



Solving environment-related business problems worldwide

175 Bernal Road • Suite 200
San Jose, California 95119 USA

408.224.4724 800.477.7411
Fax 408.225.8506

20-2525
 FILE
www.deltaenv.com

December 22, 2004
Project No. SJ31-8LI-1.2004

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 – Fourth Quarter 2004**
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 fourth quarter 2004 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.

QUARTERLY GROUND WATER MONITORING PROGRAM

Groundwater monitoring wells were gauged and sampled by Blaine Tech Services (Blaine), at the direction of Delta, on November 11, 2004. 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); 1,2-Dichloroethane (1,2-DCA); and ethylene dibromide (EDB) 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 increased by an average of 1.00 feet since last quarter. The groundwater gradient on November 11, 2004 was toward the west at a magnitude of 0.012 feet/feet, consistent with previous data.

TPH-G was detected in Well MW-3 for the first time since the fourth quarter 2003 at a concentration of 75 micrograms per liter (ug/l). MTBE continues to be detected in Well MW-7, at a concentration of 2.2 ug/l. MTBE was detected in Well MW-8 for the first time since the first quarter 2004 at 0.82 ug/l. TPH-G and MTBE were below the method detection limit in all other site wells. BTEX compounds were not detected in any site wells for the fourth consecutive quarter. 1,2-DCA was detected in Wells MW-7 and MW-8 at 2.3 ug/l and 3.2 ug/l, respectively.

Delta submitted a "Revised Investigation and Excavation Work Plan" to the ACHCSA dated November 3, 2004. Shell received a response to the work plan from the ACHCSA in a letter dated December 20, 2004. A work plan addendum was requested to be submitted by January 20, 2005.

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.

December 22, 2004

Page 3

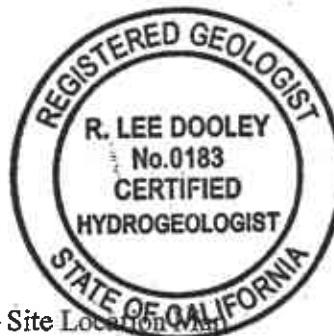
Please call if you have any questions regarding the contents of this letter.

Sincerely,
Delta Environmental Consultants, Inc.

Rebecca Wolff

Vera Fischer
Senior Staff Geologist

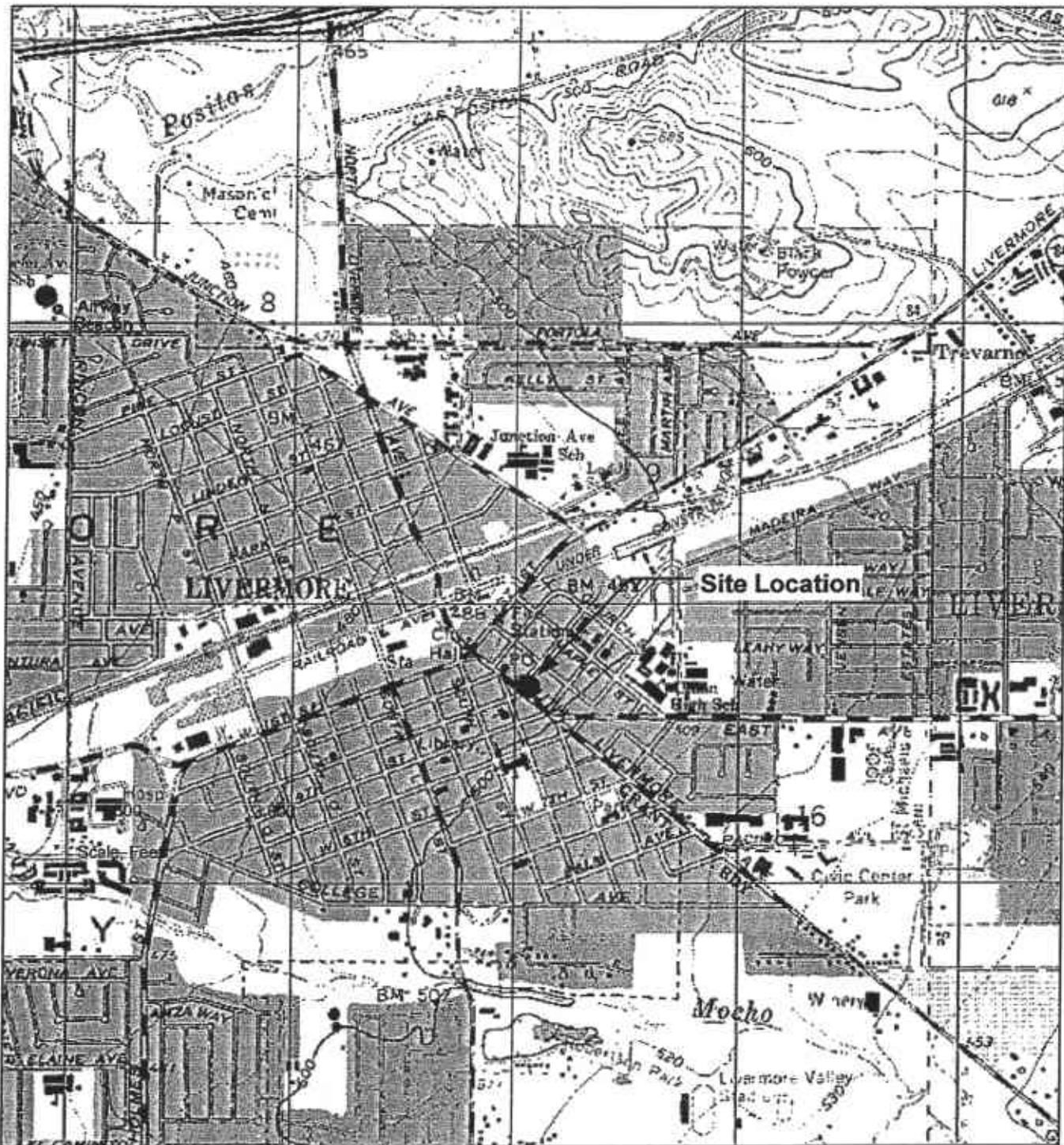
R. Lee Dooley
R. Lee Dooley
Senior Hydrogeologist
CHG 0183



