

RO 303



**Shell Oil Products US**

August 28, 2003

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

**Subject: Shell-branded Service Station**  
230 West MacArthur Boulevard  
Oakland, California

Dear Ms. Drogos:

Attached for your review and comment is a copy of the *Second 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**

A handwritten signature in cursive script that reads "Karen Petryna".

Karen Petryna  
Sr. Environmental Engineer

August 28, 2003

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

Re: **Second Quarter 2003 Monitoring Report**  
Shell-branded Service Station  
230 West MacArthur Boulevard  
Oakland, California  
Incident # 98995741  
Cambria Project # 245-0902-002



Dear Ms. Drogos:

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

## **SECOND QUARTER 2003 ACTIVITIES**

**Groundwater Monitoring:** Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged and sampled all site wells, calculated groundwater elevations, and compiled the analytical data. Cambria attempted to coordinate groundwater monitoring with the adjacent Oakland Auto Works site at 240 West MacArthur; however, the adjacent site was not sampled in the second quarter. Cambria prepared a site vicinity map which includes previously submitted well survey information (Figure 1) and a groundwater elevation contour map (Figure 2). Blaine's report, presenting the analytical laboratory reports, is included as Attachment A.

## **ANTICIPATED THIRD QUARTER 2003 ACTIVITIES**

**Groundwater Monitoring:** The third quarter sampling event is scheduled for September 2003. At that time, Blaine will gauge all wells, sample selected wells, and tabulate the data. Cambria will again attempt to coordinate monitoring with the adjacent Oakland Auto Works site at 240 West MacArthur Boulevard. Cambria will prepare a monitoring report that includes a groundwater contour map based on the coordinated monitoring data.

**Cambria  
Environmental  
Technology, Inc.**

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

**Subsurface Investigation Work Plan:** Cambria's October 31, 2002 *Sensitive Receptor Survey, Conduit Study Report and Subsurface Investigation Work Plan* included a work plan to investigate whether hydrocarbon-impacted groundwater has migrated off site in the direction of the sanitary sewer line in West Mac Arthur Boulevard. Proposed boring locations are shown on Figure 2. Cambria awaits written approval of the work plan from Alameda County Health Care Services Agency before proceeding with permitting and scheduling.

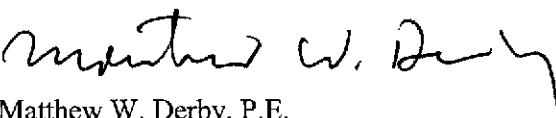
**CLOSING**

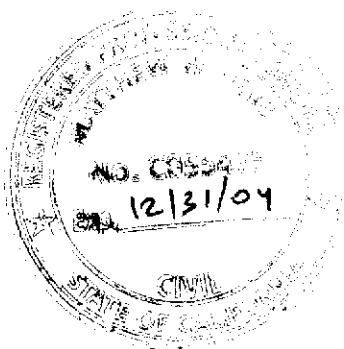


We appreciate the opportunity to work with you on this project. Please call Melody Munz at (510) 420-3324, if you have any questions or comments.

Sincerely,  
**Cambria Environmental Technology, Inc**

  
Melody Munz  
Project Engineer

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



- Figures:     1 - Vicinity/Area Well Survey Map  
              2 - Groundwater Elevation Contour Map with Underground Utility and Proposed Soil Boring Locations

