



**Shell Oil Products US**

May 12, 2003

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

**Subject:**      **Shell-branded Service Station**  
                  3790 Hopyard Road  
                  Pleasanton, California

Dear Mr. Seery:

Attached for your review and comment is a copy of the *First Quarter 2003 Monitoring Report* for the above referenced site. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

As always, please feel free to contact me directly at (559) 645-9306 with any questions or concerns.

Sincerely,

**Shell Oil Products US**

*Karen Petryna*

Karen Petryna  
Sr. Environmental Engineer

*Alameda County  
MAY 15 2003  
Environmental Health*

# C A M B R I A

May 12, 2003

Scott Seery  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Re: **First Quarter 2003 Monitoring Report**  
Shell-branded Service Station  
3790 Hopyard Road  
Pleasanton, California  
Incident #98995842  
Cambria Project #245-0497-002



Dear Mr. Seery:

This groundwater monitoring report is being submitted on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) by Cambria Environmental Technology, Inc. (Cambria) in accordance with the reporting requirements of 23 CCR 2652d. The site is located on the corner of Hopyard Road and Las Positas Boulevard in Pleasanton, California (Figures 1 and 2).

## REMEDIATION SUMMARY

**Mobile Groundwater Extraction (GWE):** Beginning the week of May 14, 2001, Advanced Cleanup Technologies Inc. of Benicia, California conducted three weekly 8-hour mobile GWE events using wells S-2, S-4 and T-2. Three additional GWE events were performed in August 2001. At Shell's direction, Onyx Industrial Service initiated twice-monthly events extracting from tank backfill well T-2 beginning in April 2002. Groundwater was also extracted from well S-4 between June 2002 and September 2002; extraction from well S-4 was discontinued due to low extraction volumes. Tank backfill well T-4 was added to the twice-monthly extraction events in October 2002. GWE was discontinued in March 2003 pending fixed GWE system installation and start-up.

Mobile GWE vacuum operations consist of lowering dedicated stingers into monitoring wells and extracting fluids using a vacuum truck. The volume of fluid extracted is recorded and used to calculate the quantity of aqueous-phase hydrocarbon removed from the subsurface. Mass-removal data for the site is presented in Table 1. To date, approximately 9.32 pounds of methyl tertiary butyl ether (MTBE) have been removed by GWE at the site.

Cambria  
Environmental  
Technology, Inc.

5900 Hollis Street  
Suite A  
Emeryville, CA 94608  
Tel (510) 420-0700  
Fax (510) 420-9170

Figures 3 through 5 show MTBE concentrations and mass removal estimates over time for wells S-4, T-2 and T-4, respectively. As shown on Figure 3, MTBE concentrations in well S-4 have shown a decreasing trend since the initiation of GWE. MTBE concentrations have decreased by approximately one order of magnitude in well S-4. As shown on Figure 4, MTBE concentrations detected in well T-2 in March 2003 are three orders of magnitude lower than those detected in June 2002. As shown on Figure 5, MTBE concentrations detected in well T-4 in March 2003 are also three orders of magnitude lower than those detected in June 2002.

## FIRST QUARTER 2003 ACTIVITIES

**Groundwater Monitoring:** Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged and sampled selected site wells, calculated groundwater elevations, and compiled the analytical data. Cambria prepared a vicinity map that includes previously reported well survey information (Figure 1) and a groundwater elevation contour map (Figure 2). Blaine's report, presenting the laboratory report and supporting field documents, is included as Attachment A.

**Interim Remediation:** On August 28, 2002, Cambria submitted an *Interim Remediation Work Plan* proposing installation of a fixed GWE system at the site. The Alameda County Health Care Services Agency (ACHCSA) approved this work plan in a September 9, 2003 letter. Cambria began system installation during the fourth quarter 2003. Figure 6 shows the layout of the remediation system piping.

**Subsurface Investigation Report:** As proposed in our June 12, 2002 *Subsurface Investigation Work Plan* and in the addendum transmitted via electronic mail to Mr. Seery of the ACHCSA on July 22, 2002, Cambria installed two cone penetrometer testing (CPT) borings (CPT-1 and CPT-2) and two downgradient monitoring wells (S-11 and S-12) at the site between July and November 2002. Preliminary investigation results were submitted to the ACHCSA on February 5, 2003. Cambria submitted a *Subsurface Investigation Report* detailing the completed work on March 28, 2003.

**Agency Meeting and Work Plan Request:** Representatives from Cambria, Shell, ACHCSA and Zone 7 Water District met on February 13, 2003 to review the investigation data collected to date. After the meeting, Mr. Seery issued a February 27, 2003 letter requesting several action items and technical reports, including a work plan for further soil and groundwater investigation at the site.

**ANTICIPATED SECOND QUARTER 2003 ACTIVITIES**

**Groundwater Monitoring:** Blaine will gauge and sample all wells and tabulate the data. Cambria will prepare a monitoring report. As specified in the February 27, 2002 ACHCSA letter, the next quarterly monitoring report will be submitted by July 15, 2003.

**Additional Analysis:** In an October 22, 2002 letter, Mr. Scott Seery of the ACHCSA requested additional analysis of the next quarterly groundwater monitoring samples at the site for di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), 1,2-dichloroethane (1,2-DCA) and ethylene dibromide (EDB). Samples collected during the fourth quarter 2002 were additionally analyzed as requested. The results of the additional analysis are summarized in Table 2.

As noted in our March 28, 2003 *Fourth Quarter 2002 Monitoring Report*, based on the lack of significant concentrations of DIPE, ETBE, TAME, 1,2-DCA and EDB detected during the fourth quarter 2002, Cambria recommends analyzing quarterly groundwater monitoring samples collected from site wells for TBA only, in addition to total petroleum hydrocarbons as gasoline, benzene, toluene, ethylbenzene, xylenes and MTBE. Cambria will implement this additional analysis during the second quarter 2003 unless otherwise directed by the ACHCSA.

**Interim Remediation:** Pending final connection by the Pacific Gas and Electric Company and inspection by the City of Pleasanton, the GWE system is expected to start-up in May 2003. A system installation and start-up report will be submitted under separate cover.

**Agency Response and Work Plan Submittal:** In response to the February 27, 2003 ACHCSA letter, Cambria submitted an April 9, 2003 *Agency Response and Extension Request* addressing several action items requested in the ACHCSA letter and requesting an extension. Mr. Seery of the ACHCSA granted an extension to May 1, 2003 in an April 15, 2003 electronic-mail transmittal. Cambria submitted an April 30, 2003 *Subsurface Investigation Work Plan*. We will move forward with the proposed work following written work plan approval from the ACHCSA.

# C A M B R I A

Scott Seery  
May 12, 2003

## CLOSING

We appreciate the opportunity to work with you on this project. Please call Ana Friel at (707) 442-2700 if you have any questions or comments.

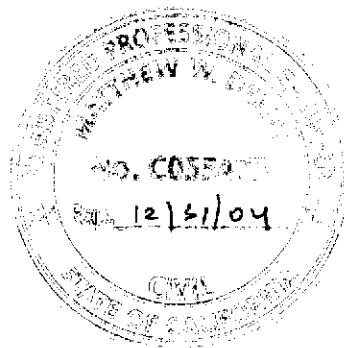
Sincerely,  
**Cambria Environmental Technology, Inc**



Jacquelyn L. Jones  
Project Geologist

A handwritten signature of "Matthew W. Derby".

Matthew W. Derby, P.E.  
Senior Project Engineer

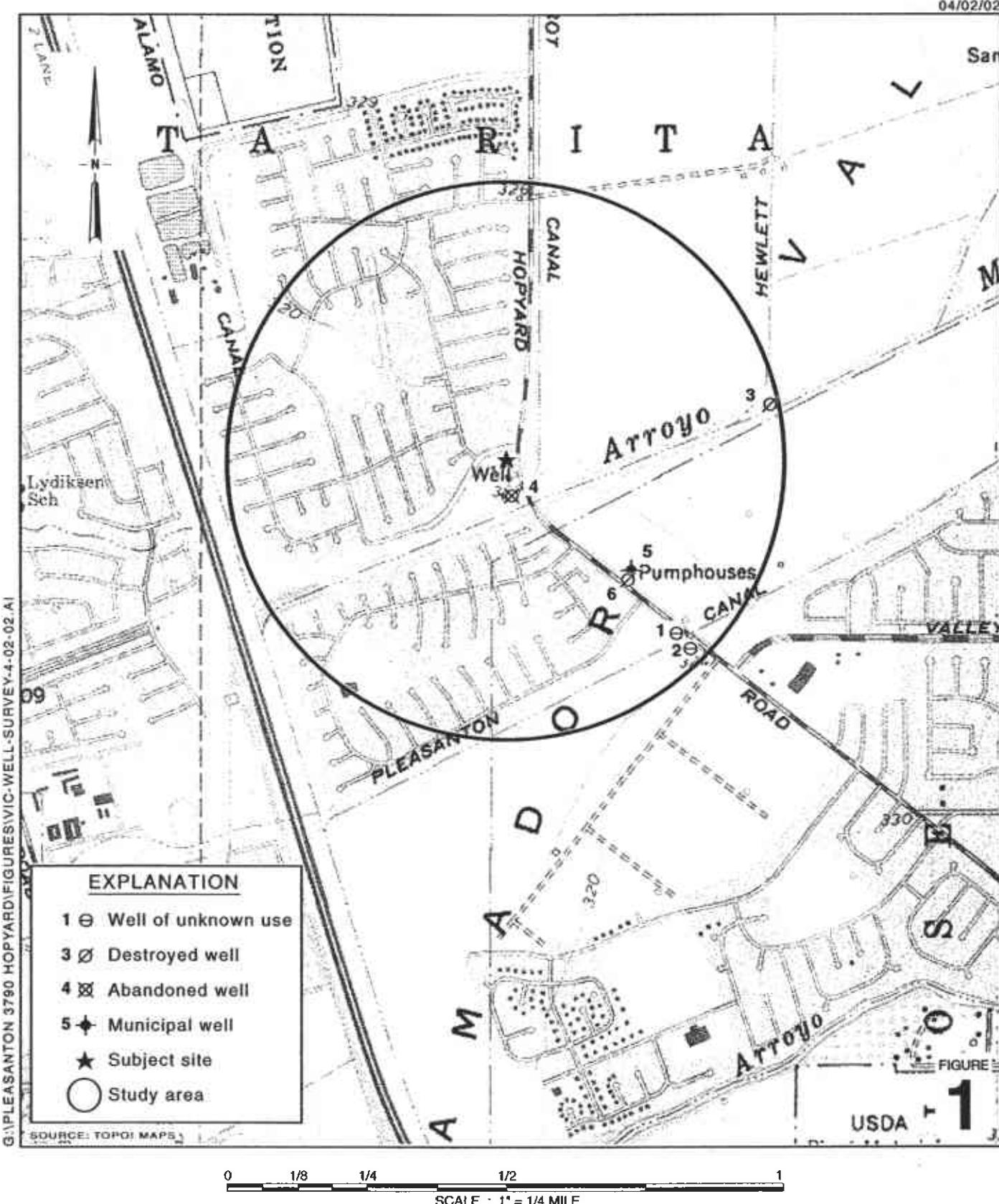


Figures:     1 - Vicinity/Area Well Survey Map  
              2 - Groundwater Elevation Contour Map  
              3 - MTBE and Mass Removal – Well S-4  
              4 - MTBE and Mass Removal – Well T-2  
              5 - MTBE and Mass Removal – Well T-4  
              6 - Remediation System Site Plan

