NAME(S) (Print): <b>WILLIAM WONG</b>		LAB USE ONLY <b>07-08-1370</b>	
TELEPHONE: <b>408-573-0555</b>	FAX: <b>408-573-7771</b>	E-MAIL: <b>mninokata@blainetech.com</b>				

TAT (STD IS 10 BUSINESS DAYS / RUSH IS CALENDAR DAYS):

STD    5 DAY    3 DAY    2 DAY    24 HOURS    RESULTS NEEDED ON WEEKEND

LA - RWQCB REPORT FORMAT    UST AGENCY: \_\_\_\_\_

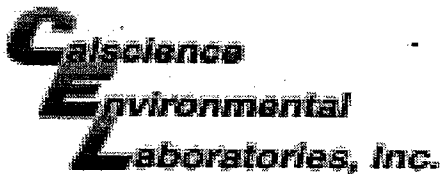
SPECIAL INSTRUCTIONS OR NOTES:

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

## REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.	TPH - Gas, Purgeable (8260B)	TPH - Diesel, Extractable (8015M)	BTEX (8260B)	5 Oxygenates (8260B) (MTBE, TBA, DIPE, TAME, ETBE)	MTBE (8260B)	TBA (8260B)	DIPE (8260B)	TAME (8260B)	ETBE (8260B)	1,2 DCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015M)	TPH-motor oil (8015M)	TDS (160.1)	Total Iron (6010B)	Total Lead (6010B)	Total Oil and Grease (1664A)	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes	
		DATE	TIME																						
	MW-1	8/15/07	1446	W	5	X	X	X																	
	MW-2		1402			X	X	X																	
	MW-3		1431			X	X	X																	
	MW-4		1510			X	X	X																	
	MW-5		1458			X	X	X																	
	Law → WW																								

Relinquished by: (Signature)	Received by: (Signature)	Date: 08-15-07	Time: 1700
Relinquished by: (Signature)	Received by: (Signature)	Date: 8/17/07	Time: 1626
Relinquished by: (Signature)	Received by: (Signature)	Date: 8/18/07	Time: 10:45



WORK ORDER #: 07 - 08 - 1370

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: BTS

DATE: 8/18/07

TEMPERATURE - SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

- Chilled, cooler with temperature blank provided.
Chilled, cooler without temperature blank.
Chilled and placed in cooler with wet ice.
Ambient and placed in cooler with wet ice.
Ambient temperature.
C Temperature blank.

LABORATORY (Other than Calscience Courier):

- C Temperature blank.
4.5 C IR thermometer.
Ambient temperature.

Initial: RW

CUSTODY SEAL INTACT:

Sample(s): Cooler: No (Not Intact): Not Present: Initial: RW

SAMPLE CONDITION:

Table with 4 columns: Description, Yes, No, N/A. Rows include Chain-Of-Custody document(s), Sampler's name, Sample container label(s), Sample container(s) intact, Correct containers and volume, Proper preservation, VOA vial(s) free of headspace, Tedlar bag(s) free of condensation.

Initial: RW

COMMENTS:

Blank lines for handwritten comments.

# SHELL WELLHEAD INSPECTION FORM

(FOR SAMPLE TECHNICIAN)

Site Address 510 E. 14th St OAKLAND, CA Date 08-15-07  
 Job Number 970815-mw2 Technician UW Page 1 of 1

Well ID	Well Inspected - No Corrective Action Required	Well Box Meets Compliance Requirements *See Below	Water Bailed From Wellbox	Cap Replaced	Lock Replaced	Well Not Inspected (explain in notes)	New Deficiency Identified	Previously Identified Deficiency Persists	Notes
Mw-1								X	NO TAG
Mw-2								X	NO TAG
Mw-3								X	NO TAG
Mw-4								X	NO TAG
Mw-5								X	NO TAG

\*Well box must meet all three criteria to be compliant: 1) WELL IS SECURABLE BY DESIGN (12" or less) 2) WELL IS MARKED WITH THE WORDS "MONITORING WELL" (12" or less) 3) WELL TAG IS PRESENT, SECURE, AND CORRECT

Notes: \_\_\_\_\_

## WELL GAUGING DATA

Project # 070815-ww2 Date 08-15-07 Client SHELL

Site 97601734

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
Mw-1	1242	4					10.90	20.64		SLOW
Mw-2	1238	4				9.81	23.96			
Mw-3	1254	4				10.69	29.22			
Mw-4	1246	4				9.01	21.70			SLOW
Mw-5	1232	4				10.01	21.79			SLOW