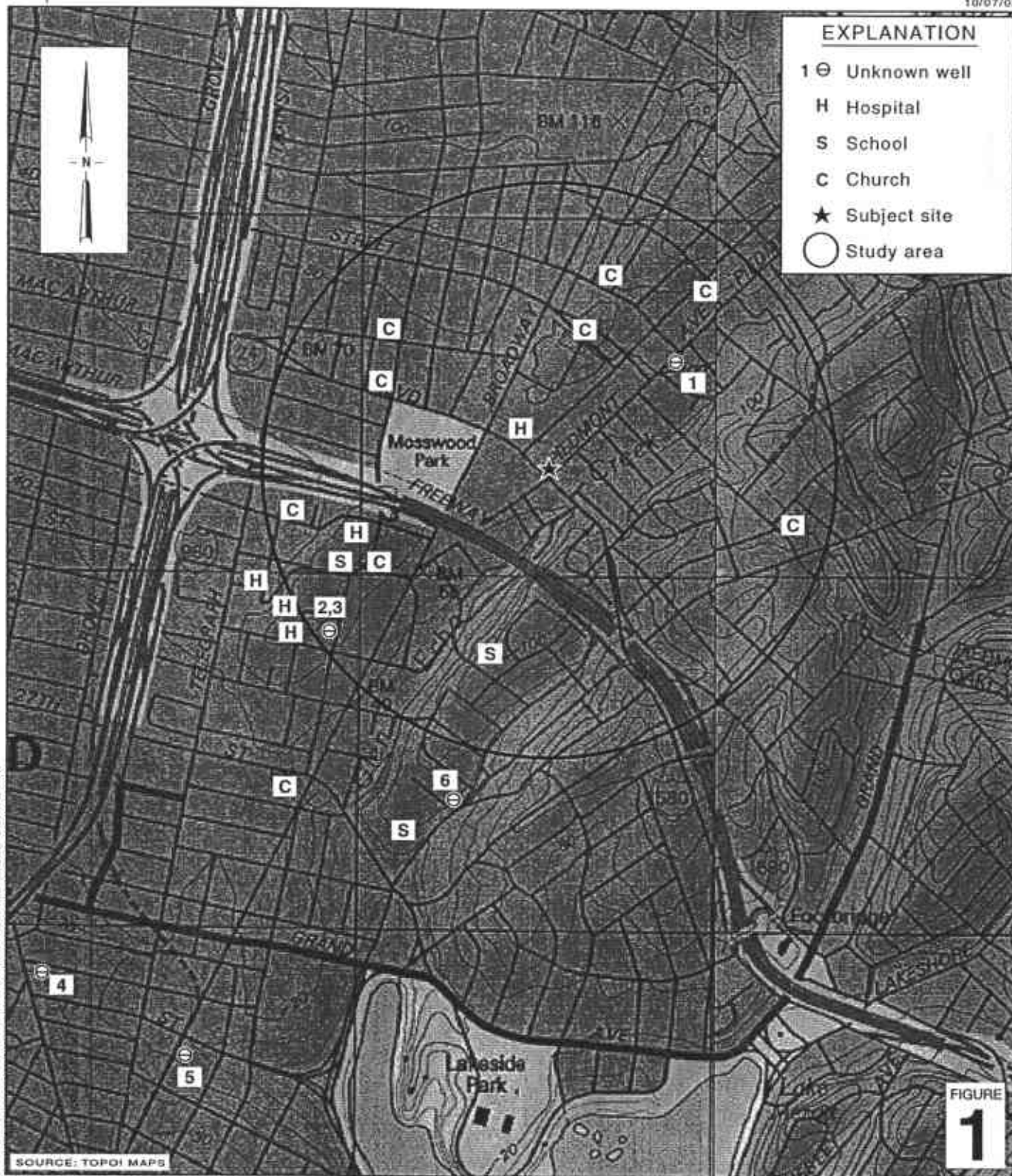
Attachment: A - Blaine Groundwater Monitoring Report

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

G:\Oakland 230 MacArthur\QM\2q03\2q03qm.doc

EXPLANATION

- 1 ⊖ Unknown well
- H Hospital
- S School
- C Church
- ★ Subject site
- Study area