Tables:     1 - Groundwater Extraction - Mass Removal Data  
              2 - Groundwater Analytical Data - Oxygenates

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc:     Karen Petryna, Shell Oil Products US, P.O. Box 7869, Burbank, CA 91510-7869  
          Chuck Headlee, RWQCB, 1515 Clay Street, Suite 1400, Oakland, CA 94612  
          Danielle Stefani, Livermore-Pleasanton Fire Department, 3560 Nevada Street,  
            Pleasanton, CA 94566  
          Matthew W. Katen, Zone 7 Water Agency, 5997 Parkside Drive, Pleasanton, CA  
            94588-5127  
          Tri-Valley Management, 3730 Hopyard Road, Pleasanton CA 94588



### Shell-branded Service Station

3790 Hopyard Road  
Pleasanton, California  
Incident #98995842



C A M B R I A

### Vicinity/Area Well Survey Map

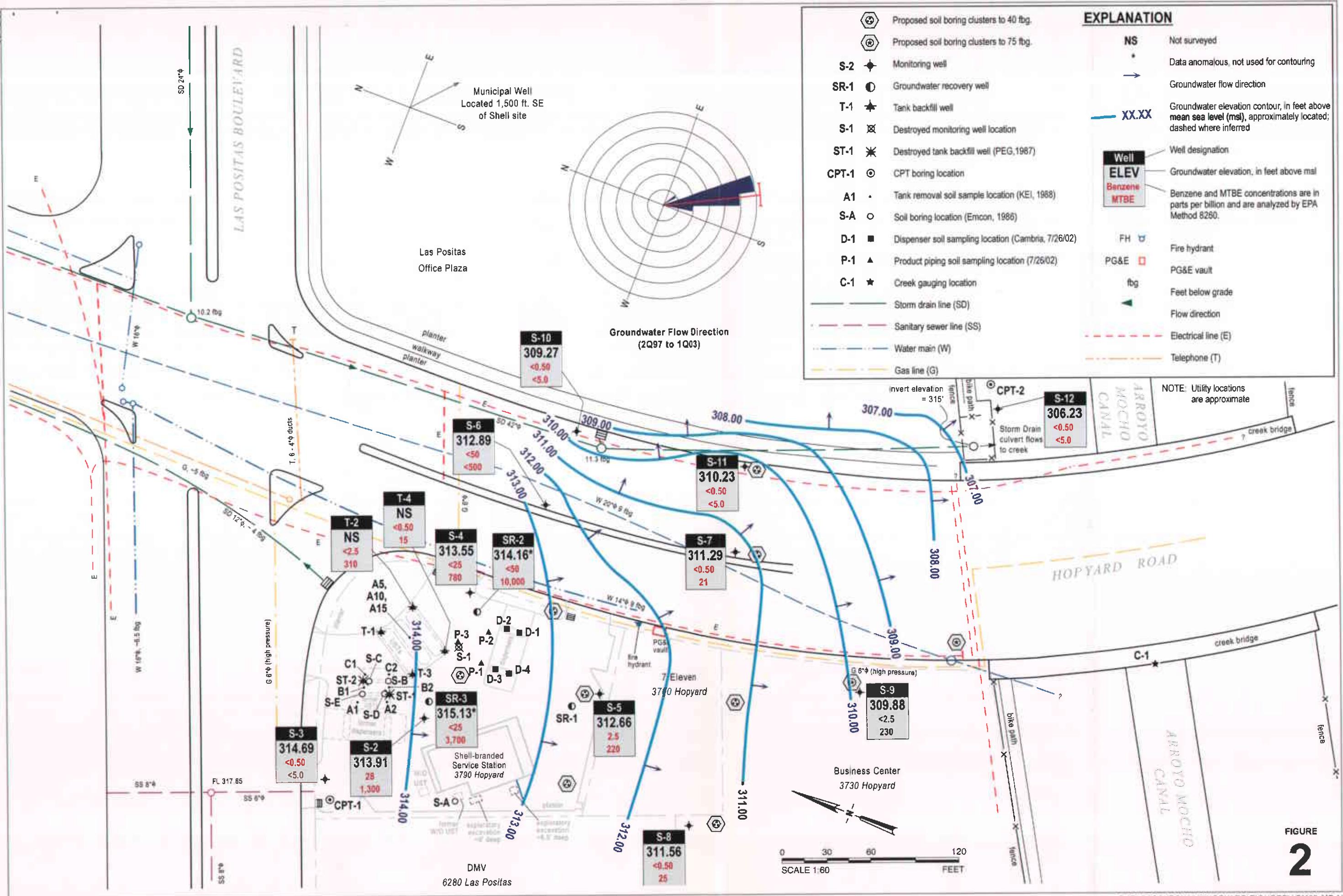
1/2 Mile Radius

**Groundwater Elevation Contour Map**  
March 24, 2003

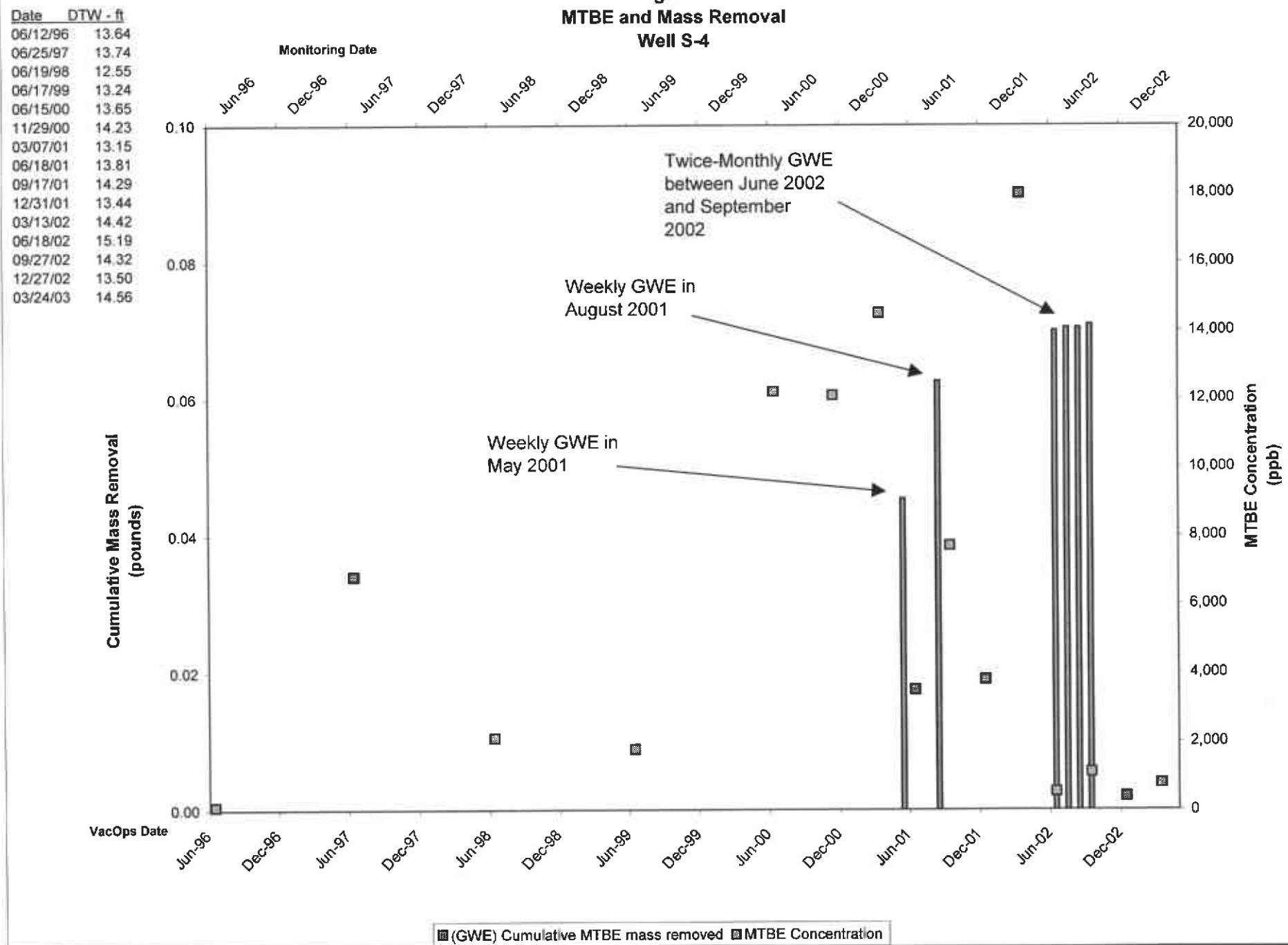
C  
CAMBRIA

**Shell-branded Service Station**  
3790 Hopyard Road  
Pleasanton, California  
Incident #98995842

**FIGURE 2**

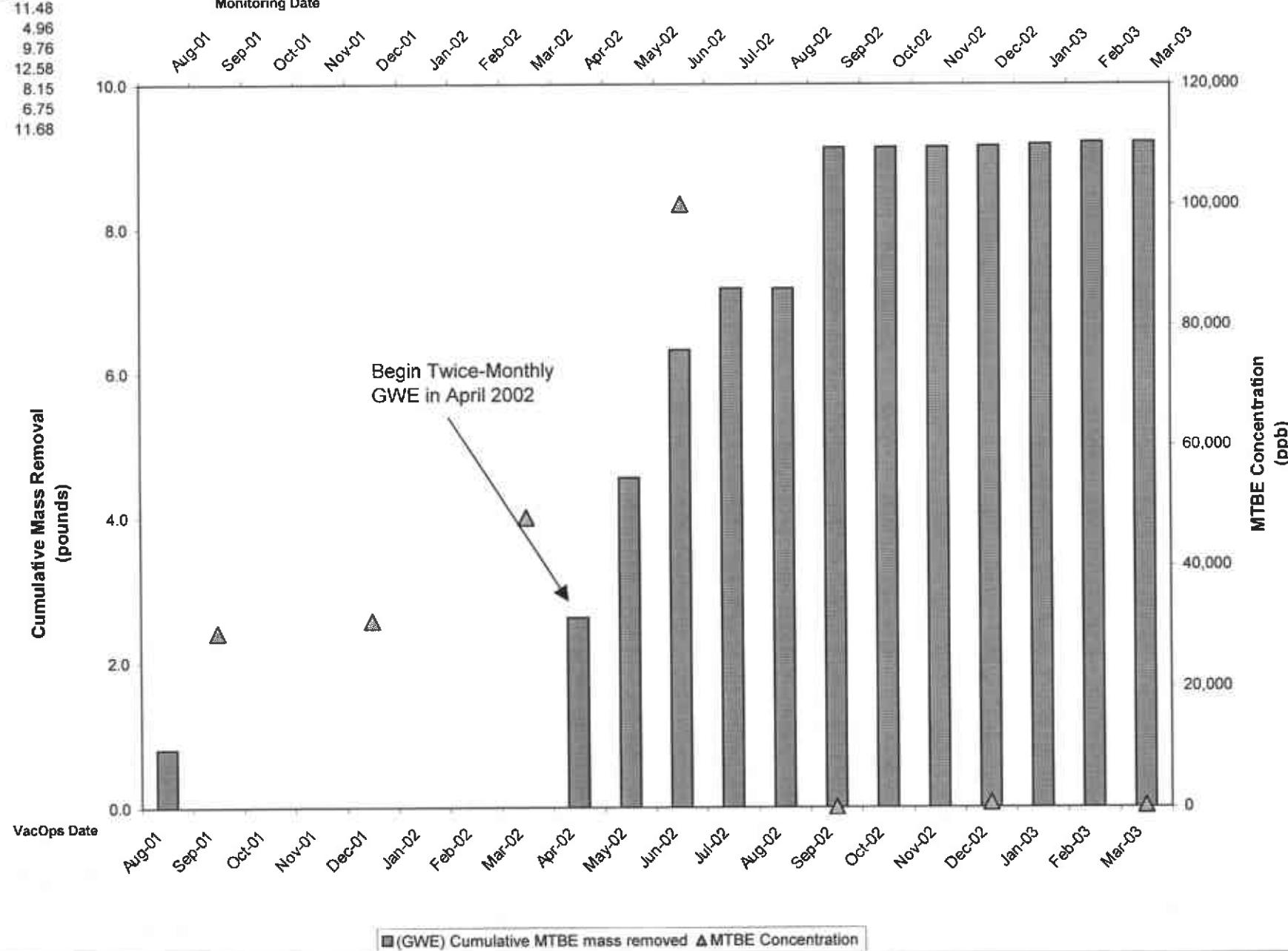


**Figure 3**  
**MTBE and Mass Removal**  
**Well S-4**



**Figure 4**  
**MTBE and Mass Removal**  
**Well T-2**

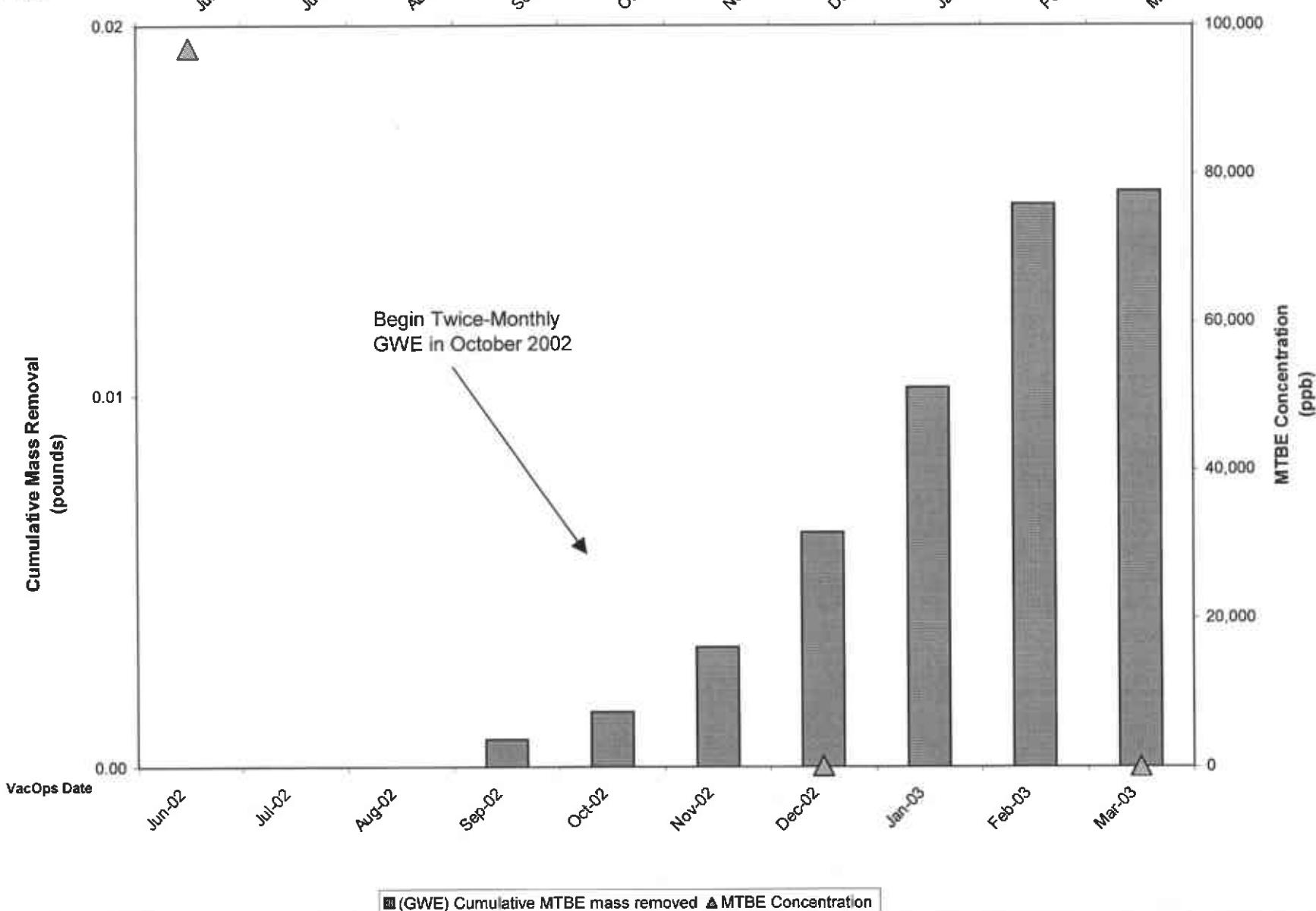
