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Alameda County
OCT 05 2005
Environmental Health

September 30, 2005
Project No. SJ80-9ST-1

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

Re: **Semi-Annual Monitoring Report – Third Quarter 2005**
Shell-branded Service Station
809 East Stanley Blvd.
Livermore, California

Dear Mr. Wickham:

Delta Environmental Consultants, Inc. (Delta), on behalf of Shell Oil Products US (Shell), has prepared the following third 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 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. During the fourth quarter 2003, Delta recommended reducing the sampling frequency from quarterly to semi-annually in the first and third quarters.

QUARTERLY GROUND WATER MONITORING PROGRAM

Groundwater monitoring wells were gauged and sampled by Blaine Tech Services (Blaine), at the direction of Delta, on July 20, 2005. Depth to groundwater was measured in Wells MW-1 through MW-4. Groundwater elevation data and contours are presented on Figure 2.

Groundwater samples were collected from Wells MW-1 through MW-4. Samples were submitted by Blaine to Severn Trent Laboratories, Inc. (STL) in Pleasanton, California for analysis of total purgeable petroleum hydrocarbons as gasoline (TPH-G); benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds) and the fuel oxygenate MTBE. Benzene and MTBE concentrations in groundwater are shown 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 has increased an average of 0.4 feet in site wells since first quarter. Well screens in Wells MW-1 through MW-4 (32.5 to 47.5 feet bg) are drowned. The groundwater gradient on July 20, 2005 was toward the northeast at a magnitude less than 0.01 feet/feet, consistent with previous data.

All analytes tested continued to be below laboratory detection limits during the third quarter 2005. MTBE, the only constituent previously detected in any site well, has been below the laboratory detection limit in Well MW-3 for the last four consecutive monitoring events. Delta will next sample wells in the first quarter 2006.

RECOMMENDATIONS

Delta is currently preparing a comprehensive site conceptual model (SCM) spreadsheet for submittal to the Alameda County Health Care Services Agency (ACHCSA). The SCM, in electronic report format, will include recommendations for possible additional soil and groundwater investigation activities at the site in order to move towards case closure. Delta plans to submit the electronic SCM spreadsheet to the ACHCSA for review during fourth quarter 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.

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

Sincerely,

Delta Environmental Consultants, Inc.

Heather Buckingham

Heather Buckingham
Senior Staff Geologist

D. Arnold

Debbie Arnold
Project Manager
PG 7745



Attachments:

