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Alameda County
APR 05 2004
Environmental Health

www.deltaenv.com

Letter of Transmittal

To: Alameda County Environmental Health Services Date: 4/1/2004
1131 Harbor Bay Pkwy
Alameda CA 94502 Job No: SJ31-8LI-1.2004

Attn: Mr. Scott Seery

We are sending the following items:

Date	Copies	Description
31-Mar-04	1	Quarterly Monitoring Report - First Quarter 2004
		Shell-branded Service Station
		318 S Livermore Avenue
		Livermore, CA

These are transmitted:

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

Remarks

By: Vera Fischer

Title: Senior Staff Geologist

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March 31, 2004
Project No. SJ31-8LI-1.2004

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

Alameda County
APR 05 2004
Environmental Health

**Re: Quarterly Monitoring Report – First Quarter 2004
Shell-branded Service Station
318 South Livermore Avenue
Livermore, California**

Dear Mr. Seery:

Delta Environmental Consultants, Inc. (Delta), on behalf of Shell Oil Products US (Shell), has prepared the following first quarter 2004 groundwater monitoring and sampling report for the above referenced site. A site location map is included as Figure 1.

BACKGROUND

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

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

QUARTERLY GROUND WATER MONITORING PROGRAM

Groundwater monitoring wells were gauged and sampled by Blaine Tech Services (Blaine), at the direction of Delta, on January 13, 2004. Depth to groundwater was measured in Wells MW-5 through MW-8. Wells MW-1 through MW-4 were previously destroyed. Groundwater elevation data and contours are presented on Figure 2.

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

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

DISCUSSION

Depth to groundwater in site wells has decreased by an average of 7 feet since last quarter. The groundwater gradient on January 13, 2004 was toward the west-southwest at a magnitude of 0.02 feet/feet, consistent with previous data.

MTBE was detected in Wells MW-7 and MW-8 at concentrations of 0.85 micrograms per liter (ug/l) and 0.92 ug/l, respectively. TPH-G and BTEX compounds were not detected in any site wells this quarter.

Delta proposes to reduce the sampling frequency to semi-annual during the first and third quarters.

REMARKS

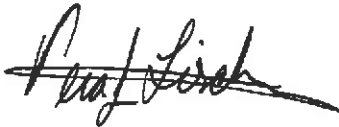
The information contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between 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.


March 31, 2004

Page 3

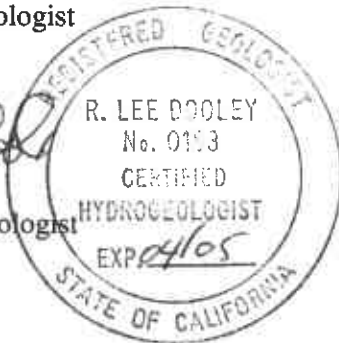
Sincerely,
Delta Environmental Consultants, Inc.



