

20-2525



**Shell Oil Products US**

March 31, 2004

**Re: Former Shell-branded Service Station  
318 S. Livermore Avenue  
Livermore, California**

Alameda County  
APR 0 2005  
Environmental Health

Dear Mr. Bob Schultz:

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Sincerely,  
Shell Oil Products US

*Karen Petryna*

Karen E. Petryna  
Sr. Environmental Engineer



*Solving environment-related business problems worldwide*

[www.deltaenv.com](http://www.deltaenv.com)

175 Bernal Road • Suite 200  
San Jose, California 95119 USA  
408.224.4724 800.477.7411  
Fax 408.224.4518

March 31, 2005  
Project No. SJ31-8LI-1.2005

Mr. Bob Schultz  
Environmental Health Services – Environmental Protection  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**Re: Quarterly Monitoring Report – First Quarter 2005  
Shell-branded Service Station  
318 South Livermore Avenue  
Livermore, California**

Dear Mr. Schultz:

Delta Environmental Consultants, Inc. (Delta), on behalf of Shell Oil Products US (Shell), has prepared the following first quarter 2005 groundwater monitoring and sampling report for the above referenced site. A site location map is included as Figure 1.

#### **BACKGROUND**

On March 7, 2003, Shell received a notice of responsibility letter from the Alameda County Health Care Services Agency (ACHCSA) placing the site in the Local Oversight Program due to the presence of methyl tert-butyl ether (MTBE) in groundwater beneath the site. In a work plan, dated May 27, 2003, Delta proposed to continue quarterly sampling of site wells for the remainder of 2003 in order to monitor MTBE concentrations.

On December 10, 2003, site USTs, fuel dispensers, and associated product piping were removed. A fuel system removal report, dated January 16, 2004, was submitted by Delta to the ACHCSA.

Alameda County  
APR 0 3 2005  
Environmental Health

## **QUARTERLY GROUND WATER MONITORING PROGRAM**

Groundwater monitoring wells were gauged and sampled by Blaine Tech Services (Blaine), at the direction of Delta, on January 26, 2005. Depth to groundwater was measured in Wells MW-5 through MW-8. Wells MW-1 through MW-4 were previously destroyed. Groundwater elevation data and contours are presented on Figure 2.

Groundwater samples were collected from Wells MW-5 through MW-8. Samples were submitted by Blaine to Severn Trent Laboratories, Inc. (STL) in Pleasanton, California for analysis for total purgeable petroleum hydrocarbons as gasoline (TPH-G); benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds); the fuel oxygenates MTBE, di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), and tertiary butyl alcohol (TBA) using EPA Method 8260B. Benzene and MTBE concentrations in groundwater are presented on Figure 3.

Blaine's groundwater monitoring and sampling report, which includes historical and current groundwater elevation data, historical and current analytical results, and field data records for the current monitoring event, is included as Attachment A.

## **DISCUSSION**

Depth to groundwater in site wells has decreased by an average of 6.61 feet since last quarter consistent with historic water level fluctuations. The groundwater gradient on January 26, 2005 was toward the west at a magnitude of 0.008 feet/feet, consistent with previous data.

MTBE was detected only in Well MW-7, at a concentration of 1.8 ug/l. TPH-G and BTEX compounds were below laboratory detection limits in all site wells. Fuel oxygenates DIPE, ETBE, TAME, and TBA remain below laboratory detection limits for at least the sixth consecutive monitoring event.

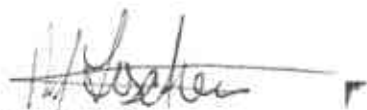
At the request of the ACHCSA, Delta submitted a "Revised Investigation and Excavation Work Plan" dated November 3, 2004. In a letter dated December 20, 2004, the ACHCSA requested an addendum. A work plan addendum was submitted on January 20, 2005, and approved by the ACHCSA in a letter dated January 21, 2005. The results of the proposed field work will be included in a separate report.

## **REMARKS**

The information contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

Please call if you have any questions regarding the contents of this letter.

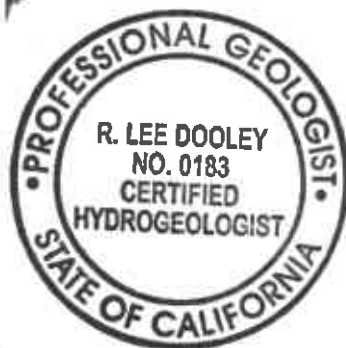
Sincerely,  
**Delta Environmental Consultants, Inc.**