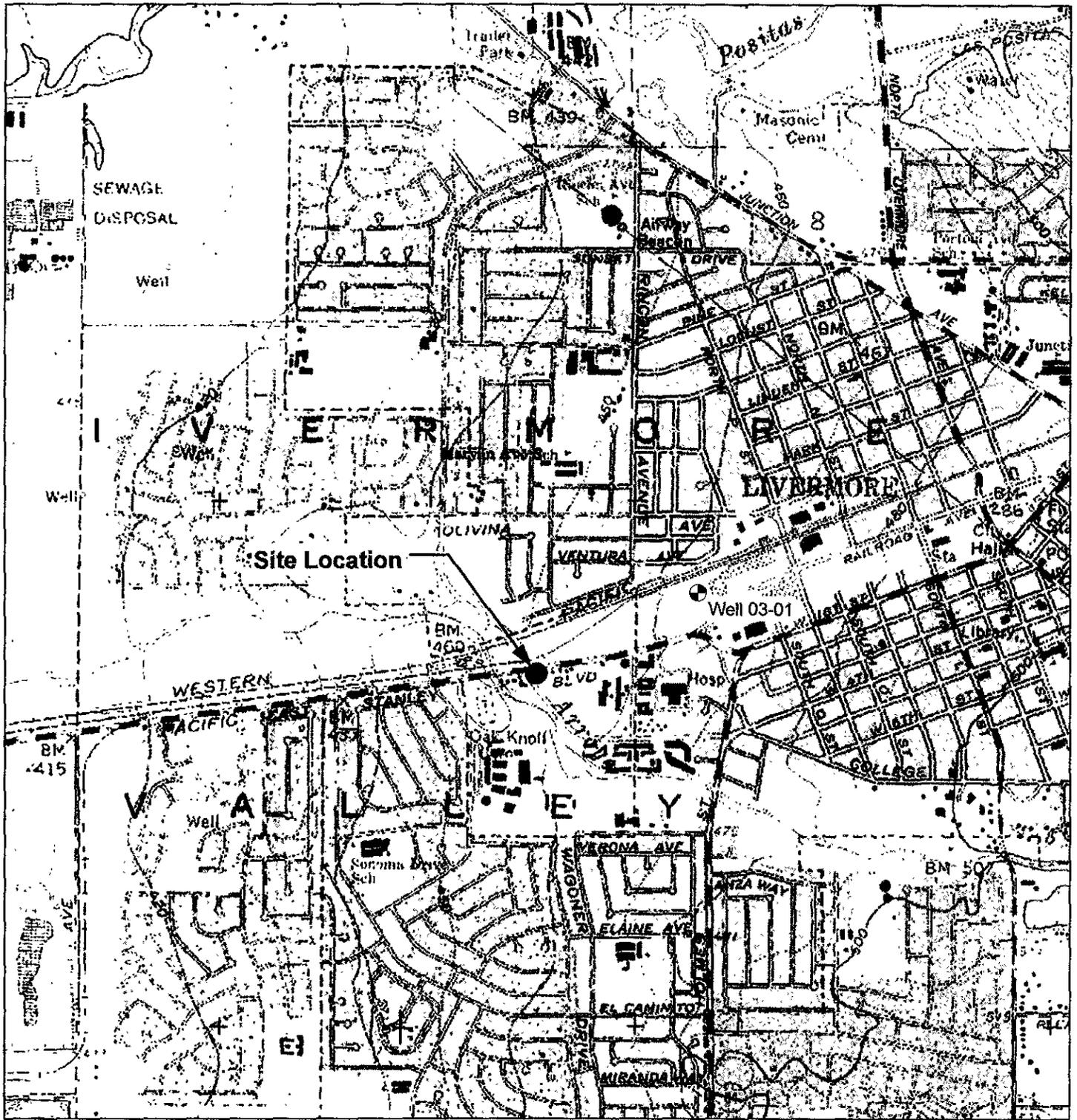
Figure 1 – Site Location Map

Figure 2 – Groundwater Elevation Contour Map, July 20, 2005

Figure 3 – Benzene and MTBE Concentrations Map, July 20, 2005

Attachment A – Groundwater Monitoring and Sampling Report, August 3, 2005

cc: Denis Brown, Shell Oil Products US, Carson



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



QUADRANGLE LOCATION

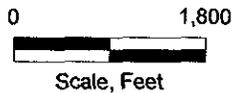
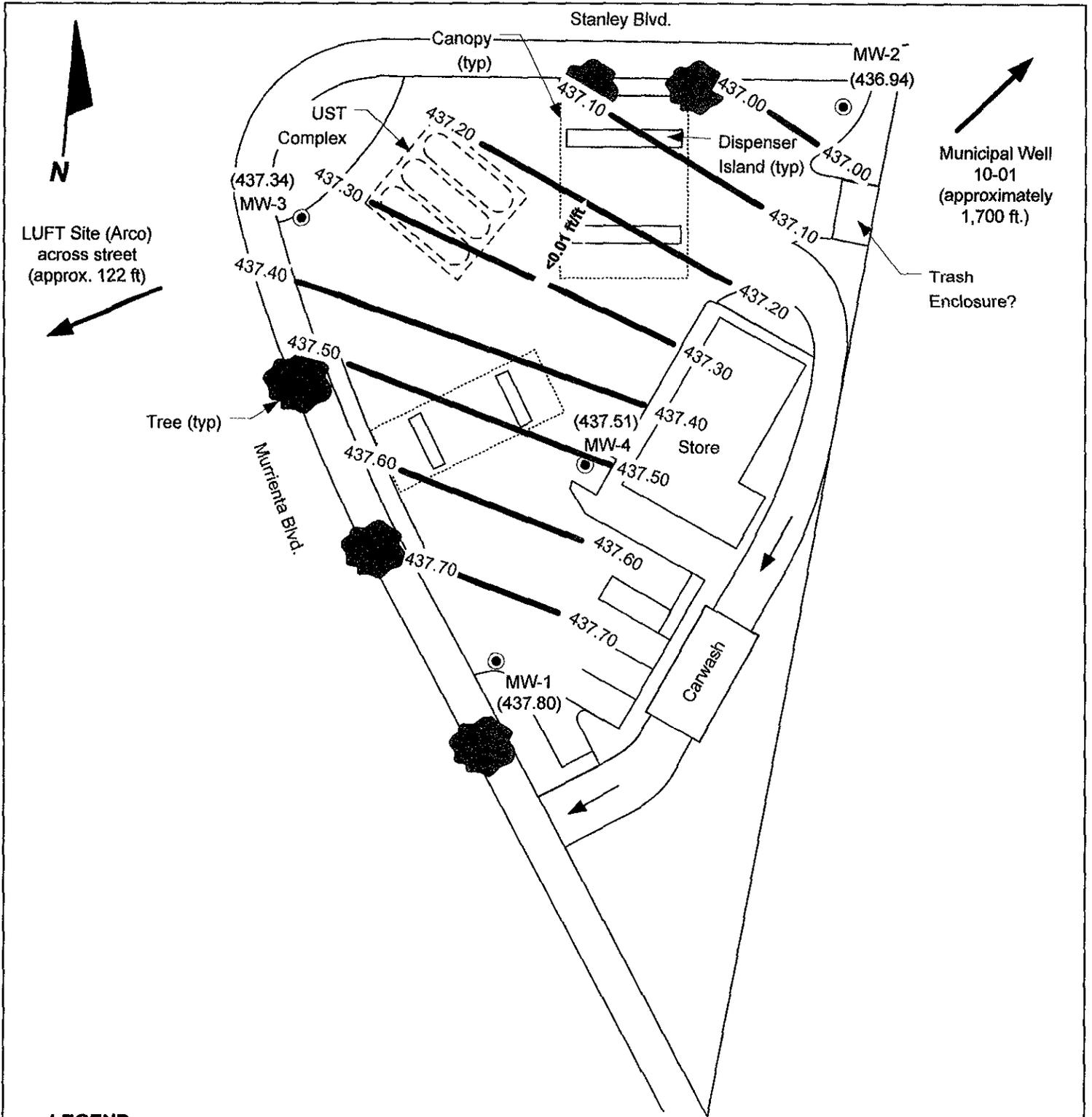


FIGURE 1
 SITE LOCATION MAP

Shell-branded Service Station
 809 East Stanley Blvd.
 Livermore, California

PROJECT NO. SJ80-SST-1 2005	DRAWN BY VF 12/01/03
FILE NO SJ80-SST-1 2005	PREPARED BY VF
REVISION NO. 1	REVIEWED BY DA





LUFT Site (Arco)
across street
(approx. 122 ft)

Municipal Well
10-01
(approximately
1,700 ft.)

Trash
Enclosure?

LEGEND

- MW-1 **GROUNDWATER MONITORING WELL**
- (437.80) **GROUNDWATER ELEVATION (FEET-MSL), 07/20/05**
- 436.20 **GROUNDWATER ELEVATION CONTOUR**
- $<0.01 \text{ ft/ft}$ **APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT**