Attachments: Figure 1 – Site Location
Figure 2 – Groundwater Elevation Contour Map, November 11, 2004
Figure 3 – Benzene and MTBE Concentrations Map, November 11, 2004

Attachment A – Groundwater Monitoring and Sampling Report, December 8, 2004

cc: Karen Petryna, Shell Oil Products US, Carson
Betty Graham, RWQCB – Oakland



GENERAL NOTES:

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

North

FIGURE 1
SITE LOCATION MAP

FORMER SHELL-BRANDED SERVICE STATION
318 South Livermore Avenue

PROJECT NO.
SJ31-BL-1-2004

DRAWN BY
VF 9/25/00

Livermore, CA

0

1,800

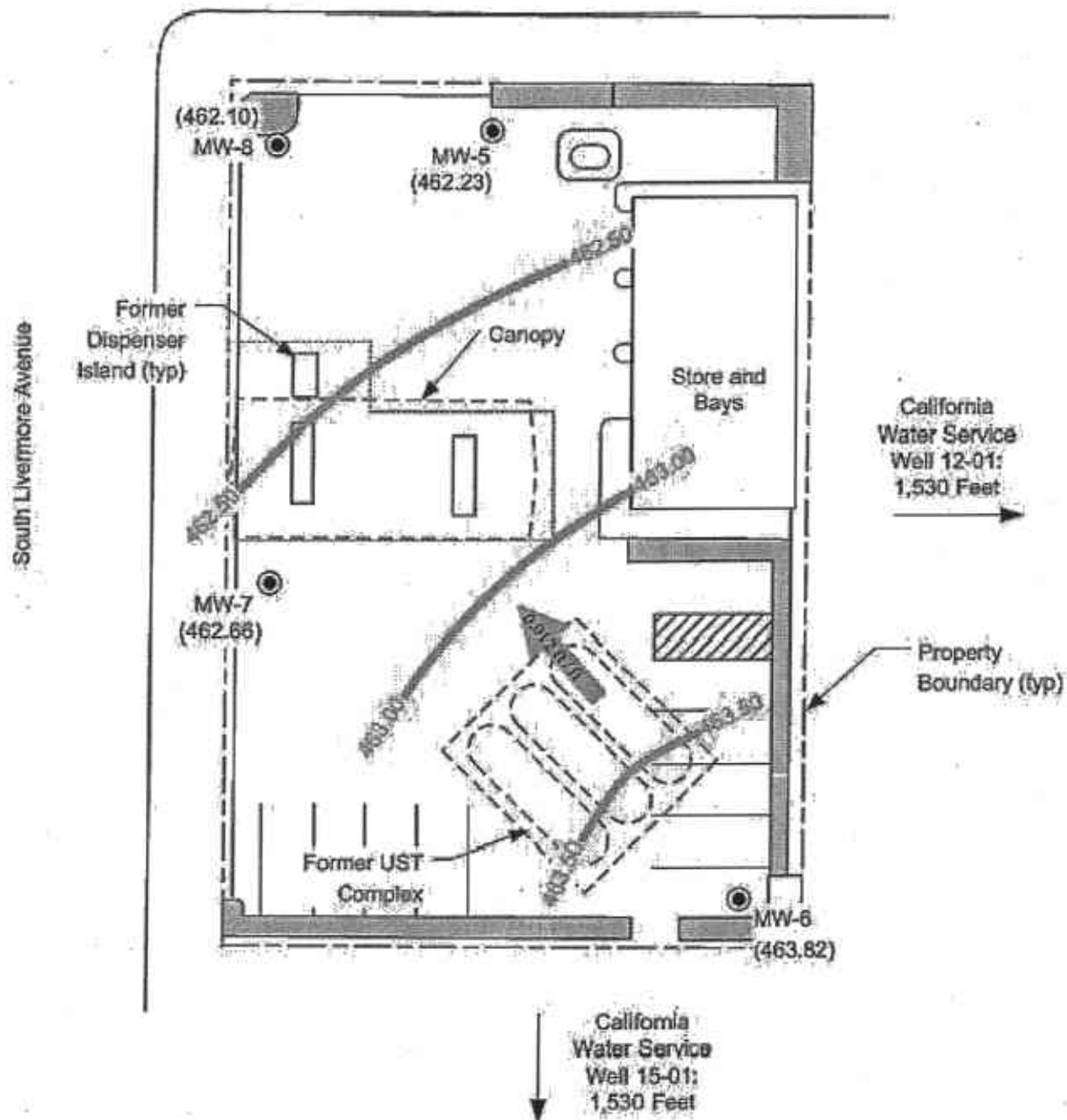
3,600

Scale: Feet



North

Third Street



LEGEND

- (W-6) ● **GROUNDWATER MONITORING WELL**
- 462.29) **GROUNDWATER ELEVATION (MSL), 11/11/04**
- 7.0 FT **GROUNDWATER ELEVATION CONTOUR**
- 0.012 FEET **APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT**