Vera Fischer  
Senior Staff Geologist



R. Lee Dooley  
Senior Hydrogeologist  
CHG 0183

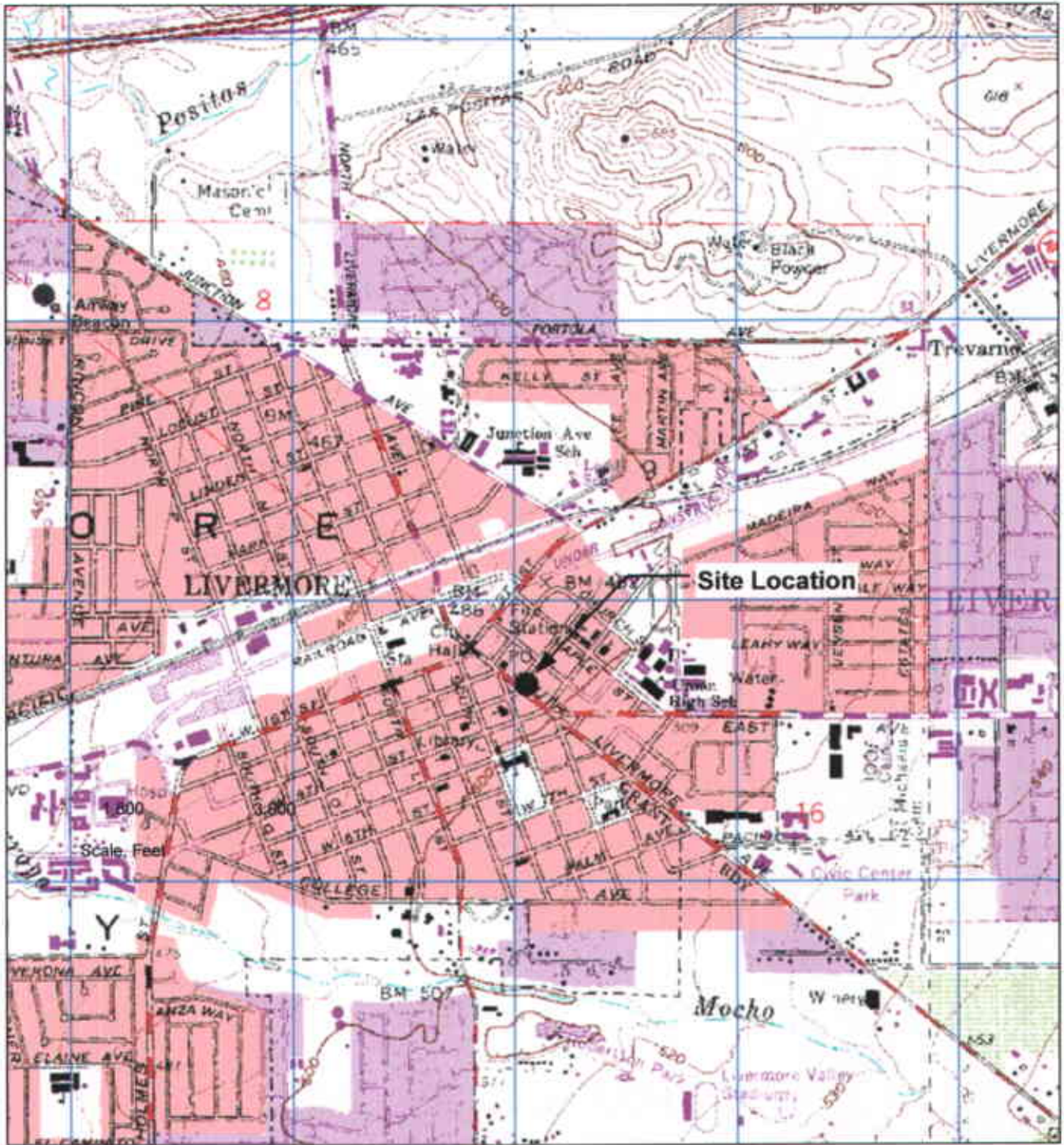


Alameda County  
APR 01 2005  
Environmental Health

- Attachments: Figure 1 – Site Location Map  
Figure 2 – Groundwater Elevation Contour Map, January 26, 2005  
Figure 3 – Benzene and MTBE Concentrations Map, January 26, 2005

Attachment A – Groundwater Monitoring and Sampling Report, March 10, 2005

cc: Denis Brown, Shell Oil Products US, Carson  
Betty Graham, RWQCB – Oakland



GENERAL NOTES:  
 Base Map from: DeLorme Yarmouth, ME 04096  
 Source Data: USGS

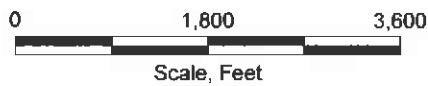


FIGURE 1  
 SITE LOCATION MAP

FORMER SHELL-BRANDED SERVICE STATION  
 318 South Livemore Avenue  
 Livermore, CA