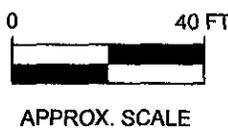
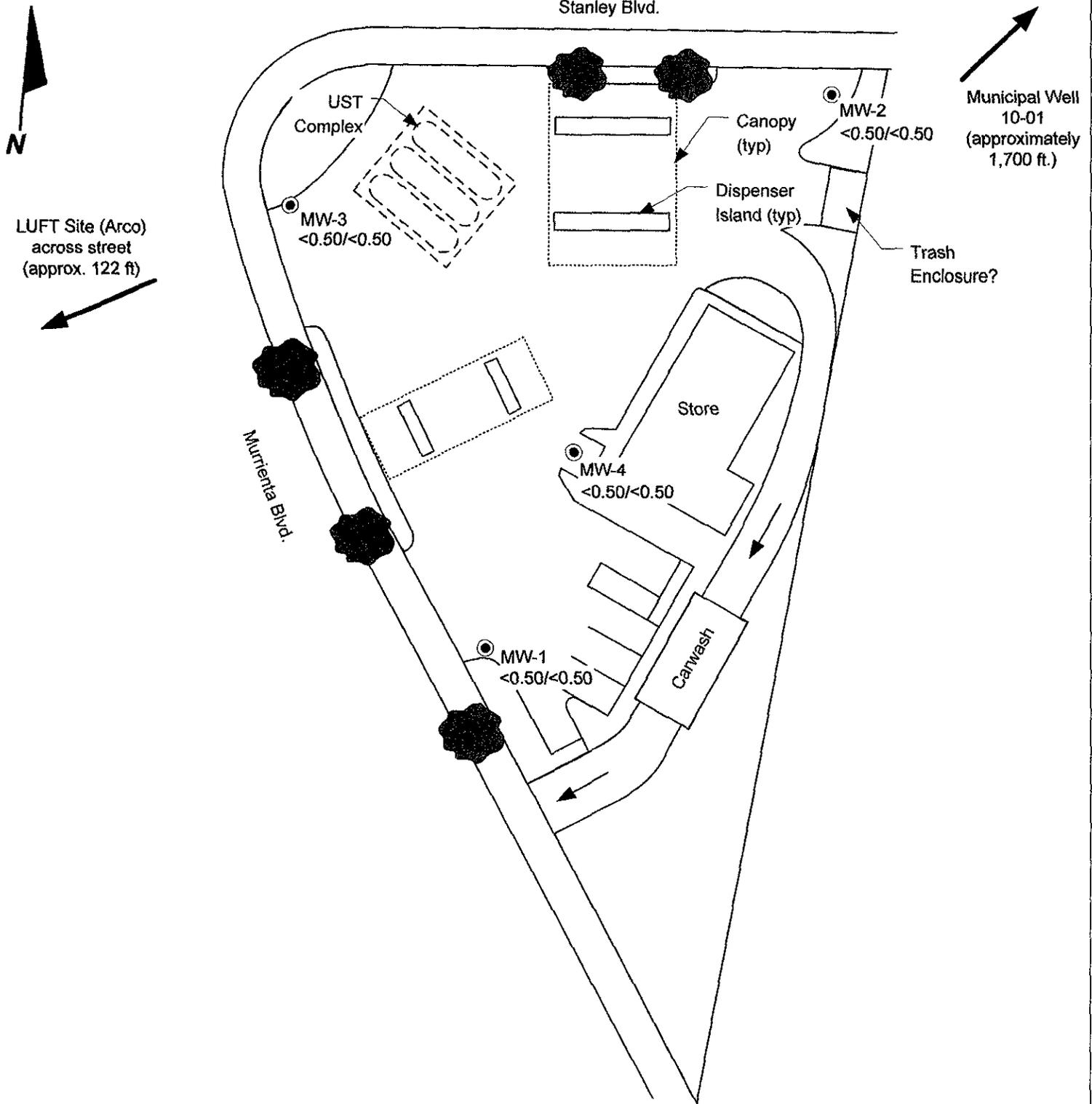


FIGURE 2
GROUNDWATER ELEVATION CONTOUR MAP,
JULY 20, 2005

Shell-branded Service Station
809 East Stanley Ave.
Livermore, California

PROJECT NO. SJ80-9ST-1 2005	DRAWN BY JL 09./15/05
FILE NO. SJ8-09ST-1 2005	PREPARED BY HB
REVISION NO 2	REVIEWED BY DA

Delta
Environmental
Consultants, Inc.