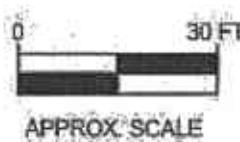


FIGURE 2
GROUNDWATER ELEVATION CONTOUR MAP,
NOVEMBER 11, 2004

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

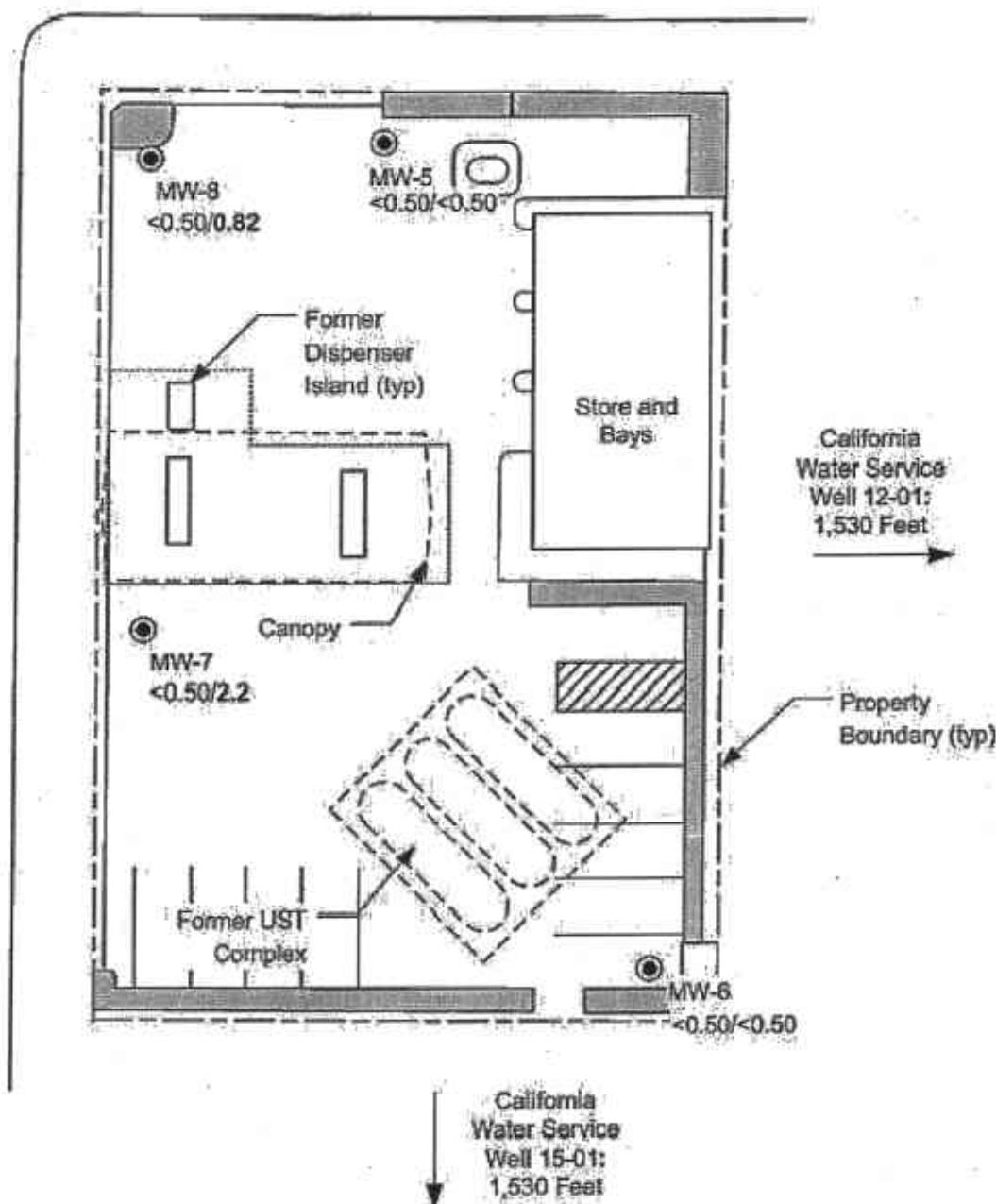
PROJECT NO. SJS1-SI-1.2004	DRAWN BY VF 9/25/05
FILE NO. SJS1-SI-1.2004	PREPARED BY VF
REVISION NO.	REVIEWED BY



North

Third Street

South Livermore Avenue



LEGEND

- MW-6 ● GROUNDWATER MONITORING WELL
- <0.50/<0.50 BENZENE / MTBE CONCENTRATIONS IN GROUNDWATER (UG/L)
- 11/11/04

0 30 FT
APPX. SCALE

FIGURE 3
BENZENE AND MTBE CONCENTRATION MAP,
NOVEMBER 11, 2004

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

PROJECT NO. SJ31-SLJ-1-2004	DRAWN BY VF 92503
FILE NO. SJ31-SLJ-1-2004	PREPARED BY VF
REVISION NO. 2	REVIEWED BY



Attachment A

GROUNDWATER MONITORING AND SAMPLING REPORT

BLAINE
TECH SERVICES INC.

