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3:19 pm, Sep 13, 2007

Alameda County  
Environmental Health



**Denis L. Brown**

**Shell Oil Products US**

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

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  
3600 Park Boulevard  
Oakland, California  
SAP Code 135689  
Incident No. 97610341  
ACHCSA Case No. RO0002855

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 stroke at the end.

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

September 13, 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  
3600 Park Boulevard  
Oakland, California  
SAP Code 135689  
Incident No. 97610341  
Agency Case No. RO0002855

Dear Mr. Wickham:

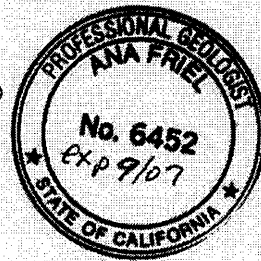
Conestoga-Rovers & Associates (CRA) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) in accordance with the quarterly reporting requirements of 23 CCR 2652d.

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



Enclosure: Groundwater Monitoring Report – Third Quarter 2007

cc: Mr. Denis Brown, Shell

Equal  
Employment  
Opportunity Employer



**CONESTOGA-ROVERS  
& ASSOCIATES**

Mr. Jerry Wickham  
September 13, 2007

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

<b>Site Address</b>	<u>3600 Park Boulevard, Oakland</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>RO0002855</u>
<b>Shell SAP Code</b>	<u>135689</u>
<b>Shell Incident No.</b>	<u>97610341</u>
<b>Date of Most Recent Agency Correspondence</b>	<u>April 18, 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>Westerly</u>
<b>Hydraulic Gradient</b>	<u>0.09</u>
<b>Depth to Water</b>	<u>4.77 to 14.71 feet below top of well casing</u>

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

1. Blaine will gauge and sample wells during the first month of the quarter and will tabulate the data, and CRA will prepare a groundwater monitoring report.



**CONESTOGA-ROVERS  
& ASSOCIATES**

Mr. Jerry Wickham  
September 13, 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.