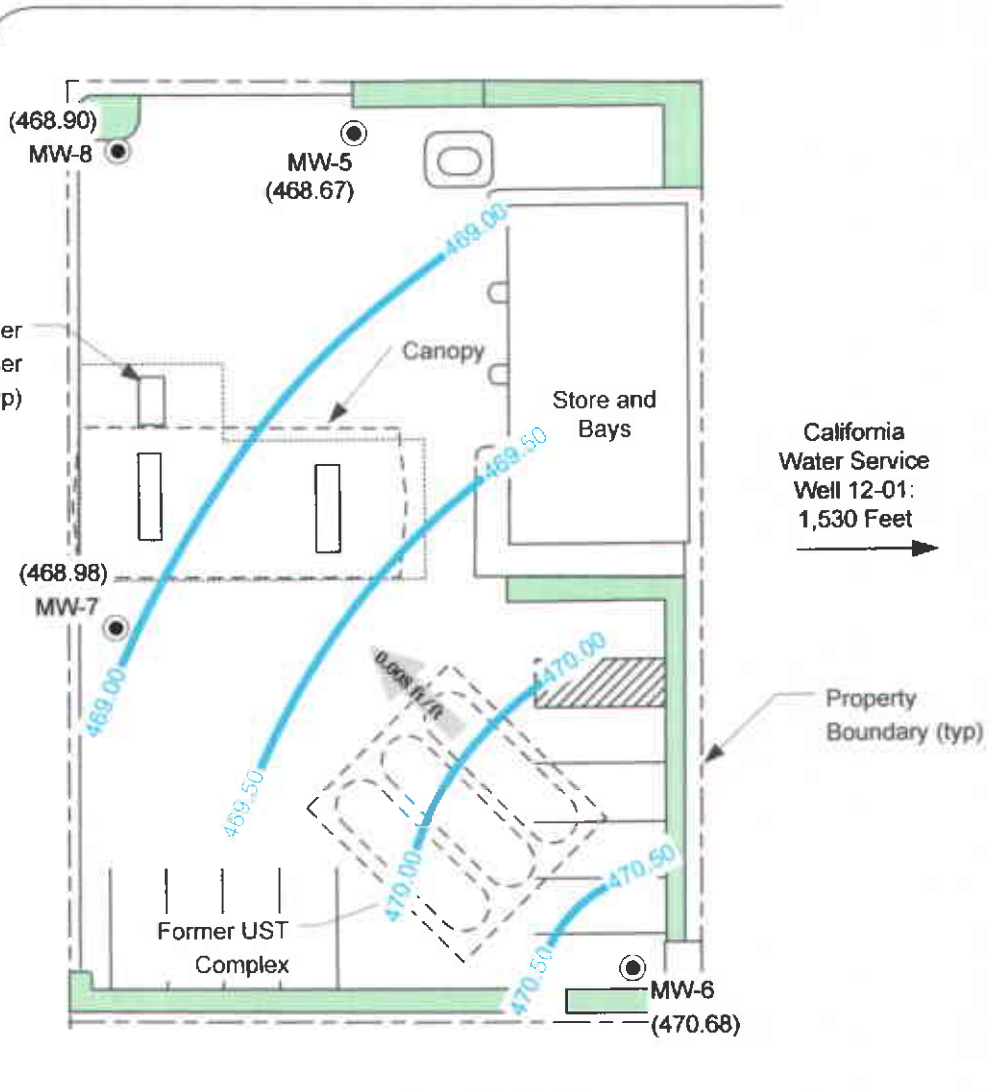
PROJECT NO. SJ31-BLI-1.2005	DRAWN BY VF 9/25/03
FILE NO. SJ31-BLI-1.2005	PREPARED BY VF
REVISION NO. 2	REVIEWED BY





Third Street

South Livermore Avenue



California Water Service Well 12-01: 1,530 Feet

Property Boundary (typ)

California Water Service Well 15-01: 1,530 Feet

**LEGEND**

- MW-6 ● **GROUNDWATER MONITORING WELL**
- (462.29) **GROUNDWATER ELEVATION (MSL), 1/26/05**
- 487.00 — **GROUNDWATER ELEVATION CONTOUR**
- ← 0.012 ft/ft **APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT**



**FIGURE 2**  
**GROUNDWATER ELEVATION CONTOUR MAP,**  
**JANUARY 26, 2005**  
**SHELL-BRANDED SERVICE STATION**  
**318 South Livermore Avenue**  
**Livermore, California**