GROUNDWATER SAMPLING SPECIALISTS
SINCE 1985

December 8, 2004

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

Fourth Quarter 2004 Groundwater Monitoring at
Shell-branded Service Station
318 South Livermore Avenue
Livermore, CA

Monitoring performed on November 11, 2004

Groundwater Monitoring Report 041111-PC-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

1680 ROGERS AVENUE SAN JOSE, CA 95112-1105

SACRAMENTO

(408) 573-0555

LOS ANGELES

FAX (408) 573-7771 LIC. 746684

SAN DIEGO

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-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-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	<0.50	2.0	<2.0	<2.0	<50	495.58	34.29	461.29

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	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-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

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)
---------	------	----------------	-------------	-------------	-------------	-------------	------------------------	----------------	----------------	----------------	---------------	--------------	----------------------------	--------------------------

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.

November 29, 2004

1680 Rogers Avenue
San Jose, CA 95112-1105

Attn.: Leon Gearhart

Project#: 041111-PC2

Project: 97464709

Site: 318 S. Livermore Ave., Livermore

Dear Mr. Gearhart,

Attached is our report for your samples received on 11/12/2004 16:11

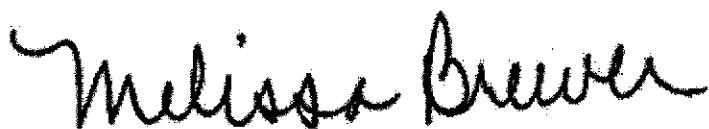
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 12/27/2004 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

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: 041111-PC2
97464709

Received: 11/12/2004 16:11

Site: 318 S. Livermore Ave., Livermore

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-5	11/11/2004 14:56	Water	1
MW-6	11/11/2004 14:26	Water	2
MW-7	11/11/2004 15:48	Water	3
MW-8	11/11/2004 15:22	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: 041111-PC2
97464709

Received: 11/12/2004 16:11

Site: 318 S. Livermore Ave., Livermore

Prep(s):	5030B	Test(s):	8260B
Sample ID:	MW-5	Lab ID:	2004-11-0459-1
Sampled:	11/11/2004 14:56	Extracted:	11/23/2004 07:55
Matrix:	Water	QC Batch#:	2004/11/23-1B.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/23/2004 07:55	
Benzene	ND	0.50	ug/L	1.00	11/23/2004 07:55	
Toluene	ND	0.50	ug/L	1.00	11/23/2004 07:55	
Ethylbenzene	ND	0.50	ug/L	1.00	11/23/2004 07:55	
Total xylenes	ND	1.0	ug/L	1.00	11/23/2004 07:55	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/23/2004 07:55	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	11/23/2004 07:55	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/23/2004 07:55	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/23/2004 07:55	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/23/2004 07:55	
1,2-DCA	ND	0.50	ug/L	1.00	11/23/2004 07:55	
EDB	ND	0.50	ug/L	1.00	11/23/2004 07:55	
Surrogate(s)						
1,2-Dichloroethane-d4	88.0	76-130	%	1.00	11/23/2004 07:55	
Toluene-d8	100.0	78-115	%	1.00	11/23/2004 07:55	

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: 041111-PC2
97464709

Received: 11/12/2004 16:11

Site: 318 S. Livermore Ave., Livermore

Prep(s):	5030B	Test(s):	8260B
Sample ID:	MW-6	Lab ID:	2004-11-0459-2
Sampled:	11/11/2004 14:26	Extracted:	11/23/2004 08:14
Matrix:	Water	QC Batch#:	2004/11/23-1B-68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/23/2004 08:14	
Benzene	ND	0.50	ug/L	1.00	11/23/2004 08:14	
Toluene	ND	0.50	ug/L	1.00	11/23/2004 08:14	
Ethylbenzene	ND	0.50	ug/L	1.00	11/23/2004 08:14	
Total xylenes	ND	1.0	ug/L	1.00	11/23/2004 08:14	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/23/2004 08:14	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	11/23/2004 08:14	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/23/2004 08:14	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/23/2004 08:14	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/23/2004 08:14	
1,2-DCA	ND	0.50	ug/L	1.00	11/23/2004 08:14	
EDB	ND	0.50	ug/L	1.00	11/23/2004 08:14	
Surrogate(s)						
1,2-Dichloroethane-d4	101.5	76-130	%	1.00	11/23/2004 08:14	
Toluene-d8	91.5	78-115	%	1.00	11/23/2004 08:14	