D:\OAKLAND\230MACARTHUR\FIGURES\VIC-WELL-SURVEY.AI

SOURCE: TOPOI MAPS

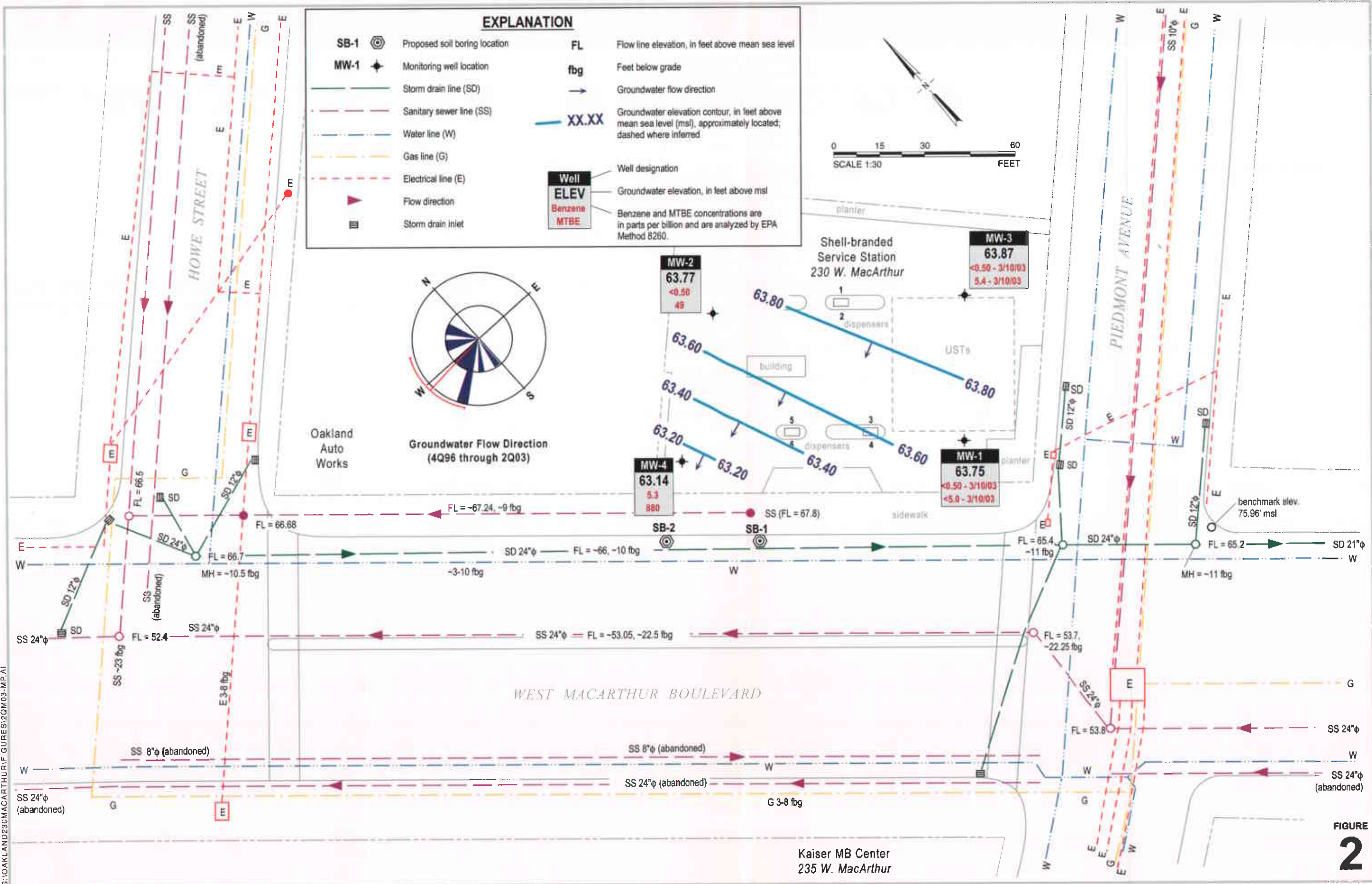
FIGURE 1

0 1/8 1/4 1/2 1  
SCALE : 1" = 1/4 MILE

**Shell-branded Service Station**  
 230 West MacArthur Boulevard  
 Oakland, California  
 Incident #98995741



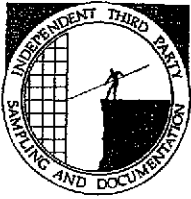
**Vicinity/Area Well  
 Survey Map**  
 (1/2-Mile Radius)



G:\OAKLAND\230MACARTHUR\FIGURES\20M03.MP.A1

**ATTACHMENT A**  
**Blaine Groundwater Monitoring Report**

**BLAINE**  
TECH SERVICES, INC.



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

June 25, 2003

Karen Petryna  
Shell Oil Products US  
P.O. Box 7869  
Burbank, CA 92510-7869

Second Quarter 2003 Groundwater Monitoring at  
Shell-branded Service Station  
230 West MacArthur Blvd.  
Oakland, CA

Monitoring performed on June 10, 2003

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Groundwater Monitoring Report **030610-MM-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/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**  
**230 West MacArthur Boulevard**  
**Oakland, 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)
MW-1	07/14/1988	ND	ND	ND	ND	ND	NA	NA	73.89	13.30	60.59
MW-1	10/04/1988	ND	8	4.3	ND	9	NA	NA	73.89	13.65	60.24
MW-1	11/10/1988	ND	ND	ND	ND	ND	NA	NA	73.89	13.55	60.34
MW-1	12/09/1988	ND	ND	ND	ND	ND	NA	NA	73.89	13.22	60.67
MW-1	01/10/1989	ND	ND	ND	ND	NA	NA	NA	73.89	12.86	61.03
MW-1	01/20/1989	ND	ND	NA	NA	ND	NA	NA	73.89	12.91	60.98
MW-1	02/06/1989	ND	ND	ND	ND	ND	NA	NA	73.89	12.94	60.95
MW-1	03/10/1989	ND	ND	ND	ND	ND	NA	NA	73.89	12.59	61.30
MW-1	06/06/1989	ND	ND	ND	ND	ND	NA	NA	73.89	14.05	59.84
MW-1	09/07/1989	ND	ND	ND	ND	ND	NA	NA	73.89	14.92	58.97
MW-1	12/18/1989	ND	ND	ND	ND	ND	NA	NA	73.89	14.88	59.01
MW-1	03/08/1990	ND	ND	ND	ND	ND	NA	NA	73.89	14.08	59.81
MW-1	06/07/1990	ND	ND	ND	ND	ND	NA	NA	73.89	13.89	60.00
MW-1	09/05/1990	ND	ND	ND	ND	ND	NA	NA	73.89	14.83	59.06
MW-1	12/03/1990	ND	ND	ND	ND	ND	NA	NA	73.89	15.05	58.84
MW-1	03/01/1991	ND	ND	ND	ND	ND	NA	NA	73.89	14.34	59.55
MW-1	06/03/1991	ND	ND	ND	ND	ND	NA	NA	73.89	14.16	59.73
MW-1	09/04/1991	ND	ND	ND	ND	ND	NA	NA	73.89	14.60	59.29
MW-1	03/13/1992	ND	ND	ND	ND	ND	NA	NA	73.89	13.40	60.49
MW-1	06/03/1992	ND	ND	ND	ND	ND	NA	NA	73.89	13.76	60.13
MW-1	08/19/1992	87	ND	ND	ND	ND	NA	NA	73.89	14.57	59.32
MW-1	11/16/1992	ND	ND	ND	ND	ND	NA	NA	73.89	14.78	59.11
MW-1	02/18/1993	59a	ND	ND	ND	ND	NA	NA	73.89	12.14	61.75
MW-1	06/01/1993	ND	ND	ND	ND	ND	NA	NA	73.89	13.30	60.59
MW-1	08/30/1993	ND	ND	ND	ND	ND	NA	NA	73.89	14.32	59.57
MW-1	12/13/1993	ND	ND	ND	ND	ND	NA	NA	73.89	14.06	59.83
MW-1	03/03/1994	100	ND	ND	ND	ND	NA	NA	73.89	13.12	60.77