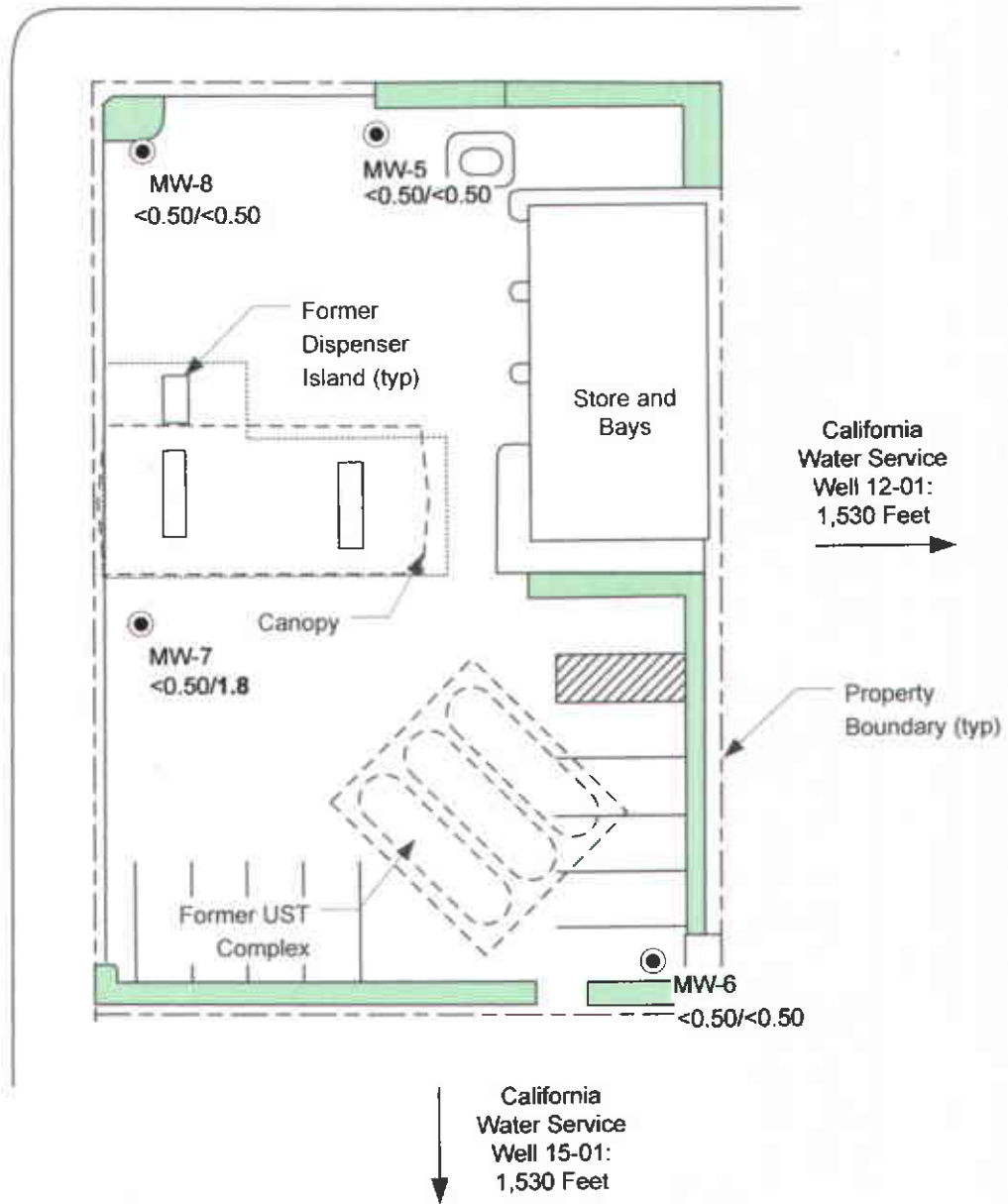
PROJECT NO. SJ31-8LI-1 2005	DRAWN BY VF 9/25/03
FILE NO. SJ31-8LI-1 2005	PREPARED BY VF
REVISION NO. 2	REVIEWED BY

**Delta**  
Environmental  
Consultants, Inc.



Third Street

South Livermore Avenue



**LEGEND**

MW-6 ●

**GROUNDWATER MONITORING WELL**

<0.50/<0.50

**BENZENE / MTBE CONCENTRATIONS IN GROUNDWATER (UG/L), 1/26/05**



APPROX. SCALE

**FIGURE 3  
BENZENE AND MTBE CONCENTRATION MAP,  
JANUARY 26, 2005**

**SHELL-BRANDED SERVICE STATION  
318 South Livermore Avenue  
Livermore, California**

PROJECT NO. SJ31-8LI-1.2005	DRAWN BY VF 9/25/03
FILE NO. SJ31-8LI-1.2005	PREPARED BY VF
REVISION NO. 2	REVIEWED BY



**Attachment A**

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**GROUNDWATER MONITORING AND SAMPLING REPORT**



# BLAINE TECH SERVICES INC.

GROUNDWATER SAMPLING SPECIALISTS  
SINCE 1985

March 10, 2005

Karen Petryna  
Shell Oil Products US  
20945 South Wilmington Avenue  
Carson, CA 90810

First Quarter 2005 Groundwater Monitoring at  
Shell-branded Service Station  
318 South Livermore Avenue  
Livermore, CA

Monitoring performed on January 26, 2005

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## Groundwater Monitoring Report 050126-SS-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.

SAN JOSE

SACRAMENTO

LOS ANGELES

SAN DIEGO

1680 ROGERS AVENUE SAN JOSE, CA 95112-1105

(408) 573-0555

FAX (408) 573-7771

LIC. 746084

[www.blainetech.com](http://www.blainetech.com)

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

Please call if you have any questions.

Yours truly,

Leon Gearhart  
Project Coordinator

LG/ks

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

cc: Debbie Arnold  
Delta Environmental  
175 Bernal Road, Suite 200  
San Jose, CA 95119

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**318 South Livermore Avenue**  
**Livermore, 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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-5	09/18/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-5	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	495.47	34.85	460.62
MW-5	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	495.47	37.26	458.21
MW-5	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	495.47	27.30	468.17
MW-5	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	27.84	467.63
MW-5	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	30.54	464.93
MW-5	11/13/2003	60	<0.50	1.5	1.7	9.6	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	33.94	461.53
MW-5	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	495.47	26.59	468.88
MW-5	04/07/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	495.47	25.44	470.03
MW-5	07/21/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	495.47	32.34	463.13
MW-5	11/11/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	33.24	462.23
MW-5	01/26/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	26.80	468.67
MW-6	09/18/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-6	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	497.57	35.41	462.16
MW-6	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	2.5	<2.0	<2.0	<2.0	<50	497.57	37.92	459.65
MW-6	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	497.57	27.71	469.86
MW-6	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	28.28	469.29
MW-6	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	30.56	467.01
MW-6	11/13/2003	90	<0.50	2.6	2.4	12	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	34.18	463.39
MW-6	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	497.57	27.16	470.41
MW-6	04/07/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	497.57	25.88	471.69
MW-6	07/21/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	497.57	32.74	464.83
MW-6	11/11/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	33.75	463.82
MW-6	01/26/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	26.89	470.68