Date	DTW - ft
09/17/00	11.48
12/31/01	4.96
03/13/01	9.76
06/18/02	12.58
09/27/02	8.15
12/27/02	6.75
03/24/03	11.68



**Figure 5**  
**MTBE and Mass Removal**  
**Well T-4**

Date	DTW - ft
06/18/02	13.50
12/27/02	7.65
03/24/03	12.88

Monitoring Date



**Groundwater Extraction System Layout**

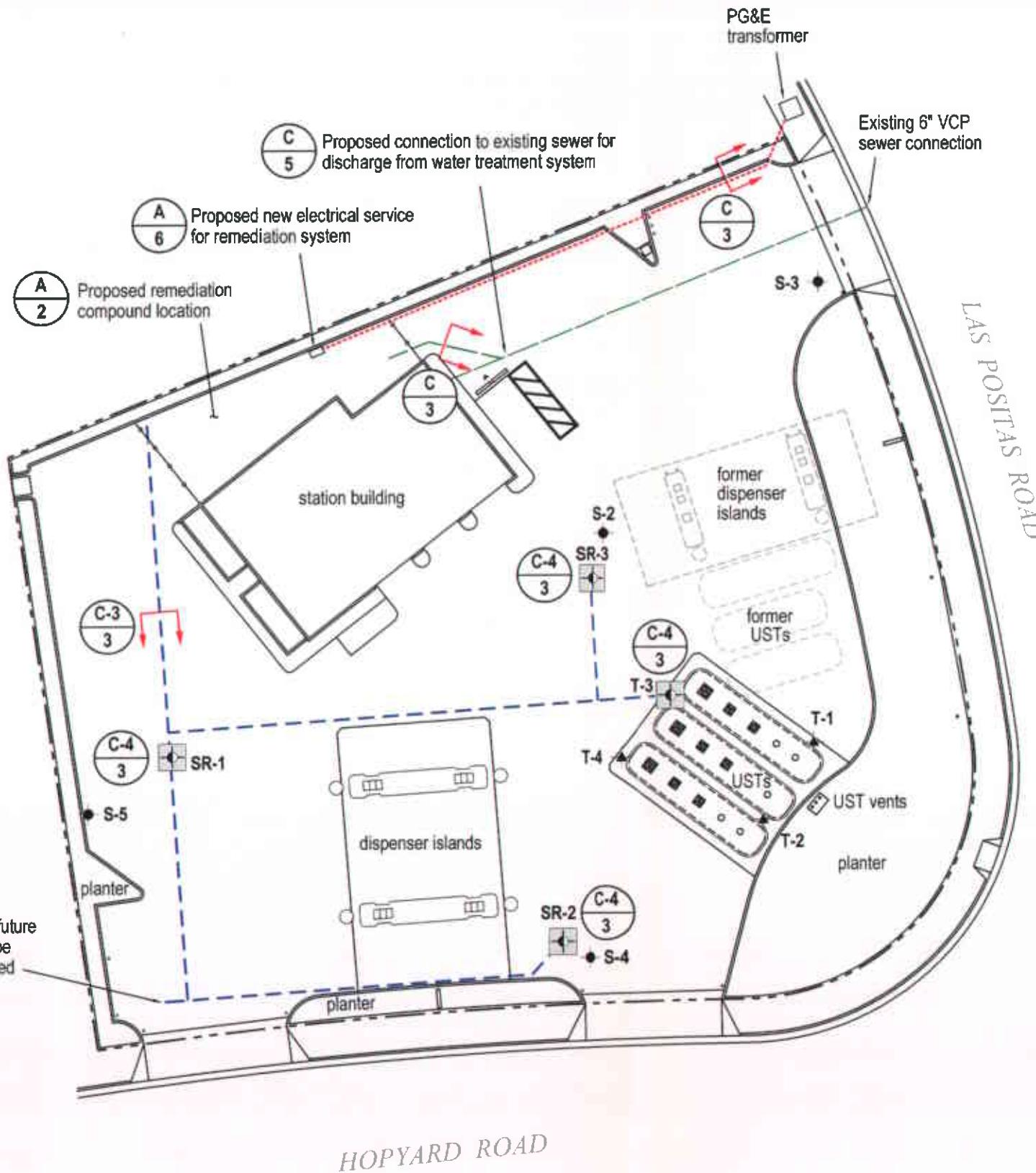
C A M B R I A

**Shell-branded Service Station**

3790 Hopyard Road  
Pleasanton, California  
Incident# 89995842

**FIGURE  
6**

<b>EXPLANATION</b>	
MW-1	Monitoring well location
SR-1	Wells proposed for shallow groundwater extraction
T-1	Existing Tank Backfill Well
-----	Proposed electrical service trench location
—	Proposed water discharge connection
—	Proposed fence
- - -	Proposed remediation trench location
(D 3)	Denotes Shell Standard Detail
Drawing Number	
(D 3)	Cross-Section Indicator & Detail Designator







**Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995842, 3790 Hopyard Road, Pleasanton, California****Abbreviations & Notes:**

TPPH = Total purgeable hydrocarbons as gasoline

MtBE = Methyl tert-butyl ether

ppb = Parts per billion

gal = Gallon

\* = Concentrations for tank backfill well T-4 taken from nearest sampled tank backfill well, T-2.