Vera Fischer
Senior Staff Geologist



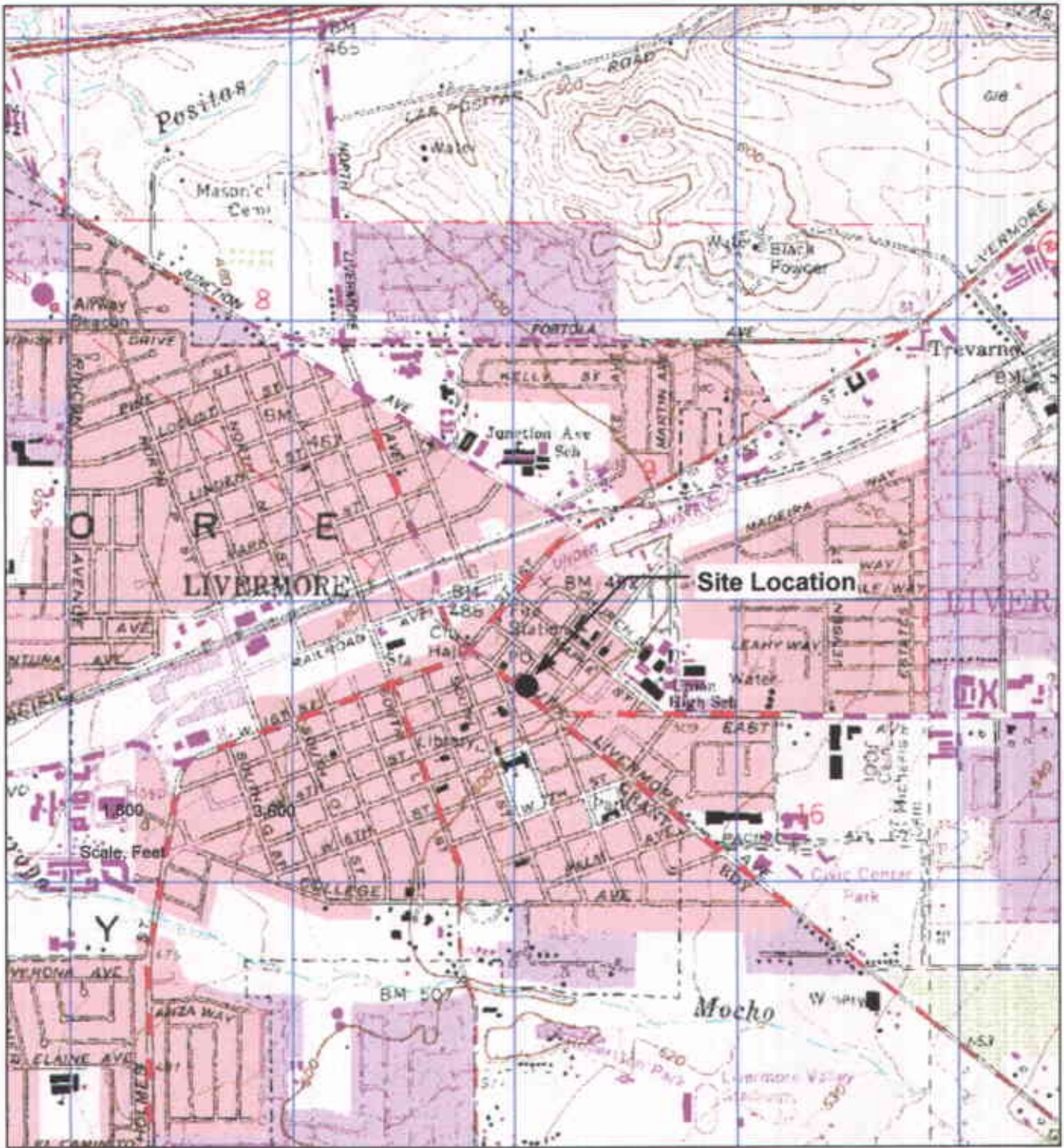
R. Lee Dooley
Senior Hydrogeologist
CHG 183



