



**Shell Oil Products US**

September 22, 2003

Alameda County

SEP 25 2003

Environmental Health

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

**Subject: Shell-branded Service Station**  
29 Wildwood Avenue  
Piedmont, California

Dear Mr. Seery:

Attached for your review and comment is a copy of the *Third 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  
Sr. Environmental Engineer

C A M B R I A

Alameda County

SEP 2 2003

September 22, 2003

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

Environmental

Re: **Third Quarter 2003 Monitoring Report**  
Shell-branded Service Station  
29 Wildwood Avenue  
Piedmont, California  
Incident #98995822  
Cambria Project# 245-0687-002



Dear Mr. Seery:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), Cambria Environmental Technology, Inc. (Cambria) is submitting this groundwater monitoring report in accordance with the reporting requirements of 23 CCR 2652d.

### THIRD QUARTER 2003 ACTIVITIES


**Groundwater Monitoring:** Blaine Tech Services, Inc. (Blaine) of San Jose, California measured dissolved oxygen (DO) concentrations, gauged and sampled all site wells, calculated groundwater elevations, and compiled the analytical data. Cambria prepared a previously submitted well survey/vicinity map (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.

**May 15, 2003 Agency Letter:** The Alameda County Health Care Services Agency's (ACHCSA's) May 15, 2003 letter to Shell reviewed the historic fuel leak case file; requested completion of a preferential pathway study including a conduit/utility survey, well search, and site conceptual model for the site; and set a schedule for the new requested reports and quarterly groundwater monitoring reports. In addition, the letter denied Shell's request to implement Cambria's proposed sampling frequency reductions.

**Cambria  
Environmental  
Technology, Inc.**

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

Cambria submitted the requested conduit study/utility survey with the July 9, 2003 *Second Quarter 2003 Monitoring Report and Agency Response*. Cambria submitted the *Well Survey and Site Conceptual Model* report on August 14, 2003.



**May 16, 2003 Agency Letter:** The ACHCSA's May 16, 2003 letter directed Shell to continue analyzing all groundwater monitoring samples for the fuel oxygenates methyl tertiary butyl ether (MTBE), tert amyl methyl ether (TAME), ethyl tert butyl ether (ETBE), di-isopropyl ether (DIPE), and tert butyl alcohol (TBA) by EPA Method 8260 until further notice. During this quarter, samples from all wells were analyzed for these target analytes. Cambria has tabulated all historical oxygenate analytical data (Table 1). Results of all oxygenate analyses to date indicate that TAME and TBA were previously detected only in the October 2002 samples from well MW-3, at concentrations of 7.4 parts per billion (ppb) and 300 ppb, respectively. The current results indicate TBA is present in wells MW-2 and MW-3 only, at concentrations of 8.6 ppb and 72 ppb, respectively.

The October 2001 and July 2003 samples from wells MW-2 and MW-3 were also analyzed for ethanol, and ethanol was detected only in MW-2. The MW-2 ethanol results were 150,000 ppb in October 2001 and 7,000 ppb in July 2003. The October 2002 samples from all wells were analyzed for the lead scavengers 1,2-dichloroethane (1,2-DCA) and ethylene dibromide (EDB). 1,2-DCA and EDB were below reporting limits for all samples.

## ANTICIPATED FOURTH QUARTER 2003 ACTIVITIES

**Groundwater Monitoring:** Blaine will measure DO, gauge and sample all site wells, and tabulate the data. Cambria will submit a monitoring report by April 15, 2004.

**Additional Oxygenate Analysis:** Groundwater samples from all monitoring wells will be analyzed for four additional oxygenates (TAME, ETBE, DIPE, TBA) in addition to the regular analysis for total petroleum hydrocarbons as gasoline, benzene, toluene, ethylbenzene, total xylenes, and MTBE. Samples from wells MW-2 and MW-3 will also be analyzed for ethanol. The results will be included in the monitoring report.

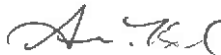
**Cambria  
Environmental  
Technology, Inc.**

5900 Hollis Street  
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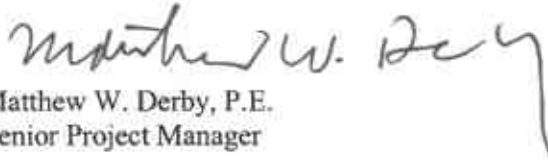
**CLOSING**

We appreciate the opportunity to work with you on this project. Please call Matt Derby at (510) 420-3332 if you have any questions or comments.

Sincerely,  
**Cambria Environmental Technology, Inc**



Anni Kreml  
Senior Staff Scientist



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



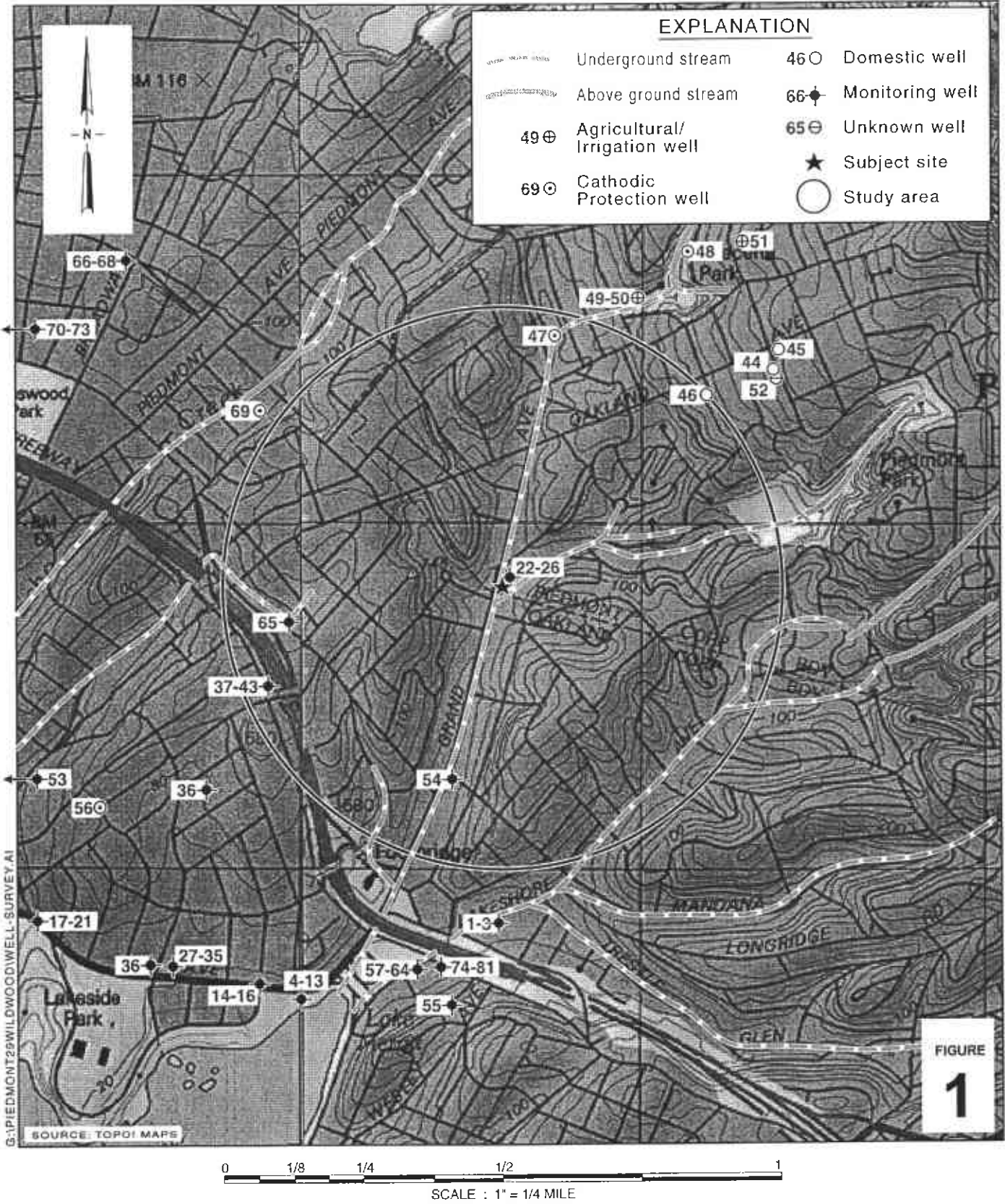
Figures: 1 - Vicinity Map  
2 - Groundwater Elevation Contour Map

Table: 1 - 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

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### Shell-branded Service Station