LEGEND

MW-1  **GROUNDWATER MONITORING WELL**

$<0.50/<0.50$ **BENZENE/MTBE CONCENTRATIONS IN GROUNDWATER (ug/l), 07/20/05**

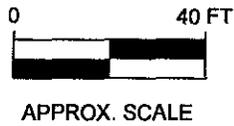


FIGURE 3
BENZENE AND MTBE CONCENTRATION MAP,
JULY 20, 2005

Shell-branded Service Station
 809 East Stanley Ave.
 Livermore, California

PROJECT NO SJB0-9ST-1 2005	DRAWN BY JL 09/15/05
FILE NO. SJB-09ST-1 2005	PREPARED BY HB
REVISION NO. 1	REVIEWED BY DA



Attachment A

GROUNDWATER MONITORING AND SAMPLING REPORT

BLAINE
TECH SERVICES INC.

GROUNDWATER SAMPLING SPECIALISTS
SINCE 1985

August 3, 2005

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

Third Quarter 2005 Groundwater Monitoring at
Shell-branded Service Station
809 East Stanley Boulevard
Livermore, CA

Monitoring performed on July 20, 2005

Groundwater Monitoring Report **050720-PCI**

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.

Attachment A

GROUNDWATER MONITORING AND SAMPLING REPORT

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/cl

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
809 East Stanley Boulevard
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-1	9/25/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-1	7/9/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	455.49	20.06	435.43
MW-1	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	455.49	19.71	435.78
MW-1	1/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	455.49	18.05	437.44
MW-1	4/21/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	455.49	17.57	437.92
MW-1	7/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	455.49	18.76	436.73
MW-1	10/20/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	5.0	455.49	20.01	435.48
MW-1	1/13/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	455.49	16.58	438.91
MW-1	7/27/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	455.49	19.43	436.06
MW-1	1/6/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	455.49	17.20	438.29
MW-1	7/20/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	455.49	17.69	437.80
MW-2	9/25/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-2	7/9/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	454.84	20.40	434.44
MW-2	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	454.84	20.17	434.67
MW-2	1/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	454.84	18.30	436.54
MW-2	4/21/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	454.84	17.93	436.91
MW-2	7/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	454.84	19.01	435.83
MW-2	10/20/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	454.84	20.36	434.48
MW-2	1/13/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	454.84	16.99	437.85
MW-2	7/27/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	454.84	19.64	435.20
MW-2	1/6/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	454.84	17.60	437.24
MW-2	7/20/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	454.84	17.90	436.94
MW-3	9/25/2001	NA	<0.50	<0.50	<0.50	<0.50	3.6	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-3	7/9/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	454.87	19.95	434.92

WELL CONCENTRATIONS
Shell-branded Service Station
809 East Stanley Boulevard
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-3	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	0.83	<2.0	<2.0	<2.0	<50	454.87	19.63	435.24
MW-3	1/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	454.87	17.90	436.97
MW-3	4/21/2003	<50	<0.50	<0.50	<0.50	<1.0	0.71	<2.0	<2.0	<2.0	<5.0	454.87	17.45	437.42
MW-3	7/17/2003	<50	<0.50	<0.50	<0.50	<1.0	0.69	<2.0	<2.0	<2.0	<5.0	454.87	18.69	436.18
MW-3	10/20/2003	<50	<0.50	<0.50	<0.50	<1.0	0.64	<2.0	<2.0	<2.0	<5.0	454.87	19.90	434.97
MW-3	1/13/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	454.87	16.50	438.37
MW-3	7/27/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	454.87	19.31	435.56
MW-3	1/6/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	454.87	17.15	437.72
MW-3	7/20/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	454.87	17.53	437.34
MW-4	9/25/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-4	7/9/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	456.24	21.15	435.09
MW-4	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	456.24	20.85	435.39
MW-4	1/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	456.24	19.15	437.09
MW-4	4/21/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	456.24	18.65	437.59
MW-4	7/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	456.24	19.87	436.37
MW-4	10/20/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	456.24	21.12	435.12
MW-4	1/13/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	456.24	17.65	438.59
MW-4	7/27/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	456.24	20.50	435.74
MW-4	1/6/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	456.24	18.29	437.95
MW-4	7/20/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	456.24	18.73	437.51

WELL CONCENTRATIONS
Shell-branded Service Station
809 East Stanley Boulevard
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 or tertiary butanol, 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.