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**230 West MacArthur Boulevard**  
**Oakland, 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)
MW-1	06/06/1994	ND	ND	ND	ND	ND	NA	NA	73.89	14.20	59.69
MW-1	09/12/1994	ND	ND	ND	ND	ND	NA	NA	73.89	15.72	58.17
MW-1	12/15/1994	ND	ND	ND	ND	ND	NA	NA	73.89	12.98	60.91
MW-1	3/13/1995 b	60	4.7	9.8	ND	2.9	NA	NA	73.89	11.74	62.15
MW-1	04/21/1995	ND	ND	ND	ND	ND	NA	NA	73.89	NA	NA
MW-1	06/26/1995	ND	ND	ND	ND	ND	NA	NA	73.89	13.00	60.89
MW-1	09/12/1995	ND	ND	ND	ND	ND	NA	NA	73.89	14.14	59.75
MW-1	03/21/1996	<50	<0.5	<0.5	<0.5	<0.5	ND	NA	73.89	11.03	62.86
MW-1	06/28/1996	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	73.89	13.53	60.36
MW-1	09/19/1996	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	73.89	14.33	59.56
MW-1	12/19/1996	NA	NA	NA	NA	NA	NA	NA	73.89	13.20	60.69
MW-1	12/05/1997	NA	NA	NA	NA	NA	NA	NA	73.89	12.39	61.50
MW-1	12/24/1998	NA	NA	NA	NA	NA	NA	NA	73.89	13.59	60.30
MW-1	12/23/1999	NA	NA	NA	NA	NA	NA	NA	73.89	15.63	58.26
MW-1	12/11/2000	NA	NA	NA	NA	NA	NA	NA	73.89	15.36	58.53
MW-1	12/27/2001	NA	NA	NA	NA	NA	NA	NA	73.89	12.09	61.80
MW-1	03/12/2002	NA	NA	NA	NA	NA	NA	NA	73.89	12.33	61.56
MW-1	03/14/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	73.89	12.08	61.81
MW-1	06/13/2002	NA	NA	NA	NA	NA	NA	NA	73.89	13.47	60.42
MW-1	09/09/2002	NA	NA	NA	NA	NA	NA	NA	76.92	14.30	62.62
MW-1	12/12/2002	NA	NA	NA	NA	NA	NA	NA	76.92	14.48	62.44
MW-1	03/10/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	76.92	12.76	64.16
<b>MW-1</b>	<b>06/10/2003</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>76.92</b>	<b>13.17</b>	<b>63.75</b>
MW-2	07/14/1988	ND	7.9	2.6	1.1	4	NA	NA	75.24	15.18	60.06
MW-2	10/04/1988	90	ND	1.3	2.3	12	NA	NA	75.24	15.30	59.94
MW-2	11/10/1988	ND	ND	ND	ND	2	NA	NA	75.24	15.17	60.07

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**230 West MacArthur Boulevard**  
**Oakland, 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)
MW-2	12/09/1988	ND	ND	0.6	ND	3	NA	NA	75.24	14.82	60.42
MW-2	01/20/1989	ND	ND	ND	ND	ND	NA	NA	75.24	14.54	60.70
MW-2	02/06/1989	NA	ND	ND	ND	ND	NA	NA	75.24	14.59	60.65
MW-2	03/10/1989	ND	ND	ND	ND	ND	NA	NA	75.24	14.88	60.36
MW-2	06/06/1989	ND	ND	0.5	ND	ND	NA	NA	75.24	15.30	59.94
MW-2	09/07/1989	ND	ND	ND	ND	ND	NA	NA	75.24	16.76	58.48
MW-2	12/18/1989	ND	ND	ND	ND	ND	NA	NA	75.24	16.65	58.59
MW-2	03/08/1990	ND	ND	ND	ND	ND	NA	NA	75.24	15.92	59.32
MW-2	06/07/1990	ND	ND	ND	ND	ND	NA	NA	75.24	16.10	59.14
MW-2	09/05/1990	ND	ND	ND	ND	ND	NA	NA	75.24	16.61	58.63
MW-2	12/03/1990	ND	ND	ND	ND	ND	NA	NA	75.24	17.06	58.18
MW-2	03/01/1991	ND	ND	ND	ND	ND	NA	NA	75.24	16.62	58.62
MW-2	06/03/1991	ND	ND	ND	ND	ND	NA	NA	75.24	16.65	58.59
MW-2	09/04/1991	ND	ND	ND	ND	ND	NA	NA	75.24	16.57	58.67
MW-2	03/13/1992	ND	ND	ND	ND	ND	NA	NA	75.24	14.66	60.58
MW-2	06/03/1992	ND	ND	ND	ND	ND	NA	NA	75.24	15.90	59.34
MW-2	08/19/1992	67	ND	ND	ND	ND	NA	NA	75.24	16.72	58.52
MW-2	11/16/1992	50	ND	ND	ND	1.2	NA	NA	75.24	16.66	58.58
MW-2	02/18/1993	52a	ND	ND	ND	ND	NA	NA	75.24	13.88	61.36
MW-2 (D)	02/18/1993	52a	ND	ND	ND	ND	NA	NA	75.24	13.88	61.36
MW-2	06/01/1993	ND	ND	ND	ND	ND	NA	NA	75.24	14.74	60.50
MW-2	08/30/1993	70a	ND	ND	ND	ND	NA	NA	75.24	15.85	59.39
MW-2	12/13/1993	68a	ND	ND	ND	ND	NA	NA	75.24	15.83	59.41
MW-2	03/03/1994	280a	ND	ND	ND	ND	NA	NA	75.24	14.80	60.44
MW-2	06/06/1994	ND	ND	ND	ND	ND	NA	NA	75.24	16.65	58.59
MW-2	09/12/1994	ND	ND	ND	ND	ND	NA	NA	75.24	16.72	58.52
MW-2	12/15/1994	230a	ND	ND	ND	ND	NA	NA	75.24	15.25	59.99