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**318 South Livermore Avenue**  
**Livermore, 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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-7	09/18/2001	NA	<0.50	<0.50	<0.50	<0.50	1.2	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-7	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	2.0	<2.0	<2.0	<2.0	<50	495.58	34.29	461.29
MW-7	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	1.9	<2.0	<2.0	<2.0	<50	495.58	36.80	458.78
MW-7	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	0.89	<2.0	<2.0	<2.0	<50	495.58	26.75	468.83
MW-7	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	4.0	<2.0	<2.0	<2.0	<5.0	495.58	27.31	468.27
MW-7	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	3.2	<2.0	<2.0	<2.0	<5.0	495.58	30.02	465.56
MW-7	11/13/2003	72	<0.50	0.62	0.57	3.2	1.4	<2.0	<2.0	<2.0	<5.0	495.58	33.85	461.73
MW-7	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	0.85	NA	NA	NA	NA	495.58	27.13	468.45
MW-7	04/07/2004	<50	<0.50	<0.50	<0.50	<1.0	0.71	NA	NA	NA	NA	495.58	25.13	470.45
MW-7	07/21/2004	<50	<0.50	<0.50	<0.50	<1.0	1.8	NA	NA	NA	NA	495.58	31.68	463.90
MW-7	11/11/2004	75	<0.50	<0.50	<0.50	<1.0	2.2	<2.0	<2.0	<2.0	<5.0	495.58	32.92	462.66
MW-7	01/26/2005	<50	<0.50	<0.50	<0.50	<1.0	1.8	<2.0	<2.0	<2.0	<5.0	495.58	26.60	468.98
MW-8	09/18/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-8	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	6.9	<2.0	<2.0	<2.0	<50	494.90	34.46	460.44
MW-8	10/25/2002	140	<0.50	<0.50	<0.50	<0.50	2.2	3.3	<2.0	<2.0	<50	494.90	36.98	457.92
MW-8	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	494.90	27.35	467.55
MW-8	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	0.67	<2.0	<2.0	<2.0	<5.0	494.90	27.44	467.46
MW-8	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	0.50	<2.0	<2.0	<2.0	<5.0	494.90	32.29	462.61
MW-8	11/13/2003	260	1.5	2.3	2.9	16	1.4	<2.0	<2.0	<2.0	<5.0	494.90	33.08	461.82
MW-8	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	0.92	NA	NA	NA	NA	494.90	26.18	468.72
MW-8	04/07/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	494.90	25.10	469.80
MW-8	07/21/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	494.90	31.97	462.93
MW-8	11/11/2004	<50	<0.50	<0.50	<0.50	<1.0	0.82	<2.0	<2.0	<2.0	<5.0	494.90	32.80	462.10
MW-8	01/26/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	494.90	26.00	468.90

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**318 South Livermore Avenue**  
**Livermore, 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)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
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Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by 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, 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:

Survey data provided by KHM Environmental Management, Inc.

**Blaine Tech Services, Inc.**

February 10, 2005

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Attn.: Leon Gearhart  
Project#: 050126-SS1  
Project: 97464709  
Site: 318 S. Livermore Ave., Livermore

Dear Mr. Gearhart,

Attached is our report for your samples received on 01/27/2005 14:38  
This report has been reviewed and approved for release. Reproduction of this report  
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after  
03/13/2005 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: [mbrewer@stl-inc.com](mailto:mbrewer@stl-inc.com)

Sincerely,



Melissa Brewer  
Project Manager

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050126-SS1  
97464709

Received: 01/27/2005 14:38

Site: 318 S. Livermore Ave., Livermore

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-5	01/26/2005 13:02	Water	1
MW-6	01/26/2005 13:32	Water	2
MW-7	01/26/2005 12:00	Water	3
MW-8	01/26/2005 12:30	Water	4

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050126-SS1  
97464709

Received: 01/27/2005 14:38

Site: 318 S. Livermore Ave., Livermore

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-5	Lab ID: 2005-01-0770 - 1
Sampled: 01/26/2005 13:02	Extracted: 2/7/2005 11:52
Matrix: Water	QC Batch#: 2005/02/07-1B.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	02/07/2005 11:52	
Benzene	ND	0.50	ug/L	1.00	02/07/2005 11:52	
Toluene	ND	0.50	ug/L	1.00	02/07/2005 11:52	
Ethylbenzene	ND	0.50	ug/L	1.00	02/07/2005 11:52	
Total xylenes	ND	1.0	ug/L	1.00	02/07/2005 11:52	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	02/07/2005 11:52	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	02/07/2005 11:52	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	02/07/2005 11:52	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	02/07/2005 11:52	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	02/07/2005 11:52	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	93.8	73-130	%	1.00	02/07/2005 11:52	
Toluene-d8	105.5	81-114	%	1.00	02/07/2005 11:52	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566  
Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