August 01, 2005

1680 Rogers Avenue
San Jose, CA 95112-1105
Attn.: Leon Gearhart
Project#: BTS#050720-PC1
Project: 97461964
Site: 809 E. Stanley Blvd., Livermore

Dear Mr. Gearhart,

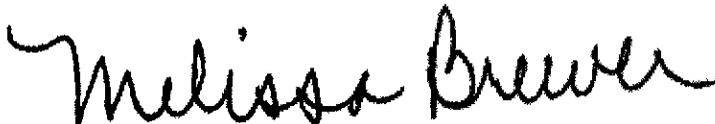
Attached is our report for your samples received on 07/22/2005 16:01
This report has been reviewed and approved for release. Reproduction of this report
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after
09/05/2005 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

Sincerely,



Melissa Brewer
Project Manager

Gas/BTEX/MTBE 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: BTS#050720-PC1

97461964

Received: 07/22/2005 16:01

Site: 809 E. Stanley Blvd., Livermore

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-1	07/20/2005 15:44	Water	1
MW-2	07/20/2005 16:40	Water	2
MW-3	07/20/2005 16:08	Water	3
MW-4	07/20/2005 15:14	Water	4

Gas/BTEX/MTBE 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: BTS#050720-PC1

97461964

Received: 07/22/2005 16:01

Site: 809 E. Stanley Blvd., Livermore

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-1	Lab ID: 2005-07-0667 - 1
Sampled: 07/20/2005 15:44	Extracted: 7/30/2005 11:40
Matrix: Water	QC Batch#: 2005/07/30-1B.68
pH: <2	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	07/30/2005 11:40	
Benzene	ND	0.50	ug/L	1.00	07/30/2005 11:40	
Toluene	ND	0.50	ug/L	1.00	07/30/2005 11:40	
Ethylbenzene	ND	0.50	ug/L	1.00	07/30/2005 11:40	
Total xylenes	ND	1.0	ug/L	1.00	07/30/2005 11:40	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	07/30/2005 11:40	
Surrogate(s)						
1,2-Dichloroethane-d4	106.7	73-130	%	1.00	07/30/2005 11:40	
Toluene-d8	102.8	81-114	%	1.00	07/30/2005 11:40	

Gas/BTEX/MTBE 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: BTS#050720-PC1
97461964

Received: 07/22/2005 16:01

Site: 809 E. Stanley Blvd., Livermore

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-2	Lab ID: 2005-07-0667 - 2
Sampled: 07/20/2005 16:40	Extracted: 7/30/2005 12:06
Matrix: Water	QC Batch#: 2005/07/30-1B.68
pH: <2	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	07/30/2005 12:06	
Benzene	ND	0.50	ug/L	1.00	07/30/2005 12:06	
Toluene	ND	0.50	ug/L	1.00	07/30/2005 12:06	
Ethylbenzene	ND	0.50	ug/L	1.00	07/30/2005 12:06	
Total xylenes	ND	1.0	ug/L	1.00	07/30/2005 12:06	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	07/30/2005 12:06	
Surrogate(s)						
1,2-Dichloroethane-d4	99.2	73-130	%	1.00	07/30/2005 12:06	
Toluene-d8	108.2	81-114	%	1.00	07/30/2005 12:06	

Gas/BTEX/MTBE 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: BTS#050720-PC1
97461964

Received: 07/22/2005 16:01

Site: 809 E. Stanley Blvd., Livermore

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-3	Lab ID: 2005-07-0667 - 3
Sampled: 07/20/2005 16:08	Extracted: 7/30/2005 12:32
Matrix: Water	QC Batch#: 2005/07/30-1B.68
pH: <2	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	07/30/2005 12:32	
Benzene	ND	0.50	ug/L	1.00	07/30/2005 12:32	
Toluene	ND	0.50	ug/L	1.00	07/30/2005 12:32	
Ethylbenzene	ND	0.50	ug/L	1.00	07/30/2005 12:32	
Total xylenes	ND	1.0	ug/L	1.00	07/30/2005 12:32	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	07/30/2005 12:32	
Surrogate(s)						
1,2-Dichloroethane-d4	95.3	73-130	%	1.00	07/30/2005 12:32	
Toluene-d8	101.3	81-114	%	1.00	07/30/2005 12:32	