Mass removed based on the formula: volume extracted (gal) x Concentration ( $\mu\text{g}/\text{L}$ ) x ( $\text{g}/10^6\mu\text{g}$ ) x (pound/453.6g) x (3.785 L/gal)

Volume removal data based on the formula: density (in gms/cc) x 9.339 (ccxlbs/gmsxgals)

TPPH, benzene analyzed by EPA Method 8015/8020

MTBE analyzed by EPA Method 8260 in bold font, all other MTBE analyzed by EPA Method 8020

Concentrations based on most recent groundwater monitoring results

Groundwater extracted by vacuum trucks provided by ACTI. Water disposed of at a Martinez Refinery.

**Table 2.** Groundwater Analytical Data - Oxygenates - Shell-branded Service Station, Incident #98995842, 3790 Hopyard Road, Pleasanton, California

Sample ID	Date Sampled	MTBE	DIPE	ETBE	TAME (Concentrations in ppb)	TBA	Ethanol	1,2-DCA	EDB
S-2	09/17/01	7,500	<10	<10	<10	680	<500	---	---
	12/27/02	4,300	<10	<10	<10	5,600	---	<10	<10
S-3	12/27/02	<5.0	<2.0	<2.0	<2.0	<50	---	<2.0	<2.0
S-4	12/27/02	390	<2.5	<2.5	<5.0	9,000	---	<2.5	<2.5
S-5	12/27/02	87	<2.0	<2.0	<2.0	<50	---	<2.0	<2.0
S-6	09/17/01	5.7	<2.0	<2.0	<2.0	<50	<500	---	---
	12/27/02	230	<5.0	<5.0	<5.0	10,000	---	<5.0	<5.0
S-7	12/27/02	22	<2.0	<2.0	<2.0	<50	---	4.1	<2.0
S-9	12/27/02	180	<2.0	<2.0	<2.0	<50	---	2.8	<2.0
S-10	12/27/02	<5.0	<2.0	<2.0	<2.0	<50	---	<2.0	<2.0
S-11	12/27/02	<5.0	<2.0	<2.0	<2.0	<50	---	<2.0	<2.0
S-12	12/27/02	<5.0	<2.0	<2.0	<2.0	<50	---	<2.0	<2.0
SR-2	12/27/02	4,800	<10	<10	<10	1,600	---	<10	<10
SR-3	12/27/02	5,100	<20	<20	<20	4,600	---	<20	<20

**Table 2.** Groundwater Analytical Data - Oxygenates - Shell-branded Service Station, Incident #98995842, 3790 Hopyard Road, Pleasanton, California

Sample ID	Date Sampled	MTBE	DIPE	ETBE	TAME (Concentrations in ppb)	TBA	Ethanol	1,2-DCA	EDB
T-2	12/27/02	790	<2.0	<2.0	2.7	1,200	---	<2.0	<2.0
T-4	12/27/02	140	<2.0	<2.0	<2.0	120	---	<2.0	<2.0

**Abbreviations:**

MTBE = Methyl tert-butyl ether, analyzed by EPA Method 8260

DIPE = Di-isopropyl ether, analyzed by EPA Method 8260

ETBE = Ethyl tert-butyl ether, analyzed by EPA Method 8260

TAME = Tert-amyl methyl ether, analyzed by EPA Method 8260

TBA = Tert-butyl alcohol, analyzed by EPA Method 8260

Ethanol analyzed by EPA Method 8260

1,2-DCA = 1,2-dichloroethane, analyzed by EPA Method 8260

EDB = 1,2-dibromomethane or ethlyene dibromide, analyzed by EPA Method 8260

ppb = Parts per billion

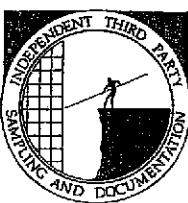
--- = Not analyzed

**ATTACHMENT A**

**Blaine Groundwater Monitoring Report**

**and Field Notes**

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

April 29, 2003

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

First Quarter 2003 Groundwater Monitoring at  
Shell-branded Service Station  
3790 Hopyard Road  
Pleasanton, CA

Monitoring performed on March 24, 2003

#### Groundwater Monitoring Report 030324-DA-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: Anni Kreml  
Cambria Environmental Technology, Inc.  
5900 Hollis Street, Suite A  
Oakland, CA 94608

























**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**3790 Hopyard Road**  
**Pleasanton, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
T-2	09/27/2002	240	NA	0.55	2.8	1.8	2.6	NA	39	NA	8.15	NA	NA
T-2	12/27/2002	2,100	NA	7.8	17	<0.50	11	NA	790	NA	6.75	NA	NA
T-2	03/24/2003	550	NA	<2.5	<2.5	<2.5	<5.0	NA	310	NA	11.68	NA	NA
T-3	06/18/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	Dry	NA	NA
T-4	06/18/2002	<10,000	NA	<100	<100	<100	<200	NA	97,000	NA	13.50	NA	NA
T-4	12/27/2002	550	NA	5.3	16	0.60	39	NA	140	NA	7.65	NA	NA
T-4	03/24/2003	1,400	NA	<0.50	1.0	1.2	3.6	NA	15	NA	12.88	NA	NA

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to June 18, 2001, analyzed by EPA Method 8015.

BTEX = benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to June 18, 2001, analyzed by EPA Method 8020.

MTBE = Methyl-tertiary-butyl ether

TOB = Top of Wellbox Elevation

TOC = Top of Casing Elevation

SPH = Separate-Phase Hydrocarbons

GW = Groundwater

DO = Dissolved Oxygen

ppm = Parts per million

ug/L = Parts per billion

MSL = Mean sea level

ft = Feet

<n = Below detection limit

D = Duplicate sample

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**3790 Hopyard Road**  
**Pleasanton, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
---------	------	----------------	----------------	-------------	-------------	-------------	-------------	------------------------	------------------------	--------------	----------------------------	--------------------------	------------------------

Notes:

a = Compounds detected within the chromatographic range of gasoline but not characteristic of the standard gasoline pattern

b = This sample was analyzed outside of the EPA recommended holding time.

c = Samples for wells S-6 and S-7 may have been switched.

d = Survey date only.

Well T-2 is a backfill well.

Beginning September 23, 2002, depth to water referenced to Top of Casing.

All wells except S-11, S-12, and T-1 through T-4 surveyed March 11, 2002, by Virgil Chavez Land Surveying of Vallejo, California.

Survey data for wells S-11 and S-12 provided by Cambria Environmental Technology, Inc.

**Blaine Tech Services, Inc.**

April 17, 2003

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Attn.: Leon Gearhart  
Project#: 030324-DAI  
Project: 98995842  
Site: 3790 Hopyard Rd.,  
Pleasanton

Dear Mr.Gearhart,

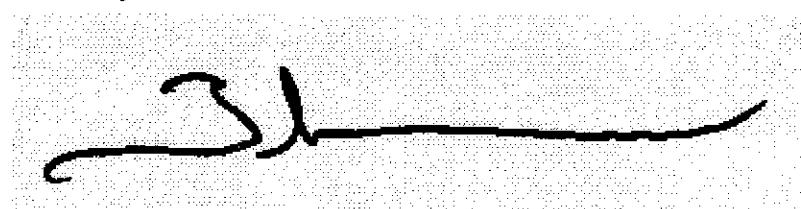
Attached is our report for your samples received on 03/24/2003 17:10  
This report has been reviewed and approved for release. Reproduction of this report  
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after  
05/08/2003 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: tgranicher@stl-inc.com

Sincerely,



Tod Granicher  
Project Manager

**Fuel Oxygenates by 8260B**

Blaine Tech Services, Inc.  
Attn.: Leon Gearhart

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

Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
S-8	03/24/2003 08:09	Water	1
S-7	03/24/2003 10:22	Water	2
S-2	03/24/2003 12:00	Water	3
S-3	03/24/2003 08:24	Water	4
S-4	03/24/2003 12:49	Water	5
S-5	03/24/2003 08:45	Water	6
S-6	03/24/2003 10:42	Water	7
S-9	03/24/2003 07:46	Water	8
S-10	03/24/2003 09:59	Water	9
S-11	03/24/2003 09:42	Water	10
S-12	03/24/2003 09:06	Water	11
T-2	03/24/2003 13:05	Water	12
T-4	03/24/2003 12:56	Water	13
SR-2	03/24/2003 11:45	Water	14
SR-3	03/24/2003 12:29	Water	15

## Fuel Oxygenates by 8260B

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

Prep(s): 5030B

Test(s): 8260B

Sample ID: S-8

Lab ID: 2003-03-0530-1

Sampled: 03/24/2003 08:09

Extracted: 4/7/2003 13:28

Matrix: Water

QC Batch#: 2003/04/07-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	04/07/2003 13:28	
Methyl tert-butyl ether (MTBE)	25	5.0	ug/L	1.00	04/07/2003 13:28	
Benzene	ND	0.50	ug/L	1.00	04/07/2003 13:28	
Toluene	ND	0.50	ug/L	1.00	04/07/2003 13:28	
Ethylbenzene	ND	0.50	ug/L	1.00	04/07/2003 13:28	
Total xylenes	ND	1.0	ug/L	1.00	04/07/2003 13:28	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	98.3	76-114	%	1.00	04/07/2003 13:28	
Toluene-d8	99.6	88-110	%	1.00	04/07/2003 13:28	

## Fuel Oxygenates by 8260B

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

Prep(s):	5030B	Test(s):	8260B
Sample ID:	S-7	Lab ID:	2003-03-0530 - 2
Sampled:	03/24/2003 10:22	Extracted:	4/4/2003 21:31
Matrix:	Water	QC Batch#:	2003/04/04 V3.39

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	04/04/2003 21:31	
Methyl tert-butyl ether (MTBE)	21	5.0	ug/L	1.00	04/04/2003 21:31	
Benzene	ND	0.50	ug/L	1.00	04/04/2003 21:31	
Toluene	ND	0.50	ug/L	1.00	04/04/2003 21:31	
Ethylbenzene	ND	0.50	ug/L	1.00	04/04/2003 21:31	
Total xylenes	ND	1.0	ug/L	1.00	04/04/2003 21:31	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	95.1	76-114	%	1.00	04/04/2003 21:31	
Toluene-d8	102.5	88-110	%	1.00	04/04/2003 21:31	

## Fuel Oxygenates by 8260B

Blaine Tech Services, Inc.  
Attn.: Leon Gearhart

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

Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

Prep(s): 5030B

Test(s): 8260B

Sample ID: S-2

Lab ID: 2003-03-0530-3

Sampled: 03/24/2003 12:00

Extracted: 4/4/2003 21:54

Matrix: Water

QC Batch#: 2003/04/04-V3.39

Analysis Flag: lm ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	2500	ug/L	50.00	04/04/2003 21:54	
Methyl tert-butyl ether (MTBE)	1300	250	ug/L	50.00	04/04/2003 21:54	
Benzene	28	25	ug/L	50.00	04/04/2003 21:54	
Toluene	ND	25	ug/L	50.00	04/04/2003 21:54	
Ethylbenzene	ND	25	ug/L	50.00	04/04/2003 21:54	
Total xylenes	ND	50	ug/L	50.00	04/04/2003 21:54	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	87.0	76-114	%	1.00	04/04/2003 21:54	
Toluene-d8	105.0	88-110	%	1.00	04/04/2003 21:54	