II:\Sonoma.Shell\Oakland 3600 Park\QMR\2007\3Q07\3Q07 text.doc

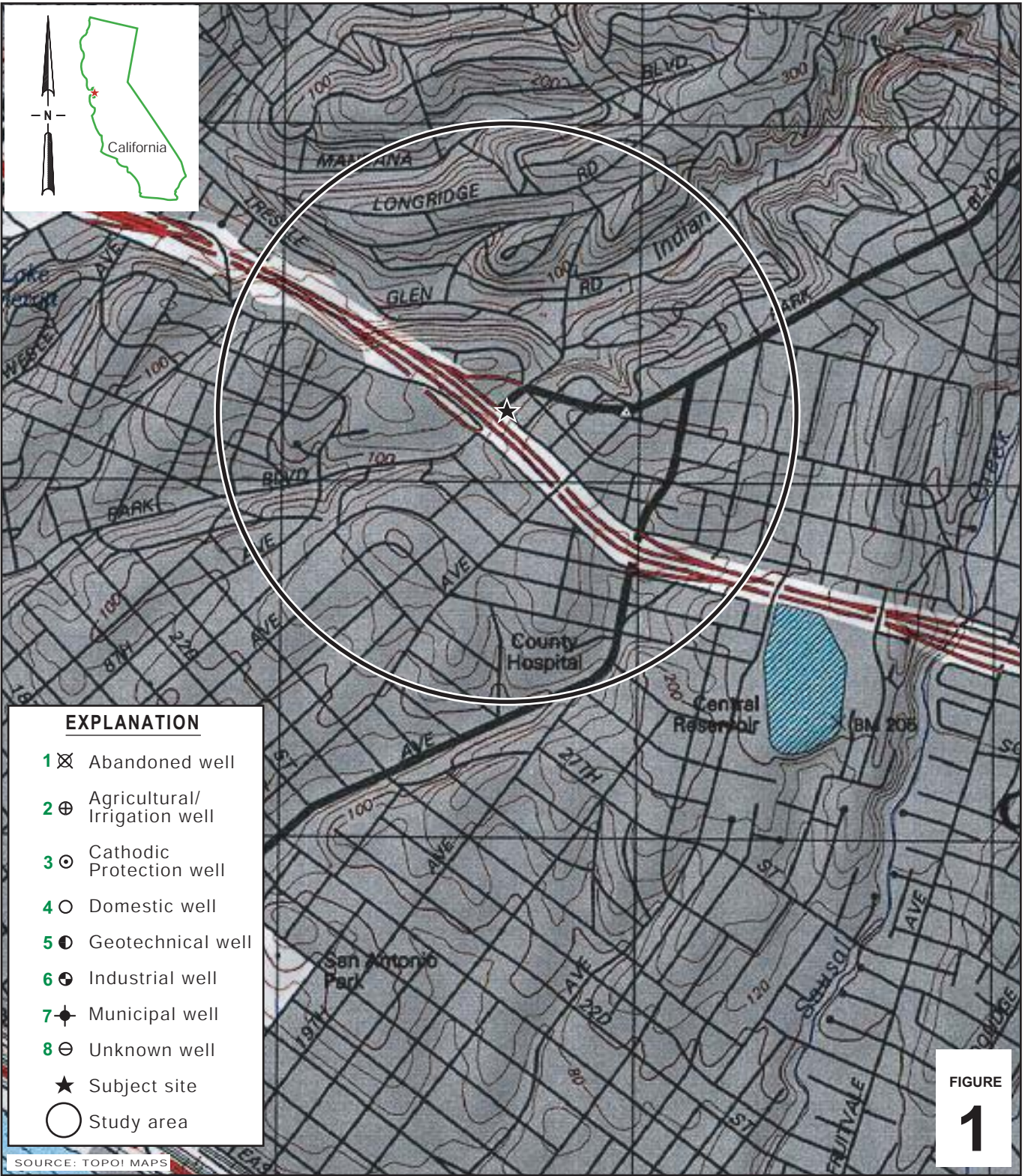


FIGURE 1

I:\SONOMA\_SHELL\OAKLAND\_3600\_PARK\FIGURES\VICINITY.A1

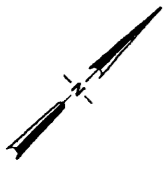
### Shell-branded Service Station

3600 Park Boulevard  
Oakland, California



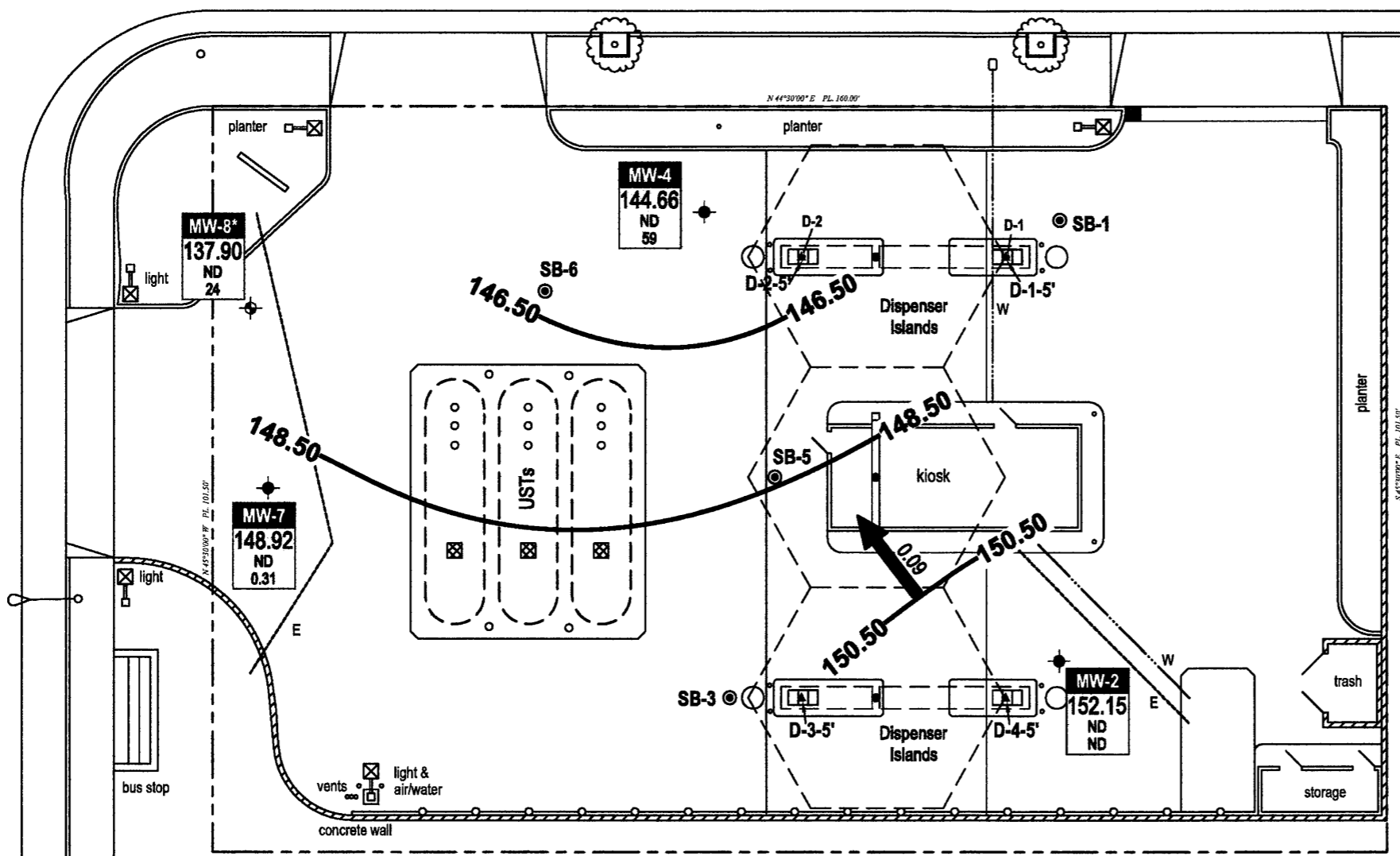
**CONESTOGA-ROVERS  
& ASSOCIATES**

### Vicinity Map



### PARK BOULEVARD

### CHATHAM ROAD



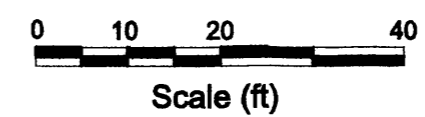
#### EXPLANATION

- MW-2 ● Monitoring well location
- MW-8\* ● Monitoring well with different screen interval; not used for contouring
- SB-1 ● Soil boring location (1/3-6/06)
- D-1-5' ▲ Dispenser soil sample location (8/20/04)
- D-1 ● Dispenser soil sample location (02/20/98)
- Electrical line (E)
- Water line (W)
- 0.02 → Groundwater flow direction and gradient
- XX.XX Groundwater elevation contour, in feet above mean sea level (msl)

Well	Well designation
ELEV	Groundwater elevation, in feet above msl
Benzene	Benzene and MTBE concentrations are in micrograms per liter
MTBE	

Notes:  
ND = Not detected

ISONOMA SHELL OAKLAND 3600 PARK BOULEVARD 07.DWG



## FIGURE 2

**Shell-branded Service Station**  
3600 Park Boulevard  
Oakland, California



**CONESTOGA-ROVERS & ASSOCIATES**

**Groundwater Contour and Chemical Concentration Map**

July 18, 2007

**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

August 23, 2007

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

Third Quarter 2007 Groundwater Monitoring at  
Shell-branded Service Station  
3600 Park Boulevard  
Oakland, CA

Monitoring performed on July 18, 2007

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Groundwater Monitoring Report **070718-WW-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.



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/ks

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

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

