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Environmental Health

JAN 18 2006

Alameda County

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Letter of Transmittal

To: Alameda County Health Care Services Agency Date: 1/18/2006
Environmental Health Service - Environmental Protection
1131 Harbor Bay Parkway, Suite 250 Job No: SJ11-55P-1
Alameda, California 94502-6577
Attn: Jerry Wickham

We are sending the following items:

Date	Copies	Description
16-Jan-06	1	Semi-Annual Monitoring Report - First & Second Quarter 2005
		Shell-branded Service Station
		1155 Portola Avenue
		Livermore, CA

These are transmitted:

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

Remarks

Copies to: Denis Brown, Shell Oil Products US By: Lena Martinez
Danielle Stefani, Livermore-Pleasanton Fire Dept Title: Project Manager Assistant/LFR
Terrell & Kimberely Bass, Danville

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Alameda County

JAN 18 2006

January 16, 2006
Project No. SJ11-55P-1

Environmental Health

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

Re: Semi-Annual Monitoring Report – First and Second Quarter 2005
Shell-branded Service Station
1155 Portola Avenue
Livermore, California

Dear Mr. Wickham:

Delta Environmental Consultants, Inc. (Delta), on behalf of Shell Oil Products US (Shell), has prepared the following joing groundwater monitoring and sampling report for first and second quarter 2005 for the above referenced site. Groundwater sampling was performed by Blaine Tech Services (Blaine) at the direction of Delta. A site location map is included as Figure 1.

BACKGROUND

In October 2002, KHM Environmental Management, Inc. (now Delta) supervised the installation of Wells MW-1 through MW-4 as part of Shell's GRoundwater ASsessment Program (GRASP). GRASP is a voluntary initiative by SHELL to install groundwater monitoring wells at numerous retail service stations nationwide that do not have any active release cases but have been identified to be in close proximity to one or more public water supply wells. The purpose of this program is to proactively monitor the groundwater beneath these sites and, in the event of a subsurface release, to respond quickly to protect public wells from this impact.

An Unauthorized Release Report (URR) was previously submitted for this site in June 2003 based on detections of methyl tert-butyl ether (MTBE) in groundwater

A member of:



Shell subsequently received a notice of responsibility letter dated July 10, 2003 from the Alameda County Health Care Services Agency (ACHCSA) placing the site in the Local Oversight Program.

QUARTERLY GROUND WATER MONITORING PROGRAM

Groundwater monitoring wells were gauged and sampled by Blaine on February 28 and June 13, 2005. Depth to groundwater was measured in Wells MW-1 through MW-4 on both events. Groundwater elevation data and contours are presented on Figures 2 and 3.

Quarterly 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. The February 28th samples were analyzed for total purgeable petroleum hydrocarbons as gasoline (TPH-G); benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds); and MTBE using EPA Method 8260B. The June 13th samples were analyzed for TPH-G, 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). Analysis of DIPE, ETBE, TAME, and TBA is performed annually during the second quarter. Benzene, MTBE, and TBA concentrations are presented on Figures 4 and 5.

Blaine's groundwater monitoring and sampling reports, which includes historical and current groundwater elevation data, historical and current analytical results, and field data records for the first and second quarter monitoring events, are included as Attachment A.

DISCUSSION

Depth to groundwater at the site typically fluctuates by about 10 feet annually. Well screens in Wells MW-1 through MW-4 are seasonally drowned by the rise and fall of the water table at the site. Depth to groundwater decreased by an average of 5.68 feet in site wells during first quarter (screens drowned). Depth to groundwater increased by an average of 1.71 feet during second quarter (screens drowned). The groundwater gradient on February 28, 2005 was towards the south at a magnitude of 0.01 ft/ft. The groundwater gradient on June 13, 2005 was towards the southwest at a magnitude of less than 0.01 ft/ft. The groundwater gradient at the site has ranged between northwest and south-southwest since fourth quarter 2002 (initial gauging event).

MTBE was detected in Wells MW-1 and MW-2 at 0.54 ug/l and 0.74 ug/l on February 28, 2005. MTBE concentrations in all site wells were below the laboratory detection limit of 0.50 ug/l on June 13, 2005. The MTBE concentration in Well MW-2 has decreased to non-detectable levels – from a historic high of 400 ug/l (third quarter 2003). TBA was detected (for the first time) in Wells MW-1, MW-2, and MW-3 during second quarter 2005. TBA concentrations ranged from 6 ug/l to 12 ug/l. All other analytes tested were below laboratory detection limits during both events.

Based on consistently decreasing and stable groundwater concentrations, Shell proposes to reduce the monitoring and sampling frequency at the site from quarterly to semi-annual.

REMARKS

The information and recommendations 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

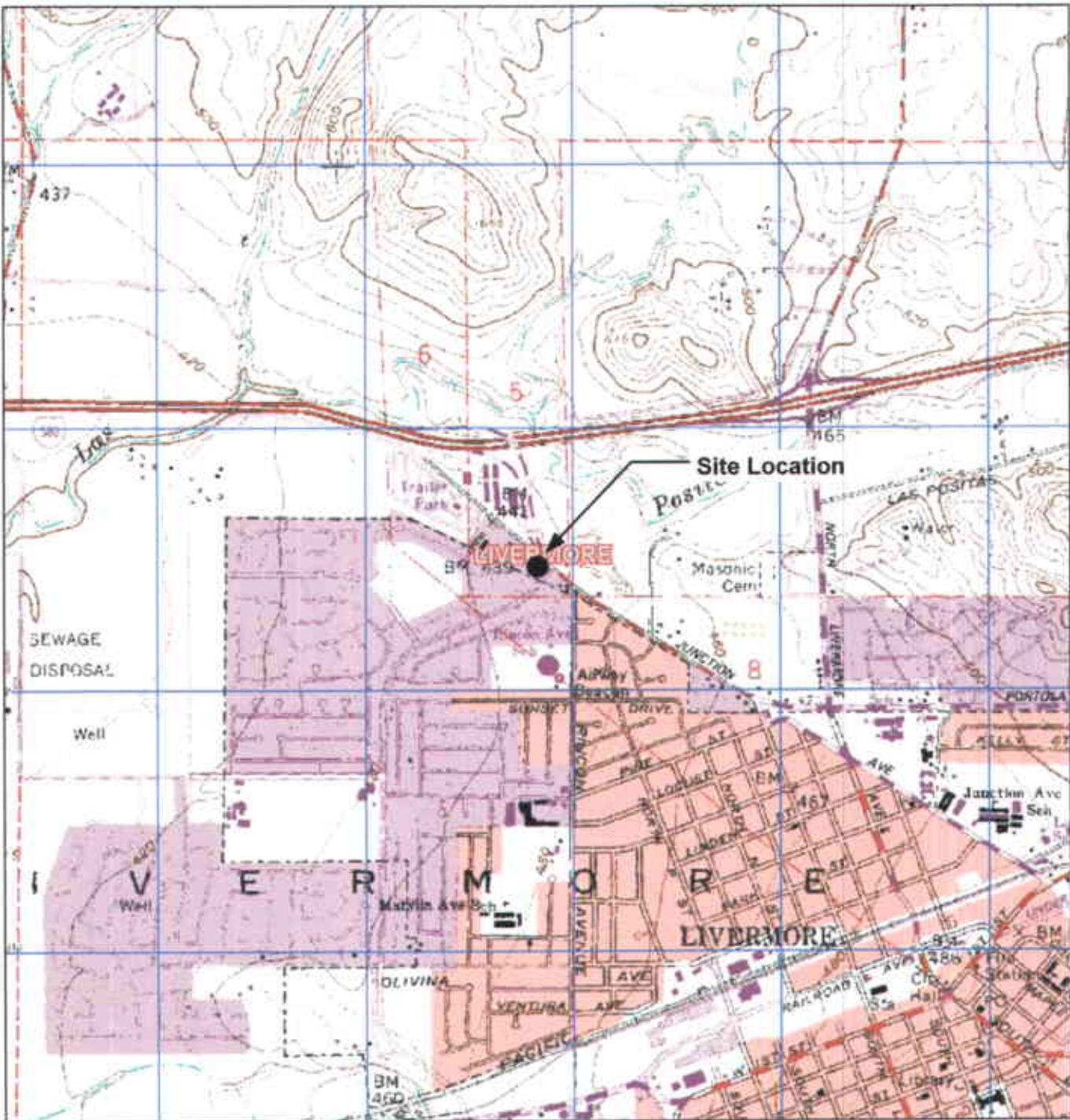
Heather Buckingham
Senior Staff Geologist

D. Arnold
Debbie Arnold
Project Manager
PG 7745



- Attachments:
- Figure 1 – Site Location Map
 - Figure 2 – Groundwater Elevation Contour Map, February 28, 2005
 - Figure 3 – Groundwater Elevation Contour Map, June 13, 2005
 - Figure 4 – Benzene, MTBE, and TBA Concentration Map, February 28, 2005
 - Figure 5 – Benzene, MTBE, and TBA Concentration Map, June 13, 2005
 - Attachment A – Groundwater Monitoring and Sampling Reports, April 20 and June 29, 2005

cc: Denis Brown, Shell Oil Products US, Carson
Danielle Stefani, Livermore-Pleasanton Fire Department, Livermore
Terrell & Kimberley Bass, Danville



GENERAL NOTES:

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



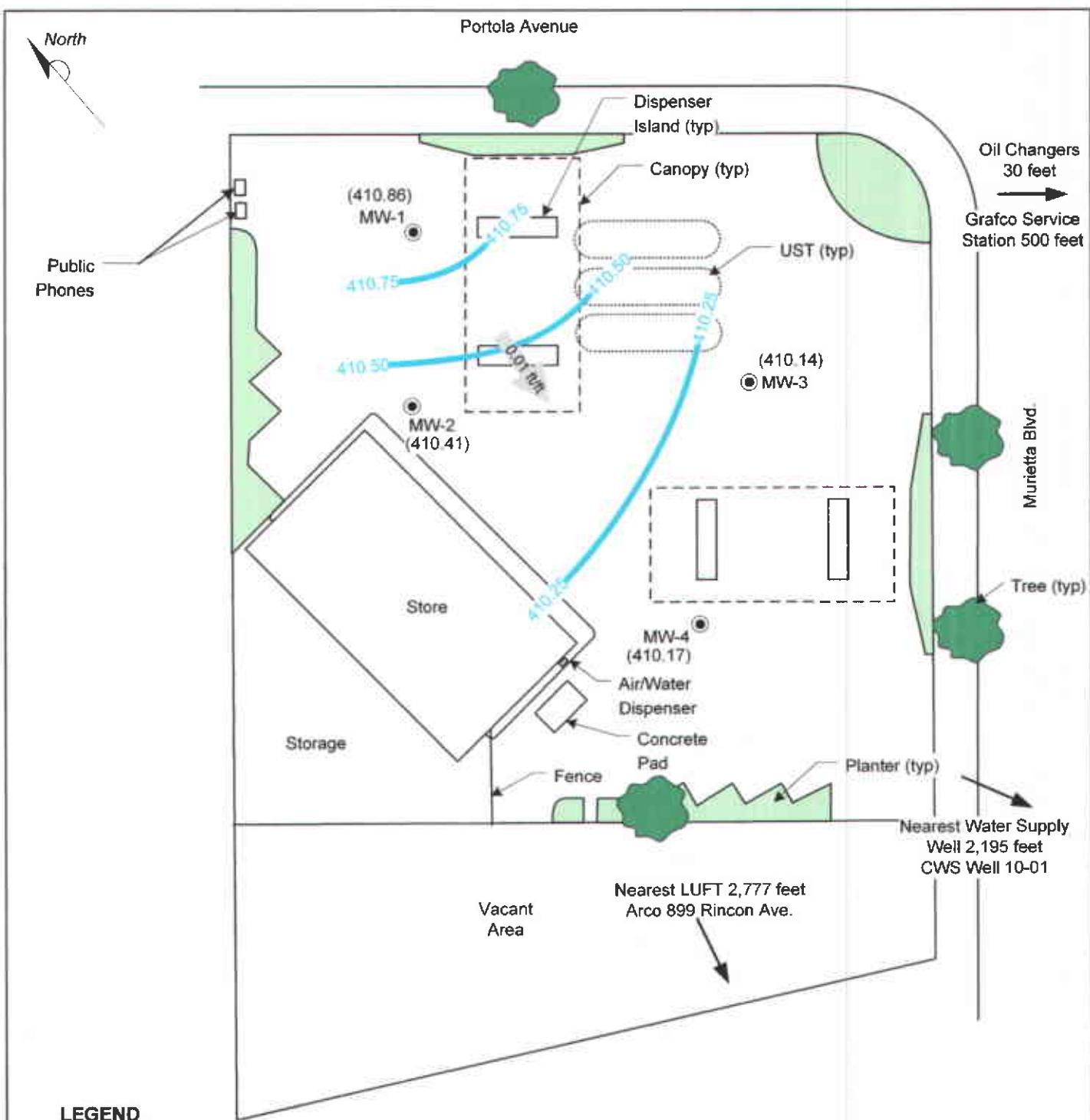
QUADRANGLE LOCATION

0 1,800 3,600
Scale, Feet

North

FIGURE 1 SITE LOCATION MAP	
SHELL-BRANDED SERVICE STATION 1155 Portola Avenue Livermore, California	
PROJECT NO. SJ11-55P-1.2005	DRAWN BY VF 10/22/03
FILE NO. SJ11-55P-1.2005	PREPARED BY VF
REVISION NO.	REVIEWED BY


Delta
 Environmental
 Consultants, Inc.



LEGEND

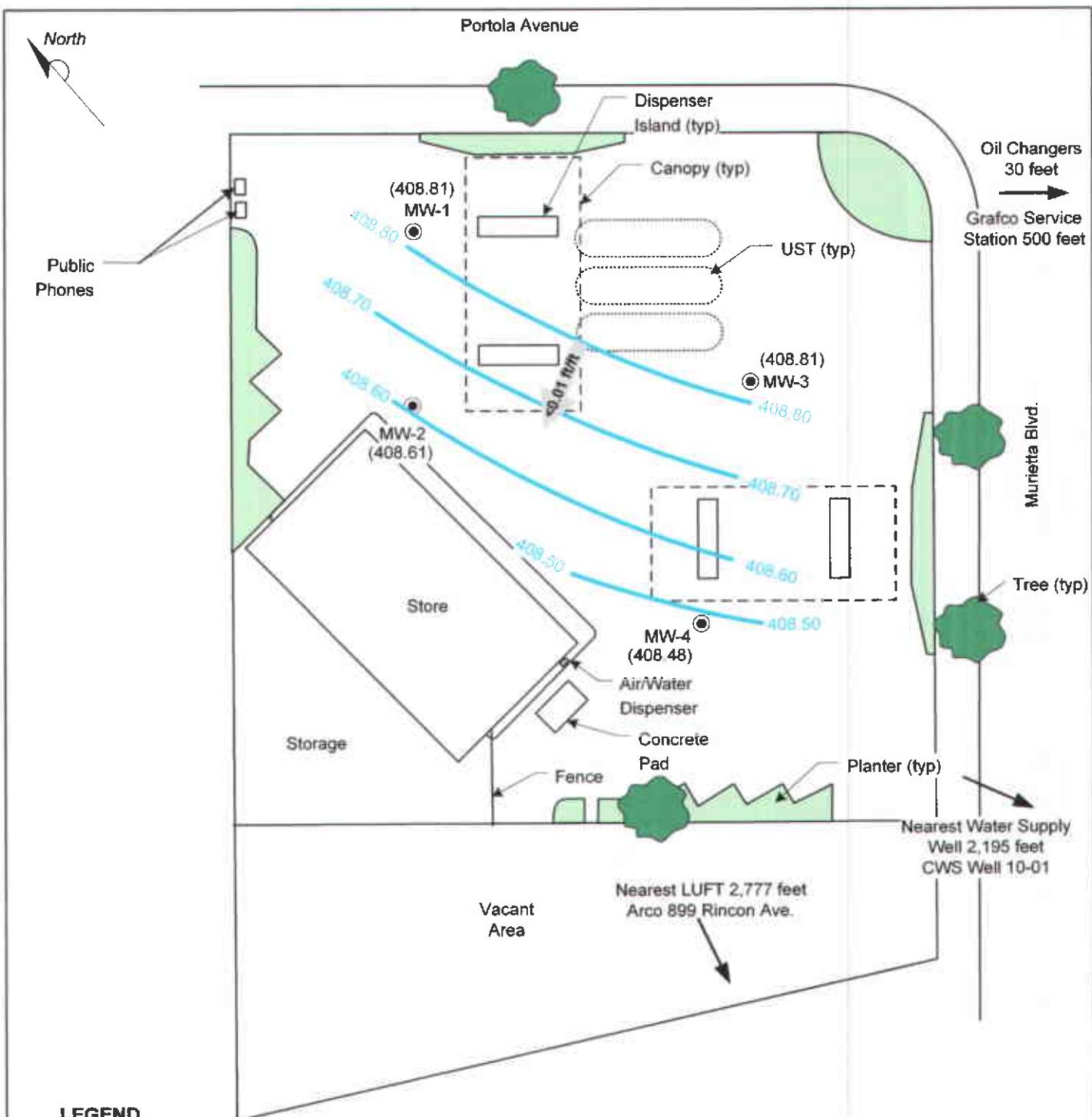
- MW-4 (●) **GROUNDWATER MONITORING WELL**
- (407.56) **GROUNDWATER ELEVATION (FEET - MSL), 2/28/05**
- 407.20 **GROUNDWATER ELEVATION CONTOUR**
- 0.02 ft/m **APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT**



FIGURE 2
GROUNDWATER ELEVATION CONTOUR MAP,
FEBRUARY 28, 2005
SHELL-BRANDED SERVICE STATION
1155 Portola Avenue
Livermore, California