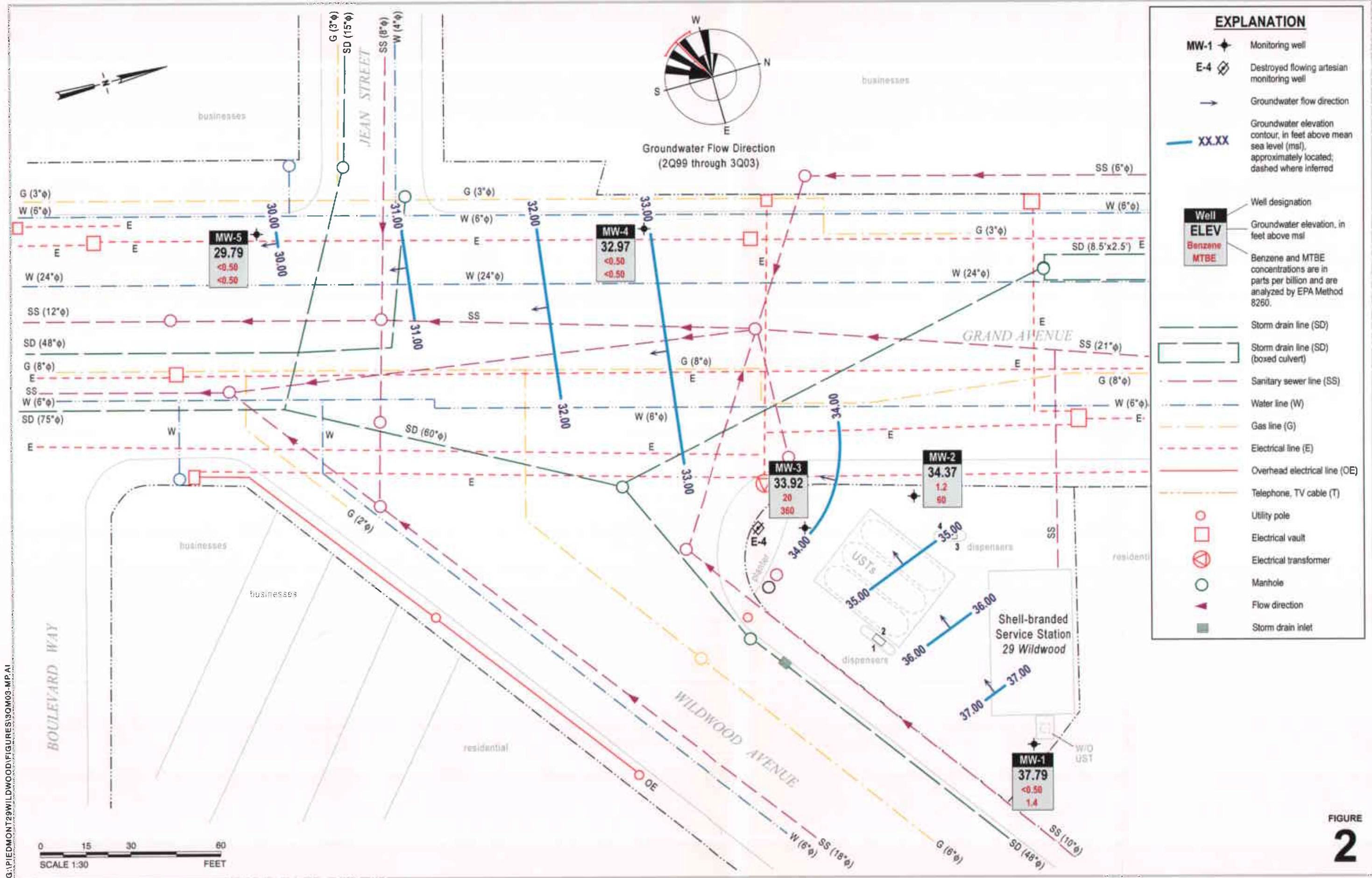
29 Wildwood Avenue  
Piedmont, California  
Incident #98995822



C A M B R I A

### Vicinity/Area Well Survey Map

1/2 Mile Radius



**Groundwater Elevation Contour Map**

July 14, 2003



**CAMBRIA**

**FIGURE 2**

**Shell-branded Service Station**  
 29 Wildwood Avenue  
 Piedmont, California  
 Incident #98995822

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**Table 1. Groundwater Analytical Data - Oxygenates - Former Shell Service Station, Incident #98995822, 29 Wildwood Avenue, Piedmont, California**

Sample ID	Date Sampled	MTBE	DIPE	ETBE	TAME (Concentrations in ppb)	TBA	Ethanol	1,2-DCA	EDB
MW-1	10/23/02	<0.50	<2.0	<2.0	<2.0	<50	--	<2.0	<2.0
	07/14/03	1.4	<2.0	<2.0	<2.0	<5.0	--	--	--
MW-2	10/31/01	<100	<100	<100	<100	<1,000	150,000	--	--
	10/23/02	140	<2.0	<2.0	<2.0	<50	--	<2.0	<2.0
	07/14/03	60	<2.0	<2.0	<2.0	8.6	7,000	--	--
MW-3	10/31/01	31	<2.0	<2.0	<2.0	<50	<500	--	--
	10/23/02	1,400	<5.0	<5.0	7.4	300	--	<5.0	<5.0
	07/14/03	360	<10	<10	<10	72	<250	--	--
MW-4	10/23/02	<0.50	<2.0	<2.0	<2.0	<50	--	<2.0	<2.0
	07/14/03	<0.50	<2.0	<2.0	<2.0	<5.0	--	--	--
MW-5	10/23/02	<0.50	<2.0	<2.0	<2.0	<50	--	<2.0	<2.0
	07/14/03	<0.50	<2.0	<2.0	<2.0	<5.0	--	--	--

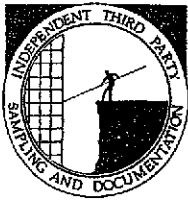
**Abbreviations & Notes:**

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-Dibromoethane, analyzed by EPA Method 8260  
 ppb = Parts per billion

**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  
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CONTRACTOR'S LICENSE #746684  
www.blainetech.com

July 31, 2003

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

Third Quarter 2003 Groundwater Monitoring at  
Shell-branded Service Station  
29 Wildwood Avenue  
Piedmont, CA

Monitoring performed on July 14, 2003

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Groundwater Monitoring Report 030714-SS-2

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

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

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

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**  
**29 Wildwood Avenue**  
**Piedmont, CA**

Well ID	Date	TPPH (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)
MW-1	07/12/1989	<50	<0.5	<1	<1	<3	NA	NA	37.96	2.76	35.20	NA
MW-1	01/30/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.10	34.86	NA
MW-1	04/27/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.24	34.72	NA
MW-1	07/31/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	4.26	33.70	NA
MW-1	10/30/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	4.25	33.71	NA
MW-1	01/31/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.66	34.30	NA
MW-1	04/30/1991	<50	0.8	<0.5	0.6	1.2	NA	NA	37.96	3.46	34.50	NA
MW-1	07/30/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	4.14	33.82	NA
MW-1	10/29/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.96	34.00	NA
MW-1	01/20/1992	<30	<0.3	<0.3	<0.3	<0.3	NA	NA	37.96	3.59	34.37	NA
MW-1	04/14/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.18	31.71	NA
MW-1	07/21/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	4.17	33.79	NA
MW-1	10/02/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	4.29	33.67	NA
MW-1	01/20/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	2.32	35.64	NA
MW-1	05/03/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.50	34.46	1.9
MW-1	06/28/1993	NA	NA	NA	NA	NA	NA	NA	37.96	3.76	34.20	NA
MW-1	07/21/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	4.09	33.87	4.6
MW-1	10/19/1993	50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.58	34.38	4.3
MW-1	01/20/1994	Well inaccessible		NA	NA	NA	NA	NA	37.96	NA	NA	NA
MW-1	04/12/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.60	34.36	7.5
MW-1	07/20/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	4.10	33.86	3.2
MW-1	10/06/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	4.30	33.66	3.2
MW-1	01/20/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	2.94	35.02	10.6
MW-1	07/06/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.68	34.28	NA
MW-1	01/24/1996	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	2.12	35.84	NA
MW-1	07/12/1996	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	37.96	3.58	34.38	2.7

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**29 Wildwood Avenue**  
**Piedmont, CA**