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

Attachment A – Groundwater Monitoring and Sampling Report, February 11, 2004

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



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



FIGURE 1

SITE LOCATION MAP

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

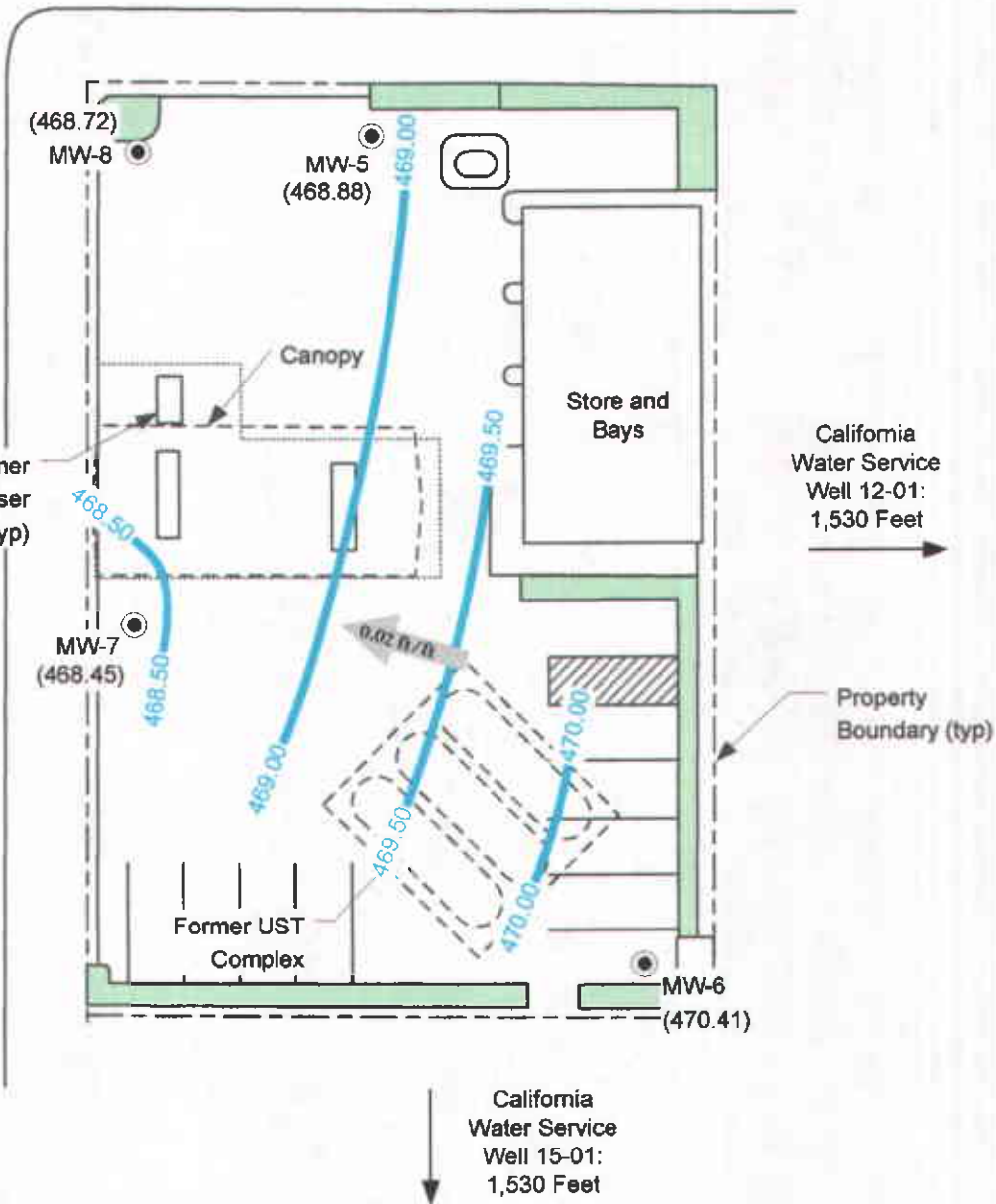
PROJECT NO. SJ31-BU-1-2004	DRAWN BY VF 9/25/03
FILE NO. SJ31-BU-1-2004	PREPARED BY VF
REVISION NO. 2	REVIEWED BY





Third Street

South Livermore Avenue



LEGEND

- MW-6 ● **GROUNDWATER MONITORING WELL**
- (462.29) **GROUNDWATER ELEVATION (MSL), 1/13/04**
- 467.00 — **GROUNDWATER ELEVATION CONTOUR**
- ← 0.012 ft/ft **APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT**



FIGURE 2
GROUNDWATER ELEVATION CONTOUR MAP,
JANUARY 13, 2004
SHELL-BRANDED SERVICE STATION
318 South Livermore Avenue
Livermore, California