PROJECT NO. SJ11-55P-1.2005	DRAWN BY VF 10/22/05
FILE NO. SJ11-55P-1.2005	PREPARED BY VF
REVISION NO. 1	REVIEWED BY





LEGEND

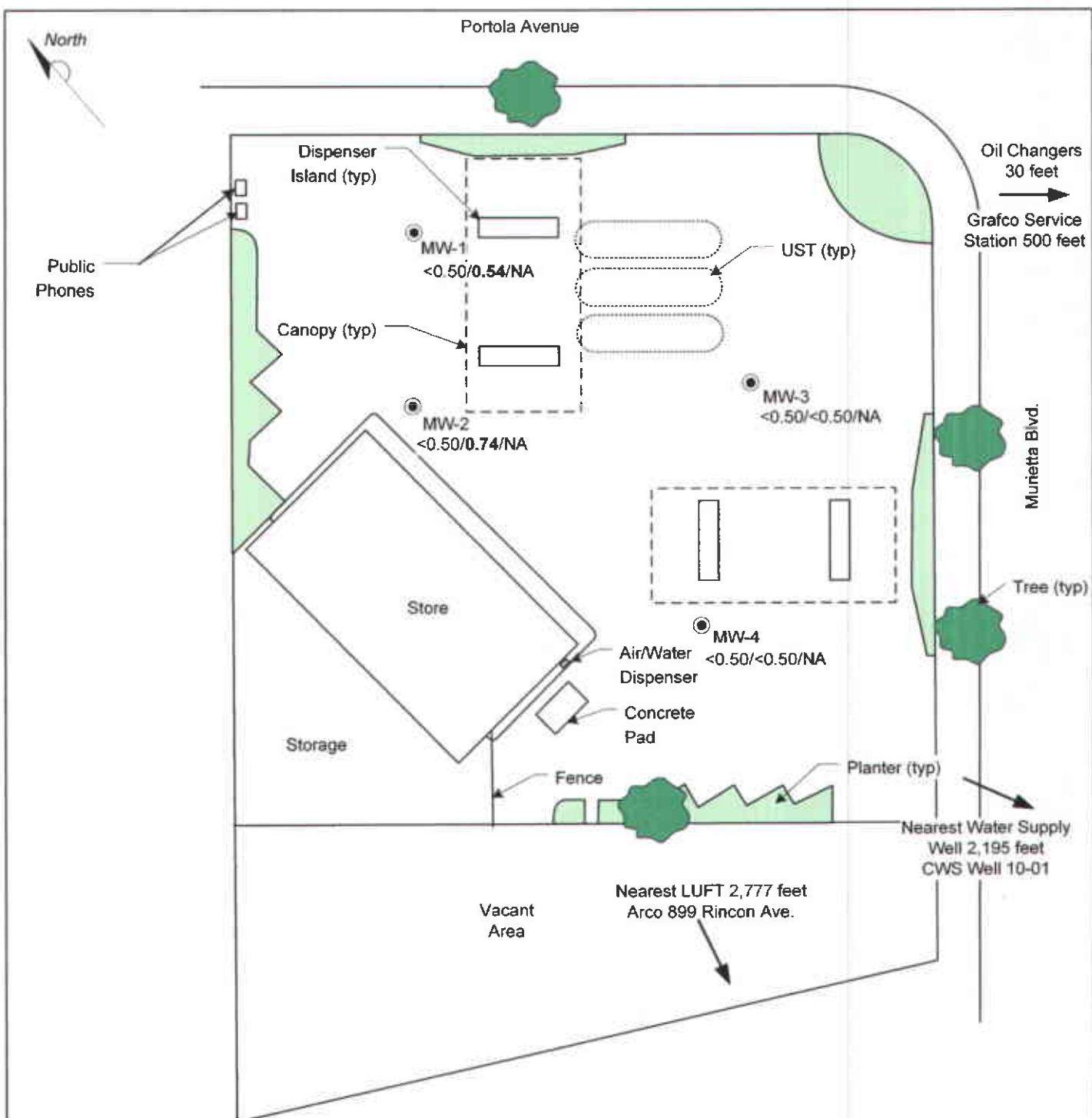
- MW-4 (●) GROUNDWATER MONITORING WELL**
- (408.48) GROUNDWATER ELEVATION (FEET - MSL), 6/13/05**
- 408.50 GROUNDWATER ELEVATION CONTOUR**
- 0.07 FT APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT**

0 30 FT
APPROX. SCALE

FIGURE 3
GROUNDWATER ELEVATION CONTOUR MAP,
JUNE 13, 2005
SHELL-BRANDED SERVICE STATION
1155 Portola Avenue
Livermore, California

PROJECT NO. SJ11-55P-1.2005	DRAWN BY JL 08/18/05
FILE NO. SJ11-55P-1.2005	PREPARED BY JL
REVISION NO. 1	REVIEWED BY





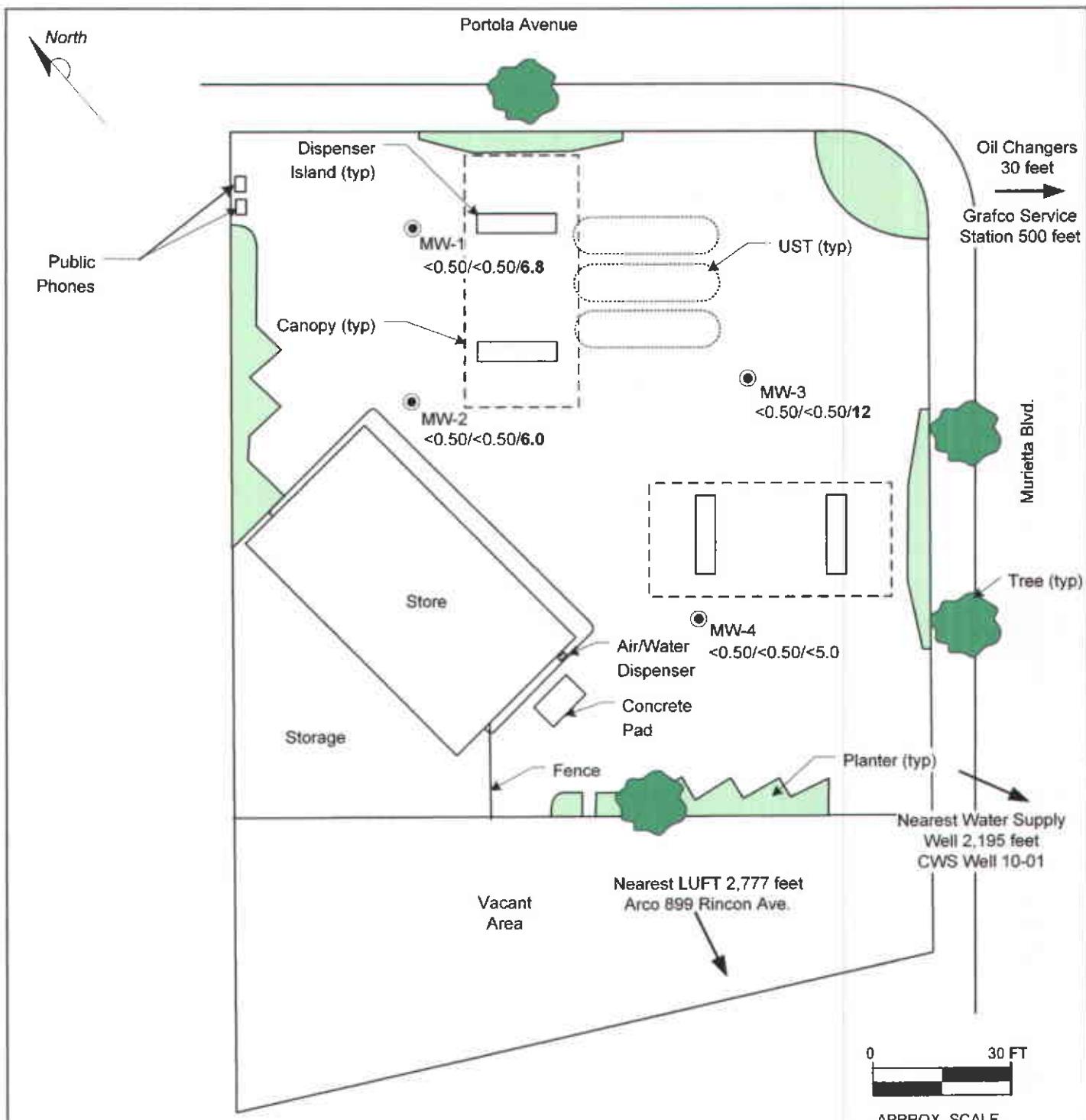
LEGEND

- MW-4 ● GROUNDWATER MONITORING WELL**
- 64/53/NA BENZENE/MTBE/TBA CONCENTRATIONS (UG/L), 2/28/05**
- NA NOT ANALYZED**

FIGURE 4
BENZENE, MTBE, AND TBA CONCENTRATIONS MAP,
FEBRUARY 28, 2005
SHELL-BRANDED SERVICE STATION
1155 Portola Avenue
Livermore, California

PROJECT NO. SJ11-55P-1.2005	DRAWN BY VF 10/22/05
FILE NO. SJ11-55P-1.2005	PREPARED BY VF
REVISION NO. 1	REVIEWED BY





LEGEND

MW-4 ● **GROUNDWATER MONITORING WELL**

$<0.50/<0.50/12$ **BENZENE/MTBE/TBA CONCENTRATIONS (UG/L), 6/13/05**

FIGURE 5
BENZENE, MTBE, AND TBA CONCENTRATIONS MAP,
JUNE 13, 2005
SHELL-BRANDED SERVICE STATION
1155 Portola Avenue
Livermore, California

PROJECT NO. SJ11-55P-1,2005	DRAWN BY JL 08/19/05
FILE NO. SJ11-55P-1,2005	PREPARED BY JL
REVISION NO. 2	REVIEWED BY



Attachment A

GROUNDWATER MONITORING AND SAMPLING REPORTS

BLAINE
TECH SERVICES INC.