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**230 West MacArthur Boulevard**  
**Oakland, 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)
MW-2	03/13/1995	ND	2.9	6.3	ND	2.7	NA	NA	75.24	15.32	59.92
MW-2	04/21/1995	ND	ND	ND	ND	ND	NA	NA	75.24	NA	NA
MW-2	06/26/1995	ND	ND	ND	ND	ND	NA	NA	75.24	14.65	60.59
MW-2	09/12/1995	ND	ND	ND	ND	ND	NA	NA	75.24	15.78	59.46
MW-2	03/21/1996	<50	<0.5	<0.5	<0.5	<0.5	ND	NA	75.24	12.72	62.52
MW-2	06/28/1996	<50	<0.5	<0.5	<0.5	<0.5	160	NA	75.24	14.95	60.29
MW-2	09/19/1996	<50	<0.5	<0.5	<0.5	<0.5	27	NA	75.24	15.64	59.60
MW-2	12/19/1996	NA	NA	NA	NA	NA	NA	NA	75.24	14.47	60.77
MW-2	12/05/1997	NA	NA	NA	NA	NA	NA	NA	75.24	14.22	61.02
MW-2	12/24/1998	NA	NA	NA	NA	NA	NA	NA	75.24	14.97	60.27
MW-2	12/23/1999	NA	NA	NA	NA	NA	NA	NA	75.24	16.07	59.17
MW-2	12/11/2000	NA	NA	NA	NA	NA	NA	NA	75.24	15.78	59.46
MW-2	12/27/2001	NA	NA	NA	NA	NA	NA	95	75.24	14.25	60.99
MW-2	03/14/2002	120	<0.50	<0.50	<0.50	<0.50	NA	31	75.24	14.59	60.65
MW-2	06/13/2002	100	<0.50	<0.50	<0.50	<0.50	NA	32	75.24	14.58	60.66
MW-2	09/09/2002	90	<0.50	<0.50	<0.50	<0.50	NA	54	78.25	15.49	62.76
MW-2	12/12/2002	92	<0.50	<0.50	<0.50	<0.50	NA	21	78.25	16.21	62.04
MW-2	03/10/2003	110	<0.50	<0.50	<0.50	<0.50	NA	33	78.25	14.33	63.92
<b>MW-2</b>	<b>06/10/2003</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>49</b>	<b>78.25</b>	<b>14.48</b>	<b>63.77</b>
MW-3	07/14/1988	ND	ND	ND	ND	ND	NA	NA	74.68	14.05	60.63
MW-3	10/04/1988	ND	ND	ND	ND	5	NA	NA	74.68	14.60	60.08
MW-3	11/10/1988	ND	ND	ND	ND	ND	NA	NA	74.68	14.35	60.33
MW-3	12/09/1988	ND	ND	ND	ND	ND	NA	NA	74.68	14.04	60.64
MW-3	01/10/1989	ND	ND	ND	ND	NA	NA	NA	74.68	13.70	60.98
MW-3	01/20/1989	NA	NA	ND	ND	ND	NA	NA	74.68	13.72	60.96
MW-3	02/06/1989	70	ND	ND	ND	ND	NA	NA	74.68	13.75	60.93