**Fuel Oxygenates by 8260B**

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: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

Prep(s):	5030B	Test(s):	8260B
Sample ID:	S-3	Lab ID:	2003-03-0530 - 4
Sampled:	03/24/2003 08:24	Extracted:	4/4/2003 22:16
Matrix:	Water	QC Batch#:	2003/04/04-V3.39

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	04/04/2003 22:16	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L	1.00	04/04/2003 22:16	
Benzene	ND	0.50	ug/L	1.00	04/04/2003 22:16	
Toluene	ND	0.50	ug/L	1.00	04/04/2003 22:16	
Ethylbenzene	ND	0.50	ug/L	1.00	04/04/2003 22:16	
Total xylenes	ND	1.0	ug/L	1.00	04/04/2003 22:16	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	86.3	76-114	%	1.00	04/04/2003 22:16	
Toluene-d8	103.8	88-110	%	1.00	04/04/2003 22:16	

## Fuel Oxygenates by 8260B

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Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

Prep(s):	5030B	Test(s):	8260B
Sample ID:	S-4	Lab ID:	2003-03-0530 - 5
Sampled:	03/24/2003 12:49	Extracted:	4/4/2003 22:39
Matrix:	Water	QC Batch#:	2003/04/04-V3.39
Analysis Flag: lm ( See Legend and Note Section )			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	2500	ug/L	50.00	04/04/2003 22:39	
Methyl tert-butyl ether (MTBE)	780	250	ug/L	50.00	04/04/2003 22:39	
Benzene	ND	25	ug/L	50.00	04/04/2003 22:39	
Toluene	ND	25	ug/L	50.00	04/04/2003 22:39	
Ethylbenzene	ND	25	ug/L	50.00	04/04/2003 22:39	
Total xylenes	ND	50	ug/L	50.00	04/04/2003 22:39	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	89.3	76-114	%	1.00	04/04/2003 22:39	
Toluene-d8	100.5	88-110	%	1.00	04/04/2003 22:39	

**Fuel Oxygenates by 8260B**

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Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

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

Sample ID: S-5 Lab ID: 2003-03-0530 - 6

Sampled: 03/24/2003 08:45 Extracted: 4/6/2003 21:57

Matrix: Water QC Batch#: 2003/04/06-01.62

Analysis Flag: o ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	250	ug/L	5.00	04/06/2003 21:57	
Methyl tert-butyl ether (MTBE)	220	25	ug/L	5.00	04/06/2003 21:57	
Benzene	2.5	2.5	ug/L	5.00	04/06/2003 21:57	
Toluene	ND	2.5	ug/L	5.00	04/06/2003 21:57	
Ethylbenzene	ND	2.5	ug/L	5.00	04/06/2003 21:57	
Total xylenes	ND	5.0	ug/L	5.00	04/06/2003 21:57	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	93.6	76-114	%	5.00	04/06/2003 21:57	
Toluene-d8	98.6	88-110	%	5.00	04/06/2003 21:57	

## Fuel Oxygenates by 8260B

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Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

Prep(s): 5030B

Test(s): 8260B

Sample ID: S-6

Lab ID: 2003-03-0530-7

Sampled: 03/24/2003 10:42

Extracted: 4/6/2003 22:19

Matrix: Water

QC Batch#: 2003/04/06-01-62

Analysis Flag: Irr ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	5000	ug/L	100.00	04/06/2003 22:19	
Methyl tert-butyl ether (MTBE)	ND	500	ug/L	100.00	04/06/2003 22:19	
Benzene	ND	50	ug/L	100.00	04/06/2003 22:19	
Toluene	ND	50	ug/L	100.00	04/06/2003 22:19	
Ethylbenzene	ND	50	ug/L	100.00	04/06/2003 22:19	
Total xylenes	ND	100	ug/L	100.00	04/06/2003 22:19	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	103.0	76-114	%	100.00	04/06/2003 22:19	
Toluene-d8	97.6	88-110	%	100.00	04/06/2003 22:19	

**Fuel Oxygenates by 8260B**

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Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

Prep(s):	5030B	Test(s):	8260B
Sample ID:	S-9	Lab ID:	2003-03-0530 - 8
Sampled:	03/24/2003 07:46	Extracted:	4/6/2003 22:41
Matrix:	Water	QC Batch#:	2003/04/06-01.62
Analysis Flag: o ( See Legend and Note Section )			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	250	ug/L	5.00	04/06/2003 22:41	
Methyl tert-butyl ether (MTBE)	230	25	ug/L	5.00	04/06/2003 22:41	
Benzene	ND	2.5	ug/L	5.00	04/06/2003 22:41	
Toluene	ND	2.5	ug/L	5.00	04/06/2003 22:41	
Ethylbenzene	ND	2.5	ug/L	5.00	04/06/2003 22:41	
Total xylenes	ND	5.0	ug/L	5.00	04/06/2003 22:41	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	101.0	76-114	%	5.00	04/06/2003 22:41	
Toluene-d8	96.2	88-110	%	5.00	04/06/2003 22:41	

## Fuel Oxygenates by 8260B

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Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

Prep(s): 5030B

Test(s): 8260B

Sample ID: S-10

Lab ID: 2003-03-0530 - 9

Sampled: 03/24/2003 09:59

Extracted: 4/5/2003 00:55

Matrix: Water

QC Batch#: 2003/04/04-V3.39

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	04/05/2003 00:55	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L	1.00	04/05/2003 00:55	
Benzene	ND	0.50	ug/L	1.00	04/05/2003 00:55	
Toluene	ND	0.50	ug/L	1.00	04/05/2003 00:55	
Ethylbenzene	ND	0.50	ug/L	1.00	04/05/2003 00:55	
Total xylenes	ND	1.0	ug/L	1.00	04/05/2003 00:55	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	98.9	76-114	%	1.00	04/05/2003 00:55	
Toluene-d8	103.2	88-110	%	1.00	04/05/2003 00:55	

## Fuel Oxygenates by 8260B

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Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

Prep(s):	5030B	Test(s):	8260B
Sample ID:	S-11	Lab ID:	2003-03-0530 - 10
Sampled:	03/24/2003 09:42	Extracted:	4/5/2003 01:18
Matrix:	Water	QC Batch#:	2003/04/04-V3.39

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	04/05/2003 01:18	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L	1.00	04/05/2003 01:18	
Benzene	ND	0.50	ug/L	1.00	04/05/2003 01:18	
Toluene	ND	0.50	ug/L	1.00	04/05/2003 01:18	
Ethylbenzene	ND	0.50	ug/L	1.00	04/05/2003 01:18	
Total xylenes	ND	1.0	ug/L	1.00	04/05/2003 01:18	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	100.1	76-114	%	1.00	04/05/2003 01:18	
Toluene-d8	102.5	88-110	%	1.00	04/05/2003 01:18	

## Fuel Oxygenates by 8260B

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98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

Prep(s):	5030B	Test(s):	8260B
Sample ID:	S-12	Lab ID:	2003-03-0530-11
Sampled:	03/24/2003 09:06	Extracted:	4/5/2003 01:41
Matrix:	Water	QC Batch#:	2003/04/04-V3.39

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	04/05/2003 01:41	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L	1.00	04/05/2003 01:41	
Benzene	ND	0.50	ug/L	1.00	04/05/2003 01:41	
Toluene	ND	0.50	ug/L	1.00	04/05/2003 01:41	
Ethylbenzene	ND	0.50	ug/L	1.00	04/05/2003 01:41	
Total xylenes	ND	1.0	ug/L	1.00	04/05/2003 01:41	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	102.4	76-114	%	1.00	04/05/2003 01:41	
Toluene-d8	108.2	88-110	%	1.00	04/05/2003 01:41	

## Fuel Oxygenates by 8260B

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Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

Prep(s): 5030B

Test(s): 8260B

Sample ID: T-2

Lab ID: 2003-03-0530 - 12

Sampled: 03/24/2003 13:05

Extracted: 4/6/2003 23:03

Matrix: Water

QC Batch#: 2003/04/06-01.62

Analysis Flag: o ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	550	250	ug/L	5.00	04/06/2003 23:03	g
Methyl tert-butyl ether (MTBE)	310	25	ug/L	5.00	04/06/2003 23:03	
Benzene	ND	2.5	ug/L	5.00	04/06/2003 23:03	
Toluene	ND	2.5	ug/L	5.00	04/06/2003 23:03	
Ethylbenzene	ND	2.5	ug/L	5.00	04/06/2003 23:03	
Total xylenes	ND	5.0	ug/L	5.00	04/06/2003 23:03	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	103.7	76-114	%	5.00	04/06/2003 23:03	
Toluene-d8	99.4	88-110	%	5.00	04/06/2003 23:03	

## Fuel Oxygenates by 8260B

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Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

Prep(s):	5030B	Test(s):	8260B
Sample ID:	T-4	Lab ID:	2003-03-0530 - 13
Sampled:	03/24/2003 12:56	Extracted:	4/6/2003 23:25
Matrix:	Water	QC Batch#:	2003/04/06-01-62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	1400	50	ug/L	1.00	04/06/2003 23:25	
Methyl tert-butyl ether (MTBE)	15	5.0	ug/L	1.00	04/06/2003 23:25	
Benzene	ND	0.50	ug/L	1.00	04/06/2003 23:25	
Toluene	1.0	0.50	ug/L	1.00	04/06/2003 23:25	
Ethylbenzene	1.2	0.50	ug/L	1.00	04/06/2003 23:25	
Total xylenes	3.6	1.0	ug/L	1.00	04/06/2003 23:25	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	96.1	76-114	%	1.00	04/06/2003 23:25	
Toluene-d8	90.8	88-110	%	1.00	04/06/2003 23:25	

## Fuel Oxygenates by 8260B

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Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

Prep(s): 5030B

Test(s): 8260B

Sample ID: SR-2

Lab ID: 2003-03-0530-14

Sampled: 03/24/2003 11:45

Extracted: 4/7/2003 13:50

Matrix: Water

QC Batch#: 2003/04/07-01.62

Analysis Flag: o ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	5000	ug/L	100.00	04/07/2003 13:50	
Methyl tert-butyl ether (MTBE)	10000	500	ug/L	100.00	04/07/2003 13:50	
Benzene	ND	50	ug/L	100.00	04/07/2003 13:50	
Toluene	ND	50	ug/L	100.00	04/07/2003 13:50	
Ethylbenzene	ND	50	ug/L	100.00	04/07/2003 13:50	
Total xylenes	ND	100	ug/L	100.00	04/07/2003 13:50	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	101.5	76-114	%	100.00	04/07/2003 13:50	
Toluene-d8	97.2	88-110	%	100.00	04/07/2003 13:50	

## Fuel Oxygenates by 8260B

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Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