GROUNDWATER SAMPLING SPECIALISTS
SINCE 1985

April 20, 2005

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

First Quarter 2005 Groundwater Monitoring at
Shell-branded Service Station
1155 Portola Avenue
Livermore, CA

Monitoring performed on February 28, 2005

Groundwater Monitoring Report **050228-MD-3**

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) 573-0565

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/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
1155 Portola Avenue
Livermore, CA

Well ID	Date	TPPH (ug/L)	TEPH (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.)	Screened Interval (ft.)	GW Elevation (MSL)
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MW-1	12/5/2002	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<50	NA	41.12	40-59	NA
MW-1	12/20/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	78	<2.0	<2.0	<2.0	<50	NA	38.40	40-59	NA
MW-1	3/28/2003	<50	<50	<0.50	<0.50	<0.50	<1.0	7.0	<2.0	<2.0	<2.0	<5.0	443.81	36.25	40-59	407.56
MW-1	6/26/2003	<50	<50	<0.50	<0.50	<0.50	<1.0	1.4	<2.0	<2.0	<2.0	<5.0	443.81	39.53	40-59	404.28
MW-1	8/25/2003	64	NA	<0.50	<0.50	<0.50	<1.0	53	<2.0	<2.0	<2.0	<5.0	443.81	42.52	40-59	401.29
MW-1	12/9/2003	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	443.81	36.84	40-59	406.97
MW-1	3/8/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	3.9	<2.0	<2.0	<2.0	<5.0	443.81	31.75	40-59	412.06
MW-1	6/7/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	0.91	<2.0	<2.0	<2.0	<5.0	443.81	38.24	40-59	405.57
MW-1	9/1/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	4.7	NA	NA	NA	NA	443.81	44.66	40-59	399.15
MW-1	12/23/2004	<50 c	NA	<0.50	2.3	1.4	3.6	<0.50	NA	NA	NA	NA	443.81	39.14	40-59	404.67
MW-1	2/28/2005	<50	NA	<0.50	<0.50	<0.50	<1.0	0.54	NA	NA	NA	NA	443.81	32.95	40-59	410.86

MW-2	12/5/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	41.57	40-60	NA
MW-2	12/20/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	190	<2.0	<2.0	<2.0	<50	NA	40.00	40-60	NA
MW-2	3/28/2003	<50	<50	<0.50	<0.50	<0.50	<1.0	46	<2.0	<2.0	<2.0	<5.0	444.61	37.40	40-60	407.21
MW-2	6/26/2003	<500	<50	<5.0	<5.0	<5.0	<10	330	<20	<20	<20	<50	444.61	40.51	40-60	404.10
MW-2	8/25/2003	<500	NA	<5.0	<5.0	<5.0	<10	400	<20	<20	<20	<50	444.61	43.38	40-60	401.23
MW-2	12/9/2003	<50	NA	<0.50	<0.50	<0.50	<1.0	27	<2.0	<2.0	<2.0	<5.0	444.61	37.92	40-60	406.69
MW-2	3/8/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	444.61	33.40	40-60	411.21
MW-2	6/7/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	85	<2.0	<2.0	<2.0	<5.0	444.61	39.18	40-60	405.43
MW-2	9/1/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	140	NA	NA	NA	NA	444.61	45.03	40-60	399.58
MW-2	12/23/2004	<50	NA	<0.50	1.7	0.75	2.6	32	NA	NA	NA	NA	444.61	39.97	40-60	404.64
MW-2	2/28/2005	<50	NA	<0.50	<0.50	<0.50	<1.0	0.74	NA	NA	NA	NA	444.61	34.20	40-60	410.41

MW-3	12/5/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	40.49	40-55	NA
MW-3	12/20/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	8.7	<2.0	<2.0	<2.0	<50	NA	36.00	40-55	NA

WELL CONCENTRATIONS
Shell-branded Service Station
1155 Portola Avenue
Livermore, CA

Well ID	Date	TPPH (ug/L)	TEPH (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.)	Screened Interval (ft.)	GW Elevation (MSL)
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MW-3	3/28/2003	<50	56	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	443.84	36.47	40-55	407.37
MW-3	6/26/2003	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	443.84	38.70	40-55	405.14
MW-3	8/25/2003	76 a	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	443.84	41.12	40-55	402.72
MW-3	12/9/2003	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	443.84	37.27	40-55	406.57
MW-3	3/8/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	120	<2.0	<2.0	<2.0	<5.0	443.84	32.49	40-55	411.35
MW-3	6/7/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	74	<2.0	<2.0	<2.0	<5.0	443.84	37.75	40-55	406.09
MW-3	9/1/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	443.84	43.29	40-55	400.55
MW-3	12/23/2004	<50 c	NA	<0.50	2.3	1.5	4.3	<0.50	NA	NA	NA	NA	443.84	38.64	40-55	405.20
MW-3	2/28/2005	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	443.84	33.70	40-55	410.14

MW-4	12/5/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	41.45	41-61	NA
MW-4	12/20/2002	<50	61	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	40.61	41-61	NA
MW-4	3/28/2003	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	444.18	37.16	41-61	407.02
MW-4	6/26/2003	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	444.18	40.05	41-61	404.13
MW-4	8/25/2003	67 a	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	444.18	43.04	41-61	401.14
MW-4	12/9/2003	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	444.18	37.62	41-61	406.56
MW-4	3/8/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	444.18	32.80	41-61	411.38
MW-4	6/7/2004	58 b	NA	0.82	1.2	<0.50	1.1	<0.50	<2.0	<2.0	<2.0	<5.0	444.18	38.94	41-61	405.24
MW-4	9/1/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	444.18	44.18	41-61	400.00
MW-4	12/23/2004	<50 c	NA	0.55	3.8	2.2	7.0	<0.50	NA	NA	NA	NA	444.18	39.83	41-61	404.35
MW-4	2/28/2005	<50 c	NA	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	444.18	34.01	41-61	410.17

WELL CONCENTRATIONS
Shell-branded Service Station
1155 Portola Avenue
Livermore, CA

Well ID	Date	TPPH (ug/L)	TEPH (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.)	Screened Interval (ft.)	GW Elevation (MSL)
---------	------	----------------	----------------	-------------	-------------	-------------	-------------	------------------------	----------------	----------------	----------------	---------------	--------------	----------------------------	-------------------------------	--------------------------

Abbreviations:

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

TEPH = Total petroleum hydrocarbons as diesel by modified EPA Method 8015.

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:

a = Hydrocarbon does not match pattern of laboratory's standard.

b = Sample contains discrete peak in addition to gasoline.

c = The concentration reported reflects individual or discrete unidentified peaks not matching a typical fuel pattern.

Site surveyed November 25, 2002 by Mid Coast Engineers.

Blaine Tech Services, Inc.

March 14, 2005

1680 Rogers Avenue
San Jose, CA 95112-1105

Attn.: Leon Gearhart

Project#: 050228-MD3
Project: 97495539
Site: 1155 Portola Ave., Livermore

Dear Mr. Gearhart,

Attached is our report for your samples received on 03/01/2005 16:40
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
04/15/2005 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: 050228-MD3
97495539

Received: 03/01/2005 16:40

Site: 1155 Portola Ave., Livermore

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-1	02/28/2005 14:20	Water	1
MW-2	02/28/2005 13:55	Water	2
MW-3	02/28/2005 14:40	Water	3
MW-4	02/28/2005 15:00	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: 050228-MD3
97495539

Received: 03/01/2005 16:40

Site: 1155 Portola Ave., Livermore

Prep(s): 5030B

Test(s): 8260B

Sample ID: MW-1

Lab ID: 2005-03-0095 - 1

Sampled: 02/28/2005 14:20

Extracted: 3/8/2005 20:01

Matrix: Water

QC Batch#: 2005/03/08-2C.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	03/08/2005 20:01	
Benzene	ND	0.50	ug/L	1.00	03/08/2005 20:01	
Toluene	ND	0.50	ug/L	1.00	03/08/2005 20:01	
Ethylbenzene	ND	0.50	ug/L	1.00	03/08/2005 20:01	
Total xylenes	ND	1.0	ug/L	1.00	03/08/2005 20:01	
Methyl tert-butyl ether (MTBE)	0.54	0.50	ug/L	1.00	03/08/2005 20:01	
Surrogate(s)						
1,2-Dichloroethane-d4	114.9	73-130	%	1.00	03/08/2005 20:01	
Toluene-d8	102.1	81-114	%	1.00	03/08/2005 20:01	

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: 050228-MD3
97495539

Received: 03/01/2005 16:40

Site: 1155 Portola Ave., Livermore

Prep(s): 5030B

Test(s): 8260B

Sample ID: MW-2

Lab ID: 2005-03-0095 - 2

Sampled: 02/28/2005 13:55

Extracted: 3/9/2005 07:51

Matrix: Water

QC Batch#: 2005/03/09-1C.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	03/09/2005 07:51	
Benzene	ND	0.50	ug/L	1.00	03/09/2005 07:51	
Toluene	ND	0.50	ug/L	1.00	03/09/2005 07:51	
Ethylbenzene	ND	0.50	ug/L	1.00	03/09/2005 07:51	
Total xylenes	ND	1.0	ug/L	1.00	03/09/2005 07:51	
Methyl tert-butyl ether (MTBE)	0.74	0.50	ug/L	1.00	03/09/2005 07:51	
Surrogate(s)						
1,2-Dichloroethane-d4	115.1	73-130	%	1.00	03/09/2005 07:51	
Toluene-d8	105.3	81-114	%	1.00	03/09/2005 07:51	