**WELL CONCENTRATIONS**  
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**Oakland, 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)
MW-3	03/10/1989	150	ND	ND	ND	ND	NA	NA	74.68	13.42	61.26
MW-3	06/06/1989	ND	ND	ND	ND	ND	NA	NA	74.68	14.52	60.16
MW-3	09/07/1989	ND	0.65	ND	ND	ND	NA	NA	74.68	15.52	59.16
MW-3	12/18/1989	46	1.3	ND	0.44	0.66	NA	NA	74.68	19.59	55.09
MW-3	03/08/1990	ND	ND	ND	ND	ND	NA	NA	74.68	14.72	59.96
MW-3	06/07/1990	ND	ND	ND	ND	ND	NA	NA	74.68	14.65	60.03
MW-3	09/05/1990	ND	ND	ND	ND	ND	NA	NA	74.68	15.51	59.17
MW-3	12/03/1990	ND	ND	ND	ND	ND	NA	NA	74.68	14.85	59.83
MW-3	03/01/1991	1.9	59	ND	22	ND	NA	NA	74.68	14.92	59.76
MW-3	06/03/1991	ND	ND	ND	ND	ND	NA	NA	74.68	14.75	59.93
MW-3	09/04/1991	ND	ND	ND	ND	ND	NA	NA	74.68	15.14	59.54
MW-3	03/13/1992	ND	ND	ND	ND	ND	NA	NA	74.68	13.50	61.18
MW-3	06/03/1992	ND	ND	ND	ND	ND	NA	NA	74.68	14.39	60.29
MW-3	08/19/1992	92	ND	ND	ND	ND	NA	NA	74.68	15.08	59.60
MW-3 (D)	08/19/1992	76	ND	ND	ND	ND	NA	NA	74.68	15.08	59.60
MW-3	11/16/1992	200a	ND	ND	ND	ND	NA	NA	74.68	15.43	59.25
MW-3 (D)	11/16/1992	140a	ND	ND	ND	ND	NA	NA	74.68	15.43	59.25
MW-3	02/18/1993	680a	ND	ND	ND	ND	NA	NA	74.68	12.96	61.72
MW-3	06/01/1993	160a	ND	ND	ND	ND	NA	NA	74.68	13.98	60.70
MW-3 (D)	06/01/1993	150a	ND	ND	ND	ND	NA	NA	74.68	13.98	60.70
MW-3	08/30/1993	110a	ND	ND	ND	ND	NA	NA	74.68	14.82	59.86
MW-3	12/13/1993	140a	ND	ND	ND	ND	NA	NA	74.68	14.70	59.98
MW-3 (D)	12/13/1993	110a	ND	ND	ND	ND	NA	NA	74.68	14.70	59.98
MW-3	03/03/1994	61a	ND	ND	ND	ND	NA	NA	74.68	13.92	60.76
MW-3	06/06/1994	ND	ND	ND	ND	ND	NA	NA	74.68	14.73	59.95
MW-3	09/12/1994	ND	ND	ND	ND	ND	NA	NA	74.68	15.42	59.26
MW-3	12/15/1994	ND	ND	0.9	ND	0.6	NA	NA	74.68	13.80	60.88

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**230 West MacArthur Boulevard**  
**Oakland, 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)
MW-3	03/13/1995	100a	7.9	17	0.7	6.1	NA	NA	74.68	12.41	62.27
MW-3	04/21/1995	60	0.9	1.1	ND	1	NA	NA	74.68	NA	NA
MW-3	06/26/1995	ND	ND	ND	ND	ND	NA	NA	74.68	13.79	60.89
MW-3	09/12/1995 b	ND	ND	ND	ND	ND	NA	NA	74.68	14.77	59.91
MW-3	03/21/1996	<50	<0.5	<0.5	<0.5	<0.5	17	NA	74.68	11.80	62.88
MW-3	06/28/1996	<50	<0.5	<0.5	<0.5	<0.5	<0.5	NA	74.68	14.19	60.49
MW-3	09/19/1996	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	74.68	14.85	59.83
MW-3	12/19/1996	NA	NA	NA	NA	NA	NA	NA	74.68	13.61	61.07
MW-3	12/05/1997	NA	NA	NA	NA	NA	NA	NA	74.68	13.16	61.52
MW-3	12/24/1998	NA	NA	NA	NA	NA	NA	NA	74.68	14.08	60.60
MW-3	12/23/1999	NA	NA	NA	NA	NA	NA	NA	74.68	15.92	58.76
MW-3	12/11/2000	NA	NA	NA	NA	NA	NA	NA	74.68	15.31	59.37
MW-3	12/27/2001	NA	NA	NA	NA	NA	NA	NA	74.68	12.84	61.84
MW-3	03/12/2002	NA	NA	NA	NA	NA	NA	NA	74.68	12.54	62.14
MW-3	03/14/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	40	74.68	12.78	61.90
MW-3	06/13/2002	NA	NA	NA	NA	NA	NA	NA	74.68	14.06	60.62
MW-3	09/09/2002	NA	NA	NA	NA	NA	NA	NA	77.69	14.77	62.92
MW-3	12/12/2002	NA	NA	NA	NA	NA	NA	NA	77.69	15.11	62.58
MW-3	03/10/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	5.4	77.69	13.52	64.17
<b>MW-3</b>	<b>06/10/2003</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>77.69</b>	<b>13.82</b>	<b>63.87</b>
MW-4	01/23/1990	1,600	100	10	30	20	NA	NA	73.83	14.68	59.15
MW-4	03/08/1990	4,200	260	18	88	39	NA	NA	73.83	14.38	59.45
MW-4	06/07/1990	2,000	150	6.9	14	17	NA	NA	73.83	14.27	59.56
MW-4	09/05/1990	1,700	130	10	7.2	19	NA	NA	73.83	15.40	58.43
MW-4	12/03/1990	2,600	108	41	17	59	NA	NA	73.83	15.90	57.93
MW-4	06/03/1991	2,800	160	15	8.8	32	NA	NA	73.83	14.60	59.23

