



October 11, 2004

Ms. Rosana Garcia-LaGrille  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**Subject:** Former Shell Service Station  
2703 Martin Luther King Jr. Way  
Oakland, California

Dear Ms. Garcia-LaGrille:

Attached for your review and comment is a copy of the *Groundwater Monitoring Report – Third Quarter 2004* 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

October 11, 2004

Ms. Rosana Garcia-LaGrille  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Re: **Groundwater Monitoring Report - Third Quarter 2004  
And Soil Vapor Investigation Work Plan**  
Former Shell Service Station  
2703 Martin Luther King Jr. Way  
Oakland, California  
SAP Code 129449  
Incident #97093397



Dear Ms. Garcia-LaGrille:

Cambria Environmental Technology, Inc. (Cambria) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) in accordance with the quarterly reporting requirements of 23 CCR 2652d.

### **THIRD QUARTER 2004 ACTIVITIES**

**Groundwater Monitoring:** Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged the site wells, sampled selected wells, measured dissolved oxygen (DO) concentrations in selected wells, and prepared a summary table of field gauging and laboratory analytical data. At Shell's request, annual sampling of select wells for analyses of the five fuel oxygenates was initiated this event. Cambria prepared a site vicinity/receptor survey map (Figure 1) and a groundwater contour/chemical concentration map (Figure 2). Blaine's report, presenting the laboratory report, is included as Appendix A.

**Oxygen Releasing Compound (ORC):** ORCs are currently installed in onsite wells MW-5 and V-2 to enhance intrinsic biodegradation at the site. ORC socks were replaced in wells MW-5 and V-2 on April 8, 2004, in accordance with the existing schedule. The DO measurements are included on the Blaine table in Appendix A

### **ANTICIPATED FOURTH QUARTER 2004 ACTIVITIES**

**Groundwater Monitoring:** Blaine will gauge and sample the site wells in accordance with the existing sampling schedule. Cambria will prepare a groundwater monitoring report.

Cambria  
Environmental  
Technology, Inc.

270 Perkins Street  
P.O. Box 259  
Sonoma, CA 95476  
Tel (707) 935-4850  
Fax (707) 935-6649

## SOIL VAPOR INVESTIGATION WORK PLAN

### Technical Rationale for Proposed Scope of Work

The subject site is a former gasoline station. Ongoing groundwater monitoring at this site indicate elevated concentrations of volatile compounds in shallow groundwater. Neighboring sites are residential, and some nearby properties contain basements. Thus, an evaluation of the potential risk of residual contamination to onsite commercial and offsite residential occupants is warranted.



To assess the concentrations of petroleum constituents in shallow soil vapor, Cambria proposes installing 10 Geoprobe ® borings (GP-1 through GP-10) for collection of vapor samples. Additionally, at select locations (GP-1, GP-3, GP-6, and GP-7), borings will be extended into groundwater to assist with additional plume delineation. The proposed sample locations are depicted on Figure 3, and a description of the work tasks is provided below.

#### Work Tasks

**Permits:** Boring permits will be obtained from the Alameda County Department Health Care Services Department.

**Gain Owner/Occupants Cooperation:** To allow access of equipment for obtaining the proposed samples, Cambria will request that the current property owner and site occupant remove or relocate any equipment, materials, and debris that are staged in the northeast corner of the property and from the carport. If desired by the owners, Cambria will arrange for assistance with the clearing of the area.

**Geophysical Survey:** Once the area is cleared, a geophysical survey of the area will be performed prior to subsurface investigation activities, to assess the presence of subsurface features.

**Utility Clearance:** Cambria will mark proposed drilling locations and will clear the locations through Underground Service Alert prior to drilling. Additionally, since shallow samples are required and the soil vapor sample probe must be pushed directly into undisturbed soil, hand clearing to five feet below grade will not be feasible. Thus, Cambria proposes that all locations be cleared using a private utility locating service prior to advancing the borings. The location of all onsite service provider utilities (water, gas, phone, sewer, electrical, telephone, cable, etc) will be identified prior to breaking ground.

**Site Safety Plan:** Cambria will prepare a Site Safety Plan for fieldwork.

**Site Investigation:** A total of 10 shallow soil borings are proposed on the property for the collection of soil-vapor samples. The proposed boring locations are concentrated along the northeastern and western property boundaries, and near the onsite commercial structure (Figure 3).