Well ID	Date	TPPH (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)
MW-1	01/16/1997	120	14	10	3.6	14	<2.5	NA	37.96	2.30	35.66	3
MW-1	10/24/1997	<50	<0.50	<0.50	<0.50	<0.50	8.6	NA	37.96	3.66	34.30	4.5
MW-1	05/13/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	37.96	2.81	35.15	5.1
MW-1	10/01/1998	<50	<0.50c	<0.50c	<0.50c	<0.50c	<2.5c	NA	37.96	3.75	34.21	5.0
MW-1	04/29/1999	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	37.96	3.52	34.44	4.1
MW-1	11/01/1999	<50.0	<0.500	<0.500	<0.500	<0.500	5.03	NA	37.96	4.05	33.91	3.6
MW-1	04/05/2000	<50.0	<0.500	<0.500	<0.500	<0.500	3.22	NA	37.96	3.74	34.22	4.2
MW-1	10/30/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	37.96	2.19	35.77	4.1
MW-1	04/27/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	37.96	4.43	33.53	1.9
MW-1	10/31/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	37.96	4.34	33.62	2.4
MW-1	05/09/2002	Well inaccessible		NA	NA	NA	NA	NA	37.96	NA	NA	NA
MW-1	07/25/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	37.96	3.53	34.43	1.2
MW-1	10/23/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	40.94	3.68	37.26	3.5
MW-1	01/22/2003	Well inaccessible		NA	NA	NA	NA	NA	40.94	NA	NA	NA
MW-1	01/29/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	40.94	3.25	37.69	3.7
MW-1	04/30/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<5.0	40.94	2.76	38.18	3.6
<b>MW-1</b>	<b>07/14/2003</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>NA</b>	<b>1.4</b>	<b>40.94</b>	<b>3.15</b>	<b>37.79</b>	<b>0.5</b>
MW-2	07/12/1989	60	2.7	<1	<1	<3	NA	NA	34.89	3.66	31.23	NA
MW-2	01/30/1990	<50	6.6	<0.5	0.54	0.93	NA	NA	34.89	3.49	31.40	NA
MW-2	04/27/1990	60	2.1	<0.5	<0.5	<0.5	NA	NA	34.89	3.79	31.10	NA
MW-2	07/31/1990	70	1.5	<0.5	<0.5	<0.5	NA	NA	34.89	4.03	30.86	NA
MW-2	10/30/1990	70	<0.5	0.7	<0.5	1.6	NA	NA	34.89	4.21	30.68	NA
MW-2	01/31/1991	80	<0.5	<0.5	0.9	1.9	NA	NA	34.89	4.09	30.80	NA
MW-2	04/30/1991	100	5.9	0.6	0.7	2	NA	NA	34.89	3.95	30.94	NA
MW-2	07/30/1991	<50	<0.5	<0.7	<0.5	<0.5	NA	NA	34.89	4.07	30.82	NA
MW-2	10/29/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.89	4.11	30.78	NA

**WELL CONCENTRATIONS**  
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Well ID	Date	TPPH (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)
MW-2	01/20/1992	<30	0.84	<0.3	<0.41	<0.48	NA	NA	34.89	3.86	31.03	NA
MW-2	04/14/1992	70	16	<0.5	3.1	2.1	NA	NA	34.89	3.66	34.30	NA
MW-2	07/21/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.89	3.92	30.97	NA
MW-2	10/02/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.89	4.45	30.44	NA
MW-2	01/20/1993	<50	3.8	<0.5	0.52	<0.5	NA	NA	34.89	3.74	31.15	NA
MW-2	05/03/1993	680a	2.8	<0.5	<0.5	<0.5	NA	NA	34.89	3.77	31.12	0.9
MW-2	06/28/1993	NA	NA	NA	NA	NA	NA	NA	34.89	3.96	30.93	NA
MW-2	07/21/1993	<50	8	1.2	1.8	7.9	NA	NA	34.89	4.39	30.50	5.9
MW-2	10/19/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.89	3.92	30.97	5.7
MW-2	01/20/1994	<50	1.5	<0.5	<0.5	<0.5	NA	NA	34.89	4.45	30.44	3.2
MW-2	04/12/1994	<50	2.9	<0.5	<0.5	<0.5	NA	NA	34.89	4.72	30.17	11.4
MW-2	07/20/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.89	5.32	29.57	2.4
MW-2	10/06/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.89	4.03	30.86	2.9
MW-2	01/20/1995	290	28	<0.5	<0.5	<0.5	NA	NA	34.89	3.89	31.00	4.6
MW-2	07/06/1995	120	3	<0.5	<0.5	<0.5	NA	NA	34.89	8.84	26.05	NA
MW-2	01/24/1996	70	3.1	<0.5	0.8	1.5	NA	NA	34.89	3.80	31.09	NA
MW-2 (D)	01/24/1996	70	3.2	0.5	0.7	1.5	NA	NA	34.89	NA	NA	NA
MW-2	07/12/1996	<50	0.68	<0.5	<0.5	<0.5	270	NA	34.89	3.85	31.04	3.8
MW-2	01/16/1997	230	34	1.6	1.6	4.2	460	NA	34.89	3.84	31.05	NA
MW-2	10/24/1997	<50	<0.50	<0.50	<0.50	<0.50	54	NA	34.89	3.75	31.14	2.9
MW-2	05/13/1998	NA	NA	NA	NA	NA	NA	NA	34.89	3.78	31.11	NA
MW-2	10/01/1998	<50	<0.50c	<0.50c	<0.50c	<0.50c	100	NA	34.89	4.90	29.99	3.0
MW-2	04/29/1999	NA	NA	NA	NA	NA	NA	NA	34.89	4.69	30.20	NA
MW-2	11/01/1999	<50.0	<0.500	1.29	0.669	4.52	7.21	NA	34.89	5.24	29.65	2.9
MW-2	04/05/2000	376d	68.1d	3.10d	2.88d	5.35d	729d	NA	34.89	3.43	31.46	3.6
MW-2	10/30/2000	5,790	59.2	315	162	1320	346	NA	34.89	2.35	32.54	2.8
MW-2	04/27/2001	2,720	90.8	22.8	18.1	165	512	578	34.89	4.67	30.22	0.9

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**29 Wildwood Avenue**  
**Piedmont, CA**

Well ID	Date	TPPH (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)
MW-2	10/31/2001	<10,000	<100	<100	<100	<100	NA	<100	34.89	3.68	31.21	1.3
MW-2	05/09/2002	490	1.5	7.8	2.1	14	NA	200	34.89	3.18	31.71	1.1
MW-2	07/25/2002	1,200	1.0	3.3	1.3	8.3	NA	45	34.89	3.30	31.59	0.4
MW-2	10/23/2002	1,100	0.85	3.8	1.3	7.9	NA	140	37.87	3.87	34.00	0.8
MW-2	01/22/2003	730	<0.50	100	0.96	5.4	NA	230	37.87	2.68	35.19	1.5
MW-2	04/30/2003	<500	<5.0	23	<5.0	<10	NA	410	37.87	3.42	34.45	0.1
MW-2	07/14/2003	<800	1.2	59	1.4	9.8	NA	60	37.87	3.50	34.37	1.1

MW-3	07/12/1989	3,900	380	41	99	30	NA	NA	35.00	3.83	31.17	NA
MW-3	01/30/1990	5,500	440	35	79	130	NA	NA	35.00	3.24	31.76	NA
MW-3	04/27/1990	4,500	310	26	37	110	NA	NA	35.00	4.02	30.98	NA
MW-3	07/31/1990	3,500	210	17	8.4	62	NA	NA	35.00	4.31	30.69	NA
MW-3	10/30/1990	2,300	610	<0.5	<0.5	28	NA	NA	35.00	4.52	30.48	NA
MW-3	01/31/1991	4,100	300	20	19	81	NA	NA	35.00	4.33	30.67	NA
MW-3	04/30/1991	3,800	370	19	8.6	60	NA	NA	35.00	3.79	31.21	NA
MW-3	07/30/1991	3,300	160	13	15	87	NA	NA	35.00	4.37	30.63	NA
MW-3	10/29/1991	1,000	35	2.8	2.9	8.1	NA	NA	35.00	4.00	31.00	NA
MW-3	01/20/1992	6,900	380	18	47	48	NA	NA	35.00	3.87	31.13	NA
MW-3	04/14/1992	6,000	480	38	41	55	NA	NA	35.00	3.15	31.85	NA
MW-3	07/21/1992	3,700	330	13	30	23	NA	NA	35.00	4.17	30.83	NA
MW-3	10/02/1992	4,200	260	10	13	12	NA	NA	35.00	4.43	30.57	NA
MW-3	01/20/1993	4,200	360	15	32	26	NA	NA	35.00	2.20	32.80	NA
MW-3 (D)	01/20/1993	3,900	370	15	32	26	NA	NA	35.00	NA	NA	NA
MW-3	05/03/1993	12,000	290	520	120	620	NA	NA	35.00	3.50	31.50	0.6
MW-3	06/28/1993	NA	NA	NA	NA	NA	NA	NA	35.00	4.08	30.92	NA
MW-3	07/21/1993	2,000	170	12	<10	11	NA	NA	35.00	4.12	30.88	4.3
MW-3 (D)	07/21/1993	2,000	170	10	<10	14	NA	NA	35.00	NA	NA	NA