02/10/2005 11:39



**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050126-SS1  
97464709

Received: 01/27/2005 14:38

Site: 318 S. Livermore Ave., Livermore

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-6	Lab ID: 2005-01-0770 - 2
Sampled: 01/26/2005 13:32	Extracted: 2/4/2005 09:09
Matrix: Water	QC Batch#: 2005/02/04-1C.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	02/04/2005 09:09	
Benzene	ND	0.50	ug/L	1.00	02/04/2005 09:09	
Toluene	ND	0.50	ug/L	1.00	02/04/2005 09:09	
Ethylbenzene	ND	0.50	ug/L	1.00	02/04/2005 09:09	
Total xylenes	ND	1.0	ug/L	1.00	02/04/2005 09:09	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	02/04/2005 09:09	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	02/04/2005 09:09	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	02/04/2005 09:09	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	02/04/2005 09:09	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	02/04/2005 09:09	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	106.8	73-130	%	1.00	02/04/2005 09:09	
Toluene-d8	101.4	81-114	%	1.00	02/04/2005 09:09	

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Blaine Tech Services, Inc.

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050126-SS1  
97464709

Received: 01/27/2005 14:38

Site: 318 S. Livermore Ave., Livermore

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-7	Lab ID: 2005-01-0770 - 3
Sampled: 01/26/2005 12:00	Extracted: 2/4/2005 09:28
Matrix: Water	QC Batch#: 2005/02/04-1C.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	02/04/2005 09:28	
Benzene	ND	0.50	ug/L	1.00	02/04/2005 09:28	
Toluene	ND	0.50	ug/L	1.00	02/04/2005 09:28	
Ethylbenzene	ND	0.50	ug/L	1.00	02/04/2005 09:28	
Total xylenes	ND	1.0	ug/L	1.00	02/04/2005 09:28	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	02/04/2005 09:28	
Methyl tert-butyl ether (MTBE)	1.8	0.50	ug/L	1.00	02/04/2005 09:28	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	02/04/2005 09:28	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	02/04/2005 09:28	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	02/04/2005 09:28	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	105.9	73-130	%	1.00	02/04/2005 09:28	
Toluene-d8	101.5	81-114	%	1.00	02/04/2005 09:28	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050126-SS1

97464709

Received: 01/27/2005 14:38

Site: 318 S. Livermore Ave., Livermore

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-8	Lab ID: 2005-01-0770 - 4
Sampled: 01/26/2005 12:30	Extracted: 2/4/2005 09:47
Matrix: Water	QC Batch#: 2005/02/04-1C.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	02/04/2005 09:47	
Benzene	ND	0.50	ug/L	1.00	02/04/2005 09:47	
Toluene	ND	0.50	ug/L	1.00	02/04/2005 09:47	
Ethylbenzene	ND	0.50	ug/L	1.00	02/04/2005 09:47	
Total xylenes	ND	1.0	ug/L	1.00	02/04/2005 09:47	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	02/04/2005 09:47	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	02/04/2005 09:47	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	02/04/2005 09:47	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	02/04/2005 09:47	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	02/04/2005 09:47	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	105.7	73-130	%	1.00	02/04/2005 09:47	
Toluene-d8	101.3	81-114	%	1.00	02/04/2005 09:47	

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02/10/2005 11:39

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050126-SS1  
97464709

Received: 01/27/2005 14:38

Site: 318 S. Livermore Ave., Livermore

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2005/02/04-1C.69-033

Water

Test(s): 8260B

QC Batch # 2005/02/04-1C.69

Date Extracted: 02/04/2005 07:33

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	02/04/2005 07:33	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	02/04/2005 07:33	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	02/04/2005 07:33	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	02/04/2005 07:33	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	02/04/2005 07:33	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	02/04/2005 07:33	
Benzene	ND	0.5	ug/L	02/04/2005 07:33	
Toluene	ND	0.5	ug/L	02/04/2005 07:33	
Ethylbenzene	ND	0.5	ug/L	02/04/2005 07:33	
Total xylenes	ND	1.0	ug/L	02/04/2005 07:33	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	92.4	73-130	%	02/04/2005 07:33	
Toluene-d8	101.4	81-114	%	02/04/2005 07:33	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050126-SS1  
97464709

Received: 01/27/2005 14:38

Site: 318 S. Livermore Ave., Livermore

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2005/02/07-1B.69-049

Water

Test(s): 8260B

QC Batch # 2005/02/07-1B.69

Date Extracted: 02/07/2005 07:49

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	02/07/2005 07:49	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	02/07/2005 07:49	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	02/07/2005 07:49	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	02/07/2005 07:49	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	02/07/2005 07:49	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	02/07/2005 07:49	
Benzene	ND	0.5	ug/L	02/07/2005 07:49	
Toluene	ND	0.5	ug/L	02/07/2005 07:49	
Ethylbenzene	ND	0.5	ug/L	02/07/2005 07:49	
Total xylenes	ND	1.0	ug/L	02/07/2005 07:49	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	99.0	73-130	%	02/07/2005 07:49	
Toluene-d8	100.4	81-114	%	02/07/2005 07:49	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050126-SS1  
97464709