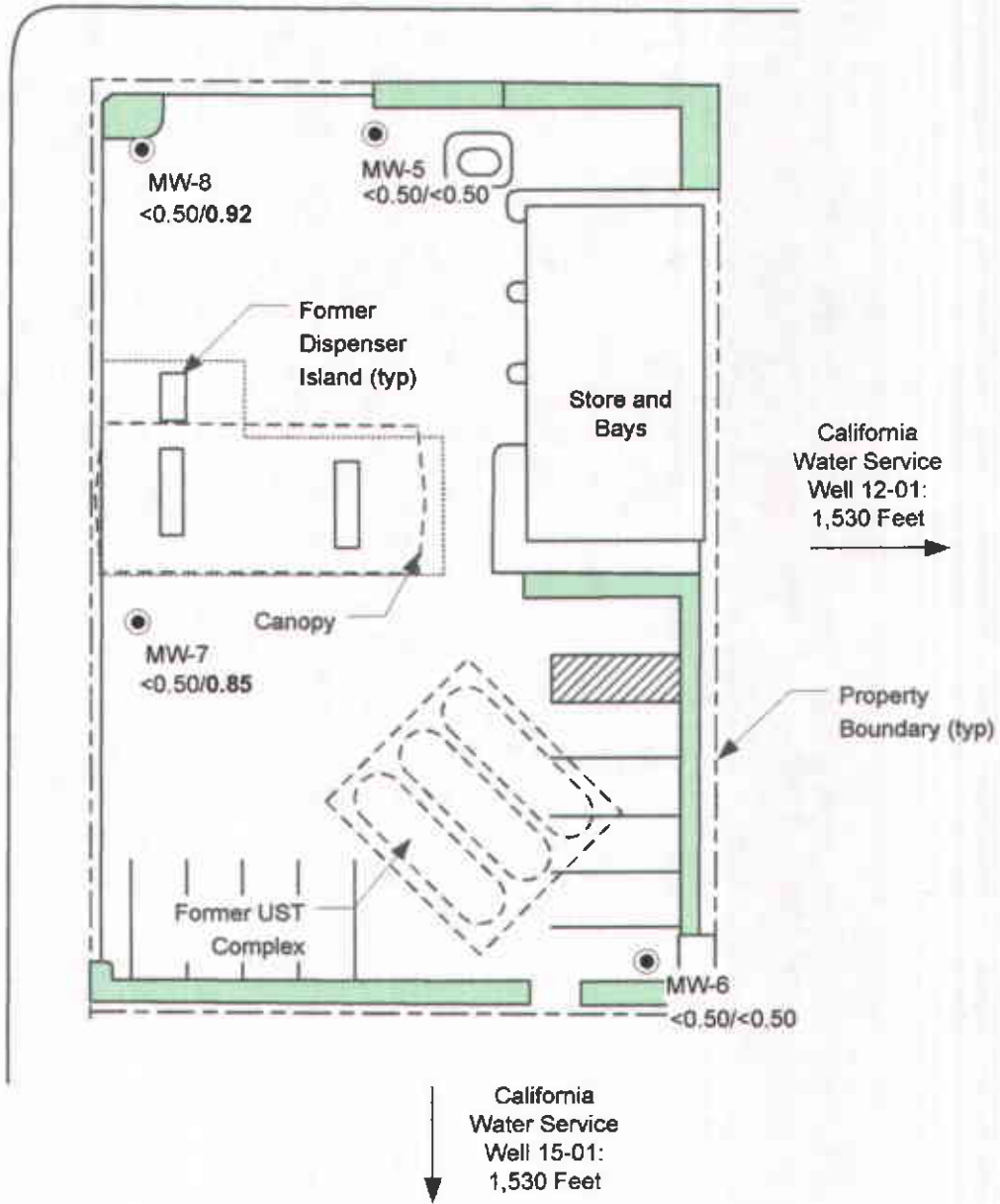
PROJECT NO. SJ31-SLI-1.2004	DRAWN BY VF 9/25/03
FILE NO. SJ31-SLI-1.2004	PREPARED BY VF
REVISION NO. 2	REVIEWED BY





Third Street

South Livermore Avenue



LEGEND

MW-6 ● **GROUNDWATER MONITORING WELL**

<0.50/<0.50 **BENZENE / MTBE CONCENTRATIONS IN GROUNDWATER (UG/L), 1/13/04**

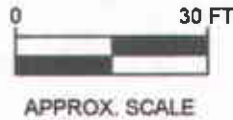


FIGURE 3
BENZENE AND MTBE CONCENTRATION MAP,
JANUARY 13, 2004

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

PROJECT NO. SJ31-SLJ-1.000G	DRAWN BY VF 9/25/03
FILE NO. SJ31-SLJ-1.000G	PREPARED BY VF
REVISION NO. 2	REVIEWED BY



Attachment A

GROUNDWATER MONITORING AND SAMPLING REPORT

BLAINE
TECH SERVICES, INC.



1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
(408) 573-7771 FAX
(408) 573-0555 PHONE
CONTRACTOR'S LICENSE #746684
www.blainetech.com

February 11, 2004

Karen Petryna
Shell Oil Products US
P.O. Box 7869
Burbank, CA 91510-7869

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

Monitoring performed on January 13, 2004

Groundwater Monitoring Report **040113-JP-1**

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

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

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

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

Please call if you have any questions.