### SHELL WELL MONITORING DATA SHEET

BTS #: <u>070815-ww2</u>	Site: <u>97601784</u>
Sampler: <u>WW</u>	Date: <u>08-15-07</u>
Well I.D.: <u>MW-1</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): <u>20.64</u>	Depth to Water (DTW): <u>10.90</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVE</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>12.85</u>	

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

$\frac{6.3 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = \frac{18.9}{\text{Calculated Volume}} \text{ Gals.}$	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> <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> </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 <del>µS</del> )	Turbidity (NTUs)	Gals. Removed	Observations
<u>1306</u>	<u>74.1</u>	<u>7.4</u>	<u>487</u>	<u>26.5</u>	<u>6.3</u>	<u>clear</u>
<u>1307</u>	<u>75.2</u>	<u>7.2</u>	<u>490</u>	<u>50</u>	<u>12.6</u>	<u>"</u>
<u>1308</u>	<u>77.1</u>	<u>7.1</u>	<u>486</u>	<u>58</u>	<u>18.9</u>	<u>"</u>

Did well dewater? Yes  No  Gallons actually evacuated: 18.9

Sampling Date: 08-15-07 Sampling Time: 1446 Depth to Water: 11.03

Sample I.D.: MW-1 Laboratory: STL Other OH SCIENCE

Analyzed for: TPH-G BTEX MTBE TPH-D Other: see w/c

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

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

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

### SHELL WELL MONITORING DATA SHEET

BTS #: 070815-ww2	Site: 97601734
Sampler: WW	Date: 08-15-07
Well I.D.: MW-2	Well Diameter: 2 3 ④ 6 8
Total Well Depth (TD): 23.96	Depth to Water (DTW): 9.81
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]: 12.64	

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

$9.2 \text{ (Gals.)} \times 3 = 27.6 \text{ Gals.}$ 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 μS)	Turbidity (NTUs)	Gals. Removed	Observations
30 1356	71.9	7.1	832	464	9.2	odor, clear chud
1358	70.6	7.0	786	241	18.4	" , chudny
30 1359	70.4	7.2	748	50	27.6	odor, clear

Did well dewater?    Yes No                                  Gallons actually evacuated: 27.6

Sampling Date: 08-15-07    Sampling Time: 1402                                  Depth to Water: 11.10

Sample I.D.: MW-2                                  Laboratory: STL    Other: CAL SCIENCE

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

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

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

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

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

**SHELL WELL MONITORING DATA SHEET**

BTS #: <del>08-15</del> <sup>WW</sup> 070815-WW2	Site: 97601734
Sampler: WW	Date: 08-15-07
Well I.D.: MW-3	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 29.22	Depth to Water (DTW): 10.69
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVE</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>14.39</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

$\frac{12.0 \text{ (Gals.)} \times 3}{1 \text{ Case Volume}} = \frac{36}{\text{Specified Volumes}} \text{ Gals. Calculated Volume}$	<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 <u>µS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
1424	68.3	7.3	730	681	12.0	brown, cloudy
1426	68.2	7.3	737	188	24.0	cloudy
1428	68.2	7.1	745	44	36.0	cloudy

Did well dewater? Yes  No  Gallons actually evacuated: 36

Sampling Date: 08-15-07 Sampling Time: 1431 Depth to Water: 11.25

Sample I.D.: MW-3 Laboratory: STL Other CHL SCIENCE

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

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

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

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





### SHELL WELL MONITORING DATA SHEET

BTS #: 070815-ww2	Site: 9760/734
Sampler: WW	Date: 08-15-07
Well I.D.: MW-5	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 21.79	Depth to Water (DTW): 10.01
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]: 12.37	

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

$7.7 \text{ (Gals.)} \times 3 = 23.1 \text{ Gals.}$ 1 Case Volume                      Specified Volumes                      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or <del>µS</del> )	Turbidity (NTUs)	Gals. Removed	Observations
1325	74.8	9.3	734	80	7.7	clear
1326	WELL DEWATERED @ 13 GALLONS					
1453	72.4	7.8	1045	65	-	clear

Did well dewater? Yes No                      Gallons actually evacuated: 13

Sampling Date: 08-15-07      Sampling Time: 1458      Depth to Water: 12.07

Sample I.D.: MW-5                      Laboratory: STL      Other: CAL SCIENCE

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

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

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

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