**WELL CONCENTRATIONS**  
**Shell Service Station**  
**3600 Park Boulevard**  
**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-2	01/12/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	156.92	11.62	145.30
MW-2	01/19/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	156.92	8.72	148.20
MW-2	01/24/2006	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	156.92	11.23	145.69
MW-2	04/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	2.53	<0.500	156.92	4.43	152.49
MW-2	07/11/2006	<50.0	<0.500	<0.500	<0.500	<1.50	<0.500	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	156.92	4.48	152.44
MW-2	10/26/2006	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	156.92	4.64	152.28
MW-2	01/19/2007	<50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<0.50	<0.50	156.92	4.73	152.19
MW-2	04/02/2007	<50 a	<0.50	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<10	<0.50	<1.0	156.92	4.70	152.22
<b>MW-2</b>	<b>07/18/2007</b>	<b>&lt;50 a</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>&lt;1.0</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>&lt;0.50</b>	<b>&lt;1.0</b>	<b>156.92</b>	<b>4.77</b>	<b>152.15</b>

MW-4	01/12/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	155.00	9.43	145.57
MW-4	01/19/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	155.00	9.45	145.55
MW-4	01/24/2006	1,330	<0.500	<0.500	<0.500	<0.500	762	<0.500	<0.500	1.72	<10.0	1.35	<0.500	155.00	9.92	145.08
MW-4	04/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	72.7	<0.500	<0.500	<0.500	<10.0	1.00	<0.500	155.00	9.33	145.67
MW-4	07/11/2006	<50.0	<0.500	<0.500	<0.500	<0.500	38.8	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	155.00	9.68	145.32
MW-4	10/26/2006	<50.0	<0.500	<0.500	<0.500	<0.500	39.8	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	155.00	10.28	144.72
MW-4	01/19/2007	<50	<0.50	<0.50	<0.50	<1.0	28	<1.0	<1.0	<1.0	<10	0.68	<0.50	155.00	10.26	144.74
MW-4	04/02/2007	<50 a	<0.50	<1.0	<1.0	<1.0	20	<2.0	<2.0	<2.0	<10	0.39 b	<1.0	155.00	9.93	145.07
<b>MW-4</b>	<b>07/18/2007</b>	<b>&lt;50 a</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>59</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;10</b>	<b>0.35 b</b>	<b>&lt;1.0</b>	<b>155.00</b>	<b>10.34</b>	<b>144.66</b>