As mentioned above, all onsite utility services will be identified prior to initiating any subsurface work, since only the top two feet of each boring will be cleared by hand, instead of Cambria's standard five feet. In order to sample the actual vapor that is present in the unsaturated shallow soils, a soil vapor sample will be targeted for collection from 3.5 to 4 fbg. Each vapor sample will be collected under vacuum using the Geoprobe® sampling equipment. The vapor samples will be stored in Summa canisters. The samples will be labeled, entered onto a chain-of-custody record, and transported to a State of California certified laboratory for analysis.

At four of the sample locations (GP-1, GP-3, GP-6, and GP-7), the boring will be extended for collection of soil and groundwater samples. After collection of the soil vapor sample, continuous soil sampling will occur until groundwater is encountered. A Hydropunch® or similar-type sampler will then be used to retrieve a shallow groundwater sample. The soil will be logged for lithology and screened with a photo-ionization detector (PID). This information will be presented on the boring logs. Soil samples will be retained from five-foot intervals in brass or Teflon sleeves capped with Teflon sheets and tight fitting end caps. Groundwater samples will be retained in laboratory-supplied 40-milliliter glass vials containing the appropriate preservatives for the desired analyses. Each sample will be labeled, logged onto a chain-of-custody form, and placed in a chilled ice-chest until delivery to a state-certified laboratory for chemical analyses.

Following completion of the sampling activities, each boring will be backfilled with a cement-bentonite grout. The grout will be brought level to existing grade, or the top few inches will be cold-patched with asphalt, depending on the property owner's preference.

**Chemical Analyses:** The soil vapor samples will be analyzed for TPHg and BTEX by EPA Method 21 TO-14A. The soil and groundwater samples will be analyzed for TPHg and BTEX by EPA Method 8260B.

**Report Preparation:** Following the receipt of analytical results from the laboratory, Cambria will prepare a written report, which will include a description of the field procedures, tabulated laboratory results, map showing the boring locations, and Cambria's conclusions and recommendations.

# C A M B R I A

**Certification:** All field and reporting activities will be overseen by a Cambria geologist, under the direct supervision of a California Registered Geologist.

## SCHEDULE

Cambria will initiate the permitting activities and schedule the field activities following receipt of written approval of this work from the Alameda County Health Care Services Department.

## CLOSING

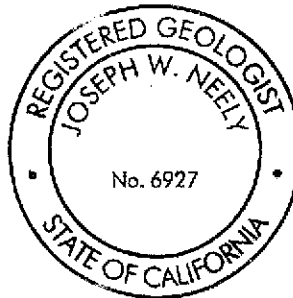


If you have any questions regarding the contents of this document, please call Ana Friel at (707) 442-2700.