Yours truly,

Leon Gearhart
Project Coordinator

LG/jt

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

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

WELL CONCENTRATIONS
Shell-branded Service Station
318 South Livermore Avenue
Livermore, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/l)	ETBE (ug/l)	TAME (ug/l)	TBA (ug/l)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-5	09/18/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-5	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	495.47	34.85	460.62
MW-5	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	495.47	37.26	458.21
MW-5	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	495.47	27.30	468.17
MW-5	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	27.84	467.63
MW-5	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	30.54	464.93
MW-5	11/13/2003	60	<0.50	1.5	1.7	9.6	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	33.94	461.53
MW-5	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	495.47	26.59	468.88
MW-6	09/18/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-6	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	497.57	35.41	462.16
MW-6	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	2.5	<2.0	<2.0	<2.0	<50	497.57	37.92	459.65
MW-6	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	497.57	27.71	469.86
MW-6	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	28.28	469.29
MW-6	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	30.56	467.01
MW-6	11/13/2003	90	<0.50	2.6	2.4	12	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	34.18	463.39
MW-6	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	497.57	27.16	470.41
MW-7	09/18/2001	NA	<0.50	<0.50	<0.50	<0.50	1.2	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-7	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	2.0	<2.0	<2.0	<2.0	<50	495.58	34.29	461.29
MW-7	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	1.9	<2.0	<2.0	<2.0	<50	495.58	36.80	458.78
MW-7	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	0.89	<2.0	<2.0	<2.0	<50	495.58	26.75	468.83
MW-7	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	4.0	<2.0	<2.0	<2.0	<5.0	495.58	27.31	468.27
MW-7	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	3.2	<2.0	<2.0	<2.0	<5.0	495.58	30.02	465.56
MW-7	11/13/2003	72	<0.50	0.62	0.57	3.2	1.4	<2.0	<2.0	<2.0	<5.0	495.58	33.85	461.73
MW-7	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	0.85	NA	NA	NA	NA	495.58	27.13	468.45

WELL CONCENTRATIONS
Shell-branded Service Station
318 South Livermore Avenue
Livermore, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/l)	ETBE (ug/l)	TAME (ug/l)	TBA (ug/l)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
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MW-8	09/18/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-8	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	6.9	<2.0	<2.0	<2.0	<50	494.90	34.46	460.44
MW-8	10/25/2002	140	<0.50	<0.50	<0.50	<0.50	2.2	3.3	<2.0	<2.0	<50	494.90	36.98	457.92
MW-8	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	494.90	27.35	467.55
MW-8	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	0.67	<2.0	<2.0	<2.0	<5.0	494.90	27.44	467.46
MW-8	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	0.50	<2.0	<2.0	<2.0	<5.0	494.90	32.29	462.61
MW-8	11/13/2003	260	1.5	2.3	2.9	16	1.4	<2.0	<2.0	<2.0	<5.0	494.90	33.08	461.82
MW-8	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	0.92	NA	NA	NA	NA	494.90	26.18	468.72

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 = Diisopropyl ether

ETBE = Ethyl-t-butyl ether

TAME = Tert-amyl methyl ether

TBA = Tert-Butanol

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

WELL CONCENTRATIONS
Shell-branded Service Station
318 South Livermore Avenue
Livermore, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/l)	ETBE (ug/l)	TAME (ug/l)	TBA (ug/l)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
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Notes:

Survey data provided by KHM Environmental Management, Inc.

Blaine Tech Services, Inc.

January 29, 2004

1680 Rogers Avenue
San Jose, CA 95112-1105

Attn.: Leon Gearhart

Project#: 04113-JP1

Project: 97464709

Site: 318 S. Livermore Ave., Livermore

Dear Mr. Gearhart,

Attached is our report for your samples received on 01/15/2004 16:58

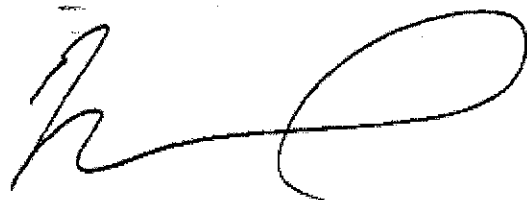
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 02/29/2004 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: vvancil@stl-inc.com