Prep(s): 5030B

Test(s): 8260B

Sample ID: SR-3

Lab ID: 2003-03-0530 - 15

Sampled: 03/24/2003 12:29

Extracted: 4/7/2003 14:12

Matrix: Water

QC Batch#: 2003/04/07-01.62

Analysis Flag: o ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	2500	ug/L	50.00	04/07/2003 14:12	
Methyl tert-butyl ether (MTBE)	3700	250	ug/L	50.00	04/07/2003 14:12	
Benzene	ND	25	ug/L	50.00	04/07/2003 14:12	
Toluene	ND	25	ug/L	50.00	04/07/2003 14:12	
Ethylbenzene	ND	25	ug/L	50.00	04/07/2003 14:12	
Total xylenes	ND	50	ug/L	50.00	04/07/2003 14:12	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	98.5	76-114	%	50.00	04/07/2003 14:12	
Toluene-d8	97.5	88-110	%	50.00	04/07/2003 14:12	

**Fuel Oxygenates by 8260B**

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Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Method Blank

Water

QC Batch # 2003/04/04-V3.39

MB: 2003/04/04-V3.39-022

Date Extracted: 04/04/2003 17:03

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	04/04/2003 17:03	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	04/04/2003 17:03	
Benzene	ND	0.5	ug/L	04/04/2003 17:03	
Toluene	ND	0.5	ug/L	04/04/2003 17:03	
Ethylbenzene	ND	0.5	ug/L	04/04/2003 17:03	
Total xylenes	ND	1.0	ug/L	04/04/2003 17:03	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	88.0	76-114	%	04/04/2003 17:03	
Toluene-d8	95.0	88-110	%	04/04/2003 17:03	

## Fuel Oxygenates by 8260B

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Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

Prep(s): 5030B

Test(s): 8260B

Method Blank

Water

QC Batch #: 2003/04/06-01.62

MB: 2003/04/06-01.62-012

Date Extracted: 04/06/2003 12:12

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	04/06/2003 12:12	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	04/06/2003 12:12	
Benzene	ND	0.5	ug/L	04/06/2003 12:12	
Toluene	ND	0.5	ug/L	04/06/2003 12:12	
Ethylbenzene	ND	0.5	ug/L	04/06/2003 12:12	
Total xylenes	ND	1.0	ug/L	04/06/2003 12:12	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	104.0	76-114	%	04/06/2003 12:12	
Toluene-d8	96.1	88-110	%	04/06/2003 12:12	

## Fuel Oxygenates by 8260B

Blaine Tech Services, Inc.

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98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

Batch QC Report						
Prep(s): 5030B	Method Blank	Water	Test(s): 8260B	QC Batch #	2003/04/07-01.62	Date Extracted: 04/07/2003 11:16
MB: 2003/04/07-01.62-016						
Compound	Conc.	RL	Unit	Analyzed	Flag	
Gasoline	ND	50	ug/L	04/07/2003 11:16		
Gasoline	ND	50	ug/L	04/07/2003 11:16		
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	04/07/2003 11:16		
Benzene	ND	0.5	ug/L	04/07/2003 11:16		
Toluene	ND	0.5	ug/L	04/07/2003 11:16		
Ethylbenzene	ND	0.5	ug/L	04/07/2003 11:16		
Total xylenes	ND	1.0	ug/L	04/07/2003 11:16		
Surrogates(s)						
1,2-Dichloroethane-d4	98.9	76-114	%	04/07/2003 11:16		
Toluene-d8	94.8	88-110	%	04/07/2003 11:16		

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

05/01/2003 16:09

Page 19 of 23

## Fuel Oxygenates by 8260B

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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Phone: (408) 573-0555 Fax: (408) 573-7771Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

Batch QC Report										
Prep(s): 5030B			Test(s): 8260B							
Laboratory Control Spike			Water			QC Batch # 2003/04/04-V3.39				
LCS	2003/04/04-V3.39-019		Extracted: 04/04/2003		Analyzed: 04/04/2003 16:07					
LCSD	2003/04/04-V3.39-020		Extracted: 04/04/2003		Analyzed: 04/04/2003 16:40					
Compound	Conc. ug/L			Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags
	LCS	LCSD			LCS	LCSD	%	Rec.	RPD	LCS LCSD
Benzene	23.4	21.9	25	93.6	87.6	6.6	69-129	20		
Toluene	18.9	18.5	25	75.6	74.0	2.1	70-130	20		
Methyl tert-butyl ether (MTBE)	22.8	20.9	25	91.2	83.6	8.7	65-165	20		
<i>Surrogates(s)</i>										
1,2-Dichloroethane-d4	433	391	500	86.6	78.2		76-114			
Toluene-d8	493	481	500	98.6	96.2		88-110			

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

05/01/2003 16:09

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



## Fuel Oxygenates by 8260B

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

## Batch QC Report

Prep(s): 5030B

Test(s): 8260B

## Laboratory Control Spike

## Water

QC Batch # 2003/04/07-01.62

LCS 2003/04/07-01.62-032

Extracted: 04/07/2003

Analyzed: 04/07/2003 10:32

LCSD 2003/04/07-01.62-054

Extracted: 04/07/2003

Analyzed: 04/07/2003 10:54

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %	Flags	
	LCS	LCSD		LCS	LCSD			Rec.	RPD
Methyl tert-butyl ether (MTBE)	32.1	29.5	25.0	128.4	118.0	8.4	65-165	20	
Benzene	24.0	26.9	25.0	96.0	107.6	11.4	69-129	20	
Toluene	24.1	27.8	25.0	96.4	111.2	14.3	70-130	20	
<b>Surrogates(s)</b>									
1,2-Dichloroethane-d4	512	475	500	102.4	95.0		76-114		
Toluene-d8	463	492	500	92.6	98.4		88-110		

**Fuel Oxygenates by 8260B**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 030324-DAI  
98995842

Received: 03/24/2003 17:10

Site: 3790 Hopyard Rd.,  
Pleasanton

**Legend and Notes**

**Analysis Flag**

lrm

Reporting limits raised due to high level of non-target analyte materials.

o

Reporting limits were raised due to high level of analyte present in the sample.

**Result Flag**

g

Hydrocarbon reported in the gasoline range does not match  
our gasoline standard.

05/01/2003 16:09

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](http://www.stl-inc.com) \* CA DHS ELAP# 2496

Lab classification (if necessary):

Priority:

City, State, Zip:

Shell Project Manager to be involved:

<input type="checkbox"/>	Shane Tech Services

Karen Petryna

INCIDENT NUMBER: SLC-001

9	8	9	9	5	8	4	2
9	8	9	9	5	8	4	2

Date: 3/24/03  
Page: 1 of 2

SAMPLE NUMBER: SLC-001		LABORATORY: San Jose City		TELEPHONE: (408) 265-1257	
Blane Tech Services		3790 Hopyard Rd., Pleasanton		FAX: (408) 265-1258	
1640 Rogers Avenue, San Jose, CA 95112		ANALYST: Karen Petryna		E-MAIL: karen.petryna@slc.com	
Leon Gearhart		ANALYST: David Aubut		TELEPHONE: (408) 265-1259	
NICHOLAS		ANALYST: David Aubut		FAX: (408) 265-1260	
408-973-7771	408-973-7771	RECEIVED DATE: 3/24/03		RECEIVED BY: SLC	
TO DETERMINE THE FOLLOWING BUSINESS DAYS:		RECEIVED DATE: 3/24/03		RECEIVED BY: SLC	
<input checked="" type="checkbox"/> 24 HRS <input type="checkbox"/> 48 HRS <input type="checkbox"/> 72 HOURS <input type="checkbox"/> 4 HOURS <input type="checkbox"/> 24 HOURS <input type="checkbox"/> LESS THAN 24 HOURS		RECEIVED DATE: 3/24/03		RECEIVED BY: SLC	
<input type="checkbox"/> NO WORK REQUIRED <input checked="" type="checkbox"/> YES WORK		RECEIVED DATE: 3/24/03		RECEIVED BY: SLC	
SIGNATURE OF APPROVING: SLOWART		HIGHEST PRIORITY: N/A		RECEIVED DATE: 3/24/03	
SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF FEEDS NOT USED		RECEIVED DATE: 3/24/03		RECEIVED BY: SLC	
FIELD NOTES: Container/Preservative or P/D Results or Laboratory Notes		RECEIVED DATE: 3/24/03		RECEIVED BY: SLC	
SAMPLE IDENTIFICATION		SAMPLING DATE	LOCATION	TESTS	TESTS
Fixed Sample Identification		DATE	TYPE	TESTS	TESTS
1	S-8	3/24/03	809	X	X
2	S-7	1022		X	X
3	S-2	1200		X	X
4	S-3	824		X	X
5	S-4	1249		X	X
6	S-5	8145		X	X
7	S-6	1042		X	X
8	S-9	746		X	X
9	S-10	987		X	X
10	S-11	942		X	X
RECEIVED BY: SLOWART		RECEIVED BY: SLOWART		RECEIVED BY: SLOWART	
RECEIVED DATE: 3/24/03		RECEIVED DATE: 3/24/03		RECEIVED DATE: 3/24/03	
RECEIVED TIME: 1550		RECEIVED TIME: 1550		RECEIVED TIME: 1550	
RECEIVED BY: SLOWART		RECEIVED BY: SLOWART		RECEIVED BY: SLOWART	
RECEIVED DATE: 3/24/03		RECEIVED DATE: 3/24/03		RECEIVED DATE: 3/24/03	
RECEIVED TIME: 1710		RECEIVED TIME: 1710		RECEIVED TIME: 1710	

## ONCALL DRUGS OF CUSTODY RECORD

32870

Lab Identification #/Specimen#:

Address:

City, State, Zip:

Shell Project Manager to be Invoiced:

- SCIENCE & INVESTIGATION  
 TECHNICAL SERVICES  
 CRIMINALISTICS

Karen Petryna

INCIDENT NUMBER (SEE CH-5)

9 8 9 9 5 8 4 2

SAFETY DATA NUMBER (IF APPLICABLE)

[REDACTED]

DATE 3/24/03

PAGE 2 of 2

COMPANY	SPECIES	SITE ADDRESS	TEST CODE	TEST NO.	CONSULTANT NAME												
Blair Tech Services	B735	3790 Hogyard Rd., Pleasanton	T0600101257		C30324-0A												
1800 Rogers Avenue, San Jose, CA 95112				David Allbut													
Leon Gearhart				2003-03-0530													
408-673-3388	408-673-7771	[REDACTED]															
TIME QUOTED FOR BUSINESS DAYS:																	
<input type="checkbox"/> 0 DAYS <input type="checkbox"/> 3 DAYS <input type="checkbox"/> 72 HOURS <input type="checkbox"/> 48 HOURS <input type="checkbox"/> 24 HOURS <input type="checkbox"/> LESS THAN 24 HOURS																	
<input type="checkbox"/> 0 - RAPID REPORT FORMAT <input type="checkbox"/> 1ST AGENCY																	
RADIOLOGY CONFIRMATION REQUEST <input type="checkbox"/> DIRECT TO BORING <input type="checkbox"/> ALL																	
SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF FIELD IS NOT NEEDED																	
LAB CODE NUMBER	Field Sample Identification	COLLECTING	TEST	ANALYSIS	TEMPERATURE ON RECEIPT												
		DATE	TIME	METHOD		NO. OF CONT.	MTBE (SCSI-B - 0.6ppm RT)	Oxygenate (f/t by 10%)	Ethanol (0.2000)	Water	ENR & T-VOL (3250ml)						
11	S-12	2300	700	V	3	X	X	-	-	-	-	-	-	-	-	4.2	
12	S-T-2	1305				X	X	-	-	-	-	-	-	-	-	-	
13	T-4	1356				X	X	-	-	-	-	-	-	-	-	-	
14	SR-2	1145				X	X	-	-	-	-	-	-	-	-	-	
15	SR-3	1224				X	X	V	-	-	-	-	-	-	-	-	
Specimen to be analyzed		Received by (Signature)				Date					Date						
Reinforced by (Signature)		RECEIVED BY (Signature)				3/24/03					3/24/03						
Reinforced by (Signature)		RECEIVED BY (Signature)															

**STL**

**STL San Francisco**

**Sample Receipt Checklist**

**Submission #:** 2003- 13.0530

Checklist completed by: (initials) CR Date: 03 25 /03

Courier name:  STL San Francisco  Client \_\_\_\_\_

Custody seals intact on shipping container/samples

Yes \_\_\_\_\_ No \_\_\_\_\_ Not Present

Chain of custody present?