Received: 01/27/2005 14:38

Site: 318 S. Livermore Ave., Livermore

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Water**

**QC Batch # 2005/02/04-1C.69**

LCS 2005/02/04-1C.69-015

Extracted: 02/04/2005

Analyzed: 02/04/2005 07:15

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	24.4		25	97.6			65-165	20		
Benzene	23.9		25	95.6			69-129	20		
Toluene	24.9		25	100.0			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	463		500	92.6			73-130			
Toluene-d8	506		500	101.2			81-114			

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02/10/2005 11:39

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

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San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050126-SS1

97464709

Received: 01/27/2005 14:38

Site: 318 S. Livermore Ave., Livermore

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Water**

**QC Batch # 2005/02/07-1B.69**

LCS 2005/02/07-1B.69-031

Extracted: 02/07/2005

Analyzed: 02/07/2005 07:31

LCSD

Compound	Conc. ug/L		Exp. Conc.	Recovery %		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	28.1		25	112.4			65-165	20		
Benzene	24.7		25	98.8			69-129	20		
Toluene	26.1		25	104.4			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	484		500	96.8			73-130			
Toluene-d8	498		500	99.6			81-114			

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02/10/2005 11:39

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050126-SS1  
97464709

Received: 01/27/2005 14:38

Site: 318 S. Livermore Ave., Livermore

**Batch QC Report**

Prep(s): 5030B Test(s): 8260B

**Matrix Spike ( MS / MSD )** **Water** **QC Batch # 2005/02/04-1C.69**

MS/MSD Lab ID: 2005-01-0760 - 004

MS: 2005/02/04-1C.69-002 Extracted: 02/04/2005 Analyzed: 02/04/2005 11:02

Dilution: 1.00

MSD: 2005/02/04-1C.69-021 Extracted: 02/04/2005 Analyzed: 02/04/2005 11:21

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	31.3	33.7	3.75	25	110.2	119.8	8.3	65-165	20		
Benzene	24.1	25.8	ND	25	96.4	103.2	6.8	69-129	20		
Toluene	23.9	24.8	ND	25	95.6	99.2	3.7	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	492	519		500	98.5	103.8		73-130			
Toluene-d8	480	481		500	95.9	96.2		81-114			



Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050126-SS1  
97464709

Received: 01/27/2005 14:38

Site: 318 S. Livermore Ave., Livermore

Batch QC Report

Prep(s): 5030B Test(s): 8260B

**Matrix Spike ( MS / MSD )** **Water** **QC Batch # 2005/02/07-1B.69**

MW-5 >> MS Lab ID: 2005-01-0770 - 001

MS: 2005/02/07-1B.69-011 Extracted: 02/07/2005 Analyzed: 02/07/2005 12:11

Dilution: 1.00

MSD: 2005/02/07-1B.69-030 Extracted: 02/07/2005 Analyzed: 02/07/2005 12:30

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Methyl tert-butyl ether	26.6	25.6	ND	25	106.4	102.4	3.8	65-165	20		
Benzene	23.3	22.3	ND	25	93.2	89.2	4.4	69-129	20		
Toluene	25.4	24.3	ND	25	101.6	97.2	4.4	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	493	471		500	98.6	94.2		73-130			
Toluene-d8	506	506		500	101.3	101.2		81-114			

LAB: SR

# SHELL Chain Of Custody Record

97824

Lab Identification (if necessary):

Address:

City, State, Zip:

Shell Project Manager to be invoiced:

- SCIENCE & ENGINEERING
- TECHNICAL SERVICES
- CRMT HOUSTON

Karen Petryna

2005-01-0770

INCIDENT NUMBER (S&E ONLY)

9 7 4 6 4 7 0 9

SAP or CRMT NUMBER (TS/CRMT)

DATE: 1/26/05

PAGE: 1 of 1

LAB/TEST COMPANY <b>Blaine Tech Services</b>	LAB CODE: <b>BTSS</b>	SITE ADDRESS (Street and City): <b>318 S. Livermore Ave., Livermore</b>	GLOBAL ID NO: <b>T0600101249</b>
---	--------------------------	--	-------------------------------------

ADDRESS: <b>1680 Rogers Avenue, San Jose, CA 95112</b>	ADP FEASIBLE TO (Access to Path or Disposal):	PHONE NO.:	CONTACT PROJECT NO.:
---	---	------------	----------------------

PROJECT CONTACT (Priority or PCF Factor): <b>Leon Gearhart</b>	<b>Vern Fischer</b>	<b>(408) 224-4724</b>	<b>vlischer@dokaenv.com</b>	CONSULTANT PROJECT NO.:
---	---------------------	-----------------------	-----------------------------	-------------------------

TELEPHONE: <b>408-573-0555</b>	FAX: <b>408-573-7771</b>	EMAIL: <b>lgearhart@blainetech.com</b>	LAB USE ONLY	
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TURNAROUND TIME (BUSINESS DAYS):  
 10 DAYS  5 DAYS  72 HOURS  48 HOURS  24 HOURS  LESS THAN 24 HOURS

LA - RAOQB REPORT FORMAT  UST AGENCY:

GCMS MTBE CONFIRMATION: HIGHEST REQUEST per ROPING: ALL

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED

*Suehem Sung*

### REQUESTED ANALYSIS

### FIELD NOTES:

Container/Preservative or PID Readings or Laboratory Notes

*2nd*

TEMPERATURE ON RECEIPT °C

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.	TPH - Gas, Plugable	RTX	MTBE (B0218 - 5ppb RL)	MTBE (B0608 - 0.5ppb RL)	Dioxinates (S) by (B2608)
		DATE	TIME							
	MW-5	1/26/05	1702	GW	S	X	X	X	X	
	MW-6		1332			X	X	X	Y	
	MW-7		1200			X	X	Y	X	
	MW-8		1230			X	X	Y	X	

Requested by (Signature): <i>[Signature]</i>	Received by (Signature): <i>[Signature]</i>	Date: <u>1/27/05</u>	Time: <u>1431</u>
Requested by (Signature): <i>[Signature]</i>	Received by (Signature): <i>[Signature]</i>	Date: <u>01/27/05</u>	Time: <u>1654</u>

**WELLHEAD INSPECTION CHECKLIST**

Date 1/26/05 Client Skan  
 Site Address 318 S. LIVERMORE AVE. LIVERMORE  
 Job Number 050126-SS 2 Technician Sooch

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
MW-1	X							
MW-2	X							
MW-3	X							
MW-4	X							

NOTES: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## WELL GAUGING DATA

Project # 050126-SS2 Date 1/26/05 Client ~~9899~~ 97464609

Site 318 S. LIVERMORE AVE. LIVERMORE

Well ID	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 TOG
MW-5	2					26.80	55.10	↓
MW-6	2					26.89	53.60	
MW-7	2					26.60	51.00	
MW-8	2					26.00	51.15	

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>050126-552</u>	Site: <u>97464609</u>
Sampler: <u>SOSch</u>	Date: <u>1/26/05</u>
Well I.D.: <u>MW-5</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>55.10</u>	Depth to Water (DTW): <u>26.80</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>32.46</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: \_\_\_\_\_

$\frac{4.5 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = \frac{13.5}{\text{Calculated Volume}} \text{ Gals.}$	<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
1245	66.7	7.6	1006	>1000	4.5	cloudy
1252	66.3	7.7	1005	805	9.0	"
1259	66.6	7.7	1010	825	13.5	"

Did well dewater? Yes  No  Gallons actually evacuated: 13.5

Sampling Date: 1/26/05 Sampling Time: 1302 Depth to Water: 31.50

Sample I.D.: MW-5 Laboratory: (STL) Other \_\_\_\_\_

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

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 #: <u>050126-552</u>	Site: <u>97464609</u>
Sampler: <u>soach</u>	Date: <u>1/26/05</u>
Well I.D.: <u>MW-6</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>53.60</u>	Depth to Water (DTW): <u>26.89</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>32.23</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

$\frac{4.3 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = \frac{12.9}{\text{Calculated Volume}} \text{ Gals.}$	<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
1315	65.8	7.7	849	> 2000	4.3	cloudy
1321	66.0	7.7	870	> 2000	8.6	"
1328	65.8	7.8	877	> 1000	13.0	"

Did well dewater? Yes  No  Gallons actually evacuated: 13

Sampling Date: 1/26/05 Sampling Time: 1332 Depth to Water: 29.30

Sample I.D.: MW-6 Laboratory: (STL) Other \_\_\_\_\_

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Other: OXY'S

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 #: <u>050126-552</u>	Site: <u>97464609</u>
Sampler: <u>soach</u>	Date: <u>1/26/05</u>
Well I.D.: <u>MW-7</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>51.00</u>	Depth to Water (DTW): <u>26.60</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>31.48</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

$\frac{4}{1} \text{ (Gals.)} \times \frac{3}{\text{Specified Volumes}} = \frac{12}{\text{Calculated Volume}} \text{ Gals.}$	<table border="1" style="width: 100%; border-collapse: collapse;"> <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 $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
1140	67.3	7.5	1246	>1000	4	cloudy
1146	67.7	7.5	1220	>1000	8	"
1152	67.7	7.5	1285	>1000	12	"

Did well dewater? Yes  No  Gallons actually evacuated: 12

Sampling Date: 1/26/05 Sampling Time: 1200 Depth to Water: 31.45

Sample I.D.: MW-7 Laboratory: (STL) Other \_\_\_\_\_

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Other: DM's

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

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

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>050126-552</u>	Site: <u>97464609</u>
Sampler: <u>soach</u>	Date: <u>1/26/05</u>
Well I.D.: <u>MW-8</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): <u>51.65</u>	Depth to Water (DTW): <u>26.00</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>31.03</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

$\frac{1}{4} \text{ (Gals.)} \times 3 = 12 \text{ Gals.}$ I Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <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 <u>µS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
1215	67.3	7.5	1016	>1000	4	cloudy
1221	67.5	7.5	997	>1000	8	"
1227	67.1	7.5	996	>1000	12	"

Did well dewater? Yes  No  Gallons actually evacuated: 12

Sampling Date: 1/26/05 Sampling Time: 1230 Depth to Water: 27.60

Sample I.D.: MW-8 Laboratory: STL Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: OXY'S

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

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