**WELL CONCENTRATIONS**  
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Well ID	Date	TPPH (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)
MW-3	10/19/1993	2,000	240	<0.5	<0.5	<0.5	NA	NA	35.00	4.20	30.80	5.7
MW-3	01/20/1994	4,200	280	<10	<10	<10	NA	NA	35.00	4.08	30.92	4.1
MW-3 (D)	01/20/1994	3,800	250	<10	<10	<10	NA	NA	35.00	NA	NA	4.1
MW-3	04/12/1994	4,700	380	<10	<10	<10	NA	NA	35.00	3.70	31.30	10.6
MW-3 (D)	04/12/1994	3,400	370	<25	<25	<25	NA	NA	35.00	NA	NA	NA
MW-3	07/20/1994	5,100	320	77	15	34	NA	NA	35.00	4.26	30.74	2.3
MW-3 (D)	07/20/1994	4,400	250	14	13	32	NA	NA	35.00	NA	NA	NA
MW-3	10/06/1994	4,300	280	9.7	4	15	NA	NA	35.00	4.31	30.69	2.3
MW-3	01/20/1995	4,600	180	18	16	10	NA	NA	35.00	3.00	32.00	11.1
MW-3 (D)	01/20/1995	4,300	170	12	15	7.2	NA	NA	35.00	NA	NA	NA
MW-3	07/06/1995	3,900	310	<0.5	7.6	13	NA	NA	35.00	3.75	31.25	NA
MW-3 (D)	07/06/1995	4,100	330	<0.5	7.9	2.4	NA	NA	35.00	NA	NA	NA
MW-3	01/24/1996	5,000	210	14	14	12	NA	NA	35.00	3.26	31.74	NA
MW-3	07/12/1996	2,700	210	<0.5	<0.5	<0.5	3,600	NA	35.00	3.77	31.23	2.4
MW-3 (D)	07/12/1996	2,800	210	<0.5	<0.5	<0.5	3,400	NA	35.00	NA	NA	2.4
MW-3	01/16/1997	4,200	130	19	10	34	4,400	4,600	35.00	2.38	32.62	2.3
MW-3	10/24/1997	4,100	270	9	5.1	8.8	2,000	NA	35.00	4.12	30.88	1.9
MW-3 (D)	10/24/1997	1,700	220	<5.0	<5.0	<5.0	1,500	NA	35.00	NA	NA	1.9
MW-3	05/13/1998	NA	NA	NA	NA	NA	NA	NA	35.00	3.22	31.78	NA
MW-3	10/01/1998	1,400	84c	<5.0c	<5.0c	<5.0c	2,300	NA	35.00	4.15	30.85	2.0
MW-3 (D)	10/01/1998	2,100	100c	<10c	<10c	<10c	2,600	NA	35.00	NA	NA	2.0
MW-3	04/29/1999	NA	NA	NA	NA	NA	NA	NA	35.00	4.27	30.73	NA
MW-3	11/01/1999	1,850	94.3	6.09	<5.00	6.67	4,140	NA	35.00	4.65	30.35	2.2
MW-3	04/05/2000	3,070	96.9	12.1	<10.0	<10.0	1,050	NA	35.00	3.50	31.50	2.7
MW-3	10/30/2000	1,570	56.8	1.91	1.39	3.06	572	524	35.00	3.40	31.60	3.1
MW-3	04/27/2001	2,420	103	12.6	<5.00	15.6	314	NA	35.00	3.67	31.33	0.9
MW-3	10/31/2001	<50	0.71	<0.50	<0.50	<0.50	NA	31	35.00	3.79	31.21	1.6

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Well ID	Date	TPPH (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)
MW-3	05/09/2002	2,000	52	<10	<10	<10	NA	4,100	35.00	3.76	31.24	0.9
MW-3	07/25/2002	1,800	50	<5.0	<5.0	<5.0	NA	1,900	35.00	4.17	30.83	3.7
MW-3	10/23/2002	1,700	27	<5.0	<5.0	<5.0	NA	1,400	37.97	4.36	33.61	1.6
MW-3	01/22/2003	1,800	38	2.4	1.5	2.4	NA	390	37.97	3.09	34.88	1.3
MW-3	04/30/2003	3,300	56	5.2	<5.0	<10	NA	540	37.97	3.39	34.58	1.5
MW-3	07/14/2003	1,000	20	2.7	<2.5	<5.0	NA	360	37.97	4.05	33.92	1.5
MW-4	01/30/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.50	29.23	NA
MW-4	04/27/1990	130a	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.62	30.11	NA
MW-4	07/31/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.19	29.54	NA
MW-4	10/30/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.19	29.54	NA
MW-4	01/31/1991	50a	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.49	29.24	NA
MW-4	04/30/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.02	29.71	NA
MW-4	07/30/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.39	29.34	NA
MW-4	10/29/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.75	29.98	NA
MW-4	01/20/1992	<30	<0.3	<0.3	<0.3	<0.3	NA	NA	33.73	3.94	29.79	NA
MW-4	04/14/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.71	30.02	NA
MW-4	07/21/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.02	29.71	NA
MW-4	10/02/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.13	29.60	NA
MW-4	01/20/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.10	30.63	NA
MW-4	05/03/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.70	30.03	1.7
MW-4	06/28/1993	NA	NA	NA	NA	NA	NA	NA	33.73	3.81	29.92	NA
MW-4	07/21/1993	<50	0.56	<0.5	<0.5	<0.5	NA	NA	33.73	3.81	29.92	4.5
MW-4	10/19/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.94	29.79	5.8
MW-4	01/20/1994	<50	0.71	<0.5	<0.5	<0.5	NA	NA	33.73	4.00	29.73	4.4
MW-4	04/12/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.01	29.72	7.3
MW-4	07/20/1994	160	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.91	29.82	6.4



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Well ID	Date	TPPH (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)
MW-4	10/06/1994	410	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.99	29.74	5.0
MW-4	01/20/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.56	30.17	4.9
MW-4	07/06/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.85	29.88	NA
MW-4	01/24/1996	<50	<0.5	<0.5	0.6	1.8	NA	NA	33.73	2.56	31.17	NA
MW-4	07/12/1996	<50	<0.5	<0.5	<0.5	<0.5	b	NA	33.73	3.36	30.37	2.7
MW-4	01/16/1997	Well inaccessible		NA	NA	NA	NA	NA	33.73	NA	NA	NA
MW-4	10/24/1997	Well inaccessible		NA	NA	NA	NA	NA	33.73	NA	NA	NA
MW-4	05/13/1998	Well inaccessible		NA	NA	NA	NA	NA	33.73	NA	NA	NA
MW-4	10/01/1998	<50	<0.50c	<0.50c	<0.50c	0.74c	8.1	NA	33.73	3.90	29.83	2.5
MW-4	04/29/1999	<50	<0.50	<0.50	<0.50	<0.50	5.7	NA	33.73	3.97	29.76	2.1
MW-4	11/01/1999	Well inaccessible		NA	NA	NA	NA	NA	33.73	NA	NA	NA
MW-4	04/05/2000	<50.0	<0.500	<0.500	<0.500	<0.500	3.64	NA	33.73	3.63	30.10	2.1
MW-4	10/30/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	33.73	3.33	30.40	3.0
MW-4	04/27/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	33.73	3.48	30.25	2.2
MW-4	10/31/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	33.73	3.58	30.15	2.8
MW-4	05/09/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	33.73	3.74	29.99	2.0
MW-4	07/25/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	33.73	3.71	30.02	1.3
MW-4	10/23/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	36.72	3.93	32.79	2.6
MW-4	01/22/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	36.72	3.67	33.05	3.1
MW-4	04/30/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<5.0	36.72	3.46	33.26	2.8
MW-4	07/14/2003	56 a	<0.50	<0.50	<0.50	<1.0	NA	<0.50	36.72	3.75	32.97	2.4
MW-5	01/30/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	7.12	24.26	NA
MW-5	04/27/1990	210a	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.19	27.19	NA
MW-5	07/31/1990	90	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.09	27.29	NA
MW-5	10/30/1990	100	0.8	0.7	0.6	1.4	NA	NA	31.38	4.39	26.99	NA
MW-5	01/31/1991	80a	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.49	26.89	NA