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: 050228-MD3
97495539

Received: 03/01/2005 16:40

Site: 1155 Portola Ave., Livermore

Prep(s): 5030B

Test(s): 8260B

Sample ID: MW-3

Lab ID: 2005-03-0095 - 3

Sampled: 02/28/2005 14:40

Extracted: 3/10/2005 23:36

Matrix: Water

QC Batch#: 2005/03/10-2C.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	03/10/2005 23:36	
Benzene	ND	0.50	ug/L	1.00	03/10/2005 23:36	
Toluene	ND	0.50	ug/L	1.00	03/10/2005 23:36	
Ethylbenzene	ND	0.50	ug/L	1.00	03/10/2005 23:36	
Total xylenes	ND	1.0	ug/L	1.00	03/10/2005 23:36	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	03/10/2005 23:36	
<i>Surrogate(s)</i>						
1,2-Dichloroethane-d4	113.8	73-130	%	1.00	03/10/2005 23:36	
Toluene-d8	93.6	81-114	%	1.00	03/10/2005 23:36	

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: 050228-MD3
97495539

Received: 03/01/2005 16:40

Site: 1155 Portola Ave., Livermore

Prep(s): 5030B

Test(s): 8260B

Sample ID: MW-4

Lab ID: 2005-03-0095 - 4

Sampled: 02/28/2005 15:00

Extracted: 3/9/2005 08:43

Matrix: Water

QC Batch#: 2005/03/09-1C.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	03/09/2005 08:43	Q6
Benzene	ND	0.50	ug/L	1.00	03/09/2005 08:43	
Toluene	ND	0.50	ug/L	1.00	03/09/2005 08:43	
Ethylbenzene	ND	0.50	ug/L	1.00	03/09/2005 08:43	
Total xylenes	ND	1.0	ug/L	1.00	03/09/2005 08:43	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	03/09/2005 08:43	
Surrogate(s)						
1,2-Dichloroethane-d4	119.5	73-130	%	1.00	03/09/2005 08:43	
Toluene-d8	101.5	81-114	%	1.00	03/09/2005 08:43	

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: 050228-MD3
97495539

Received: 03/01/2005 16:40

Site: 1155 Portola Ave., Livermore

Batch QC Report

Prep(s): 5030B

Method Blank

MB: 2005/03/08-2C.68-032

Test(s): 8260B

Water

QC Batch # 2005/03/08-2C.68

Date Extracted: 03/08/2005 19:32

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	03/08/2005 19:32	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	03/08/2005 19:32	
Benzene	ND	0.5	ug/L	03/08/2005 19:32	
Toluene	ND	0.5	ug/L	03/08/2005 19:32	
Ethylbenzene	ND	0.5	ug/L	03/08/2005 19:32	
Total xylenes	ND	1.0	ug/L	03/08/2005 19:32	
Surrogates(s)					
1,2-Dichloroethane-d4	108.6	73-130	%	03/08/2005 19:32	
Toluene-d8	103.6	81-114	%	03/08/2005 19:32	

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: 050228-MD3
97495539

Received: 03/01/2005 16:40

Site: 1155 Portola Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Method Blank

Water

QC Batch # 2005/03/09-1C.68

MB: 2005/03/09-1C.68-017

Date Extracted: 03/09/2005 07:17

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	03/09/2005 07:17	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	03/09/2005 07:17	
Benzene	ND	0.5	ug/L	03/09/2005 07:17	
Toluene	ND	0.5	ug/L	03/09/2005 07:17	
Ethylbenzene	ND	0.5	ug/L	03/09/2005 07:17	
Total xylenes	ND	1.0	ug/L	03/09/2005 07:17	
Surrogates(s)					
1,2-Dichloroethane-d4	103.6	73-130	%	03/09/2005 07:17	
Toluene-d8	104.0	81-114	%	03/09/2005 07:17	

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: 050228-MD3
97495539

Received: 03/01/2005 16:40

Site: 1155 Portola Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Method Blank

QC Batch # 2005/03/10-2C.65

MB: 2005/03/10-2C.65-057

Date Extracted: 03/10/2005 19:57

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	03/10/2005 19:57	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	03/10/2005 19:57	
Benzene	ND	0.5	ug/L	03/10/2005 19:57	
Toluene	ND	0.5	ug/L	03/10/2005 19:57	
Ethylbenzene	ND	0.5	ug/L	03/10/2005 19:57	
Total xylenes	ND	1.0	ug/L	03/10/2005 19:57	
Surrogates(s)					
1,2-Dichloroethane-d4	111.0	73-130	%	03/10/2005 19:57	
Toluene-d8	97.2	81-114	%	03/10/2005 19:57	

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: 050228-MD3
97495539

Received: 03/01/2005 16:40

Site: 1155 Portola Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike**Water****QC Batch # 2005/03/08-2C.68**

LCS 2005/03/08-2C.68-015

Extracted: 03/08/2005

Analyzed: 03/08/2005 19:15

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)	27.4		25	109.6			65-165	20		
Benzene	26.3		25	105.2			69-129	20		
Toluene	26.7		25	106.8			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	466		500	93.2			73-130			
Toluene-d8	522		500	104.4			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: 050228-MD3
97495539

Received: 03/01/2005 16:40

Site: 1155 Portola Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike**Water****QC Batch # 2005/03/09-1C.68**

LCS 2005/03/09-1C.68-000

Extracted: 03/09/2005

Analyzed: 03/09/2005 07:00

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)	26.4		25	105.6			65-165	20		
Benzene	28.1		25	112.4			69-129	20		
Toluene	30.2		25	120.8			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	419		500	83.8			73-130			
Toluene-d8	547		500	109.4			81-114			

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

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

Project: 050228-MD3
97495539

Received: 03/01/2005 16:40

Site: 1155 Portola Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2005/03/10-2C.65

LCS 2005/03/10-2C.65-031

Extracted: 03/10/2005

Analyzed: 03/10/2005 19:31

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)	22.5		25	90.0			65-165	20		
Benzene	23.8		25	95.2			69-129	20		
Toluene	24.8		25	99.2			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	431		500	86.2			73-130			
Toluene-d8	470		500	94.0			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: 050228-MD3
97495539

Received: 03/01/2005 16:40

Site: 1155 Portola Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD)**Water****QC Batch # 2005/03/08-2C.68**

MW-1 >> MS

Lab ID: 2005-03-0095 - 001

MS: 2005/03/08-2C.68-018

Extracted: 03/08/2005

Analyzed: 03/08/2005 20:18

MSD: 2005/03/08-2C.68-036

Extracted: 03/08/2005

Dilution: 1.00

Analyzed: 03/08/2005 20:36

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	29.0	30.0	0.537	25	113.9	117.9	3.5	65-165	20		
Benzene	24.9	27.6	ND	25	99.6	110.4	10.3	69-129	20		
Toluene	26.1	28.8	ND	25	104.4	115.2	9.8	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	505	465		500	101.0	93.0		73-130			
Toluene-d8	513	521		500	102.6	104.2		81-114			

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: 050228-MD3
97495539

Received: 03/01/2005 16:40

Site: 1155 Portola Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD)

Water

QC Batch # 2005/03/09-1C.68

MW-2 >> MS

Lab ID: 2005-03-0095 - 002

MS: 2005/03/09-1C.68-008

Extracted: 03/09/2005

Analyzed: 03/09/2005 08:08

MSD: 2005/03/09-1C.68-026

Extracted: 03/09/2005

Analyzed: 03/09/2005 08:26

Dilution: 1.00

Dilution: 1.00

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	30.4	24.5	0.736	25	118.7	95.1	22.1	65-165	20		R1
Benzene	27.4	23.2	ND	25	109.6	92.8	16.6	69-129	20		
Toluene	28.6	23.4	ND	25	114.4	93.6	20.0	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	475	480		500	95.0	96.0		73-130			
Toluene-d8	522	524		500	104.4	104.8		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) 573-7771Project: 050228-MD3
97495539

Received: 03/01/2005 16:40

Site: 1155 Portola Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD)

Water

QC Batch # 2005/03/10-2C.65

MS/MSD

MS: 2005/03/10-2C.65-003

Extracted: 03/10/2005

Lab ID: 2005-03-0017 - 001

MSD: 2005/03/10-2C.65-027

Extracted: 03/10/2005

Analyzed: 03/10/2005 21:03

Dilution: 1.00

Analyzed: 03/10/2005 21:27

Dilution: 1.00

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	22.3	25.7	ND	25	89.2	102.8	14.2	65-165	20		
Benzene	22.8	28.3	ND	25	91.2	113.2	21.5	69-129	20		
Toluene	24.1	29.3	ND	25	96.4	117.2	19.5	70-130	20		R1
<i>Surrogate(s)</i>											
1,2-Dichloroethane-d4	442	430		500	88.4	86.0		73-130			
Toluene-d8	462	464		500	92.4	92.8		81-114			

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: 050228-MD3
97495539

Received: 03/01/2005 16:40

Site: 1155 Portola Ave., Livermore

Legend and Notes

Sample Comment

Lab ID: 2005-03-0095 -4

Siloxane peaks were found in the sample, which are not believed to be gasoline related. If they were to be quantified as gasoline, the concentration would be 91 ug/L

Result Flag

Q6

The concentration reported reflect(s) individual or discrete unidentified peaks not matching a typical fuel pattern.