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: 041111-PC2
97464709

Received: 11/12/2004 16:11

Site: 318 S. Livermore Ave., Livermore

Prep(s):	5030B	Test(s):	8260B
Sample ID:	MW-7	Lab ID:	2004-11-0459-3
Sampled:	11/11/2004 15:48	Extracted:	11/24/2004 13:09
Matrix:	Water	QC Batch#:	2004/11/24-1A.64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	75	50	ug/L	1.00	11/24/2004 13:09	
Benzene	ND	0.50	ug/L	1.00	11/24/2004 13:09	
Toluene	ND	0.50	ug/L	1.00	11/24/2004 13:09	
Ethylbenzene	ND	0.50	ug/L	1.00	11/24/2004 13:09	
Total xylenes	ND	1.0	ug/L	1.00	11/24/2004 13:09	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/24/2004 13:09	
Methyl tert-butyl ether (MTBE)	2.2	0.50	ug/L	1.00	11/24/2004 13:09	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/24/2004 13:09	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/24/2004 13:09	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/24/2004 13:09	
1,2-DCA	2.3	0.50	ug/L	1.00	11/24/2004 13:09	
EDB	ND	0.50	ug/L	1.00	11/24/2004 13:09	
Surrogate(s)						
1,2-Dichloroethane-d4	112.1	76-130	%	1.00	11/24/2004 13:09	
Toluene-d8	106.9	78-115	%	1.00	11/24/2004 13:09	

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: 041111-PC2
97464709

Received: 11/12/2004 16:11

Site: 318 S. Livermore Ave., Livermore

Prep(s):	5030B	Test(s):	8260B
Sample ID:	MW-8	Lab ID:	2004-11-0459-4
Sampled:	11/11/2004 15:22	Extracted:	11/25/2004 10:56
Matrix:	Water	OC Batch#:	2004/11/25/1B.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/25/2004 10:56	
Benzene	ND	0.50	ug/L	1.00	11/25/2004 10:56	
Toluene	ND	0.50	ug/L	1.00	11/25/2004 10:56	
Ethylbenzene	ND	0.50	ug/L	1.00	11/25/2004 10:56	
Total xylenes	ND	1.0	ug/L	1.00	11/25/2004 10:56	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/25/2004 10:56	
Methyl tert-butyl ether (MTBE)	0.82	0.50	ug/L	1.00	11/25/2004 10:56	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/25/2004 10:56	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/25/2004 10:56	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/25/2004 10:56	
1,2-DCA	3.2	0.50	ug/L	1.00	11/25/2004 10:56	
EDB	ND	0.50	ug/L	1.00	11/25/2004 10:56	
Surrogate(s)						
1,2-Dichloroethane-d4	109.1	76-130	%	1.00	11/25/2004 10:56	
Toluene-d8	95.4	78-115	%	1.00	11/25/2004 10:56	

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: 041111-PC2
97464709

Received: 11/12/2004 16:11

Site: 318 S. Livermore Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Method Blank**Water****QC Batch # 2004/11/23-1B.68**

MB: 2004/11/23-1B.68-016

Date Extracted: 11/23/2004 07:16

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/23/2004 07:16	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/23/2004 07:16	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/23/2004 07:16	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	11/23/2004 07:16	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	11/23/2004 07:16	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	11/23/2004 07:16	
1,2-DCA	ND	0.5	ug/L	11/23/2004 07:16	
EDB	ND	0.5	ug/L	11/23/2004 07:16	
Benzene	ND	0.5	ug/L	11/23/2004 07:16	
Toluene	ND	0.5	ug/L	11/23/2004 07:16	
Ethylbenzene	ND	0.5	ug/L	11/23/2004 07:16	
Total xylenes	ND	1.0	ug/L	11/23/2004 07:16	
Surrogates(s)					
1,2-Dichloroethane-d4	89.2	76-130	%	11/23/2004 07:16	
Toluene-d8	94.8	78-115	%	11/23/2004 07:16	

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: 041111-PC2
97464709

Received: 11/12/2004 16:11

Site: 318 S. Livermore Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Method Blank**Water****QC Batch # 2004/11/24-1A.64**

MB: 2004/11/24-1A.64-079

Date Extracted: 11/24/2004 07:13

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/24/2004 07:13	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/24/2004 07:13	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/24/2004 07:13	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	11/24/2004 07:13	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	11/24/2004 07:13	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	11/24/2004 07:13	
1,2-DCA	ND	0.5	ug/L	11/24/2004 07:13	
EDB	ND	0.5	ug/L	11/24/2004 07:13	
Benzene	ND	0.5	ug/L	11/24/2004 07:13	
Toluene	ND	0.5	ug/L	11/24/2004 07:13	
Ethylbenzene	ND	0.5	ug/L	11/24/2004 07:13	
Total xylenes	ND	1.0	ug/L	11/24/2004 07:13	
Surrogates(s)					
1,2-Dichloroethane-d4	104.4	76-130	%	11/24/2004 07:13	
Toluene-d8	109.2	78-115	%	11/24/2004 07:13	

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: 041111-PC2
97464709

Received: 11/12/2004 16:11

Site: 318 S. Livermore Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Method: Blank

Water

QC Batch #: 2004/11/25-1B.66

MB: 2004/11/25-1B.66-014

Date Extracted: 11/25/2004 08:14

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/25/2004 08:14	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/25/2004 08:14	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/25/2004 08:14	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	11/25/2004 08:14	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	11/25/2004 08:14	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	11/25/2004 08:14	
1,2-DCA	ND	0.5	ug/L	11/25/2004 08:14	
EDB	ND	0.5	ug/L	11/25/2004 08:14	
Benzene	ND	0.5	ug/L	11/25/2004 08:14	
Toluene	ND	0.5	ug/L	11/25/2004 08:14	
Ethylbenzene	ND	0.5	ug/L	11/25/2004 08:14	
Total xylenes	ND	1.0	ug/L	11/25/2004 08:14	
Surrogates(s)					
1,2-Dichloroethane-d4	96.0	76-130	%	11/25/2004 08:14	
Toluene-d8	97.6	78-115	%	11/25/2004 08:14	