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Well ID	Date	TPPH (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)
MW-5	04/30/1991	90	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.27	27.11	NA
MW-5	07/30/1991	90	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.32	27.06	NA
MW-5	10/29/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	3.79	27.59	NA
MW-5	01/20/1992	<30	<0.3	<0.3	<0.3	<0.3	NA	NA	31.38	4.09	27.29	NA
MW-5	04/14/1992	<50a	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.12	27.26	NA
MW-5	07/21/1992	74a	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.13	27.25	NA
MW-5	10/02/1992	76a	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.30	27.08	NA
MW-5	01/20/1993	72a	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	3.12	28.26	NA
MW-5	05/03/1993	70a	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.07	27.31	1.6
MW-5 (D)	05/04/1993	80a	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	NA	NA	NA
MW-5	06/28/1993	NA	NA	NA	NA	NA	NA	NA	31.38	4.08	27.30	NA
MW-5	07/21/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.05	27.33	3.5
MW-5	10/19/1993	51	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.20	27.18	3.8
MW-5	01/20/1994	90	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.40	26.98	4.2
MW-5	04/12/1994	67	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.18	27.20	NA
MW-5	07/20/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.06	27.32	3.2
MW-5	10/06/1994	80	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.01	27.37	2.1
MW-5 (D)	10/06/1994	60	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	NA	NA	NA
MW-5	01/20/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	3.49	27.89	3.2
MW-5	07/06/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.06	27.32	NA
MW-5	01/24/1996	70	<0.5	<0.5	0.8	2.9	NA	NA	31.38	2.90	28.48	NA
MW-5	07/12/1996	62	<0.5	<0.5	<0.5	<0.5	b	NA	31.38	4.02	27.36	1.9
MW-5	01/16/1997	66	0.91	0.89	<0.50	1.7	<2.5	NA	31.38	2.59	28.79	2.2
MW-5 (D)	01/16/1997	<50	0.7	0.78	<0.50	1.3	<2.5	NA	31.38	NA	NA	2.2
MW-5	10/24/1997	59	<0.50	<0.50	<0.50	<0.50	17	NA	31.38	4.15	27.23	4.6
MW-5	05/13/1998	72	<0.50	<0.50	<0.50	<0.50	<2.5	NA	31.38	3.64	27.74	2.1
MW-5 (D)	05/13/1998	70	<0.50	<0.50	<0.50	<0.50	<2.5	NA	31.38	NA	NA	2.1

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Well ID	Date	TPPH (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)
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MW-5	10/01/1998	57	<0.50c	<0.50c	<0.50c	0.62c	20	NA	31.38	4.25	27.13	2.2
MW-5	04/29/1999	<50	<0.50	<0.50	<0.50	<0.50	16	NA	31.38	4.56	26.82	2.0
MW-5	11/01/1999	<50.0	<0.500	<0.500	<0.500	<0.500	3.06	NA	31.38	4.19	27.19	2.2
MW-5	04/05/2000	<50.0	<0.500	<0.500	<0.500	<0.500	22.5	NA	31.38	4.34	27.04	2.2
MW-5	10/30/2000	<50.0	<0.500	<0.500	<0.500	<0.500	19.3	NA	31.38	3.25	28.13	4.0
MW-5	04/27/2001	51.5	<0.500	<0.500	<0.500	<0.500	4.29	NA	31.38	4.07	27.31	1.0
MW-5	10/31/2001	210	<0.50	<0.50	<0.50	<0.50	NA	<5.0	31.38	4.02	27.36	1.5
MW-5	05/09/2002	280	0.71	<0.50	<0.50	<0.50	NA	<5.0	31.38	4.31	27.07	1.7
MW-5	07/25/2002	410	<0.50	<0.50	<0.50	<0.50	NA	<5.0	31.38	4.32	27.06	0.7
MW-5	10/23/2002	290	<0.50	<0.50	<0.50	<0.50	NA	<0.50	34.36	4.37	29.99	2.3
MW-5	01/22/2003	260	<0.50	<0.50	<0.50	<0.50	NA	<5.0	34.36	4.12	30.24	2.4
MW-5	04/30/2003	90 e	<0.50	<0.50	<0.50	<1.0	NA	<5.0	34.36	3.88	30.48	1.5
MW-5	07/14/2003	72 a	<0.50	<0.50	<0.50	<1.0	NA	<0.50	34.36	4.57	29.79	1.0

E-4	07/12/1989	<50	<0.5	<1	<1	<3	NA	NA	34.63	NA	>39.13	NA
E-4	01/30/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	04/27/1990	120a	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	07/31/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	10/30/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	01/31/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	04/30/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	07/30/1991	<50	<0.5	0.6	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	10/29/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	01/20/1992	<30	<0.3	<0.3	<0.3	<0.3	NA	NA	34.63	NA	>34.63	NA
E-4	04/14/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	07/21/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	10/02/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**29 Wildwood Avenue**  
**Piedmont, CA**

Well ID	Date	TPPH (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)
E-4	01/20/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	05/03/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	0.6
E-4	06/28/1993	NA	NA	NA	NA	NA	NA	NA	34.63	NA	>34.63	NA
E-4	07/21/1993	<50	5.4	0.72	1	4.4	NA	NA	34.63	NA	>34.63	5.4
E-4	10/19/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	5.6
E-4	01/20/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	04/12/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	9.4
E-4	07/20/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	2.0
E-4	10/06/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	1.3
E-4	01/20/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	3.7
E-4	05/16/1995	Well abandoned		NA	NA	NA	NA	NA	NA	NA	NA	NA

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to October 31, 2001, analyzed by EPA Method 8015.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to October 31, 2001, analyzed by EPA Method 8020.

MTBE = Methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

SPH = Separate-Phase Hydrocarbons

GW = Groundwater

DO = Dissolved Oxygen

ug/L = Parts per billion

ppm = Parts per million

MSL = Mean sea level

ft = Feet

<n = Below detection limit

D = Duplicate sample

NA = Not applicable

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**29 Wildwood Avenue**  
**Piedmont, CA**

Well ID	Date	TPPH (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 = Chromatogram pattern indicated an unidentified hydrocarbon/ hydrocarbon reported does not match pattern of laboratory's standard.

b = Due to coelution with early eluters, no result could be determined for MTBE

c = Laboratory reported 1.3 ug/L benzene, 11 ug/L toluene, 0.98 ug/L ethyl benzene, and 6.5 ug/L total xylenes in the equipment blank.

d = Result reported was generated out of hold time.

e = Hydrocarbon reported in the gasoline range does not match STL's gasoline standard.

Well E-4 is a flowing artesian well; potentiometric surface above top-of-casing elevation.

Site surveyed March 5, 2002, by Virgil Chavez Land Surveying of Vallejo, California.

**Blaine Tech Services, Inc.**

July 28, 2003

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Attn.: Leon Gearhart  
Project#: 030714-SS2  
Project: 98995822  
Site: 29 Wildwood Avenue, Piedmont

Dear Mr. Gearhart,

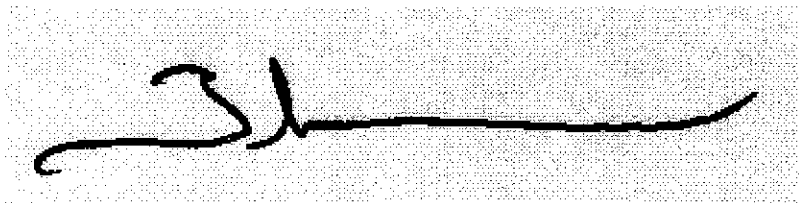
Attached is our report for your samples received on 07/15/2003 16:23  
This report has been reviewed and approved for release. Reproduction of this report  
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after  
08/29/2003 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](mailto:tgranicher@stl-inc.com)

Sincerely,



Tod Granicher  
Project Manager

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771Project: 030714-SS2  
98995822

Received: 07/15/2003 16:23

Site: 29 Wildwood Avenue, Piedmont

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
MW-1	07/14/2003 13:00	Water	1
MW-2	07/14/2003 13:08	Water	2
MW-3	07/14/2003 13:15	Water	3
MW-4	07/14/2003 12:00	Water	4
MW-5	07/14/2003 12:20	Water	5