R1

Analyte RPD was out of QC limits.

WELLHEAD INSPECTION CHECKLIST

Page 1 of 1

Date 2/26/05 Client gell
Site Address 1155 Portola Ave, Livermore
Job Number 050228-MD 3 Technician MH

NOTES: _____

WELL GAUGING DATA

Project # 050228-MD3 Date 2/28/05 Client Shelf

Site 1155 Portola Ave, Livermore

SHELL WELL MONITORING DATA SHEET

BTS #: 050228-MD3	Site: 9740157	
Sampler: CW	Date: 2/28/05	
Well I.D.: MD	Well Diameter: ② 3 4 6 8	
Total Well Depth (TD): 59.00	Depth to Water (DTW): 32.95	
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]: 38.16		

Purge Method:	Bailer Disposable Bailer Positive Air Displacement Electric Submersible		Sampling Method:	Bailer Disposable Bailer Extraction Port Dedicated Tubing																
Other:			Other:																	
4.2 (Gals.) X 3 = 12.6 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 μS)	Turbidity (NTUs)	Gals. Removed	Observations
1403	68.3	7.0	898	71000	4.2	cloudy
1408	68.3	6.7	895	71000	8.4	11
1413	68.1	6.7	895	71000	12.6	cloudy

Did well dewater? Yes No Gallons actually evacuated: 12.6

Sampling Date: 2/28/05 Sampling Time: 1420 Depth to Water: 33.51

Sample I.D.: MW-1 Laboratory: STL 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 #:	050228-M03		Site:	98 974015/7				
Sampler:	M		Date:	2/28				
Well I.D.:	MW-2		Well Diameter:	2	3	4	6	8
Total Well Depth (TD):	59.15		Depth to Water (DTW):	34.20				
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]: 39.19								

Purge Method: Bailer
 Disposable Bailer
 Positive Air Displacement
 Electric Submersible

Water
 Peristaltic
 Extraction Pump
 Other _____

Sampling Method:
 Bailer
 Disposable Bailer
 Extraction Port
 Dedicated Tubing

Other: _____

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

9 (Gals.) X 3 = 27 Gals.
 1 Case Volume Specified Volumes Calculated Volume

Time	Temp (°F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	Gals. Removed	Observations
1336	67.9	7.9	1021	7000	4	cloudy
1343	67.7	6.9	982	657	8	cloudy
1348	67.7	6.9	978	293	12	cloudy

Did well dewater? Yes No Gallons actually evacuated: 12

Sampling Date: 2/28/03 Sampling Time: 1355 Depth to Water: 35.71

Sample I.D.: MW-2 Laboratory: STL 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 #: 050228-MW3	Site: 97401517	
Sampler: MW	Date: 2/28/05	
Well I.D.: MW-3	Well Diameter: <input checked="" type="checkbox"/> 3 4 6 8	
Total Well Depth (TD): 54.27	Depth to Water (DTW): 33.70	
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]: 37.81		

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

	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	

3.3 (Gals.) X 3 = 9.9 Gals.
 1 Case Volume Specified Volumes Calculated Volume

Time	Temp (°F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	Gals. Removed	Observations
1425	67.2	7.1	1010	>1000	3.3	cloudy
1429	68.0	6.8	994	>1000	6.6	"
1434	67.4	6.8	989	>1000	9.9	cloudy

Did well dewater? Yes No Gallons actually evacuated: 9.9

Sampling Date: 2/28/05 Sampling Time: 1440 Depth to Water: 33.91

Sample I.D.: MW-3 Laboratory: STL 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 #: 050228-M03	Site: 9701577 97401517	
Sampler: MW	Date: 2/28/05	
Well I.D.: MW-4	Well Diameter: ② 3 4 6 8	
Total Well Depth (TD): 59.05	Depth to Water (DTW): 34.01	
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]: 39.02		

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: _____	

4	(Gals.) X	3	=	12	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
1447	66.9	7.2	1057	7000	4	Cloudy
1452	67.5	7.1	1051	398	8	"
1458	67.6	7.2	1051	249	12	cloudy

Did well dewater? Yes Gallons actually evacuated: 12

Sampling Date: 2/28/05 Sampling Time: 1500 Depth to Water: 34.48

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

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

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

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

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

GROUNDWATER SAMPLING SPECIALISTS
SINCE 1985

June 29, 2005

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

Second Quarter 2005 Groundwater Monitoring at
Shell-branded Service Station
1155 Portola Avenue
Livermore, CA

Monitoring performed on June 13, 2005

Groundwater Monitoring Report **050613-PM-1**

This report covers the routine monitoring of groundwater wells at this Shell-branded facility. In accordance with standard procedures that conform to Regional Water Quality Control Board requirements, routine field data collection includes depth to water, total well depth, thickness of any separate immiscible layer, water column volume, calculated purge volume (if applicable), elapsed evacuation time (if applicable), total volume of water removed (if applicable), and standard water parameter instrument readings. Sample material is collected, contained, stored, and transported to the laboratory in conformance with EPA standards. Purgewater (if applicable) is, likewise, collected and transported to the Martinez Refining Company.

Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL CONCENTRATIONS**. The full analytical report for the most recent samples and the field data sheets are attached to this report.

At a minimum, Blaine Tech Services, Inc. field personnel are certified on completion of a forty-hour Hazardous Materials and Emergency Response training course per 29 CFR 1910.120. Field personnel are also enrolled in annual eight-hour refresher courses.

SAN JOSE

1680 ROGERS AVENUE SAN JOSE, CA 95112-1108

SACRAMENTO

(408) 673-0888

LOS ANGELES

FAX (408) 673-7771 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
1155 Portola Avenue
Livermore, CA

Well ID	Date	TPPH (ug/L)	TEPH (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.)	Screened Interval (ft.)	GW Elevation (MSL)
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MW-1	12/05/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	41.12	40-59	NA
MW-1	12/20/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	78	<2.0	<2.0	<2.0	<50	NA	38.40	40-59	NA
MW-1	03/28/2003	<50	<50	<0.50	<0.50	<0.50	<1.0	7.0	<2.0	<2.0	<2.0	<5.0	443.81	36.25	40-59	407.56
MW-1	06/26/2003	<50	<50	<0.50	<0.50	<0.50	<1.0	1.4	<2.0	<2.0	<2.0	<5.0	443.81	39.53	40-59	404.28
MW-1	08/25/2003	64	NA	<0.50	<0.50	<0.50	<1.0	53	<2.0	<2.0	<2.0	<5.0	443.81	42.52	40-59	401.29
MW-1	12/09/2003	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	443.81	36.84	40-59	406.97
MW-1	03/08/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	3.9	<2.0	<2.0	<2.0	<5.0	443.81	31.75	40-59	412.06
MW-1	06/07/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	0.91	<2.0	<2.0	<2.0	<5.0	443.81	38.24	40-59	405.57
MW-1	09/01/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	4.7	NA	NA	NA	NA	443.81	44.66	40-59	399.15
MW-1	12/23/2004	<50 c	NA	<0.50	2.3	1.4	3.6	<0.50	NA	NA	NA	NA	443.81	39.14	40-59	404.67
MW-1	02/28/2005	<50	NA	<0.50	<0.50	<0.50	<1.0	0.54	NA	NA	NA	NA	443.81	32.95	40-59	410.86
MW-1	06/13/2005	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	6.8	443.81	35.00	40-59	408.81

MW-2	12/05/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	41.57	40-60	NA	
MW-2	12/20/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	190	<2.0	<2.0	<2.0	<50	NA	40.00	40-60	NA	
MW-2	03/28/2003	<50	<50	<0.50	<0.50	<0.50	<0.50	<1.0	46	<2.0	<2.0	<2.0	<5.0	444.61	37.40	40-60	407.21
MW-2	06/26/2003	<500	<50	<5.0	<5.0	<5.0	<5.0	<10	330	<20	<20	<20	<50	444.61	40.51	40-60	404.10
MW-2	08/25/2003	<500	NA	<5.0	<5.0	<5.0	<5.0	<10	400	<20	<20	<20	<50	444.61	43.38	40-60	401.23
MW-2	12/09/2003	<50	NA	<0.50	<0.50	<0.50	<0.50	<1.0	27	<2.0	<2.0	<2.0	<5.0	444.61	37.92	40-60	406.69
MW-2	03/08/2004	<50	NA	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	444.61	33.40	40-60	411.21
MW-2	06/07/2004	<50	NA	<0.50	<0.50	<0.50	<0.50	<1.0	85	<2.0	<2.0	<2.0	<5.0	444.61	39.18	40-60	405.43
MW-2	09/01/2004	<50	NA	<0.50	<0.50	<0.50	<0.50	<1.0	140	NA	NA	NA	NA	444.61	45.03	40-60	399.58
MW-2	12/23/2004	<50	NA	<0.50	1.7	0.75	2.6	32	NA	NA	NA	NA	NA	444.61	39.97	40-60	404.64
MW-2	02/28/2005	<50	NA	<0.50	<0.50	<0.50	<0.50	<1.0	0.74	NA	NA	NA	NA	444.61	34.20	40-60	410.41
MW-2	06/13/2005	<50	NA	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	6.0	444.61	36.00	40-60	408.61