Sincerely,  
**Cambria Environmental Technology, Inc.**

*Susan Lukaszewicz*  
for Susan Lukaszewicz  
Staff Geologist

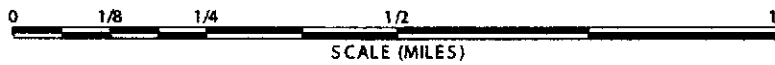
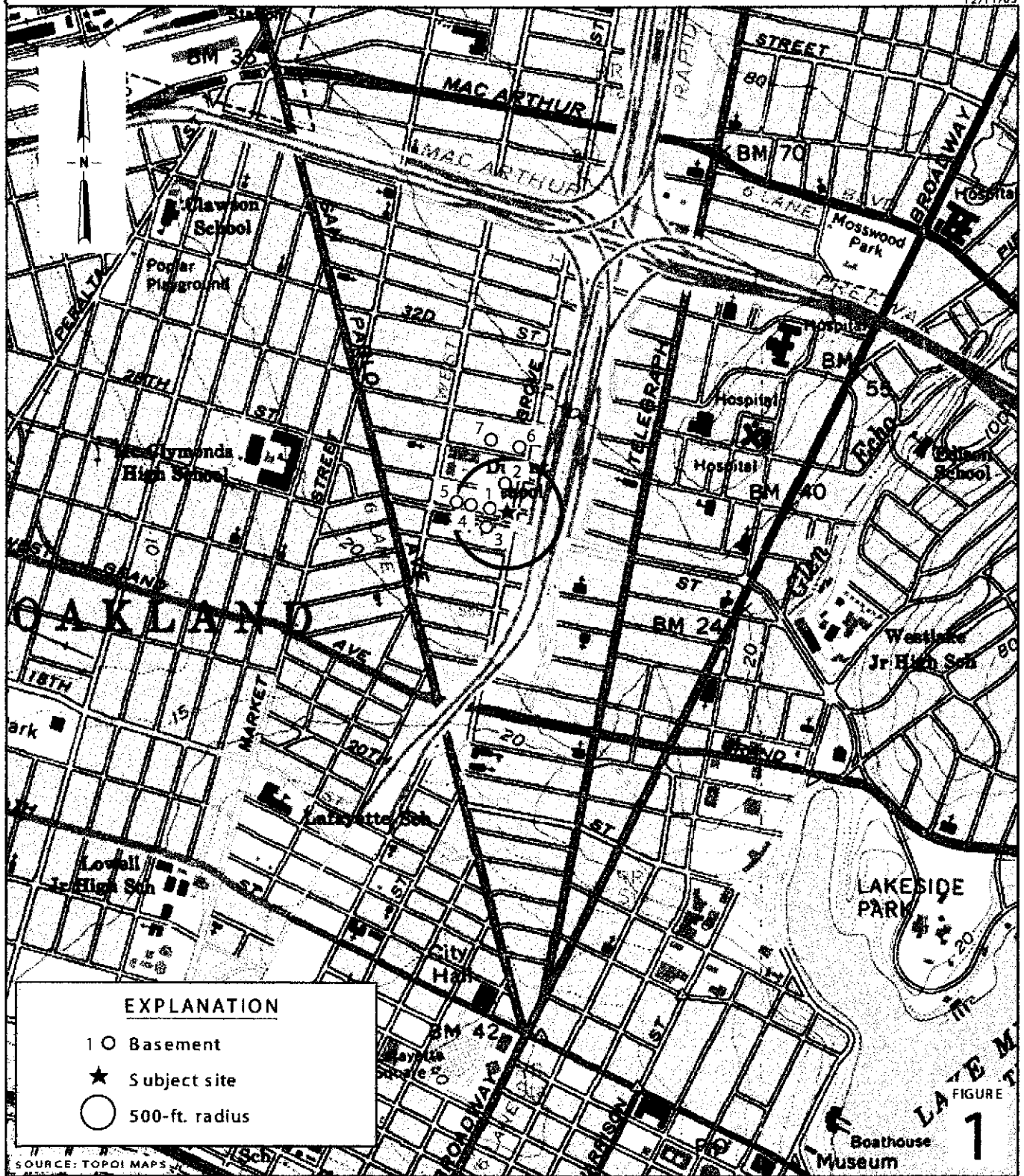
*Ana Friel*  
for Ana Friel, RG  
Senior Project Geologist  
RG 6452



### Attachments:

- Figure 1. Site Vicinity/Receptor Survey Map
  - Figure 2. Groundwater Contour/Chemical Concentration Map
  - Figure 3. Proposed Soil Vapor Sample Locations
- Appendix A. Blaine Tech Services, Inc. - Groundwater Monitoring Report