MW-7	01/12/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	154.00	5.97	148.03
MW-7	01/19/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	154.00	6.40	147.60
MW-7	01/24/2006	<50.0	<0.500	<0.500	<0.500	<0.500	3.08	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	154.00	9.64	144.36
MW-7	04/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	0.690	<0.500	<0.500	<0.500	<10.0	2.32	<0.500	154.00	3.49	150.51
MW-7	07/11/2006	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	154.00	3.96	150.04
MW-7	10/26/2006	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	154.00	5.11	148.89
MW-7	01/19/2007	<50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<0.50	<0.50	154.00	4.62	149.38
MW-7	04/02/2007	<50 a	<0.50	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<10	<0.50	<1.0	154.00	4.23	149.77

**WELL CONCENTRATIONS**  
**Shell Service Station**  
**3600 Park Boulevard**  
**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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<b>MW-7</b>	<b>07/18/2007</b>	<b>&lt;50 a</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>0.31 b</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;10</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>154.00</b>	<b>5.08</b>	<b>148.92</b>
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MW-8	01/12/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	152.61	16.84	135.77
MW-8	01/19/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	152.61	16.00	136.61
MW-8	01/24/2006	1,120	<0.500	<0.500	<0.500	<0.500	592	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	152.61	17.08	135.53
MW-8	04/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	26.4	<0.500	<0.500	<0.500	<10.0	2.32	<0.500	152.61	12.97	139.64
MW-8	07/11/2006	<50.0	<0.500	<0.500	<0.500	<0.500	16.8	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	152.61	12.91	139.70
MW-8	10/26/2006	<50.0	<0.500	<0.500	<0.500	<0.500	6.09	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	152.61	14.28	138.33
MW-8	01/19/2007	<50	<0.50	<0.50	<0.50	<1.0	8.3	<1.0	<1.0	<1.0	<10	<0.50	<0.50	152.61	14.45	138.16
MW-8	04/02/2007	<50 a	<0.50	<1.0	<1.0	<1.0	23	<2.0	<2.0	<2.0	<10	<0.50	<1.0	152.61	14.54	138.07
<b>MW-8</b>	<b>07/18/2007</b>	<b>&lt;50 a</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>24</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;10</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>152.61</b>	<b>14.71</b>	<b>137.90</b>

**WELL CONCENTRATIONS**  
**Shell Service Station**  
**3600 Park Boulevard**  
**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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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

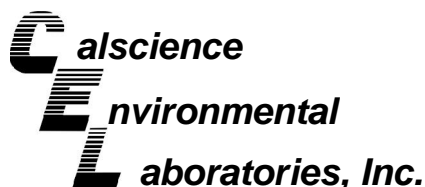
NA = Not applicable

Notes:

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

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

Site surveyed on February 2, 2006 by Virgil Chavez Land Surveying of Vallejo, CA.



July 30, 2007

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

Subject: **Calscience Work Order No.: 07-07-1524**  
**Client Reference: 3600 Park Blvd., Oakland, CA**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 7/21/2007 and analyzed in accordance with the attached chain-of-custody.

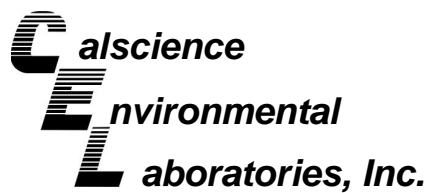
Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows 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 long horizontal flourish 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: 07/21/07  
Work Order No: 07-07-1524  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: 3600 Park Blvd., Oakland, CA

Page 1 of 2

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
MW-2	07-07-1524-1	07/18/07	Aqueous	GC 5	07/25/07	07/25/07	070725B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	85	38-134			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
MW-4	07-07-1524-2	07/18/07	Aqueous	GC 5	07/25/07	07/25/07	070725B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	84	38-134			

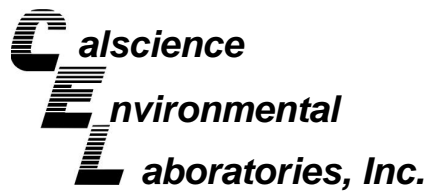
Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
MW-7	07-07-1524-3	07/18/07	Aqueous	GC 5	07/25/07	07/25/07	070725B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	82	38-134			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
MW-8	07-07-1524-4	07/18/07	Aqueous	GC 5	07/25/07	07/25/07	070725B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	84	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: 07/21/07  
Work Order No: 07-07-1524  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: 3600 Park Blvd., Oakland, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	099-12-436-703	N/A	Aqueous	GC 5	07/25/07	07/25/07	070725B01