Yes  No \_\_\_\_\_

Chain of custody signed when relinquished and received?

Yes  No \_\_\_\_\_

Chain of custody agrees with sample labels?

Yes  No \_\_\_\_\_

Samples in proper container/bottle?

Yes  No \_\_\_\_\_

Sample containers intact?

Yes  No \_\_\_\_\_

Sufficient sample volume for indicated test?

Yes  No \_\_\_\_\_

All samples received within holding time?

Yes  No \_\_\_\_\_

Container/Temp Blank temperature in compliance ( $4^{\circ}\text{C} \pm 2$ )?

Temp: 4.2  $^{\circ}\text{C}$  Yes  No \_\_\_\_\_

Water - VOA vials have zero headspace?

No VOA vials submitted Yes  No \_\_\_\_\_

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~O), M (medium ~ O) or L (large ~ O))

Water - pH acceptable upon receipt?  Yes  No

pH adjusted- Preservative used:  HNO<sub>3</sub>  HCl  H<sub>2</sub>SO<sub>4</sub>  NaOH  ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

**Comments:** \_\_\_\_\_

**Project Management [Routing for instruction of indicated discrepancy(ies)]**

Project Manager: (initials) \_\_\_\_\_ Date: \_\_\_\_\_ / \_\_\_\_\_ /03

Client contacted:  Yes  No

Summary of discussion: \_\_\_\_\_

Corrective Action (per PM/Client): \_\_\_\_\_

# WELL GAUGING DATA

 Project # 030324-041

 Date 3/24/03

 Client Shell

 Site 3790 Hopyard Rd. Pleasanton, CA

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	
S-2	3					14.86	35.18	TOC	
S-3	3					12.71	35.50		
* S-4	3					14.56	35.85		
S-5	3					16.70	35.85		
S-6	3					14.37	34.70		
S-7	3					17.12	35.20		
S-8	3					14.58	34.35		
S-9	3					17.97	35.25		
S-10	3					16.60	34.30		
* S-11	2					17.25	25.06 24.85		
S-12	2					16.53	24.85		
* T-2	6					11.68	13.15		
* T-4	4					12.88	14.43		
SR-2	4					13.75	34.65	EXT	
SR-3	4					13.52	34.75	EXT	
Gauged w/ stringer in well									





# SHELL WELL MONITORING DATA SHEET

BTS #: 030324-DA1	Site: 3790 Hopyard Rd. Pleasanton, CA		
Sampler: DA	Date: 3/24/03		
Well I.D.: S-4	Well Diameter: 2 ③ 4 6 8		
Total Well Depth (TD): 35.85	Depth to Water (DTW): 14.56		
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]: 18.82			

Purge Method: Bailer    Waterm Sampling Method: X Bailer  
 Disposable Bailer    Peristaltic  
 Middleburg    Extraction Pump  
 Electric Submersible                                  Other \_\_\_\_\_

Sampling Method: X Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

$$\frac{7.9 \text{ (Gals.)} \times 3}{1 \text{ Case Volume}} = \frac{23.7 \text{ Gals.}}{\text{Specified Volumes}} \text{ Calculated Volume}$$

Well Diameter	Multipier	Well Diameter	Multipier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1104	68.6	7.0	1840	>200	8	cloudy, grey tint.
1106	68.6	6.8	1827	>200	16	"
1108	68.0	6.8	1956	>200	24	" DTW = 32.70

Did well dewater? Yes N Gallons actually evacuated: 24

Sampling Date: 3/24/03 Sampling Time: 1249 Depth to Water: 14.67

Sample I.D.: S-4 Laboratory: Kif SPL Other STL

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: % / L Post-purge: mg / L

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

### SHELL WELL MONITORING DATA SHEET

BTS #: 030324-DA1	Site: 3790 Hopyard Rd. Pleasanton, CA	
Sampler: DA	Date: 3/24/03	
Well I.D.: S-5	Well Diameter: 2 <input checked="" type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8 <input type="radio"/>	
Total Well Depth (TD): 35.85	Depth to Water (DTW): 16.70	
Depth to Free Product:	Thickness of Free Product (feet):	
Referenced to: <input checked="" type="checkbox"/> PVC	Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 20.53		

Purge Method:  Boiler       Water      Sampling Method:  Boiler  
 Disposable Bailer       Peristaltic       Disposable Bailer  
 Middleburg       Extraction Pump       Extraction Port  
 Electric Submersible       Other \_\_\_\_\_       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 <sup>2</sup> * 0.163

7.1 (Gals.) X 3 = 21.3 Gals.  
1 Case Volume Specified Volumes Calculated Volume

Time	Temp (°F)	pH	Cond. (mS or <input type="checkbox"/> µS)	Turbidity (NTUs)	Gals. Removed	Observations
0832	63.9	6.8	2949	7200	7.5	tan, cloudy
0834	64.8	6.7	2436	7200	15	"
0835	64.9	6.7	2286	7.1	21.5	clearing

Did well dewater? Yes  No Gallons actually evacuated: 21.5

Sampling Date: 3/24/03 Sampling Time: 0845 Depth to Water: 20.53

Sample I.D.: S-5 Laboratory: KIT SPL Other  STL

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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### SHELL WELL MONITORING DATA SHEET

BTS #: 030324-PAI	Site: 3790 Hwyard Rd. Pleasanton, CA		
Sampler: DK	Date: 3/24/03		
Well I.D.: S-6	Well Diameter: 2 <input checked="" type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8		
Total Well Depth (TD): 34.70	Depth to Water (DTW): 14.36		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: <input checked="" type="radio"/> PVC Grade	D.O. Meter (if req'd): YSI HACH		
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 18.43			

Purge Method:  Bailor  Watera  Sampling Method:  Bailor  
 Disposable Bailor  Peristaltic  Disposable Bailor  
 Middleburg  Extraction Pump  Extraction Port  
 Electric Submersible  Other \_\_\_\_\_  Dedicated Tubing

Well Diameter	Multiplicator	Well Diameter	Multiplicator
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

7.5 (Gals.) X 3 = 22.5 Gals.  
 1 Case Volume Specified Volumes Calculated Volume

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTU#)	Gals. Removed	Observations
1035	68.6	7.9	1838	7200	7.5	cloudy
1037	68.7	7.7	1796	> 200	15	"
1039	69.5	7.2	1792	7200	22.5	"

Did well dewater? Yes  Gallons actually evacuated: 22.5

Sampling Date: 3/24/03 Sampling Time: 1042 Depth to Water: 26.19 traffic

Sample I.D.: S-6 Laboratory: Kiff SPL Other S7L

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

EB I.D. (if applicable): @ <sub>Time</sub> 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 #: 030324-DA1	Site: 3790 Hopyard Rd. Pleasanton, CA	
Sampler: DA	Date: 3/24/03	
Well I.D.: S-7	Well Diameter: 2 ③ 4 6 8 _____	
Total Well Depth (TD): 35.20	Depth to Water (DTW): 17.12	
Depth to Free Product:	Thickness of Free Product (feet):	
Referenced to: <input checked="" type="checkbox"/> PVT Grade	D.O. Meter (if req'd): YSI HACH	
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.74		

Purge Method:  Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible      Water:  Peristaltic  
 Extraction Pump  
 Other: \_\_\_\_\_      Sampling Method:  Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other: \_\_\_\_\_

Well Diameter	Multiplier	Well Diameter	Multipplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

4.4 (Gals.) X 3 = 13.2 Gals.  
 1 Case Volume      Specified Volumes      Calculated Volume

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
1016	67.5	6.7	2185	7200	4.5	cloudy
1017	68.3	6.7	2129	7200	9	"
1018	68.3	6.7	2044	7200	13.5	"
			Reaction; Used NP Noxas			

Did well dewater? Yes  No Gallons actually evacuated: 13.5

Sampling Date: 3/24/03 Sampling Time: 1022 Depth to Water: 23.67 traffic

Sample I.D.: S-7 Laboratory: KII SPL Other: STL

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 #: 030324-DA1	Site: 3790 Hopyard Rd. Pleasanton, CA		
Sampler: DA	Date: 3/24/03		
Well I.D.: S-8	Well Diameter: 2 <input checked="" type="radio"/> 4 6 8		
Total Well Depth (TD): 34.35	Depth to Water (DTW): 14.58		
Depth to Free Product: 34.35	Thickness of Free Product (feet): 14.58		
Referenced to: <input checked="" type="checkbox"/> Grade	D.O. Meter (if req'd): YSI HACH		
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 18.53			

Purge Method:  Bailer  Wateria  Sampling Method:  Bailer  
 Disposable Bailer  Peristaltic  Disposable Bailer  
 Middleburg  Extraction Pump  Extraction Port  
 Electric Submersible  Other \_\_\_\_\_  Dedicated Tubing

Other:

Case Volume	Specified Volumes	Calculated Volume	Well Diameter	Multipier	Well Diameter	Multipier
7.3	(Gals.) X 3	= 21.9 Gals.	1"	0.04	4"	0.65
			2"	0.16	6"	1.47
			<input checked="" type="radio"/> 3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
0759	61.6	6.6	3664	7200	7.5	cloudy
0801	63.9	6.5	3853	7200	15	"
0802	64.5	6.6	3999	7200	22	"
		Reaction in vials;	used NP			

Did well dewater? Yes  Gallons actually evacuated: 22

Sampling Date: 3/24/03 Sampling Time: 0809 Depth to Water: 18.53

Sample I.D.: S-8 Laboratory: KII SPL Other STL

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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# SHELL WELL MONITORING DATA SHEET

BTS #: 030324-DA1	Site: 3790 Hopyard Rd. Pleasanton, CA		
Sampler: DA	Date: 3/24/03		
Well I.D.: S-9	Well Diameter: 2 ③ 4 6 8		
Total Well Depth (TD): 35.25	Depth to Water (DTW): 17.97		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: PVC	Grade	D.O. Meter (if req'd): YSI	UACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 21.43			