cc: Karen Petryna, Shell  
Rodney & Janet Kwan, property owners

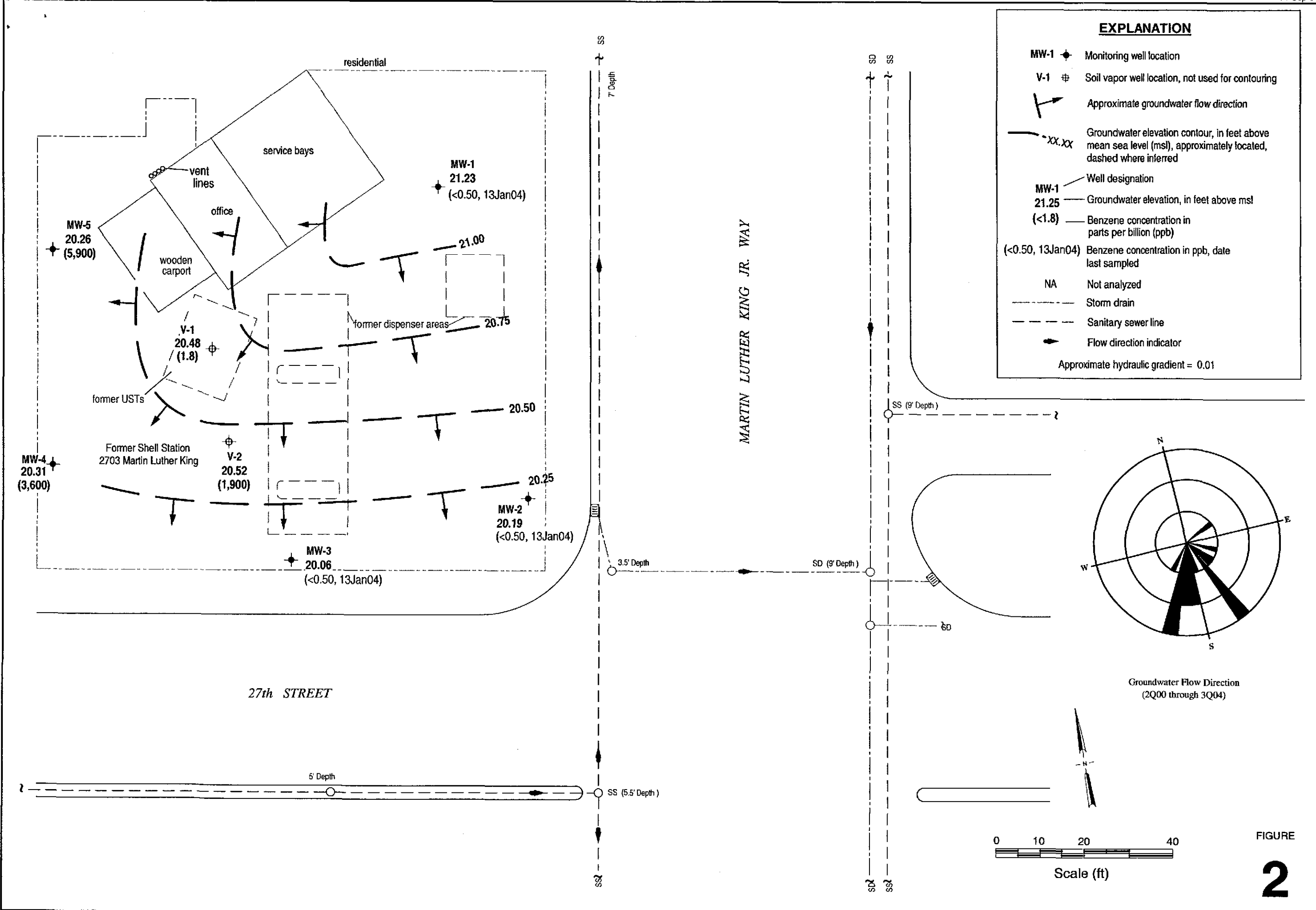


**Former Shell Service Station**  
 2703 Martin Luther King Jr. Way  
 Oakland, California



CAMBRIA

**Site Vicinity/Receptor  
 Survey Map**



0781

**Groundwater Contour/  
Benzene Concentration Map**

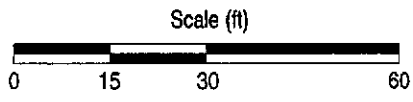
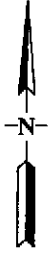
July 13, 2004