<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	78	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: 07/21/07  
Work Order No: 07-07-1524  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: 3600 Park Blvd., Oakland, CA

Page 1 of 2

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
MW-2	07-07-1524-1	07/18/07	Aqueous	GC/MS Z	07/24/07	07/25/07	070724L02

Comment(s): -Results were evaluated to the MDL, concentrations >= 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		o-Xylene	ND	1.0	0.17	1	
1,2-Dibromoethane	ND	1.0	0.49	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.26	1	
1,2-Dichloroethane	ND	0.50	0.26	1		Tert-Butyl Alcohol (TBA)	ND	10	5.4	1	
Ethylbenzene	ND	1.0	0.23	1		Diisopropyl Ether (DIPE)	ND	2.0	0.33	1	
Toluene	ND	1.0	0.27	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	0.18	1	
p/m-Xylene	ND	1.0	0.54	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	111	74-140				1,2-Dichloroethane-d4	110	74-146			
Toluene-d8	100	88-112				1,4-Bromofluorobenzene	93	74-110			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
MW-4	07-07-1524-2	07/18/07	Aqueous	GC/MS Z	07/24/07	07/25/07	070724L02

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

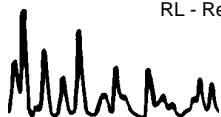
Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		o-Xylene	ND	1.0	0.17	1	
1,2-Dibromoethane	ND	1.0	0.49	1		Methyl-t-Butyl Ether (MTBE)	59	1.0	0.26	1	
1,2-Dichloroethane	0.35	0.50	0.26	1	J	Tert-Butyl Alcohol (TBA)	ND	10	5.4	1	
Ethylbenzene	ND	1.0	0.23	1		Diisopropyl Ether (DIPE)	ND	2.0	0.33	1	
Toluene	ND	1.0	0.27	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	0.18	1	
p/m-Xylene	ND	1.0	0.54	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	109	74-146			
Toluene-d8	101	88-112				1,4-Bromofluorobenzene	92	74-110			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
MW-7	07-07-1524-3	07/18/07	Aqueous	GC/MS Z	07/24/07	07/25/07	070724L02

Comment(s): -Results were evaluated to the MDL, concentrations >= 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		o-Xylene	ND	1.0	0.17	1	
1,2-Dibromoethane	ND	1.0	0.49	1		Methyl-t-Butyl Ether (MTBE)	0.31	1.0	0.26	1	J
1,2-Dichloroethane	ND	0.50	0.26	1		Tert-Butyl Alcohol (TBA)	ND	10	5.4	1	
Ethylbenzene	ND	1.0	0.23	1		Diisopropyl Ether (DIPE)	ND	2.0	0.33	1	
Toluene	ND	1.0	0.27	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	0.18	1	
p/m-Xylene	ND	1.0	0.54	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	112	74-140				1,2-Dichloroethane-d4	110	74-146			
Toluene-d8	101	88-112				1,4-Bromofluorobenzene	94	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: 07/21/07  
Work Order No: 07-07-1524  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: 3600 Park Blvd., Oakland, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
MW-8	07-07-1524-4	07/18/07	Aqueous	GC/MS Z	07/24/07	07/25/07	070724L02

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

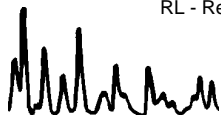
Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		o-Xylene	ND	1.0	0.17	1	
1,2-Dibromoethane	ND	1.0	0.49	1		Methyl-t-Butyl Ether (MTBE)	24	1.0	0.26	1	
1,2-Dichloroethane	ND	0.50	0.26	1		Tert-Butyl Alcohol (TBA)	ND	10	5.4	1	
Ethylbenzene	ND	1.0	0.23	1		Diisopropyl Ether (DIPE)	ND	2.0	0.33	1	
Toluene	ND	1.0	0.27	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	0.18	1	
p/m-Xylene	ND	1.0	0.54	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.1	1	
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Dibromofluoromethane	111	74-140				1,2-Dichloroethane-d4	107	74-146			
Toluene-d8	102	88-112				1,4-Bromofluorobenzene	92	74-110			