WELL CONCENTRATIONS
Shell-branded Service Station
1155 Portola Avenue
Livermore, CA

Well ID	Date	TPPH (ug/L)	TEPH (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.)	Screened Interval (ft.)	GW Elevation (MSL)
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MW-3	12/05/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	40.49	40-55	NA
MW-3	12/20/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	8.7	<2.0	<2.0	<2.0	<50	NA	36.00	40-55	NA
MW-3	03/28/2003	<50	56	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	443.84	36.47	40-55	407.37
MW-3	06/26/2003	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	443.84	38.70	40-55	405.14
MW-3	08/25/2003	76 a	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	443.84	41.12	40-55	402.72
MW-3	12/09/2003	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	443.84	37.27	40-55	406.57
MW-3	03/08/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	120	<2.0	<2.0	<2.0	<5.0	443.84	32.49	40-55	411.35
MW-3	06/07/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	74	<2.0	<2.0	<2.0	<5.0	443.84	37.75	40-55	406.09
MW-3	09/01/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	443.84	43.29	40-55	400.55
MW-3	12/23/2004	<50 c	NA	<0.50	2.3	1.5	4.3	<0.50	NA	NA	NA	NA	443.84	38.64	40-55	405.20
MW-3	02/28/2005	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	443.84	33.70	40-55	410.14
MW-3	06/13/2005	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	12	443.84	35.03	40-55	408.81

MW-4	12/05/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	41.45	41-61	NA
MW-4	12/20/2002	<50	61	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	40.61	41-61	NA
MW-4	03/28/2003	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	444.18	37.16	41-61	407.02
MW-4	06/26/2003	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	444.18	40.05	41-61	404.13
MW-4	08/25/2003	67 a	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	444.18	43.04	41-61	401.14
MW-4	12/09/2003	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	444.18	37.62	41-61	406.56
MW-4	03/08/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	444.18	32.80	41-61	411.38
MW-4	06/07/2004	58 b	NA	0.82	1.2	<0.50	1.1	<0.50	<2.0	<2.0	<2.0	<5.0	444.18	38.94	41-61	405.24
MW-4	09/01/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	444.18	44.18	41-61	400.00
MW-4	12/23/2004	<50 c	NA	0.55	3.8	2.2	7.0	<0.50	NA	NA	NA	NA	444.18	39.83	41-61	404.35
MW-4	02/28/2005	<50 c	NA	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	444.18	34.01	41-61	410.17
MW-4	06/13/2005	<50	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	444.18	35.70	41-61	408.48

WELL CONCENTRATIONS
Shell-branded Service Station
1155 Portola Avenue
Livermore, CA

Well ID	Date	TPPH (ug/L)	TEPH (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.)	Screened Interval (ft.)	GW Elevation (MSL)
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Abbreviations:

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

TEPH = Total petroleum hydrocarbons as diesel by modified EPA Method 8015.

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:

a = Hydrocarbon does not match pattern of laboratory's standard.

b = Sample contains discrete peak in addition to gasoline.

c = The concentration reported reflects individual or discrete unidentified peaks not matching a typical fuel pattern.

Site surveyed November 25, 2002 by Mid Coast Engineers.

Blaine Tech Services, Inc.

June 28, 2005

1680 Rogers Avenue
San Jose, CA 95112-1105

Attn.: Leon Gearhart

Project#: BTS#050613-PM1

Project: 97495539

Site: 1155 Portola Ave., Livermore

Dear Mr.Gearhart,

Attached is our report for your samples received on 06/14/2005 11:40

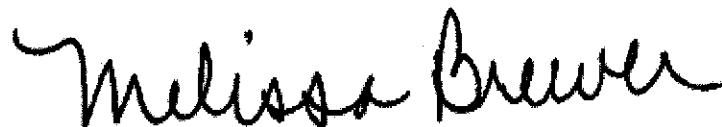
This report has been reviewed and approved for release. Reproduction of this report
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after
07/29/2005 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

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

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) 573-7771Project: BTS#050613-PM1
97495539

Received: 06/14/2005 11:40

Site: 1155 Portola Ave., Livermore

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-1	06/13/2005 11:06	Water	1
MW-2	06/13/2005 12:22	Water	2
MW-3	06/13/2005 13:55	Water	3
MW-4	06/13/2005 15:56	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) 573-7771Project: BTS#050613-PM1
97495539

Received: 06/14/2005 11:40

Site: 1155 Portola Ave., Livermore

Prep(s): 5030B

Sample ID: MW-1

Sampled: 06/13/2005 11:06

Matrix: Water

pH: <2

Test(s): 8260B

Lab ID: 2005-06-0381 - 1

Extracted: 6/24/2005 20:31

QC Batch#: 2005/06/24-2A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	06/24/2005 20:31	
Benzene	ND	0.50	ug/L	1.00	06/24/2005 20:31	
Toluene	ND	0.50	ug/L	1.00	06/24/2005 20:31	
Ethylbenzene	ND	0.50	ug/L	1.00	06/24/2005 20:31	
Total xylenes	ND	1.0	ug/L	1.00	06/24/2005 20:31	
tert-Butyl alcohol (TBA)	6.8	5.0	ug/L	1.00	06/24/2005 20:31	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/24/2005 20:31	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	06/24/2005 20:31	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	06/24/2005 20:31	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	06/24/2005 20:31	
Surrogate(s)						
1,2-Dichloroethane-d4	107.8	73-130	%	1.00	06/24/2005 20:31	
Toluene-d8	100.3	81-114	%	1.00	06/24/2005 20:31	

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: BTS#050613-PM1
97495539

Received: 06/14/2005 11:40

Site: 1155 Portola Ave., Livermore

Prep(s): 5030B

Sample ID: MW-2

Sampled: 06/13/2005 12:22

Matrix: Water

pH: <2

Test(s): 8260B

Lab ID: 2005-06-0381 - 2

Extracted: 6/24/2005 20:49

QC Batch#: 2005/06/24-2A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	06/24/2005 20:49	
Benzene	ND	0.50	ug/L	1.00	06/24/2005 20:49	
Toluene	ND	0.50	ug/L	1.00	06/24/2005 20:49	
Ethylbenzene	ND	0.50	ug/L	1.00	06/24/2005 20:49	
Total xylenes	ND	1.0	ug/L	1.00	06/24/2005 20:49	
tert-Butyl alcohol (TBA)	6.0	5.0	ug/L	1.00	06/24/2005 20:49	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/24/2005 20:49	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	06/24/2005 20:49	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	06/24/2005 20:49	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	06/24/2005 20:49	
Surrogate(s)						
1,2-Dichloroethane-d4	104.8	73-130	%	1.00	06/24/2005 20:49	
Toluene-d8	98.6	81-114	%	1.00	06/24/2005 20:49	

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: BTS#050613-PM1
97495539

Received: 06/14/2005 11:40

Site: 1155 Portola Ave., Livermore

Prep(s):	5030B	Test(s):	8260B
Sample ID:	MW-3	Lab ID:	2005-06-0381 - 3
Sampled:	06/13/2005 13:55	Extracted:	6/24/2005 21:08
Matrix:	Water	QC Batch#:	2005/06/24-2A.69
pH:	<2		

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	06/24/2005 21:08	
Benzene	ND	0.50	ug/L	1.00	06/24/2005 21:08	
Toluene	ND	0.50	ug/L	1.00	06/24/2005 21:08	
Ethylbenzene	ND	0.50	ug/L	1.00	06/24/2005 21:08	
Total xylenes	ND	1.0	ug/L	1.00	06/24/2005 21:08	
tert-Butyl alcohol (TBA)	12	5.0	ug/L	1.00	06/24/2005 21:08	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/24/2005 21:08	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	06/24/2005 21:08	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	06/24/2005 21:08	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	06/24/2005 21:08	
Surrogate(s)						
1,2-Dichloroethane-d4	107.9	73-130	%	1.00	06/24/2005 21:08	
Toluene-d8	100.0	81-114	%	1.00	06/24/2005 21:08	

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: BTS#050613-PM1
97495539

Received: 06/14/2005 11:40

Site: 1155 Portola Ave., Livermore

Prep(s): 5030B

Sample ID: MW-4

Sampled: 06/13/2005 15:56

Matrix: Water

pH: <2

Test(s): 8260B

Lab ID: 2005-06-0381 - 4

Extracted: 6/24/2005 21:26

QC Batch#: 2005/06/24-2A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	06/24/2005 21:26	
Benzene	ND	0.50	ug/L	1.00	06/24/2005 21:26	
Toluene	ND	0.50	ug/L	1.00	06/24/2005 21:26	
Ethylbenzene	ND	0.50	ug/L	1.00	06/24/2005 21:26	
Total xylenes	ND	1.0	ug/L	1.00	06/24/2005 21:26	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	06/24/2005 21:26	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/24/2005 21:26	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	06/24/2005 21:26	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	06/24/2005 21:26	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	06/24/2005 21:26	
Surrogate(s)						
1,2-Dichloroethane-d4	103.7	73-130	%	1.00	06/24/2005 21:26	
Toluene-d8	99.2	81-114	%	1.00	06/24/2005 21:26	