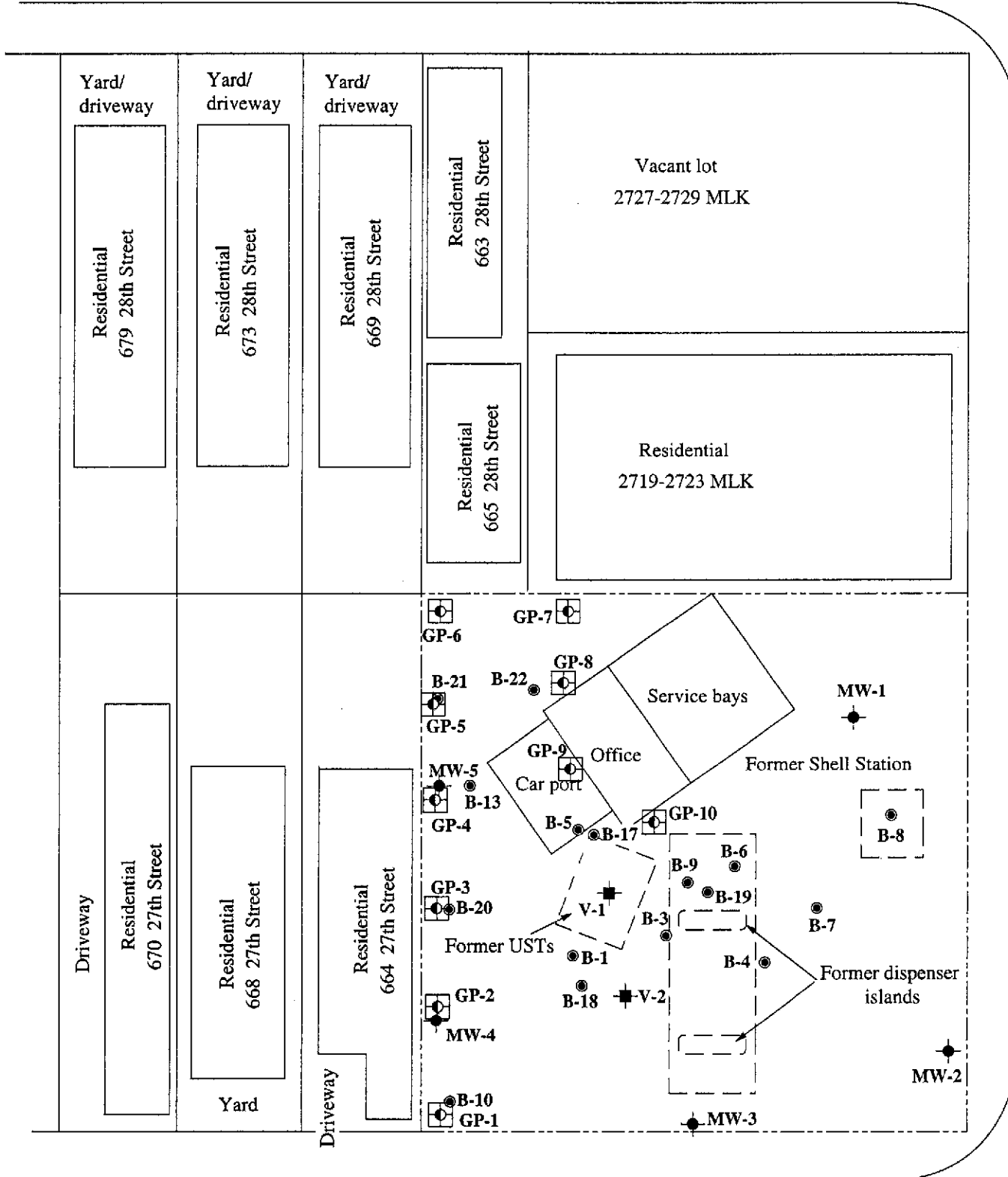
CAMBRIA

**Former Shell Service Station**

2703 Martin Luther King Jr. Way  
Oakland, California



EXPLANATION	
●	Soil boring
⊕	Monitoring well
⊛	Soil vapor well
⊠	Proposed boring



MARTIN LUTHER KING JR. WAY

27th STREET

FIGURE

3

0781

**Former Shell Service Station**  
 2703 Martin Luther King Jr. Way  
 Oakland, California



CAMBRIA

**Proposed Soil Vapor  
 Sample Locations**



**APPENDIX A**

**Blaine Tech Services, Inc.  
Groundwater Monitoring Report**

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**BLAINE**  
**TECH SERVICES INC.**

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GROUNDWATER SAMPLING SPECIALISTS  
SINCE 1985

August 11, 2004

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

Third Quarter 2004 Groundwater Monitoring at  
Former Shell Service Station  
2703 Martin Luther King Jr. Way  
Oakland, CA

Monitoring performed on July 13, 2004

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Groundwater Monitoring Report 040713-DW-2

This report covers the routine monitoring of groundwater wells at this Former Shell 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/ks

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

cc: Ana Friel  
Cambria Environmental Technology, Inc.  
P.O. Box 259  
Sonoma, CA 95476-0259

**WELL CONCENTRATIONS**  
**Former Shell Service Station**  
**2703 Martin Luther King Jr. Way**  
**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)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-1 (B-11)	08/02/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23.53	NA	NA	NA
MW-1 (B-11)	08/05/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	23.53	8.76	14.77	NA
MW-1 (B-11) (D)	08/05/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	23.53	NA	NA	NA
MW-1 (B-11)	10/17/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	23.53	9.88	13.65	NA
MW-1 (B-11)	01/08/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	23.53	6.82	16.71	NA
MW-1 (B-11)	04/07/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	23.53	7.89	15.64	NA
MW-1 (B-11)	07/02/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	23.53	8.71	14.82	NA
MW-1 (B-11)	10/24/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	23.53	9.26	14.27	NA
MW-1 (B-11)	01/09/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	23.53	7.94	15.59	NA
MW-1 (B-11)	04/02/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	23.53	7.21	16.32	NA
MW-1 (B-11)	07/14/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	23.53	7.78	15.75	NA
MW-1 (B-11)	10/01/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	23.53	8.39	15.14	NA
MW-1 (B-11)	01/18/1999	<50.0	<0.500	0.785	<0.500	<0.500	2.36	NA	NA	NA	NA	NA	23.53	8.28	15.25	NA
MW-1 (B-11)	04/29/1999	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	23.53	8.41	15.12	NA
MW-1 (B-11)	08/23/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	23.53	8.17	15.36	NA
MW-1 (B-11)	10/06/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	NA	NA	NA	NA	23.53	9.37	14.16	NA
MW-1 (B-11)	01/27/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	23.53	7.52	16.01	NA
MW-1 (B-11)	04/18/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	23.53	7.66	15.87	NA
MW-1 (B-11)	07/19/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	23.53	7.81	15.72	NA
MW-1 (B-11)	10/24/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	23.53	8.33	15.20	NA
MW-1 (B-11)	01/04/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	23.53	8.33	15.20	NA
MW-1 (B-11)	05/03/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	23.53	7.83	15.70	NA
MW-1 (B-11)	07/09/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	23.53	8.60	14.93	NA
MW-1	10/18/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	23.53	9.01	14.52	0.2
MW-1	01/24/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	23.53	7.68	15.85	2.1
MW-1	04/04/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	23.53	7.38	16.15	1.1