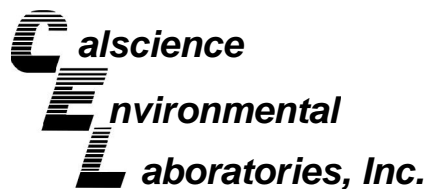
Method Blank	099-10-006-22,218	N/A	Aqueous	GC/MS Z	07/24/07	07/25/07	070724L02
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Comment(s): -Results were evaluated to the MDL, concentrations  $\geq$  to the MDL but  $<$  RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		o-Xylene	ND	1.0	0.17	1	
1,2-Dibromoethane	ND	1.0	0.49	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.26	1	
1,2-Dichloroethane	ND	0.50	0.26	1		Tert-Butyl Alcohol (TBA)	ND	10	5.4	1	
Ethylbenzene	ND	1.0	0.23	1		Diisopropyl Ether (DIPE)	ND	2.0	0.33	1	
Toluene	ND	1.0	0.27	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	0.18	1	
p/m-Xylene	ND	1.0	0.54	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.1	1	
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Dibromofluoromethane	110	74-140				1,2-Dichloroethane-d4	112	74-146			
Toluene-d8	99	88-112				1,4-Bromofluorobenzene	92	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

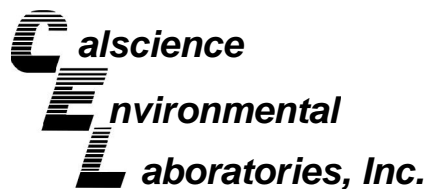
Date Received: 07/21/07  
Work Order No: 07-07-1524  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project 3600 Park Blvd., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
07-07-1590-1	Aqueous	GC 5	07/25/07	07/25/07	070725S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	103	104	68-122	0	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

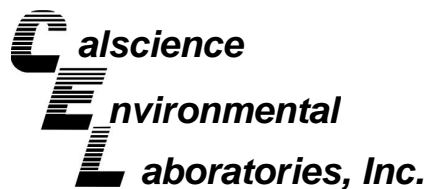
Date Received: 07/21/07  
Work Order No: 07-07-1524  
Preparation: EPA 5030B  
Method: EPA 8260B

Project 3600 Park Blvd., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-2	Aqueous	GC/MS Z	07/24/07	07/25/07	070724S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	89	83	88-118	8	0-7	4,3
Carbon Tetrachloride	87	80	67-145	8	0-11	
Chlorobenzene	89	85	88-118	5	0-7	3
1,2-Dichlorobenzene	91	87	86-116	4	0-8	
1,1-Dichloroethene	87	81	70-130	7	0-25	
Toluene	91	82	87-123	9	0-8	4,3
Trichloroethene	88	81	79-127	8	0-10	
Vinyl Chloride	73	81	69-129	11	0-13	
Methyl-t-Butyl Ether (MTBE)	93	89	71-131	4	0-13	
Tert-Butyl Alcohol (TBA)	70	71	36-168	1	0-45	
Diisopropyl Ether (DIPE)	98	93	81-123	5	0-9	
Ethyl-t-Butyl Ether (ETBE)	91	88	72-126	4	0-12	
Tert-Amyl-Methyl Ether (TAME)	91	88	72-126	4	0-12	
Ethanol	74	82	53-149	10	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

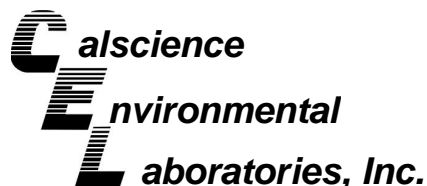
Date Received: N/A  
Work Order No: 07-07-1524  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: 3600 Park Blvd., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-436-703	Aqueous	GC 5	07/25/07	07/25/07	070725B01

<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	107	105	78-120	3	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

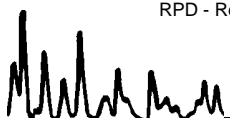
Date Received: N/A  
Work Order No: 07-07-1524  
Preparation: EPA 5030B  
Method: EPA 8260B

Project: 3600 Park Blvd., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-006-22,218	Aqueous	GC/MS Z	07/24/07	07/25/07	070724L02

<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>
Benzene	106	100	84-120	6	0-8	
Carbon Tetrachloride	109	103	63-147	5	0-10	
Chlorobenzene	103	98	89-119	5	0-7	
1,2-Dichlorobenzene	99	95	89-119	4	0-9	
1,1-Dichloroethene	113	104	77-125	8	0-16	
Toluene	108	102	83-125	6	0-9	
Trichloroethene	110	104	89-119	5	0-8	
Vinyl Chloride	95	105	63-135	10	0-13	
Methyl-t-Butyl Ether (MTBE)	97	96	82-118	1	0-13	
Tert-Butyl Alcohol (TBA)	92	101	46-154	9	0-32	
Diisopropyl Ether (DIPE)	104	102	81-123	2	0-11	
Ethyl-t-Butyl Ether (ETBE)	97	95	74-122	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	98	96	76-124	2	0-10	
Ethanol	107	108	60-138	1	0-32	

RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 07-07-1524

<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.