Purge Method:  Bailer       Water      Sampling Method:  Bailer  
 Disposable Bailer      Peristaltic       Disposable Bailer  
 Middleburg      Extraction Pump       Extraction Port  
 Electric Submersible      Other \_\_\_\_\_       Dedicated Tubing

$$\frac{6.4 \text{ (Gals.)}}{1 \text{ Case Volume}} \times \frac{3}{\text{Specified Volumes}} = \frac{19.2 \text{ Gals.}}{\text{Calculated Volume}}$$

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.103

Time	Temp ("F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
0734	60.6	5.6	3222	143	6.5	cloudy
0736	59.5	6.4	3150	68	13	clearing
0740	59.6	6.6	3169	57	19.5	"

Did well dewater? Yes  Gallons actually evacuated: 19.5

Sampling Date: 3/24/03 Sampling Time: 0746 Depth to Water: 21.43

Sample I.D.: S-9 Laboratory: Kiff SPL Other 57L

Analyzed for:  TPH  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
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

**SHELL WELL MONITORING DATA SHEET**

BTS #: 030324-DA1	Site: 3790 Hopyard Rd. Pleasanton, CA	
Sampler: PA	Date: 3/24/03	
Well I.D.: S-10	Well Diameter: 2 ④ 4 6 8 _____	
Total Well Depth (TD): 34.30	Depth to Water (DTW): 16.60	
Depth to Free Product:	Thickness of Free Product (feet):	
Referenced to: PVC	Gmde	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 20.14		

Purge Method:	Bailer	Waterra	Sampling Method:	Bailer
	Disposable Bailer	Peristaltic		Disposable Bailer
	Middleburg	Extraction Pump		Extraction Port
	Electric Submersible	Other _____		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 <sup>2</sup> * 0.163

$$\frac{6.5 \text{ (Gals.)} \times 3}{1 \text{ Case Volume}} = \frac{19.5 \text{ Gals.}}{\text{Specified Volumes}} \quad \text{Calculated Volume}$$

Time	Temp (°F)	pH	Cond. (mS or uS)	Turbidity (NTU's)	Gals. Removed	Observations
952	65.6	8.4	2204	7200	6.5	grey, turbid
953	65.7	8.4	1490	7200	13	"
955	65.9	8.0	1362	7200	19.5	"

Did well dewater? Yes (No) Gallons actually evacuated: 19.5

Sampling Date: 3/24/03 Sampling Time: 959 Depth to Water: 23.36 traffic

Sample I.D.: S-10 Laboratory: KIT SPL Other STL

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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# SHELL WELL MONITORING DATA SHEET

BTS #: 030324-PA1	Site: 3790 Hopyard Rd. Pleasanton, CA	
Sampler: OA	Date: 3/24/03	
Well I.D.: S-11	Well Diameter: ② 3 4 6 8	
Total Well Depth (TD): 25.06	Depth to Water (DTW): 17.25	
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]: 18.81		

Purge Method:  Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible  
 Waterra  
 Peristatic  
 Extraction Pump  
 Other \_\_\_\_\_  
Sampling Method:  Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other \_\_\_\_\_

Well Diameter	Multipier	Well Diameter	Multipier
2"	0.04	4"	0.65
3"	0.16	6"	1.47
4"	0.37	Other	radius <sup>2</sup> * 0.163

1.2 (Gals.) X 3 = 3.6 Gals.  
1 Cube Volume Specified Volumes Calculated Volume

Time	Temp (°F)	pH	Cond. (mS or <del>µS</del> )	Turbidity (NTUs)	Gals. Removed	Observations
934	65.7	7.7	3254	7200	1.5	tan, turbid
936	66.4	7.9	3521	7200	3	"
938	66.7	8.0	3784	7200	4	"

Did well dewater? Yes  Gallons actually evacuated: 4

Sampling Date: 3/24/03 Sampling Time: 942 Depth to Water: 21.92 traffic

Sample I.D.: S-11 Laboratory: KIT SPL Other SJL

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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### SHELL WELL MONITORING DATA SHEET

BTS #: 030324-DA1	Site: 3790 Hwyard Rd. Pleasanton, CA		
Sampler: DA	Date: 3/24/03		
Well I.D.: S-12	Well Diameter: <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 6 <input type="checkbox"/> 8		
Total Well Depth (TD): 24.85	Depth to Water (DTW): 16.53		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: <input checked="" type="checkbox"/> Grade	D.O. Meter (if req'd):	YSI	HACH

DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 18.19

Purge Method:  Baile  
 Disposable Baile  
 Middleburg  
 Electric Submersible

Watera  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method:  Baile  
 Disposable Baile  
 Extraction Port  
 Dedicated Tubing

Other: \_\_\_\_\_

1 Case Volume	(Gals.) X	Specified Volumes	Calculated Volume	Well Diameter	Multiplier	Well Diameter	Multiplier
1.3		3	= 3.9 Gals.	4"	0.04	4"	0.65
				6"	0.16	6"	1.47
				3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
856	64.8	7.8	3137	>200	1.5	tan, turbid
858	66.0	7.6	3147	>200	3	"
900	66.3	7.6	3152	>200	4	"

Did well dewater? Yes  Gallons actually evacuated: 4

Sampling Date: 3/24/03 Sampling Time: 906 Depth to Water: 18.19

Sample I.D.: S-12 Laboratory: Kiff SPL Other STC

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
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O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV
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### SHELL WELL MONITORING DATA SHEET

BTS #: 030324-DA1	Site: 3790 Hopyard Rd. Pleasanton, CA		
Sampler: DA	Date: 3/24/03		
Well I.D.: T-2	Well Diameter: 2 3 4 <input checked="" type="radio"/> 6 8		
Total Well Depth (TD): 13.15	Depth to Water (DTW): 11.68		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: <input checked="" type="radio"/> Grade	D.O. Meter (if req'd): VST	HACH	
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.97			

Purge Method:  Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible  
 Water  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method:  Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other \_\_\_\_\_

Well Diameter	Multiplicator	Well Diameter	Multiplicator
1"	0.01	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

2.2 (Gals.) X 3 = 6.6 Gals.  
 1 Case Volume Specified Volumes Calculated Volume

Time	Temp (°F)	pH	Cond. (mS or <del>µS</del> )	Turbidity (NTUs)	Gals. Removed	Observations
1241	66.2	8.1	1219	68	2.5	clear, odor
1241	well dewatered @ 2.5 g.			DTW = 12.0		
1300	67.6	6.4	849	61	0	II

Did well dewater?  Yes No Gallons actually evacuated: 2.5

Sampling Date: 3/24/03 Sampling Time: 1305 Depth to Water: 11.68

Sample I.D.: T-2 Laboratory: Klf SPL Other STL

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

EB I.D. (if applicable):  <sub>Time</sub> 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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### SHELL WELL MONITORING DATA SHEET

BTS #: 030324-DA1	Site: 3790 Hopyard Rd. Pleasanton, CA		
Sampler: DA	Date: 3/24/03		
Well I.D.: T-4	Well Diameter: 2 3 ④ 6 8		
Total Well Depth (TD): 14.43	Depth to Water (DTW): 12.88		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: <input checked="" type="checkbox"/> Grade	D.O. Meter (if req'd): YSI	HACH	
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.19			

Purge Method:  Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible

Water取  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	$\text{radius}^2 + 0.163$

$$\frac{1.0 \text{ (Gals.)} \times 3}{1 \text{ Case Volume}} = \frac{3.0 \text{ Gals.}}{\text{Specified Volumes}} \quad \text{Calculated Volume}$$

Time	Temp (°F)	pH	Cond. (mS or $\mu\text{S}$ )	Turbidity (NTUs)	Gals. Removed	Observations
1119	65.4	7.8	1304	7206	1.0	cloudy
1119	well dewatered @		g.	DTW = 13.21	"	
1256	67.0	6.7	698	138	-	clear

Did well dewater?  Yes No Gallons actually evacuated: 1.0

Sampling Date: 3/24/03 Sampling Time: 1256 Depth to Water: 12.87

Sample I.D.: T-4 Laboratory: Kiff SPL Other STL

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
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O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV
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### SHELL WELL MONITORING DATA SHEET

BTS #: 030324-PA1	Site: 3790 Hopyard Rd. Pleasanton, CA		
Sampler: OA	Date: 3/24/03		
Well I.D.: SR-2	Well Diameter: 2 3 <input checked="" type="radio"/> 4 6 8		
Total Well Depth (TD): 34.65	Depth to Water (DTW): 13.75		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH		
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 17.93			

Purge Method: Bailer    Sampling Method:  Bailer  
 Disposable Bailer     Disposable Bailer  
 Middleburg    Extraction Port  
 Electric Submersible    Dedicated Tubing

Waterjet    Other \_\_\_\_\_

Other: \_\_\_\_\_

Well Diameter	Multipier	Well Diameter	Multipier
1"	0.04	<input checked="" type="radio"/> 4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or <del>μS</del> )	Turbidity (NTUs)	Gals. Removed	Observations
System Not Running				Pulled pump to sample.		
1130	66.7	6.8	1527	7200	14	cloudy
1133	67.0	6.7	1576	7200	28	"
1135	67.1	6.7	1721	7200	41	"

Did well dewater? Yes  Gallons actually evacuated: 41

Sampling Date: 3/24/03 Sampling Time: 1145 Depth to Water: 16.92

Sample I.D.: SR-2 Laboratory: KIT SPL Other STL

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

EB I.D. (if applicable): <sup>@</sup> Duplicate I.D. (if applicable):

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

D.O. (if req'd): Pre-purge: <sup>mg/L</sup> Post-purge: <sup>mg/L</sup>

O.R.P. (if req'd): Pre-purge: <sup>mV</sup> Post-purge: <sup>mV</sup>

### SHELL WELL MONITORING DATA SHEET

BTS #: 030324-DA1	Site: 3790 Hopyard Rd. Pleasanton, CA		
Sampler: DA	Date: 3/24/03		
Well I.D.: SR-3	Well Diameter: 2 3 <input checked="" type="radio"/> 6 8		
Total Well Depth (TD): 34.75	Depth to Water (DTW): 13.52		
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]: 17.77			

Purge Method:  Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible      Waterm \_\_\_\_\_ Sampling Method:  Bailer  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_  Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

$$\frac{13.8 \text{ (Gals.)} \times 3}{\text{Case Volume}} = \frac{41.4 \text{ Gals.}}{\text{Specified Volumes}} \quad \text{Calculated Volume}$$

Well Diameter	Multipier	Well Diameter	Multipier
1"	0.04	<input checked="" type="radio"/> 3"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or <del>µS</del> )	Turbidity (NTUs)	Gals. Removed	Observations
1211	68.2	6.6	2062	87	14	cloudy, slight odor
1213	69.4	6.5	2014	56	28	"
1216	69.6	6.5	2090	37	41.5	"

Did well dewater? Yes  Gallons actually evacuated: 41.5

Sampling Date: 3/24/03 Sampling Time: 1224 Depth to Water: 17.23

Sample I.D.: SR-3 Laboratory: KII<sub>F</sub> SPL Other STL

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