**WELL CONCENTRATIONS**  
**Former Shell Service Station**  
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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)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-1	07/18/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	23.53	7.75	15.78	2.2
MW-1	10/21/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	29.53	8.10	21.43	1.6
MW-1	01/21/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	29.53	7.82	21.71	0.6
MW-1	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<5.0	NA	NA	NA	NA	29.53	7.76	21.77	1.7
MW-1	07/22/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	29.53	7.87	21.66	1.5
MW-1	10/20/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	29.53	8.67	20.86	0.8
MW-1	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	29.53	8.28	21.25	NA
MW-1	01/22/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29.53	8.50	21.03	1.1
MW-1	04/01/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29.53	7.98	21.55	NA
MW-1	07/13/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29.53	8.30	21.23	NA
MW-2 (B-12)*	07/17/1996	<50	<0.50	0.69	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	22.47	NA	NA	NA
MW-2 (B-12)*	08/05/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	22.47	8.35	14.12	NA
MW-2 (B-12)*	10/17/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	22.47	9.32	13.15	NA
MW-2 (B-12) (D)*	10/17/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	22.47	NA	NA	NA
MW-2 (B-12)*	01/08/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	22.47	6.80	15.67	NA
MW-2 (B-12) (D)*	01/08/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	22.47	NA	NA	NA
MW-2 (B-12)*	04/07/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	22.47	7.81	14.66	NA
MW-2 (B-12)*	07/02/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	22.47	8.27	14.20	NA
MW-2 (B-12)*	10/24/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	22.47	9.12	13.35	NA
MW-2 (B-12)*	01/09/1998	<50	<0.50	<0.50	<0.50	<0.50	6.3	NA	NA	NA	NA	NA	22.47	7.41	15.06	NA
MW-2 (B-12)*	04/02/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	22.47	6.59	15.88	NA
MW-2 (B-12)*	07/14/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	22.47	7.49	14.98	NA
MW-2 (B-12)*	10/01/1998	<50	<0.50	<0.50	<0.50	0.59	<2.5	NA	NA	NA	NA	NA	22.47	8.58	13.89	NA
MW-2 (B-12)*	01/18/1999	<50.0	<0.500	0.971	<0.500	<0.500	2.47	NA	NA	NA	NA	NA	22.47	8.68	13.79	NA
MW-2 (B-12)*	04/29/1999	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	22.47	8.62	13.85	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)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-2 (B-12)*	08/23/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	22.47	7.43	15.04	NA
MW-2 (B-12)*	10/06/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	NA	NA	NA	NA	22.47	9.00	13.47	NA
MW-2 (B-12)*	01/27/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	22.47	8.15	14.32	NA
MW-2 (B-12)*	04/18/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	22.47	7.04	15.43	NA
MW-2 (B-12)*	07/19/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	22.47	7.13	15.34	NA
MW-2 (B-12)*	10/24/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	22.47	8.78	13.69	NA
MW-2 (B-12)*	01/04/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	22.47	8.33	14.14	NA
MW-2 (B-12)*	05/03/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	22.47	7.24	15.23	NA
MW-2 (B-12)*	07/09/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	22.47	8.55	13.92	NA
MW-2	10/18/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	22.47	9.42	13.05	NA
MW-2	01/24/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	22.47	7.23	15.24	NA
MW-2	04/04/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	22.47	6.90	15.57	NA
MW-2	07/18/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	22.47	7.97	14.50	NA
MW-2	10/21/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	28.47	8.62	19.85	NA
MW-2	01/21/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	28.47	7.08	21.39	NA
MW-2	04/17/2003	<50	<0.50	<0.50	0.98	2.5	NA	<5.0	NA	NA	NA	NA	28.47	6.94	21.53	NA
MW-2	07/22/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	28.47	8.10	20.37	NA
MW-2	10/20/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	28.47	9.09	19.38	NA
MW-2	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	28.47	7.28	21.19	NA
MW-2	01/22/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28.47	8.99	19.48	2.8
MW-2	04/01/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28.47	6.88	21.59	NA
MW-2	07/13/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28.47	8.28	20.19	NA
MW-3	04/25/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.30	7.16	15.14	NA
MW-3	05/03/2001	<100	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	22.30	7.28	15.02	NA
MW-3	07/09/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	22.30	8.45	13.85	NA