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: 041111-PC2
97464709

Received: 11/12/2004 16:11

Site: 318 S. Livermore Ave., Livermore

Batch QC Report									
Prep(s): 5030B		Test(s): 8260B							
Laboratory Control Spike			Water			QC Batch # 2004/11/23-1B.68			
LCS	2004/11/23-1B.68-058				Extracted: 11/23/2004				Analyzed: 11/23/2004 06:58
LCSD									

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags		
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	22.9		25	91.6		65-165	20				
Benzene	23.9		25	95.6		69-129	20				
Toluene	23.7		25	94.8		70-130	20				
Surrogates(s)											
1,2-Dichloroethane-d4	455		500	91.0		76-130					
Toluene-d8	491		500	98.2		78-115					

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: 041111-PC2
97464709

Received: 11/12/2004 16:11

Site: 318 S. Livermore Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike**Water**

QC Batch # 2004/11/24-1A:64

LCS 2004/11/24-1A:64-080
LCSD

Extracted: 11/24/2004

Analyzed: 11/24/2004 06:51

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	26.9		25	107.6			65-165	20		
Benzene	25.9		25	103.6			69-129	20		
Toluene	31.0		25	124.0			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	516		500	103.2			76-130			
Toluene-d8	558		500	111.6			78-115			

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: 041111-PC2
97464709

Received: 11/12/2004 16:11

Site: 318 S. Livermore Ave., Livermore

Batch QC Report

Prep(s): 5030B	Test(s): 8260B	
Laboratory Control Spike	Water	QC Batch # 2004/11/25-1B,66
LCS 2004/11/25-1B,66-027	Extracted: 11/25/2004	Analyzed: 11/25/2004 07:27
LCSD		

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD %	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	21.2		25	84.8		65-165	20			
Benzene	23.6		25	94.4		69-129	20			
Toluene	26.1		25	104.4		70-130	20			
Surrogates(s)										
1,2-Dichloroethane-d4	478		500	95.6		76-130				
Toluene-d8	492		500	98.4		78-115				

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: 041111-PC2
97464709

Received: 11/12/2004 16:11

Site: 318 S. Livermore Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD)

Water

QC Batch # 2004/11/23-1B.68

MS/MSD

Lab ID: 2004-11-0461 - 001

MS: 2004/11/23-1B.68-049

Extracted: 11/23/2004

Analyzed: 11/23/2004 12:49

MSD: 2004/11/23-1B.68-008

Extracted: 11/23/2004

Analyzed: 11/23/2004 13:08

Dilution: 1.00

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	43.5	44.2	18.6	25	99.6	176.8	55.9	65-165	20			
Benzene	25.2	24.5	ND	25	100.8	98.0	2.8	69-129	20			
Toluene	23.9	24.2	ND	25	95.6	96.8	1.2	70-130	20			
Surrogate(s)												
1,2-Dichloroethane-d4	464	450		500	92.7	90.0		76-130				
Toluene-d8	473	493		500	94.5	98.6		78-115				

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: 041111-PC2
97464709

Received: 11/12/2004 16:11

Site: 318 S. Livermore Ave., Livermore

Batch QC Report											
Prep(s): 5030B				Test(s): 8260B							
Matrix Spike (MS / MSD)				Water				QC Batch # 2004/11/24-1A.64			
MS/MSD								Lab ID:	2004-11-0470 - 001		
MS:	2004/11/24-1A.64-051				Extracted: 11/24/2004			Analyzed:	11/24/2004 08:51		
MSD:	2004/11/24-1A.64-013				Extracted: 11/24/2004			Dilution:	1.00		
								Analyzed:	11/24/2004 09:13		
								Dilution:	1.00		

Compound	Conc.			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Methyl tert-butyl ether	24.5	24.4	ND	25	98.0	97.6	0.4	65-165	20		
Benzene	24.1	25.0	ND	25	96.4	100.0	3.7	69-129	20		
Toluene	27.7	27.9	ND	25	110.8	111.6	0.7	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	532	516		500	106.4	103.2		76-130			
Toluene-d8	561	546		500	112.2	109.2		78-115			

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: 041111-PC2
97464709

Received: 11/12/2004 16:11

Site: 318 S. Livermore Ave., Livermore

Batch QC Report											
Prep(s): 5030B				Test(s): 8260B							
Matrix Spike (MS / MSD)				Water				QC Batch # 2004/11/25-1B.66			
MS/MSD	MS	MSD	Sample	Extracted:	11/25/2004	Water	Lab ID:	2004-11-0471 - 001	Analyzed:	11/25/2004 12:48	Dilution:
MS: 2004/11/25-1B.66-048							Analyzed:		1.00		
MSD: 2004/11/25-1B.66-011				Extracted:	11/25/2004		Analyzed:		11/25/2004 13:11		
							Dilution:				1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec:	RPD	MS	MSD
Benzene	24.5	25.2	ND	25	98.0	100.8	2.8	69-129	20		
Toluene	25.1	23.6	ND	25	100.4	94.4	6.2	70-130	20		
Methyl tert-butyl ether	23.3	26.3	3.07	25	80.9	92.9	13.8	65-165	20		
Surrogate(s)											
1,2-Dichloroethane-d4	454	482		500	90.8	96.4		76-130			
Toluene-d8	468	437		500	93.7	87.4		78-115			

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: 041111-PC2
97464709

Received: 11/12/2004 16:11

Site: 318 S. Livermore Ave., Livermore

Legend and Notes

Result Flag

M4

MS/MSD spike recoveries were above acceptance limits.
See blank spike (LCS).