**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)
MW-4	09/04/1991	Sheen	NA	NA	NA	NA	NA	NA	73.83	15.25	58.58
MW-4	03/13/1992	2,700	180	70	5.9	29	NA	NA	73.83	12.72	61.11
MW-4	06/03/1992	1,700	190	ND	30	23	NA	NA	73.83	14.33	59.50
MW-4	08/19/1992	170	4.2	ND	0.6	1	NA	NA	73.83	15.18	58.65
MW-4	11/16/1992	2,600	92	49	50	81	NA	NA	73.83	15.39	58.44
MW-4	02/18/1993	7,400	120	38	51	87	NA	NA	73.83	12.62	61.21
MW-4	06/01/1993	7,000	1,800	1,700	1,600	1,700	NA	NA	73.83	13.68	60.15
MW-4	08/30/1993	2,100	80	11	ND	11	NA	NA	73.83	14.83	59.00
MW-4 (D)	08/30/1993	2,100	77	5.6	ND	5.5	NA	NA	73.83	14.83	59.00
MW-4	12/13/1993	2,000a	20	ND	21	52	NA	NA	73.83	14.50	59.33
MW-4	03/03/1994	3,500	150	86	85	90	NA	NA	73.83	13.48	60.35
MW-4 (D)	03/03/1994	3,200	130	73	74	76	NA	NA	73.83	13.48	60.35
MW-4	06/06/1994	590	25	ND	ND	ND	NA	NA	73.83	14.26	59.57
MW-4 (D)	06/06/1994	400	16	ND	ND	ND	NA	NA	73.83	14.26	59.57
MW-4	09/12/1994	1,800	42	ND	3.7	4.7	NA	NA	73.83	15.42	58.41
MW-4 (D)	09/12/1994	2,000	40	ND	5.7	8	NA	NA	73.83	15.42	58.41
MW-4	12/15/1994	2,900	78	14	94	17	NA	NA	73.83	13.43	60.40
MW-4 (D)	12/15/1994	2,900	90	7	96	18	NA	NA	73.83	13.43	60.40
MW-4	03/13/1995	2,700	240	24	99	34	NA	NA	73.83	12.13	61.70
MW-4 (D)	03/13/1995	2,500	300	24	140	28	NA	NA	73.83	12.13	61.70
MW-4	06/25/1995	2,100	87	10	67	25	NA	NA	73.83	13.26	60.57
MW-4 (D)	06/25/1995	2,300	92	12	74	26	NA	NA	73.83	13.26	60.57
MW-4	09/12/1995 b	1,300	33	13	9.3	15	NA	NA	73.83	14.64	59.19
MW-4 (D)	09/12/1995 b	1,500	2.1	16	11	17	NA	NA	73.83	14.64	59.19
MW-4	03/21/1996	2,100	50	3.2	40	5.4	ND	NA	73.83	11.55	62.28
MW-4 (D)	03/21/1996	1,700	24	<0.5	39	7.2	740	NA	73.83	11.55	62.28
MW-4	06/28/1996	1,300	61	6.2	53	11	1,000	NA	73.83	13.86	59.97

**WELL CONCENTRATIONS**  
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**230 West MacArthur Boulevard**  
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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)
MW-4 (D)	06/28/1996	1,200	29	6.2	50	8.3	1,000	NA	73.83	13.86	59.97
MW-4	09/19/1996	820	12	<2.5	2.8	4.3	720	NA	73.83	14.72	59.11
MW-4 (D)	09/19/1996	580	9.6	<2.5	<2.5	<2.5	760	1,200	73.83	14.72	59.11
MW-4	12/19/1996	1,200	28	<5.0	<5.0	<5.0	<25	NA	73.83	13.06	60.77
MW-4	12/05/1997	1,900	36	9	16	18	630	NA	73.83	12.89	60.94
MW-4	12/24/1998	1,100	23	5.3	38	7.9	1,100	NA	73.83	13.92	59.91
MW-4	12/17/1999	1,100	22	21	13	11	3,800	3,200	73.83	14.28	59.55
MW-4	12/23/1999	NA	NA	NA	NA	NA	NA	NA	73.83	16.24	57.59
MW-4	12/11/2000	975	25.0	11.3	<5.00	<5.00	1960	1730c	73.83	14.15	59.68
MW-4	12/27/2001	2,000	9.9	<5.0	18	<5.0	NA	1,400	73.83	12.61	61.22
MW-4	03/14/2002	1,700	6.6	<2.0	2.1	2.1	NA	1,100	73.83	12.35	61.48
MW-4	06/13/2002	1,200	4.7	<2.0	<2.0	<2.0	NA	1,100	73.83	13.72	60.11
MW-4	09/09/2002	620	3.7	<2.0	<2.0	<2.0	NA	760	76.82	14.56	62.26
MW-4	12/12/2002	1,500	3.9	<2.0	<2.0	<2.0	NA	880	76.82	14.82	62.00
MW-4	03/10/2003	2,300	5.7	0.95	3.8	0.63	NA	1,200	76.82	13.63	63.19
MW-4	06/10/2003	2,200	5.3	<5.0	<5.0	<10	NA	880	76.82	13.68	63.14



**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**230 West MacArthur Boulevard**  
**Oakland, 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)
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**Abbreviations:**

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to December 27, 2001, by EPA Method 8015.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to December 27, 2001, by EPA Method 8020.

MTBE = Methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

GW = Groundwater

ug/L = Parts per billion

MSL = Mean sea level

ft = Feet

<n = Below detection limit

D = Duplicate sample

ND = Not detected at or above the quantitative limit

NA = Not applicable

**Notes:**

a = Chromatogram pattern indicates the presence of an unidentified hydrocarbon.

b = The laboratory noted the sample was analyzed after the method specified holding time.

c = This sample was analyzed outside of EPA recommended hold time.

Site surveyed January 30, 2002, by Virgil Chavez Land Surveying of Vallejo, California.