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MW-3	10/18/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	22.30	9.44	12.86	NA
MW-3	01/24/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	22.30	5.88	16.42	NA
MW-3	04/04/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	22.30	6.68	15.62	NA
MW-3	07/18/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	22.30	7.63	14.67	NA
MW-3	10/21/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	28.30	8.56	19.74	NA
MW-3	01/21/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	28.30	6.95	21.35	NA
MW-3	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<5.0	NA	NA	NA	NA	28.30	6.77	21.53	NA
MW-3	07/22/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	28.30	7.92	20.38	NA
MW-3	10/20/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	28.30	9.12	19.18	NA
MW-3	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	28.30	7.21	21.09	NA
MW-3	01/22/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28.30	9.00	19.30	0.6
MW-3	04/01/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28.30	6.65	21.65	NA
MW-3	07/13/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28.30	8.24	20.06	NA

MW-4	04/25/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.51	7.05	15.46	NA
MW-4	05/03/2001	8,000	3,500	24	37	350	NA	<200	NA	NA	NA	NA	22.51	6.66	15.85	NA
MW-4	07/09/2001	16,000	4,100	32	890	790	NA	<200	NA	NA	NA	NA	22.51	8.28	14.23	NA
MW-4	10/18/2001	12,000	3,300	<20	430	220	NA	<200	NA	NA	NA	NA	22.51	9.40	13.11	NA
MW-4	01/24/2002	5,500	1,200	<5.0	280	240	NA	<50	NA	NA	NA	NA	22.51	5.73	16.78	NA
MW-4	04/04/2002	2,000	350	1.4	13	7.8	NA	<10	NA	NA	NA	NA	22.51	5.62	16.89	NA
MW-4	07/18/2002	3,400	440	1.3	200	98	NA	<5.0	NA	NA	NA	NA	22.51	6.94	15.57	NA
MW-4	10/21/2002	16,000	3,100	11	1,200	970	NA	<5.0	NA	NA	NA	NA	28.51	8.04	20.47	NA
MW-4	01/21/2003	3,600	720	3.9	110	58	NA	<25	NA	NA	NA	NA	28.51	6.10	22.41	NA
MW-4	04/17/2003	3,700	810	<5.0	140	17	NA	<50	NA	NA	NA	NA	28.51	5.97	22.54	NA
MW-4	07/22/2003	3,700	450	<2.5	110	7.9	NA	<2.5	NA	NA	NA	NA	28.51	6.37	22.14	NA
MW-4	10/20/2003	11,000 c	2,500	<20	550	95	NA	<20	NA	NA	NA	NA	28.51	8.99	19.52	NA