R1

Analyte RPD was out of QC limits.

三

卷之三

卷之三

卷之三

SHELL Chain Of Custody Record

95710

Lab Identification (if necessary)		Shell Project Manager to be Invoiced:		INCIDENT NUMBER (S&E ONLY)								
Address:		<input checked="" type="checkbox"/> SCIENTIFIC ENVIROCHEM <input type="checkbox"/> TECHNICAL SERVICES <input type="checkbox"/> CITY/HOUSTON		Karen Petryma								
City, State, Zip:				9 7 4 6 4 7 0 9								
				SAP or CRNT NUMBER (ITS/CRNT)								
		2004-11-0459										
Sample Company:		318 S. Livermore Ave., Livermore		DATE: 11/11/04								
Elaine Tech Services		318 S. Livermore Ave., Livermore		PAGE: 1 of 1								
Address: 1580 Rogers Avenue, San Jose, CA 95112 408-272-7771 Fax: 408-272-7771 Email: Leon Gearhart		Vera Fischer 408-272-7771		T0600101249								
TELEPHONE: 408-272-7771 FAX: 408-272-7771 Email: lsgearhart@elainetech.com		P.Cornish		LAB USE ONLY								
TURNAROUND TIME (BUSINESS DAYS): 15-30 DAYS <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 24 HOURS <input type="checkbox"/> 48 HOURS <input type="checkbox"/> 24 HOURS <input type="checkbox"/> LESS THAN 24 HOURS				REQUESTED ANALYSIS								
<input type="checkbox"/> IA - INVOICE REPORT FORMAT <input type="checkbox"/> LIST AGENCY				FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes								
GCAMS ALTRE CONFIRMATION: HIGHEST <input type="checkbox"/> HIGHEST TO LOWEST <input type="checkbox"/> ALL <input type="checkbox"/>				30°C								
SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF PID IS NOT NEEDED <input type="checkbox"/>				TEMPERATURE ON RECEIPT OF								
LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - USE PERIODIC	TPH - USE SPOT	ATTE (03/08 - Sept 04)	ATTE (03/08 - Sept 04)	Order date (by location)	1-2-04	1-2-04
	MU-5	11/11/04	1426	3	X	A	A	A	1	1		
	MU-6	11/11/04	1426	3	X	A	A	1	1			
	MU-7	11/11/04	1518	3	X	A	A	1	1			
	MU-8	11/11/04	1522	3	X	A	A	1	1			
Received by (Signature) <i>John Muller</i> Received by (Signature) <i>John Muller</i> Received by (Signature) <i>John Muller</i>												
Received by (Signature) <i>John Muller</i> Received by (Signature) <i>John Muller</i> Received by (Signature) <i>John Muller</i>												

WELLHEAD INSPECTION CHECKLIST

Page 1 of 1

Client shell

Date 11/11/04

Site Address 316 S. Livermore Ave., Livermore

Job Number 941111-0c2 Technician P.Cornish

NOTES:

SITE INSPECTION CHECKLIST

Client Shell Date 11/9/04

Site Address 318 S. Livermore Ave., Livermore

Job Number 041109-1462 Technician ME

Site Status _____ **Branded Station** _____ **Vacant Lot** **Other** _____

- | | | |
|--|-------------------------------------|-------|
| Inspected / Labeled / Cleaned - All Wells on Scope Of Work | <input checked="" type="checkbox"/> | |
| Inspected / Cleaned Components - All Other Identifiable Wells | <input type="checkbox"/> | (N/A) |
| Inspected Site for Investigation Related Trip Hazards | <input checked="" type="checkbox"/> | |
| Addressed All Outstanding Wellhead Repair Order(s) | <input type="checkbox"/> | (N/A) |
| Completed Repair Data Sheets(s) | <input type="checkbox"/> | (N/A) |
| Inspected Treatment / Remediation System Compound For Security, Cleanliness and Appearance | <input type="checkbox"/> | (N/A) |
| Inspected Vacant Lot for Signs of Habitation, Hazardous Materials or Terrain, Overgrown Vegetation and Security | <input checked="" type="checkbox"/> | N/A |

PLEASE BE ADVISED THAT, UNLESS OTHERWISE INSTRUCTED, NO REPAIRS ARE PLANNED FOR THE ISSUES DESCRIBED BELOW

PROJECT COORDINATOR ONLY

Checklist Reviewed LG 11/10/04 **Notes**
Initial/Date

WELL GAUGING DATA

Project # 04111-PCP

Date 11/16/04

Client stuff

Site 31B S. Livermore Ave., Livermore.