Gas/BTEX/MTBE 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: BTS#050720-PC1
97461964

Received: 07/22/2005 16:01

Site: 809 E. Stanley Blvd., Livermore

Prep(s): 5030B

Sample ID: MW-4

Sampled: 07/20/2005 15:14

Matrix: Water

pH: <2

Test(s): 8260B

Lab ID: 2005-07-0667 - 4

Extracted: 7/30/2005 12:58

QC Batch#: 2005/07/30-1B.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	07/30/2005 12:58	
Benzene	ND	0.50	ug/L	1.00	07/30/2005 12:58	
Toluene	ND	0.50	ug/L	1.00	07/30/2005 12:58	
Ethylbenzene	ND	0.50	ug/L	1.00	07/30/2005 12:58	
Total xylenes	ND	1.0	ug/L	1.00	07/30/2005 12:58	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	07/30/2005 12:58	
Surrogate(s)						
1,2-Dichloroethane-d4	105.7	73-130	%	1.00	07/30/2005 12:58	
Toluene-d8	98.0	81-114	%	1.00	07/30/2005 12:58	

Gas/BTEX/MTBE 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: BTS#050720-PC1

97461964

Received: 07/22/2005 16:01

Site: 809 E. Stanley Blvd., Livermore

Batch QC Report

Prep(s): 5030B

Method Blank

MB: 2005/07/30-1B.68-042

Water

Test(s): 8260B

QC Batch # 2005/07/30-1B.68

Date Extracted: 07/30/2005 07:42

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	07/30/2005 07:42	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/30/2005 07:42	
Benzene	ND	0.5	ug/L	07/30/2005 07:42	
Toluene	ND	0.5	ug/L	07/30/2005 07:42	
Ethylbenzene	ND	0.5	ug/L	07/30/2005 07:42	
Total xylenes	ND	1.0	ug/L	07/30/2005 07:42	
Surrogates(s)					
1,2-Dichloroethane-d4	107.8	73-130	%	07/30/2005 07:42	
Toluene-d8	100.6	81-114	%	07/30/2005 07:42	

Gas/BTEX/MTBE 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: BTS#050720-PC1
97461964

Received: 07/22/2005 16:01

Site: 809 E. Stanley Blvd., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2005/07/30-1B.68

LCS 2005/07/30-1B.68-016
LCSD

Extracted: 07/30/2005

Analyzed: 07/30/2005 07:16

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	20.6		25	82.4			65-165	20		
Benzene	18.8		25	75.2			69-129	20		
Toluene	22.0		25	88.0			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	398		500	79.6			73-130			
Toluene-d8	482		500	96.4			81-114			

Gas/BTEX/MTBE 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: BTS#050720-PC1
97461964

Received: 07/22/2005 16:01

Site: 809 E. Stanley Blvd., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD)

Water

QC Batch # 2005/07/30-1B.68

MS/MSD

Lab ID: 2005-07-0558 - 002

MS: 2005/07/30-1B.68-056

Extracted: 07/30/2005

Analyzed: 07/30/2005 09:56

Dilution: 40.00

MSD: 2005/07/30-1B.68-022

Extracted: 07/30/2005

Analyzed: 07/30/2005 10:22

Dilution: 40.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	3810	3760	2960	1000	85.0	80.0	6.1	65-165	20		
Benzene	763	791	ND	1000	76.3	79.1	3.6	69-129	20		
Toluene	958	966	ND	1000	95.8	96.6	0.8	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	426	421		500	85.2	84.2		73-130			
Toluene-d8	511	471		500	102.2	94.2		81-114			