**Blaine Tech Services, Inc.**

June 23, 2003

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Attn.: Leon Gearhart  
Project#: 030610-MM2  
Project: 98995741  
Site: 230 W. MacArthur Blvd., Oakland

Dear Mr. Gearhart,

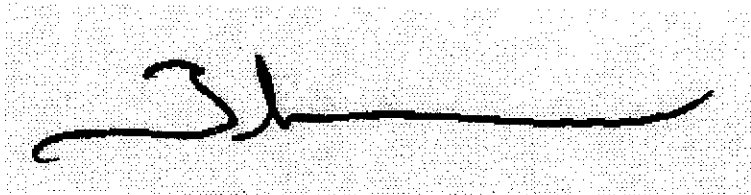
Attached is our report for your samples received on 06/10/2003 15:58  
This report has been reviewed and approved for release. Reproduction of this report  
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after  
07/25/2003 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/MTBE by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

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

Project: 030610-MM2

98995741

Received: 06/10/2003 15:58

Site: 230 W. MacArthur Blvd., Oakland

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
MW-2	06/10/2003 09:20	Water	1
MW-4	06/10/2003 09:45	Water	2

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

06/23/2003 16:24

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

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 030610-MM2  
98995741

Received: 06/10/2003 15:58

Site: 230 W. MacArthur Blvd., Oakland

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-2	Lab ID:	2003-06-0316 - 1
Sampled:	06/10/2003 09:20	Extracted:	6/22/2003 11:12
Matrix:	Water	QC Batch#:	2003/06/22-1a-64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/22/2003 11:12	
Benzene	ND	0.50	ug/L	1.00	06/22/2003 11:12	
Toluene	ND	0.50	ug/L	1.00	06/22/2003 11:12	
Ethylbenzene	ND	0.50	ug/L	1.00	06/22/2003 11:12	
Total xylenes	ND	1.0	ug/L	1.00	06/22/2003 11:12	
Methyl tert-butyl ether (MTBE)	49	0.50	ug/L	1.00	06/22/2003 11:12	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	101.7	76-130	%	1.00	06/22/2003 11:12	
Toluene-d8	98.5	78-115	%	1.00	06/22/2003 11:12	

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

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98995741

Received: 06/10/2003 15:58

Site: 230 W. MacArthur Blvd., Oakland

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-4	Lab ID:	2003-06-0316 - 2
Sampled:	06/10/2003 09:45	Extracted:	6/22/2003 11:34
Matrix:	Water	QC Batch#:	2003/06/22-1a.64
Analysis Flag: o ( See Legend and Note Section )			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	2200	500	ug/L	10.00	06/22/2003 11:34	
Benzene	5.3	5.0	ug/L	10.00	06/22/2003 11:34	
Toluene	ND	5.0	ug/L	10.00	06/22/2003 11:34	
Ethylbenzene	ND	5.0	ug/L	10.00	06/22/2003 11:34	
Total xylenes	ND	10	ug/L	10.00	06/22/2003 11:34	
Methyl tert-butyl ether (MTBE)	880	5.0	ug/L	10.00	06/22/2003 11:34	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	103.2	76-130	%	10.00	06/22/2003 11:34	
Toluene-d8	97.5	78-115	%	10.00	06/22/2003 11:34	

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

06/23/2003 16:24

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

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Project: 030610-MM2

98995741

Received: 06/10/2003 15:58

Site: 230 W. MacArthur Blvd., Oakland

Batch QC Report					
Prep(s): 5030B		Water		Test(s): 8260FAB	
Method Blank				QC Batch # 2003/06/22-1a.64	
MB: 2003/06/22-1a.64-043				Date Extracted: 06/22/2003 10:06	
Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/22/2003 10:06	
Benzene	ND	0.5	ug/L	06/22/2003 10:06	
Toluene	ND	0.5	ug/L	06/22/2003 10:06	
Ethylbenzene	ND	0.5	ug/L	06/22/2003 10:06	
Total xylenes	ND	1.0	ug/L	06/22/2003 10:06	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/22/2003 10:06	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	103.6	76-130	%	06/22/2003 10:06	
Toluene-d8	101.2	78-115	%	06/22/2003 10:06	

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06/23/2003 16:24

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Project: 030610-MM2  
98995741

Received: 06/10/2003 15:58

Site: 230 W. MacArthur Blvd., Oakland

Batch QC Report										
Prep(s): 5030B						Test(s): 8260FAB				
Laboratory Control Spike				Water			QC Batch # 2003/06/22-1a.64			
LCS	2003/06/22-1a.64-042			Extracted: 06/22/2003			Analyzed: 06/22/2003 09:22			
LCSD	2003/06/22-1a.64-001			Extracted: 06/22/2003			Analyzed: 06/22/2003 09:44			
Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	23.7	23.7	25	94.8	94.8	0.0	69-129	20		
Toluene	24.1	24.3	25	96.4	97.2	0.8	70-130	20		
Methyl tert-butyl ether (MTBE)	28.5	27.1	25	114.0	108.4	5.0	65-165	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	524	520	500	104.8	104.0		76-130			
Toluene-d8	489	512	500	97.8	102.4		78-115			

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06/23/2003 16:24

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

Project: 030610-MM2

98995741

Received: 06/10/2003 15:58

Site: 230 W. MacArthur Blvd., Oakland

**Legend and Notes**

**Analysis Flag**

o

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