Sincerely,



Vincent Vancil
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/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: 04113-JP1

97464709

Received: 01/15/2004 16:58

Site: 318 S. Livermore Ave., Livermore

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-5	01/13/2004 09:20	Water	1
MW-6	01/13/2004 09:50	Water	2
MW-7	01/13/2004 10:30	Water	3
MW-8	01/13/2004 11:10	Water	4

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

01/27/2004 16:56

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: 04113-JP1

97464709

Received: 01/15/2004 16:58

Site: 318 S. Livermore Ave., Livermore

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-5	Lab ID: 2004-01-0422 - 1
Sampled: 01/13/2004 09:20	Extracted: 1/24/2004 11:04
Matrix: Water	QC Batch#: 2004/01/24-01.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	01/24/2004 11:04	
Benzene	ND	0.50	ug/L	1.00	01/24/2004 11:04	
Toluene	ND	0.50	ug/L	1.00	01/24/2004 11:04	
Ethylbenzene	ND	0.50	ug/L	1.00	01/24/2004 11:04	
Total xylenes	ND	1.0	ug/L	1.00	01/24/2004 11:04	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	01/24/2004 11:04	
Surrogate(s)						
1,2-Dichloroethane-d4	114.7	76-130	%	1.00	01/24/2004 11:04	
Toluene-d8	102.0	78-115	%	1.00	01/24/2004 11:04	

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

01/27/2004 16:56

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: 04113-JP1

97464709

Received: 01/15/2004 16:58

Site: 318 S. Livermore Ave., Livermore

Prep(s): 5030B

Test(s): 8260B

Sample ID: MW-6

Lab ID: 2004-01-0422 - 2

Sampled: 01/13/2004 09:50

Extracted: 1/24/2004 11:59

Matrix: Water

QC Batch#: 2004/01/24-01.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	01/24/2004 11:59	
Benzene	ND	0.50	ug/L	1.00	01/24/2004 11:59	
Toluene	ND	0.50	ug/L	1.00	01/24/2004 11:59	
Ethylbenzene	ND	0.50	ug/L	1.00	01/24/2004 11:59	
Total xylenes	ND	1.0	ug/L	1.00	01/24/2004 11:59	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	01/24/2004 11:59	
Surrogate(s)						
1,2-Dichloroethane-d4	113.2	76-130	%	1.00	01/24/2004 11:59	
Toluene-d8	104.7	78-115	%	1.00	01/24/2004 11:59	

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

01/27/2004 16:56

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: 04113-JP1

97464709

Received: 01/15/2004 16:58

Site: 318 S. Livermore Ave., Livermore

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-7	Lab ID: 2004-01-0422 - 3
Sampled: 01/13/2004 10:30	Extracted: 1/24/2004 12:18
Matrix: Water	QC Batch#: 2004/01/24-01.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	01/24/2004 12:18	
Benzene	ND	0.50	ug/L	1.00	01/24/2004 12:18	
Toluene	ND	0.50	ug/L	1.00	01/24/2004 12:18	
Ethylbenzene	ND	0.50	ug/L	1.00	01/24/2004 12:18	
Total xylenes	ND	1.0	ug/L	1.00	01/24/2004 12:18	
Methyl tert-butyl ether (MTBE)	0.85	0.50	ug/L	1.00	01/24/2004 12:18	
Surrogate(s)						
1,2-Dichloroethane-d4	114.3	76-130	%	1.00	01/24/2004 12:18	
Toluene-d8	103.0	78-115	%	1.00	01/24/2004 12:18	

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

01/27/2004 16:56

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: 04113-JP1

97464709

Received: 01/15/2004 16:58

Site: 318 S. Livermore Ave., Livermore

Prep(s): 5030B Test(s): 8260B
 Sample ID: MW-8 Lab ID: 2004-01-0422 - 4
 Sampled: 01/13/2004 11:10 Extracted: 1/24/2004 12:36
 Matrix: Water QC Batch#: 2004/01/24-01.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	01/24/2004 12:36	
Benzene	ND	0.50	ug/L	1.00	01/24/2004 12:36	
Toluene	ND	0.50	ug/L	1.00	01/24/2004 12:36	
Ethylbenzene	ND	0.50	ug/L	1.00	01/24/2004 12:36	
Total xylenes	ND	1.0	ug/L	1.00	01/24/2004 12:36	
Methyl tert-butyl ether (MTBE)	0.92	0.50	ug/L	1.00	01/24/2004 12:36	
Surrogate(s)						
1,2-Dichloroethane-d4	113.9	76-130	%	1.00	01/24/2004 12:36	
Toluene-d8	101.3	78-115	%	1.00	01/24/2004 12:36	