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) 573-7771Project: BTS#050613-PM1
97495539

Received: 06/14/2005 11:40

Site: 1155 Portola Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Method Blank**QC Batch # 2005/06/24-2A.69**

MB: 2005/06/24-2A.69-047

Date Extracted: 06/24/2005 18:47

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	06/24/2005 18:47	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	06/24/2005 18:47	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/24/2005 18:47	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	06/24/2005 18:47	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	06/24/2005 18:47	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	06/24/2005 18:47	
Benzene	ND	0.5	ug/L	06/24/2005 18:47	
Toluene	ND	0.5	ug/L	06/24/2005 18:47	
Ethylbenzene	ND	0.5	ug/L	06/24/2005 18:47	
Total xylenes	ND	1.0	ug/L	06/24/2005 18:47	
Surrogates(s)					
1,2-Dichloroethane-d4	89.8	73-130	%	06/24/2005 18:47	
Toluene-d8	98.0	81-114	%	06/24/2005 18:47	

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: BTS#050613-PM1
97495539

Received: 06/14/2005 11:40

Site: 1155 Portola Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2005/06/24-2A.69

LCS 2005/06/24-2A.69-029

Extracted: 06/24/2005

Analyzed: 06/24/2005 18:29

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)	19.7		25	78.8		65-165	20			
Benzene	22.2		25	88.8		69-129	20			
Toluene	23.4		25	93.6		70-130	20			
Surrogates(s)										
1,2-Dichloroethane-d4	407		500	81.4		73-130				
Toluene-d8	485		500	97.0		81-114				

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) 573-7771Project: BTS#050613-PM1
97495539

Received: 06/14/2005 11:40

Site: 1155 Portola Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD)

Water

QC Batch # 2005/06/24-2A.69

MS/MSD

Lab ID: 2005-06-0464 - 004

MS: 2005/06/24-2A.69-036

Extracted: 06/24/2005

Analyzed: 06/24/2005 19:36

MSD: 2005/06/24-2A.69-055

Extracted: 06/24/2005

Dilution: 1.00

Analyzed: 06/24/2005 19:55

Dilution: 1.00

Compound	Conc.			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Benzene	18.9	19.8	ND	25	75.6	79.2	4.7	69-129	20		
Toluene	20.9	21.4	ND	25	83.6	85.6	2.4	70-130	20		
Methyl tert-butyl ether	18.2	19.6	ND	25	72.8	78.4	7.4	65-165	20		
<i>Surrogate(s)</i>											
1,2-Dichloroethane-d4	449	466		500	89.8	93.2		73-130			
Toluene-d8	493	496		500	98.6	99.2		81-114			

LAB: STL

SHELL Chain Of Custody Record

116564

Lab Identification (if necessary):

Address:

City, State, Zip:

Shell Project Manager to be Involved:

- SCIENCE & ENGINEERING
 TECHNICAL SERVICES
 CRMT HOUSTON

Denis Brown

INCIDENT NUMBER (S&E ONLY)

9 7 4 9 5 5 3 9

SAP or CRMT NUMBER (TS/CRMT)

PAGE: 1 of 1

SAMPLING COMPANY: Blaine Tech Services		LOM CODE: BTSS	SITE ADDRESS (Street and City): 1155 Portola Ave., Livermore	GLOBAL ID #3: T0600194367	CONTRACT PROJECT NO.: BTS # 0501213-Am 1
ADDRESS: 1680 Rogers Avenue, San Jose, CA 95112		EDF DELIVERABLE TO (INSPECTOR Name/Division): Vera Fischer		PHONE#: (408)224-4724	EMAIL: v.fischer@dellamw.com
PROJECT CONTACT (Name/Phone/PDF Report): Leon Gearhart		SAMPLE NAME(S)/ID#: Panic Monitor		LAB USE ONLY	
TELEPHONE: 408-573-0555		FAX: 408-573-7771		EMAIL: gearhart@blainetech.com	
TURNAROUND TIME (BUSINESS DAYS): <input checked="" type="checkbox"/> 10 DAYS <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 72 HOURS <input type="checkbox"/> 48 HOURS <input type="checkbox"/> 24 HOURS <input type="checkbox"/> LESS THAN 24 HOURS					
□ LA = RMOCC REPORT FORMAT □ UST AGENCY					
EXCLUSIONS/CONFIRMATION (CHECK ONE): REQUEST INFORMATION: All					
OR LOCAL INSTRUCTIONS OR NOTES: Open site of tank has been cleaned.					
146 SHE ONLY	Field Sample Identification		SAMPLING DATE	MATRIX	NO. OF CONT.
	TPH - Gas, Purgeable	BTEX	MITB (S001B - Tppb RL)	MITB (S200B - O-Sppb RL)	Oxygenates (P by IS200e)
	<i>MW-1</i>	<i>6/30/05 1100</i>	<i>W</i>	<i>3</i>	<i>X X X X X X</i>
	<i>MW-2</i>	<i>6/30/05 1222</i>	<i>I</i>	<i>3</i>	<i>X X X X X X</i>
	<i>MW-3</i>	<i>6/30/05 1355</i>	<i>I</i>	<i>3</i>	<i>X X X X X X</i>
	<i>MW-4</i>	<i>6/30/05 1550</i>	<i>V</i>	<i>3</i>	<i>X X X X X X</i>
TEMPERATURE CURRENT: 3					
Received by: (Signature) <i>D. Brown</i>		Received by: (Signature) <i>J. L. Bullock</i>		Date: 6/14/05	Time: 1140
Received by: (Signature) <i>6/14/05 1309</i>		Received by: (Signature) <i>J. L. Bullock</i>		Date: 6/14/05	Time: 1309
DISTRIBUTION: White with field report, Green is Fire, Yellow and Pink to Client.					

WELLHEAD INSPECTION CHECKLIST

Page 1 of 1

Date 04-13-05 Client SHELL
 Site Address 1155 Portola Ave, Livermore
 Job Number 050613-PMI Technician Paul Monroe

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:

SHELL WELL MONITORING DATA SHEET

BTS #: 0501013-PM1	Site: 97401517
Sampler: PM	Date: 6-13-05
Well I.D.: MW-1	Well Diameter: ② 3 4 6 8
Total Well Depth (TD): 59.00	Depth to Water (DTW): 35.00
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 39.80	

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: _____

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

3.8 (Gals.) X 3 = 11.4 Gals.
 1 Case Volume Specified Volumes Calculated Volume

Time	Temp (°F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	Gals. Removed	Observations
1017	77.5	6.6	912	>1000	3.8	brown
1041	73.9	7.0	897	>1000	7.6	brown
1059	89.6	7.3	892	>1000	11.4	brown

Did well dewater? Yes No Gallons actually evacuated: 11.4

Sampling Date: 6-13-05 Sampling Time: 1106 Depth to Water: 35.02

Sample I.D.: MW-1 Laboratory: STL Other: _____

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

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 #: 050613 - pm 1	Site: 97401517	
Sampler: PM	Date: 6-13-05	
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8	
Total Well Depth (TD): 59.15	Depth to Water (DTW): 36.00	
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]: 40.63		

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

3.7 (Gals.) X 3 = 11.1 Gals.	Well Diameter	Multiplier	Well Diameter	Multiplier
1 Case Volume	1"	0.04	4"	0.65
Specified Volumes	2"	0.16	6"	1.47
Calculated Volume	3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	Gals. Removed	Observations
1137	79.7	7.3	885	>1000	3.7	brown
1150	79.4	7.1	910	>1000	7.4	tan
1212	77.2	7.9	908	>1000	11.1	"

Did well dewater? Yes No Gallons actually evacuated: 11.1

Sampling Date: 6-13-05 Sampling Time: 1222 Depth to Water: 36.15

Sample I.D.: MW-2 Laboratory: STL Other: _____

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

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 #: 050613-1m1	Site: 97401517		
Sampler: PM	Date: 6-13-05		
Well I.D.: MW-3	Well Diameter: ⑥ 3 4 6 8		
Total Well Depth (TD): 54.25	Depth to Water (DTW): 35.03		
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]: 38.87			

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: _____

3.1	(Gals.) X	3	=	9.3	Gals.
1 Case Volume	Specified Volumes		Calculated Volume		

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	Gals. Removed	Observations
1330	74.0	7.0	892	>10000	3.1	brown
1340	74.0	7.0	891	>10000	6.2	
1350	74.0	7.4	904	>10000	9.3	

Did well dewater? Yes No Gallons actually evacuated: 9.3

Sampling Date: 6-13-05 Sampling Time: 1355 Depth to Water: 35.25

Sample I.D.: MW-3 Laboratory: STL Other: _____

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

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 #: 050613 - 1m 1	Site: 97401517		
Sampler: PM	Date: 6-13-05		
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8		
Total Well Depth (TD): 59.03	Depth to Water (DTW): 35.70		
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]: 40.37			

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: _____
3.7 (Gals.) X 3 = 11.1 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 μ S)	Turbidity (NTUs)	Gals. Removed	Observations
1500	75.4	7.5	1022	>1000	3.7	
1540	75.9	8.2	1009	>1000	7.4	
1550	76.3	7.8	1018	>1000	11.1	

Did well dewater? Yes No Gallons actually evacuated: 11.1

Sampling Date: 6-13-05 Sampling Time: 1550 Depth to Water: 35.85

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See scope.

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