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

08/18/2003 12:48

Page 1 of 13

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

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

Project: 030714-SS2

98995822

Received: 07/15/2003 16:23

Site: 29 Wildwood Avenue, Piedmont

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-1	Lab ID:	2003-07-0443 - 1
Sampled:	07/14/2003 13:00	Extracted:	7/23/2003 20:28
Matrix:	Water	QC Batch#:	2003/07/23-1B.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/23/2003 20:28	
Benzene	ND	0.50	ug/L	1.00	07/23/2003 20:28	
Toluene	ND	0.50	ug/L	1.00	07/23/2003 20:28	
Ethylbenzene	ND	0.50	ug/L	1.00	07/23/2003 20:28	
Total xylenes	ND	1.0	ug/L	1.00	07/23/2003 20:28	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	07/23/2003 20:28	
Methyl tert-butyl ether (MTBE)	1.4	0.50	ug/L	1.00	07/23/2003 20:28	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	07/23/2003 20:28	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	07/23/2003 20:28	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	07/23/2003 20:28	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	94.1	76-130	%	1.00	07/23/2003 20:28	
Toluene-d8	101.5	78-115	%	1.00	07/23/2003 20:28	



**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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

Project: 030714-SS2  
98995822

Received: 07/15/2003 16:23

Site: 29 Wildwood Avenue, Piedmont

Prep(s): 5030B	Test(s): 8260FAB
Sample ID: MW-2	Lab ID: 2003-07-0443 - 2
Sampled: 07/14/2003 13:08	Extracted: 7/23/2003 21:57 7/24/2003 23:49 7/24/2003 23:49
Matrix: Water	QC Batch#: 2003/07/23-02.65 2003/07/23-02.65 2003/07/24-02.64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	800	50	ug/L	1.00	07/24/2003 23:49	
Benzene	1.2	0.50	ug/L	1.00	07/24/2003 23:49	
Toluene	59	0.50	ug/L	1.00	07/24/2003 23:49	
Ethylbenzene	1.4	0.50	ug/L	1.00	07/24/2003 23:49	
Total xylenes	9.8	1.0	ug/L	1.00	07/24/2003 23:49	
tert-Butyl alcohol (TBA)	8.6	5.0	ug/L	1.00	07/24/2003 23:49	
Methyl tert-butyl ether (MTBE)	60	0.50	ug/L	1.00	07/24/2003 23:49	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	07/24/2003 23:49	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	07/24/2003 23:49	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	07/24/2003 23:49	
Ethanol	7000	1000	ug/L	20.00	07/23/2003 21:57	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	107.7	76-130	%	1.00	07/24/2003 23:49	
1,2-Dichloroethane-d4	102.0	76-130	%	1.00	07/23/2003 21:57	
Toluene-d8	103.4	78-115	%	1.00	07/24/2003 23:49	
Toluene-d8	105.1	78-115	%	1.00	07/23/2003 21:57	

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

08/18/2003 12:48

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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 Project: 030714-SS2  
 98995822

Received: 07/15/2003 16:23

Site: 29 Wildwood Avenue, Piedmont

Prep(s): 5030B	Test(s): 8260FAB
Sample ID: MW-3	Lab ID: 2003-07-0443-3
Sampled: 07/14/2003 13:15	Extracted: 7/23/2003 22:20
Matrix: Water	QC Batch#: 2003/07/23-02.65
Analysis Flag: o ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	1000	250	ug/L	5.00	07/23/2003 22:20	
Benzene	20	2.5	ug/L	5.00	07/23/2003 22:20	
Toluene	2.7	2.5	ug/L	5.00	07/23/2003 22:20	
Ethylbenzene	ND	2.5	ug/L	5.00	07/23/2003 22:20	
Total xylenes	ND	5.0	ug/L	5.00	07/23/2003 22:20	
tert-Butyl alcohol (TBA)	72	25	ug/L	5.00	07/23/2003 22:20	
Methyl tert-butyl ether (MTBE)	360	2.5	ug/L	5.00	07/23/2003 22:20	
Di-isopropyl Ether (DIPE)	ND	10	ug/L	5.00	07/23/2003 22:20	
Ethyl tert-butyl ether (ETBE)	ND	10	ug/L	5.00	07/23/2003 22:20	
tert-Amyl methyl ether (TAME)	ND	10	ug/L	5.00	07/23/2003 22:20	
Ethanol	ND	250	ug/L	5.00	07/23/2003 22:20	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	101.2	76-130	%	5.00	07/23/2003 22:20	
Toluene-d8	103.5	78-115	%	5.00	07/23/2003 22:20	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 030714-SS2  
98995822

Received: 07/15/2003 16:23

Site: 29 Wildwood Avenue, Piedmont

Prep(s): 5030B	Test(s): 8260FAB
Sample ID: MW-4	Lab ID: 2003-07-0443 - 4
Sampled: 07/14/2003 12:00	Extracted: 7/23/2003 22:42
Matrix: Water	QC Batch#: 2003/07/23-02 65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	56	50	ug/L	1.00	07/23/2003 22:42	g
Benzene	ND	0.50	ug/L	1.00	07/23/2003 22:42	
Toluene	ND	0.50	ug/L	1.00	07/23/2003 22:42	
Ethylbenzene	ND	0.50	ug/L	1.00	07/23/2003 22:42	
Total xylenes	ND	1.0	ug/L	1.00	07/23/2003 22:42	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	07/23/2003 22:42	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	07/23/2003 22:42	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	07/23/2003 22:42	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	07/23/2003 22:42	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	07/23/2003 22:42	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	119.0	76-130	%	1.00	07/23/2003 22:42	
Toluene-d8	103.7	78-115	%	1.00	07/23/2003 22:42	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 030714-SS2

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Received: 07/15/2003 16:23

Site: 29 Wildwood Avenue, Piedmont

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-5	Lab ID:	2003-07-0443 - 6
Sampled:	07/14/2003 12:20	Extracted:	7/23/2003 15:04
Matrix:	Water	QC Batch#:	2003/07/23-1B 65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	72	50	ug/L	1.00	07/23/2003 15:04	g
Benzene	ND	0.50	ug/L	1.00	07/23/2003 15:04	
Toluene	ND	0.50	ug/L	1.00	07/23/2003 15:04	
Ethylbenzene	ND	0.50	ug/L	1.00	07/23/2003 15:04	
Total xylenes	ND	1.0	ug/L	1.00	07/23/2003 15:04	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	07/23/2003 15:04	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	07/23/2003 15:04	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	07/23/2003 15:04	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	07/23/2003 15:04	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	07/23/2003 15:04	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	118.9	76-130	%	1.00	07/23/2003 15:04	
Toluene-d8	101.9	78-115	%	1.00	07/23/2003 15:04	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 030714-SS2  
98995822

Received: 07/15/2003 16:23

Site: 29 Wildwood Avenue, Piedmont

Batch QC Report					
Prep(s): 5030B			Test(s): 8260FAB		
Method Blank			Water		
MB: 2003/07/23-02.65-035			QC Batch # 2003/07/23-02.65		
			Date Extracted: 07/23/2003 21:35		
Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/23/2003 21:35	
Benzene	ND	0.5	ug/L	07/23/2003 21:35	
Toluene	ND	0.5	ug/L	07/23/2003 21:35	
Ethylbenzene	ND	0.5	ug/L	07/23/2003 21:35	
Total xylenes	ND	1.0	ug/L	07/23/2003 21:35	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	07/23/2003 21:35	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/23/2003 21:35	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	07/23/2003 21:35	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	07/23/2003 21:35	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	07/23/2003 21:35	
Ethanol	ND	50	ug/L	07/23/2003 21:35	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	92.5	76-130	%	07/23/2003 21:35	
Toluene-d8	105.1	78-115	%	07/23/2003 21:35	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

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

Project: 030714-SS2  
98995822

Received: 07/15/2003 16:23

Site: 29 Wildwood Avenue, Piedmont

Batch QC Report					
Prep(s): 5030B		Water		Test(s): 8260FAB	
Method Blank				QC Batch # 2003/07/23-1B.65	
MB: 2003/07/23-1B.65-029				Date Extracted: 07/23/2003 10:29	

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/23/2003 10:29	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	07/23/2003 10:29	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/23/2003 10:29	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	07/23/2003 10:29	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	07/23/2003 10:29	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	07/23/2003 10:29	
Benzene	ND	0.5	ug/L	07/23/2003 10:29	
Toluene	ND	0.5	ug/L	07/23/2003 10:29	
Ethylbenzene	ND	0.5	ug/L	07/23/2003 10:29	
Total xylenes	ND	1.0	ug/L	07/23/2003 10:29	
Ethanol	ND	50	ug/L	07/23/2003 10:29	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	93.3	76-130	%	07/23/2003 10:29	
Toluene-d8	101.7	78-115	%	07/23/2003 10:29	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