SHELL WELL MONITORING DATA SHEET

BTS #: <u>070720-001</u>	Site: <u>97306796</u>
Sampler: <u>PC</u>	Date: <u>7/20/05</u>
Well I.D.: <u>M.W.1</u>	Well Diameter: <u>3</u> 3 4 6 8
Total Well Depth (TD): <u>4733</u>	Depth to Water (DTW): <u>769</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVD)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>2362</u>	

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

<u>4.7</u> (Gals.) X	<u>3</u> Specified Volumes	= <u>14.1</u> Gals. Calculated Volume	
1 Case 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
<u>1525</u>	<u>71.7</u>	<u>7.2</u>	<u>520</u>	<u>21000</u>	<u>4.5</u>	
<u>1530</u>	<u>72.1</u>	<u>7.1</u>	<u>517</u>	<u>21000</u>	<u>9</u>	
<u>1535</u>	<u>74.2</u>	<u>7.1</u>	<u>518</u>	<u>257</u>	<u>14.1</u>	

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Gallons actually evacuated: <u>14.1</u>	
Sampling Date: <u>7/20/05</u>	Sampling Time: <u>1544</u>	Depth to Water: <u>769</u>
Sample I.D.: <u>M.W.1</u>	Laboratory: <u>(STP)</u> Other _____	
Analyzed for: <u>TPH-G BTEX MTBE</u> TPH-D Other:		
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 #: 050720-PC1	Site: 97306796
Sampler: PC	Date: 7/20/05
Well I.D.: MU-2	Well Diameter: <input checked="" type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8
Total Well Depth (TD): 46.78	Depth to Water (DTW): 17.90
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="radio"/> PVD <input type="radio"/> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 23.68	

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: _____

$4.6 \text{ (Gals.)} \times 3 = 14.8 \text{ Gals.}$ <p>1 Case Volume Specified Volumes Calculated Volume</p>	<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>radius² * 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 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	radius ² * 0.163														

Time	Temp (°F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	Gals. Removed	Observations
1622	72.3	7.4	539	21000	4.5	
1628	71.6	7.4	543	21000	9	
1632	71.7	7.2	543	21000	14.8	

Did well dewater? Yes Gallons actually evacuated: 15

Sampling Date: 7/20/05 Sampling Time: 1640 Depth to Water: 17.99

Sample I.D.: MU-2 Laboratory: STD Other: _____

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

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 #: 050720FC	Site: 97-06796
Sampler: PC	Date: 7/20/05
Well I.D.: MW-4	Well Diameter: ② 3 4 6 8
Total Well Depth (TD): 47.59	Depth to Water (DTW): 18.73
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]: 24.73	

Purge Method: Bailer Waterra
 Disposable Bailer Peristaltic
 Positive Air Displacement Extraction Pump
 Electric Submersible Other _____

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

$4.5 \text{ (Gals.)} \times 3 = 13.5 \text{ Gals.}$ 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>radius² * 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 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	radius ² * 0.163														

Time	Temp (°F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	Gals. Removed	Observations
1455	74.9	7.2	581	199	4.5	
1459	72.0	7.1	589	127	9	
1505	74.0	7.0	561	50	13.5	

Did well dewater? Yes No Gallons actually evacuated: 13.5

Sampling Date: 7/20/05 Sampling Time: 1514 Depth to Water: 18.76

Sample I.D.: MW-4 Laboratory: STB Other: _____

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

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

R02524



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Fax 408 225.8506

Alameda County
OCT 05 2005
Environmental Health

www.deltaenv.com

Letter of Transmittal

To: Alameda County Health Care Services Agency Date: 9/30/2005
Environmental Health Services - Environmental Protection
1131 Harbor Bay Parkway, Suite 250 Job No: SJ80-9ST-1
Alameda, CA 94502-6577
Attn: Mr. Jerry Wickham

We are sending the following items:

Date	Copies	Description
30-Sep-05	1	Semi-Annual Monitoring Report - Third Quarter 2005
		Shell-branded Service Station
		809 East Stanley Blvd
		Livermore, CA

These are transmitted:

- For your Information
 For action specified below
 For review and comment
 For your use
 As requested

Remarks

Copies to: _____ By: Heather Buckingham
Title: Senior Staff Geologist

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