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: 04113-JP1

97464709

Received: 01/15/2004 16:58

Site: 318 S. Livermore Ave., Livermore

Batch QC Report

Prep(s): 5030B

Method Blank

MB: 2004/01/24-01.69-039

Water

Test(s): 8260B

QC Batch # 2004/01/24-01.69

Date Extracted: 01/24/2004 09:39

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	01/24/2004 09:39	
Benzene	ND	0.5	ug/L	01/24/2004 09:39	
Toluene	ND	0.5	ug/L	01/24/2004 09:39	
Ethylbenzene	ND	0.5	ug/L	01/24/2004 09:39	
Total xylenes	ND	1.0	ug/L	01/24/2004 09:39	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	01/24/2004 09:39	
Surrogates(s)					
1,2-Dichloroethane-d4	105.2	76-130	%	01/24/2004 09:39	
Toluene-d8	100.4	78-115	%	01/24/2004 09:39	

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

01/27/2004 16:56

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: 04113-JP1

97464709

Received: 01/15/2004 16:58

Site: 318 S. Livermore Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2004/01/24-01.69

LCS 2004/01/24-01.69-012

Extracted: 01/24/2004

Analyzed: 01/24/2004 10:12

LCSD 2004/01/24-01.69-031

Extracted: 01/24/2004

Analyzed: 01/24/2004 10:31

Compound	Conc. ug/L		Exp. Conc.	Recovery %		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	23.9	21.5	25.0	95.6	86.0	10.6	69-129	20		
Toluene	23.8	21.1	25.0	95.2	84.4	12.0	70-130	20		
Methyl tert-butyl ether (MTBE)	26.7	22.0	25.0	106.8	88.0	19.3	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	557	540	500	111.4	108.0		76-130			
Toluene-d8	500	508	500	100.0	101.6		78-115			

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01/27/2004 16:56

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: 04113-JP1

97464709

Received: 01/15/2004 16:58

Site: 318 S. Livermore Ave., Livermore

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD)

Water

QC Batch # 2004/01/24-01.69

MW-5 >> MS

Lab ID: 2004-01-0422 - 001

MS: 2004/01/24-01.69-022

Extracted: 01/24/2004

Analyzed: 01/24/2004 11:22

Dilution: 1.00

MSD: 2004/01/24-01.69-041

Extracted: 01/24/2004

Analyzed: 01/24/2004 11:41

Dilution: 1.00

Compound	Conc. ug/L			Spk. Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Benzene	21.6	22.3	ND	25.0	86.4	89.2	3.2	69-129	20		
Toluene	22.3	22.5	ND	25.0	89.2	90.0	0.9	70-130	20		
Methyl tert-butyl ether	24.0	25.3	ND	25.0	96.0	101.2	5.3	65-165	20		
Surrogate(s)											
1,2-Dichloroethane-d4	525	544		500	105.0	108.9		76-130			
Toluene-d8	508	503		500	101.7	100.5		78-115			

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Tel 925 484 1919 Fax 925 484 1096 * www.stl-inc.com * CA DHS ELAP# 2496

01/27/2004 16:56

LAB: STL

SHELL Chain Of Custody Record

82041

Lab Identification (if necessary):
Address:
City, State, ZIP:

Shell Project Manager to be invoiced:
Karen Petryna
2004-01-0422

INCIDENT NUMBER (S&E ONLY)								
9	7	4	6	4	7	0	9	
SAP or CRMT NUMBER (TS/CRMT)								