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Project: 030714-SS2  
98995822

Received: 07/15/2003 16:23

Site: 29 Wildwood Avenue, Piedmont

Batch QC Report					
Prep(s): 5030B		Water		Test(s): 8260FAB	
Method Blank				QC Batch # 2003/07/24-02.64	
MB: 2003/07/24-02.64-020				Date Extracted: 07/24/2003 22:20	
Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/24/2003 22:20	
Benzene	ND	0.5	ug/L	07/24/2003 22:20	
Toluene	ND	0.5	ug/L	07/24/2003 22:20	
Ethylbenzene	ND	0.5	ug/L	07/24/2003 22:20	
Total xylenes	ND	1.0	ug/L	07/24/2003 22:20	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	07/24/2003 22:20	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/24/2003 22:20	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	07/24/2003 22:20	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	07/24/2003 22:20	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	07/24/2003 22:20	
Ethanol	ND	50	ug/L	07/24/2003 22:20	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	102.4	76-130	%	07/24/2003 22:20	
Toluene-d8	105.0	78-115	%	07/24/2003 22:20	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 030714-SS2  
98995822

Received: 07/15/2003 16:23

Site: 29 Wildwood Avenue, Piedmont

Batch QC Report			
Prep(s): 5030B		Test(s): 8260FAB	
<b>Laboratory Control Spike</b>		<b>Water</b>	<b>QC Batch # 2003/07/23-02.65</b>
LCS	2003/07/23-02.65-051	Extracted: 07/23/2003	Analyzed: 07/23/2003 20:51
LCSD	2003/07/23-02.65-013	Extracted: 07/23/2003	Analyzed: 07/23/2003 21:13

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	19.8	19.3	25.0	79.2	77.2	2.6	69-129	20		
Toluene	19.8	19.9	25.0	79.2	79.6	0.5	70-130	20		
Methyl tert-butyl ether (MTBE)	18.5	18.1	25.0	74.0	72.4	2.2	65-165	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	490	478	500	98.0	95.6		76-130			
Toluene-d8	525	526	500	105.0	105.2		78-115			



**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 030714-SS2  
98995822

Received: 07/15/2003 16:23

Site: 29 Wildwood Avenue, Piedmont

Batch QC Report									
Prep(s): 5030B					Test(s): 8260FAB				
Laboratory Control Spike			Water			QC Batch # 2003/07/23-1B.65			
LCS	2003/07/23-1B.65-044		Extracted: 07/23/2003			Analyzed: 07/23/2003 09:44			
LCSD	2003/07/23-1B.65-006		Extracted: 07/23/2003			Analyzed: 07/23/2003 10:06			

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	18.4	20.2	25	73.6	80.8	9.3	65-165	20		
Benzene	21.7	21.9	25	86.8	87.6	0.9	69-129	20		
Toluene	21.8	22.2	25	87.2	88.8	1.8	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	467	472	500	93.4	94.4		76-130			
Toluene-d8	531	502	500	106.2	100.4		78-115			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

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

Project: 030714-SS2

98995822

Received: 07/15/2003 16:23

Site: 29 Wildwood Avenue, Piedmont

Batch QC Report			
Prep(s): 5030B		Test(s): 8260FAB	
<b>Laboratory Control Spike</b>		<b>Water</b>	<b>QC Batch # 2003/07/24-02.64</b>
LCS	2003/07/24-02.64-036	Extracted: 07/24/2003	Analyzed: 07/24/2003 21:36
LCSD	2003/07/24-02.64-058	Extracted: 07/24/2003	Analyzed: 07/24/2003 21:58

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	19.4	19.7	25.0	77.6	78.8	1.5	69-129	20		
Toluene	20.4	20.8	25.0	81.6	83.2	1.9	70-130	20		
Methyl tert-butyl ether (MTBE)	23.2	24.5	25.0	92.8	98.0	5.5	65-165	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	541	545	500	108.2	109.0		76-130			
Toluene-d8	534	523	500	106.8	104.6		78-115			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

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

Project: 030714-SS2

98995822

Received: 07/15/2003 16:23

Site: 29 Wildwood Avenue, Piedmont

**Legend and Notes**

**Analysis Flag**

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.

**FIELD SHIPMENT OR CUSTODY RECORD**

7/10/04

Lab identification (if necessary):  
 Address:  
 City, State, Zip:

Shell Project Manager to be Invoiced:  
**Karen Petryna**  
2003-07-0443

INCIDENT NUMBER (S&E ONLY)							
9	8	9	9	5	8	2	2
SAP or CRMT NUMBER (TS/CRMT)							
[REDACTED]							

DATE: 7/14/03  
 PAGE: 1 of 1

SAMPLING COMPANY: <b>Blaine Tech Services</b>		LOG CODE: <b>BTSS</b>	SITE ADDRESS (Street and City): <b>29 Wildwood Avenue, Piedmont</b>		SCAR ID NO: <b>T0600101246</b>
ADDRESS: <b>1680 Rogers Avenue, San Jose, CA 95112</b>		EDF DELIVERABLE TO (Responsible Party or Director): <b>Anni Kraml</b>	PHONE NO: <b>510-420-3335</b>	E-MAIL: <b>ShellOaklandEDF@cambria-env.com</b>	CONSULTANT PROJECT NO: <b>STS # 030714-SS2</b>
PROJECT CONTACT (Address, Name & Report ID): <b>Leon Gearhart</b>		SAMPLER NAME(S) (CRMT): <b>SUCCEEDON SUNKS</b>		LAB USE ONLY	
TELEPHONE: <b>408-573-0555</b>	FAX: <b>408-573-7771</b>	E-MAIL: <b>lgearhart@blainetech.com</b>		LAB USE ONLY	

TURNAROUND TIME (BUSINESS DAYS):  
 10 DAYS  5 DAYS  72 HOURS  48 HOURS  24 HOURS  LESS THAN 24 HOURS

LA - RIVQCB REPORT FORMAT  LIST AGENCY

GC/MS MTBE CONFIRMATION: HIGHEST \_\_\_\_\_ HIGHEST per BOREING \_\_\_\_\_ ALL \_\_\_\_\_

SPECIAL INSTRUCTIONS OR NOTES: \_\_\_\_\_ CHECK BOX IF EDD IS NOT NEEDED

**REQUESTED ANALYSIS**

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (102-1B - Spubb RL)	MTBE (F360B - 0.5ppb RL)	Oxygenates (S) by (F260B)	Ethanol (F269B)	Methanol	1,2-DCA (F260B)	EDB (F266B)	TPH - Diesel, Extractable (R015m)													FIELD NOTES:		
		DATE	TIME																									Container/Preservative or PID Readings or Laboratory Notes		
	MW-1	7/14/03	1300	GW	3	X	X			X																				Container/Preservative or PID Readings or Laboratory Notes
	MW-2	↓	1308	↓	↓	X	X			X																				4.7°C
	MW-3	↓	1315	↓	↓	X	X			X																				TEMPERATURE ON RECEIPT CV
	MW-4	↓	1200	↓	↓	X	X			X																				
	MW-5	↓	1220	↓	↓	X	X			X																				

Relinquished by (Signature): <i>[Signature]</i>	Received by (Signature): <i>Alex Tabo (12)</i>	Date: <u>7/15/03</u>	Time: <u>1623</u>
Relinquished by (Signature): <i>Alex Tabo (12)</i>	Received by (Signature): <i>[Signature]</i> STS ST	Date: <u>7/15/03</u>	Time: <u>17:30</u>
Relinquished by (Signature):	Received by (Signature):	Date:	Time:

## WELL GAUGING DATA

Project # 030714-552 Date 7/14/03 Client 98995822

Site 29 WILLOWOOD AVE. PIEDMONT

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
MW-1	4					3.15	13.07	↓
MW-2	4					3.50	11.40	
MW-3	4					4.05	8.95	
MW-4	4					3.25	13.08	
MW-5	4					4.57	15.98	
GANGED w/ ORC IN MW								

### SHELL WELL MONITORING DATA SHEET

BTS #: <u>030714-552</u>	Site: <u>98995822</u>
Sampler: <u>socch</u>	Date: <u>7/19/03</u>
Well I.D.: <u>MW-1</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): <u>13.01</u>	Depth to Water (DTW): <u>3.15</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>5.13</u>	