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

# SHELL Chain of Custody Record

**NAME OF PERSON TO BILL: Denis Brown**

ENVIRONMENTAL SERVICES       CHECK BOX TO VERIFY IF NO INCIDENT # APPLIES

NETWORK DEV / FE       BILL CONSULTANT

COMPLIANCE       RMT/CRMT

INCIDENT # (ES ONLY): **9 7 6 1 0 3 4 1**

DATE: **07-18-07**

PAGE: **1** of **1**

SAMPLING COMPANY: **Blaine Tech Services**      LOG CODE: **BTSS**

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

PROJECT CONTACT (Hardcopy or PDF Report to): **Michael Ninokata**

TELEPHONE: **408-573-0555**      FAX: **408-573-7771**      E-MAIL: **mminokata@blainetech.com**

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

SITE ADDRESS: Street and City: **3600 Park Blvd., Oakland**      State: **CA**      GLOBAL ID NO.: **T0600115417**

EDP DELIVERABLE TO (Name, Company, Office Location): **Dennis Baertschi, CRA, Sonoma Office**      PHONE NO.: **(707) 268-3813**      E-MAIL: **sonomaedf@croworld.com**      CONSULTANT PROJECT NO.: **070718-ww1**

SAMPLER NAME(S) (Print): **WILLIAM WONG**      LAB USE ONLY: **07-1524**

## REQUESTED ANALYSIS

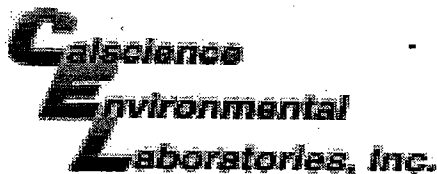
LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.	TPH - Gas, Purgeable (8260B)	TPH - Diesel, Extractable (8015M)	BTEX (8260B)	5 Oxygenates (8260B) (MTBE, TBA, DIPE, TAME, ETBE)	MTBE (8260B)	TBA (8260B)	DIPE (8260B)	TAME (8260B)	ETBE (8260B)	1,2 DCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015M)	TPH-motor oil (8015M)	TDS (160.1)	Total Iron (6010B)	Total Lead (6010B)	TEMPERATURE ON RECEIPT C°	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
		DATE	TIME																					
	MW-2	07/18/07	1240	W	5	+		X	X							X	X							
	MW-4	↓	1310	↓	5	+		X	X							X	X							
	MW-7	↓	1230	↓	5	+		X	X							X	X							
	MW-8	↓	1320	↓	5	+		X	X							X	X							

Relinquished by: (Signature) *[Signature]*      Received by: (Signature) *[Signature]*      Date: **07-18-07**      Time: \_\_\_\_\_

Relinquished by: (Signature) *[Signature]*      Received by: (Signature) *[Signature]*      Date: **7-20-07**      Time: **1601**

Relinquished by: (Signature) *[Signature]*      Received by: (Signature) *[Signature]*      Date: **7-21-07**      Time: **10:10**

**SAMPLE CUSTODIAN**



WORK ORDER #: 07 - 07 - 1524

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: BTS

DATE: 7-21-07

**TEMPERATURE - SAMPLES RECEIVED BY:**

<b>CALSCIENCE COURIER:</b>	<b>LABORATORY (Other than CalScience Courier):</b>
<input type="checkbox"/> Chilled, cooler with temperature blank provided.	<input type="checkbox"/> °C Temperature blank.
<input type="checkbox"/> Chilled, cooler without temperature blank.	<u>4.5</u> °C IR thermometer.
<input type="checkbox"/> Chilled and placed in cooler with wet ice.	<input type="checkbox"/> Ambient temperature.
<input type="checkbox"/> Ambient and placed in cooler with wet ice.	
<input type="checkbox"/> Ambient temperature.	
<input type="checkbox"/> °C Temperature blank.	

Initial: DN

**CUSTODY SEAL INTACT:**

Sample(s): \_\_\_\_\_ Cooler: \_\_\_\_\_ No (Not Intact) : \_\_\_\_\_ Not Present:

Initial: DN

**SAMPLE CONDITION:**

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with custody papers.....	<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"/>
Proper preservation noted on sample label(s).....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VOA vial(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"/>

Initial: DN

**COMMENTS:**

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# SHELL WELLHEAD INSPECTION FORM

(FOR SAMPLE TECHNICIAN)

Site Address 3600 PARK BLVD. OAKLAND, CA Date 07-18-07  
Job Number 070718WW1 Technician WW 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-2	X	X							
MW-4	X	X	X						
MW-7	X	X							
MW-8	X	X							

\*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 # 070718-WWI Date 07-18-07 Client SHELL