DATE: 1/13/04
PAGE: 1 of 7

Blaine Tech Services 1680 Rogers Avenue, San Jose, CA 95112 Loon Gearhart 408-573-0555 408-573-7771 gearhart@blainetech.com	BTSS	318 S. Livermore Ave., Livermore Debbie Arnold (408) 224-4724 darnold@khn1.com	pending	CORRELATION PROJECT ID: 040113-1P1
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TURNAROUND TIME (BUSINESS DAYS):
 10 DAYS 5 DAYS 72 HOURS 48 HOURS 24 HOURS LESS THAN 24 HOURS
 LA - INVOICE REPORT FORMAY UST AGENCY
 GC/MS NDBE CONFIRMATION: HIGHEST _____ HIGHEST per BORING _____ ALL _____
 SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EPR IS NOT NEEDED:

REQUESTED ANALYSIS										FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes 2.5
TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (S) by (8260B)						
										TEMPERATURE ON RECEIPT: _____

Matthew Lynch

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	NO OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (S) by (8260B)
		DATE	TIME							
	MW-5	1/13/04	0920	W	3	X	X	X	X	
	MW-6	↓	0950	↓	↓	X	X	X	X	
	MW-7	↓	1030	↓	↓	X	X	X	X	
	MW-8	↓	1110	↓	↓	X	X	X	X	

26
1-14-04

Delivered by (Signature): <i>Matthew Lynch</i>	Received by (Signature): <i>[Signature]</i>	Date: <u>1/15/04</u>	Time: <u>1530</u>
Delivered by (Signature): <i>[Signature]</i>	Received by (Signature): <i>[Signature]</i>	Date: <u>01/15/04</u>	Time: <u>1658</u>
Delivered by (Signature): <i>[Signature]</i>	Received by (Signature): <i>[Signature]</i>	Date:	Time:

0810-0012-N White only final report. Green to Env. before and Pink to Client.

MP1400 Revision

0810-0012-N (11/15/99-9/02)

WELLHEAD INSPECTION CHECKLIST

Client 97464709 Date 1/13/04
 Site Address 318 S. Livermore Ave, Livermore
 Job Number 040113-JP1 Technician M. Pyrek

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-5	X							
MW-6	X							
MW-7	X							
MW-8	X							

NOTES: _____

SHELL WELL MONITORING DATA SHEET

7

BTS #: 040113-JP1	Site: 97464709
Sampler: M. Pynch	Date: 1/13/04
Well I.D.: MW-5	Well Diameter: (2) 3 4 6 8
Total Well Depth (TD): 55-20	Depth to Water (DTW): 26.59
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]: 32.31	

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

4.5 (Gals.) X 3 = 13.5 Gals.		
1 Case Volume	Specified Volumes	Calculated Volume

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

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
0900	56.2	6.9	1223	71000	4.5	slightly brown
0906	57.1	7.6	1092	71000	9	"
0909	59.9	7.7	1080	76000	13.5	"

Did well dewater? Yes No Gallons actually evacuated: 13.5

Sampling Date: 1/13/04 Sampling Time: 0920 Depth to Water: 28.68

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

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

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

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

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

SHELL WELL MONITORING DATA SHEET

BTS #: 040113-JP1	Site: 97464709
Sampler: M. Pynch	Date: 1/13/04
Well I.D.: MW-8	Well Diameter: (2) 3 4 6 8
Total Well Depth (TD): 51.15	Depth to Water (DTW): 26.18
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]: 31.17	

Purge Method: Bailer Disposable Bailer <u>Positive Air Displacement</u> Electric Submersible	Waterra Peristaltic Extraction Pump Other:	Sampling Method: <u>Bailer</u> Disposable Bailer Extraction Port Dedicated Tubing Other:
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3.9 (Gals.) X 3 = 11.7 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>0.14</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"	0.14	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.14	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
1053	60.0	7.2	1130	71000	4	brown, very cloudy
1058	61.1	7.1	1063	71000	8	11
1103	62.5	7.2	1044	7200	12	cloudy

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: 12	
Sampling Date: 1/13/04	Sampling Time: 1110	Depth to Water: 28.15
Sample I.D.: MW-8	Laboratory: (STL) Other: _____	
Analyzed for: (TPH-G) (BTEX) MTBE TPH-D	Other: Oxy's	
EB I.D. (if applicable): _____ @ _____ Time	Duplicate I.D. (if applicable): _____	
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: _____	
D.O. (if req'd): Pre-purge: _____ mg/L	Post-purge: _____ mg/L	
O.R.P. (if req'd): Pre-purge: _____ mV	Post-purge: _____ mV	