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

6.5 (Gals.) X 3 = 19.5 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 <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or <u>μS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
<u>1232</u>	<u>71.0</u>	<u>6.9</u>	<u>718</u>	<u>22</u>	<u>6.5</u>	<u>clear</u>
<u>1233</u>	<u>69.5</u>	<u>6.8</u>	<u>746</u>	<u>15</u>	<u>13.0</u>	"
<u>well dewatered @ 13 gal.</u>						<u>DTW = 10.00</u>
<u>1300</u>	<u>72.3</u>	<u>7.0</u>	<u>801</u>	<u>&gt;200</u>	-----	<u>MEB00</u>

Did well dewater? Yes No      Gallons actually evacuated: 13

Sampling Date: 7/19/03      Sampling Time: 1300      Depth to Water: 3.95

Sample I.D.: MW-1      Laboratory: STL Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: OXY'S (5) at 8260

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	<u>Post-purge:</u>	mg/L
				<u>0.5</u>
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>030714-552</u>	Site: <u>98995822</u>
Sampler: <u>secht</u>	Date: <u>7/19/03</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>(4)</u> 6 8 <u>   </u>
Total Well Depth (TD): <u>11.40</u>	Depth to Water (DTW): <u>3.50</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): <u>(YSI)</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>5.08</u>	

Purge Method: <u>Bailer</u>	Water: <u>Peristaltic</u>	Sampling Method: <u>(Bailer)</u>
Disposable Bailer	Peristaltic	Disposable Bailer
Positive Air Displacement	Extraction Pump	Extraction Port
<u>Electric Submersible</u>	Other: _____	Dedicated Tubing
		Other: _____

$\frac{5.1 \text{ (Gals.)} \times 3}{\text{I Case Volume Specified Volumes}} = \frac{15.3 \text{ Gals.}}{\text{Calculated Volume}}$	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multplier</th> <th>Well Diameter</th> <th>Multplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> + 0.163</td> </tr> </tbody> </table>	Well Diameter	Multplier	Well Diameter	Multplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> + 0.163
Well Diameter	Multplier	Well Diameter	Multplier														
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 <u>(µS)</u> )	Turbidity (NTUs)	Gals. Removed	Observations
<u>1244</u>	<u>74.7</u>	<u>5.9</u>	<u>2650</u>	<u>&gt;200</u>	<u>5.1</u>	<u>grey / MICRO GAS</u>
<u>WELL DEWATERED @</u>			<u>5.1 gal.</u>			<u>DTW = 9.00</u>
<u>1308</u>	<u>75.8</u>	<u>6.6</u>	<u>2713</u>	<u>&gt;200</u>	<u>   </u>	<u>grey</u>

Did well dewater? <u>(Yes)</u> No	Gallons actually evacuated: <u>5.1</u>	
Sampling Date: <u>7/19/03</u>	Sampling Time: <u>1308</u>	Depth to Water: <u>9.20 @ SITE DEPART.</u>
Sample I.D.: <u>MW-2</u>	Laboratory: <u>(STL)</u> Other: _____	
Analyzed for: <u>(TPH-G BTEX)</u> MTBE TPH-D Other: <u>oxy's (5) at R260</u>		
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: <u>1.1</u> mg/L	
O.R.P. (if req'd): Pre-purge: _____ mV	Post-purge: _____ mV	

**Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (800) 545-7558**

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>030714-557</u>	Site: <u>98995822</u>
Sampler: <u>secht</u>	Date: <u>7/14/03</u>
Well I.D.: <u>MW-3</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth (TD): <u>8.95</u>	Depth to Water (DTW): <u>4.05</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): <u>(YSI)</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>5.03</u>	

Purge Method: <u>Bailer</u>	Water: <u>Peristaltic</u>	Sampling Method: <u>Bailer</u>
<u>Disposable Bailer</u>	<u>Extraction Pump</u>	<u>Disposable Bailer</u>
<u>Positive Air Displacement</u>	Other: _____	<u>Extraction Port</u>
<u>Electric Submersible</u>		<u>Dedicated Tubing</u>
		Other: _____

$\frac{3.2 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = \frac{9.6}{\text{Calculated Volume}} \text{ Gals.}$	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or (IS))	Turbidity (NTUs)	Gals. Removed	Observations
<u>1255</u>	<u>75.8</u>	<u>8.7</u>	<u>1199</u>	<u>&gt;200</u>	<u>3.5</u>	<u>Brown / cloudy</u>
<u>WELL DEWATERED @</u>			<u>3.5 gal.</u>			<u>DTW = 5.93</u>
<u>1315</u>	<u>77.7</u>	<u>7.8</u>	<u>1146</u>	<u>&gt;200</u>	<u>—</u>	<u>TURBID</u>

Did well dewater? (Yes) No      Gallons actually evacuated: 3.5

Sampling Date: 7/14/03      Sampling Time: 1315      Depth to Water: 4.22

Sample I.D.: MW-3      Laboratory: (STL) Other: \_\_\_\_\_

Analyzed for: (TPH-G BTEX) MTBE TPH-D Other: oxy's (5) at 8260

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: 1.5) mg/L

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



## SHELL WELL MONITORING DATA SHEET

BTS #: <u>030714-557</u>	Site: <u>98995822</u>
Sampler: <u>SOECLT</u>	Date: <u>7/19/03</u>
Well I.D.: <u>MW-4</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth (TD): <u>13.08</u>	Depth to Water (DTW): <u>3.75</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): <u>(YSI)</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>5.62</u>	

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

$\frac{6.1 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = 18.3 \text{ Gals.}$ <p style="font-size: small; margin: 0;">1 Case Volume      Specified Volumes      Calculated Volume</p>	<table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </table>	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
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														

Time	Temp (°F)	pH	Cond. (mS or <u>(µS)</u> )	Turbidity (NTUs)	Gals. Removed	Observations
<u>1156</u>	<u>73.4</u>	<u>7.0</u>	<u>500<del>#</del></u>	<u>87</u>	<u>6.1</u>	<u>clear</u>
<u>1157</u>	<u>WELL DEWATERED @ 6.5 gal.</u>					<u>DTW = 10.01</u>
<u>1200</u>	<u>73.5</u>	<u>7.0</u>	<u>478</u>	<u>&gt; 200</u>	<u>---</u>	<u>cloudy</u>

Did well dewater? (Yes) No      Gallons actually evacuated: 6.5

Sampling Date: 7/19/03      Sampling Time: 1200      Depth to Water: 9.90 (TRAFIC)

Sample I.D.: MW-4      Laboratory: (STL) Other \_\_\_\_\_

Analyzed for: (TPH-G BTEX) MTBE TPH-D      Other: oxy's(S) at 8260

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: <u>(2.4)</u>	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

**Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (800) 545-7558**

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>030714-552</u>	Site: <u>98995822</u>
Sampler: <u>SOECH</u>	Date: <u>7/14/03</u>
Well I.D.: <u>MW-5</u>	Well Diameter: 2 3 <u>(4)</u> 6 8 _____
Total Well Depth (TD): <u>15.98</u>	Depth to Water (DTW): <u>4.57</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): <u>(YSI)</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>6.85</u>	

Purge Method: Bailer Disposable Bailer Positive Air Displacement <u>Electric Submersible</u>	Water: Peristaltic Extraction Pump Other: _____	Sampling Method: <u>(Bailer)</u> Disposable Bailer Extraction Port Dedicated Tubing Other: _____
---	---	--

$\frac{7.4 \text{ (Gals.)} \times 3}{1 \text{ Case Volume Specified Volumes}} = \frac{22.2 \text{ Gals.}}{\text{Calculated Volume}}$	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </table>	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
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														

Time	Temp (°F)	pH	Cond. (mS or <u>(µS)</u> )	Turbidity (NTUs)	Gals. Removed	Observations
<u>1212</u>	<u>71.8</u>	<u>7.0</u>	<u>719</u>	<u>17</u>	<u>7.5</u>	<u>CLEAR</u>
<u>1214</u>	<u>70.8</u>	<u>6.9</u>	<u>749</u>	<u>11</u>	<u>15.0</u>	"
<u>1216</u>	<u>71.5</u>	<u>6.9</u>	<u>757</u>	<u>11</u>	<u>22.5</u>	"

Did well dewater? Yes <u>(No)</u>	Gallons actually evacuated: <u>22.5</u>
Sampling Date: <u>7/14/03</u>	Sampling Time: <u>1220</u> Depth to Water: <u>7.39 (Traffic)</u>
Sample I.D.: <u>MW-5</u>	Laboratory: <u>(STL)</u> Other: _____
Analyzed for: <u>(TPH-G BTEX)</u> MTBE TPH-D Other: <u>oxy's (5) at 8260</u>	
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	<u>(Post-purge): 1.0</u> mg/L
O.R.P. (if req'd): Pre-purge: _____ mV	Post-purge: _____ mV