Site 3600 PARK BLVD, OAKLAND, CA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-2	1005	4					<del>4.77</del> 29.49	29.49		
MW-4	1023	4					10.34	29.59		
MW-7	0930	4				<del>3</del> <i>3</i>	5.08	37.97		
MW-8	1045	4					14.71	50.96		

## SHELL WELL MONITORING DATA SHEET

BTS #: 070718 - WW	Site: 97610341
Sampler: WW	Date: 07-18-07
Well I.D.: MW-2	Well Diameter: 2 3 4 6 8
Total Well Depth (TD): 29.49	Depth to Water (DTW): 4.77
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <del>PVE</del> Grade	D.O. Meter (if req'd): <del>SI</del> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.71	

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

16.1 (Gals.) X	3	=	48.3	Gals.	
1 Case Volume	Specified Volumes		Calculated Volume		

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
1009	67.1	7.8	1427	20	16.1	clear
1011	68.3	7.6	1399	149	32.2	"
<del>1013</del>	WELL DEWATERED @					36 gallons
1237	70.2	7.5	1337	101	-	cloudy

Did well dewater?  Yes    No    Gallons actually evacuated: 36

Sampling Date: 07-18-07    Sampling Time: 1240    Depth to Water: 25.24 (2 hrs)

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

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

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):	mV	Post-purge:	mV

## SHELL WELL MONITORING DATA SHEET

BTS #: <del>WV-0707018</del> <sup>070718 WW1</sup>	Site: 47610341
Sampler: WW	Date: 07-18-07
Well I.D.: MW-4	Well Diameter: 2 3 <b>4</b> 6 8
Total Well Depth (TD): 29.59	Depth to Water (DTW): 10.34
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]: 14.19	

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

12.5 (Gals.) X	3	= 37.5 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

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
1032	69.2	7.7	638	6	12.5	clear
1034	69.2	7.5	627	10	25	"
WELL DEWATERED @ 26 GALLONS						
1304	72.5	7.8	688	16		clear
Did well dewater? <u>Yes</u> No			Gallons actually evacuated: 26			
Sampling Date: 07-18-07		Sampling Time: 1310		Depth to Water: 24.87 <u>2 hour</u>		
Sample I.D.: MW-4				Laboratory: STL Other <u>CAUSCENCE</u>		
Analyzed for: TPH-G BTEX MTBE TPH-D				Other: <u>See SOC</u>		
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

**SHELL WELL MONITORING DATA SHEET**

BTS #: <u>070718-WW1</u>	Site: <u>97610341</u>
Sampler: <u>WW</u>	Date: <u>07-18-07</u>
Well I.D.: <u>MW-7</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth (TD): <u>37.97</u>	Depth to Water (DTW): <u>5.08</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>11.66</u>	

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

<u>21.4</u> (Gals.) X <u>3</u> = <u>64.2</u> Gals. Case Volume          Specified Volumes          Calculated Volume	<table border="1"><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	
<del>0940</del>	<del>68.8</del>	<del>7.7</del>	<del>966</del>	<del>9</del>	<del>21.4</del>	<del>clear</del>	
0946	72.7	7.6	963	12	42.8	"	
<del>0949</del>	<u>WELL DEWATERED</u>					<del>64.2<sup>gals</sup></del>	<u>@ 60 GALLONS</u>
1225	71.3	7.5	109.6	56		<u>cloudy</u>	

Did well dewater?  Yes    No          Gallons actually evacuated: 60

Sampling Date: 07-18-07    Sampling Time: 1230    Depth to Water: 30.07 (2.HRS)

Sample I.D.: MW-7          Laboratory: STL    Other: CAL SCIENCE

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

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:	<input type="text"/>	mg/L	Post-purge:	<input type="text"/>	mg/L
O.R.P. (if req'd):	Pre-purge:	<input type="text"/>	mV	Post-purge:	<input type="text"/>	mV

### SHELL WELL MONITORING DATA SHEET

BTS #: 070718-ww1	Site: 97610341
Sampler: WW	Date: 07-18-07
Well I.D.: MW-8	Well Diameter: 2 3 4 6 8
Total Well Depth (TD): 50.96	Depth to Water (DTW): 14.71
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 21.96	

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

$23.6 \text{ (Gals.)} \times 3 = 70.8 \text{ Gals.}$ 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
1056	69.5	7.5	941	4	23.6	clear
WELL DEWATERED @ 42 GALLONS					42	
1315	72.2	7.6	1095	493		gray cloudy

Did well dewater?  Yes    No      Gallons actually evacuated: 42

Sampling Date: 07-18-07    Sampling Time: 1320    Depth to Water: 44.77 @hov

Sample I.D.: MW-8      Laboratory: STL    Other: CAL SCIENCE

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

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