SHELL WELL MONITORING DATA SHEET

BTS #: 04111-PC2	Site: 318 S. Livermore Ave., Livermore
Sampler: PC	Date: 11/16/04
Well I.D.: MW-5	Well Diameter: <input checked="" type="radio"/> 3 4 6 8
Total Well Depth (TD): 55.14	Depth to Water (DTW): 33.24
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVE	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 37.62	

Purge Method: Bailer
 Disposable Bailer
 Positive Air Displacement
 Electric Submersible

Waterra
 Peristaltic
 Extraction Pump
 Other _____

Sampling Method:
 Bailer
 Disposable Bailer
 Extraction Port
 Dedicated Tubing
 Other _____

1 Case Volume	(Gals.) X	Specified Volumes	=	Calculated Volume	Well Diameter	Multiplier	Well Diameter	Multiplier
3.5		3	=	10.5 Gals.	1"	0.04	4"	0.65
					2"	0.16	6"	1.47
					3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or $\mu\Omega$)	Turbidity (NTUs)	Gals. Removed	Observations
1438	65.6	7.2	1049	71000	3.5	brown
1442	65.6	7.2	1082	71000	7	
1446	65.6	7.2	1088	845	10.5	

Did well dewater? Yes Gallons actually evacuated: 10.5

Sampling Date: 11/16/04 Sampling Time: 1456 Depth to Water: 34.25

Sample I.D.: MW-5 Laboratory: STI Other _____

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
--------------------	------------	----	-------------	----

SHELL WELL MONITORING DATA SHEET

BTS #: 04U11-PC2	Site: 313 S. Livermore Ave., Livermore		
Sampler: PC	Date: 4/11/04		
Well I.D.: MW-6	Well Diameter: ② 3 4 6 8		
Total Well Depth (TD): 53.58	Depth to Water (DTW): 33.75		
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]: <u>33.72</u> ^{RC} <u>37.72</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 _____		Other: _____
<u>3.2</u> (Gals.) X <u>3</u> = <u>9.6</u> 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 ² * 0.163	

Time	Temp (°F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	Gals. Removed	Observations
1412	65.5	7.4	1000	21000	3.2	brown
1415	65.8	7.2	955	467	6.4	clearing
1418	65.6	7.2	936	306	9.6	↓

Did well dewater? Yes Gallons actually evacuated: 9.6

Sampling Date: 4/11/04 Sampling Time: 1426 Depth to Water: 34.02

Sample I.D.: MW-6 Laboratory: STD Other: _____

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

SHELL WELL MONITORING DATA SHEET

BTS #: 041111-PC2	Site: 518 S. Livermore Ave., Livermore		
Sampler: PC	Date: 11/11/04		
Well I.D.: MW-7	Well Diameter: ① 3 4 6 8		
Total Well Depth (TD): 51.07	Depth to Water (DTW): 32.92		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: <input checked="" type="checkbox"/> Grade	D.O. Meter (if req'd):	YSI	HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 34.55			

Purge Method:	Bailer Disposable Bailer Positive Air Displacement Electric Submersible	Waterra Peristaltic Extraction Pump Other _____	Sampling Method:	~Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____
2.9 (Gals.) X 3 = 8.7 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 ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	Gals. Removed	Observations
1532	65.4	7.0	1272	71000	3	brown
1535	65.8	6.9	1376	71000	6	↓
1539	65.7	6.9	1370	660	9	

Did well dewater? Yes Gallons actually evacuated: 9

Sampling Date: 11/11/04 Sampling Time: 1548 Depth to Water: 35.10

Sample I.D.: MW-7 Laboratory: STL Other: _____

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

SHELL WELL MONITORING DATA SHEET

BTS #: 04111-PCZ	Site: 3185 Livermore Ave., Livermore	
Sampler: PC	Date: 11/10/04	
Well I.D.: MW-8	Well Diameter: (2) 3 4 6 8	
Total Well Depth (TD): 51.49	Depth to Water (DTW): 32.80	
Depth to Free Product:	Thickness of Free Product (feet):	
Referenced to: <input checked="" type="checkbox"/>	Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 36.54		

Purge Method: <input type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input checked="" type="checkbox"/> Positive Air Displacement <input type="checkbox"/> Electric Submersible	Waterra Peristaltic Extraction Pump Other _____	Sampling Method: <input type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Extraction Port <input type="checkbox"/> Dedicated Tubing Other: _____																
$\frac{3 \text{ (Gals.)} \times 3}{1 \text{ Case Volume} \quad \text{Specified Volumes}} = \frac{9}{\text{Calculated Volume}}$		<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>$\text{radius}^2 * 0.163$</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	$\text{radius}^2 * 0.163$
Well Diameter	Multiplier	Well Diameter	Multiplier															
1"	0.04	4"	0.65															
2"	0.16	6"	1.47															
3"	0.37	Other	$\text{radius}^2 * 0.163$															

Time	Temp (°F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	Gals. Removed	Observations
1506	65.4	7.2	1091	71000	3	brown
1510	66.1	7.2	1074	71000	6	
1513	65.6	7.2	1077	660	9	

Did well dewater? Yes Gallons actually evacuated: 9

Sampling Date: 11/10/04 Sampling Time: 1522 Depth to Water: 33.29

Sample I.D.: MW-8 Laboratory: STL Other _____

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
--------------------	------------	----	-------------	----