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MW-4	01/13/2004	6,600	1,500	<10	41	37	NA	<10	NA	NA	NA	NA	28.51	6.67	21.84	NA
MW-4	01/22/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28.51	8.80	19.71	0.3
MW-4	04/01/2004	9,500	2,100	12	170	30	NA	NA	NA	NA	NA	NA	28.51	6.28	22.23	0.1
MW-4	07/13/2004	12,000	3,600	39	160	58	NA	<25	<100	<100	<100	<250	28.51	8.20	20.31	0.1
MW-5	04/25/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23.54	7.36	16.18	NA
MW-5	05/03/2001	160,000	12,000	20,000	3,600	23,000	NA	<500	NA	NA	NA	NA	23.54	7.77	15.77	NA
MW-5	07/09/2001	130,000	11,000	19,000	4,500	22,000	NA	<500	NA	NA	NA	NA	23.54	9.32	14.22	NA
MW-5	10/18/2001	120,000	12,000	23,000	4,200	21,000	NA	<500	NA	NA	NA	NA	23.54	9.39	14.15	0.5
MW-5	01/24/2002	34,000	3,300	3,300	960	6,000	NA	<100	NA	NA	NA	NA	23.54	7.05	16.49	4.0
MW-5	04/04/2002	32,000	2,100	2,800	730	6,400	NA	<200	NA	NA	NA	NA	23.54	6.89	16.65	1.0
MW-5	07/18/2002	75,000	7,500	4,700	2,700	15,000	NA	<500	NA	NA	NA	NA	23.54	8.48	15.06	1.2
MW-5	10/21/2002	140,000	13,000	18,000	4,000	26,000	NA	<500	NA	NA	NA	NA	29.54	9.21	20.33	1.1
MW-5	01/21/2003	47,000	6,400	3,500	370	8,300	NA	<500	NA	NA	NA	NA	29.54	7.23	22.31	0.8
MW-5	04/17/2003	93,000	9,700	16,000	3,200	20,000	NA	<500	NA	NA	NA	NA	29.54	6.61	22.93	0.8
MW-5	07/22/2003	110,000	9,500	15,000	560	23,000	NA	<50	NA	NA	NA	NA	29.54	8.68	20.86	1.2
MW-5	10/20/2003	88,000	6,600	12,000	1,900	16,000	NA	<50	NA	NA	NA	NA	29.54	9.71	19.83	0.1
MW-5	01/13/2004	4,600	460	140	<10	930	NA	<10	NA	NA	NA	NA	29.54	7.30	22.24	NA
MW-5	01/22/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29.54	9.51	20.03	0.3
MW-5	04/01/2004	70,000	7,900	11,000	2,100	17,000	NA	NA	NA	NA	NA	NA	29.54	6.80	22.74	0.1
MW-5	07/13/2004	66,000	5,900	10,000	1,900	16,000	NA	<50	<200	<200	<200	<500	29.54	9.28	20.26	0.1
B-10 *	07/17/1996	20,000	400	<100	<100	870	<500	NA	NA	NA	NA	NA	NA	NA	NA	NA
B-13*	07/17/1996	290,000	34,000	21,000	9,900	47,000	<2,500	NA	NA	NA	NA	NA	NA	NA	NA	NA



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V-1	08/02/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23.26	NA	NA	NA
V-1	08/05/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23.26	8.58	14.68	NA
V-1	10/17/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23.26	10.02	13.24	NA
V-1	01/16/1997	9,500	1,200	250	280	880	<50	NA	NA	NA	NA	NA	23.26	5.55	17.71	NA
V-1	04/07/1997	2,200	42	<5.0	130	15	<25	NA	NA	NA	NA	NA	23.26	7.40	15.86	NA
V-1	07/02/1997	2,600	340	5.8	49	12	74	<4.0	NA	NA	NA	NA	23.26	8.94	14.32	NA
V-1	10/24/1997	57,000	5,200	2,300	3,600	16,000	1,900	<200	NA	NA	NA	NA	23.26	9.43	13.83	NA
V-1	01/09/1998	23,000	2,400	1,700	1,300	2,300	310	NA	NA	NA	NA	NA	23.26	6.81	16.45	NA
V-1 (D)	01/09/1998	24,000	2,500	1,800	1,400	2,400	450	NA	NA	NA	NA	NA	23.26	NA	NA	NA
V-1	04/02/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	23.26	4.58	18.68	NA
V-1 (D)	04/02/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	23.26	NA	NA	NA
V-1	07/14/1998	160	1.9	<0.50	4.2	<0.50	6.1	NA	NA	NA	NA	NA	23.26	7.51	15.75	NA
V-1	10/01/1998	440	18	<0.50	11	0.80	7.9	NA	NA	NA	NA	NA	23.26	8.49	14.77	NA
V-1	01/18/1999	697	55.7	0.839	28.2	<0.500	9.35	NA	NA	NA	NA	NA	23.26	8.59	14.67	NA
V-1	04/29/1999	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	23.26	8.69	14.57	NA
V-1	08/23/1999	457	33.4	3.59	16.3	<0.500	13.9	NA	NA	NA	NA	NA	23.26	8.99	14.27	NA
V-1	10/06/1999	714	53.7	0.740	8.69	<0.500	9.83	NA	NA	NA	NA	NA	23.26	9.55	13.71	NA
V-1	01/27/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	23.26	7.19	16.07	NA
V-1	04/18/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	23.26	7.67	15.59	NA
V-1	07/19/2000	255	21.7	<0.500	10.2	<0.500	7.33	<1.00a	NA	NA	NA	NA	23.26	7.53	15.73	NA
V-1	10/24/2000	200	4.05	0.566	<0.500	<0.500	7.82	NA	NA	NA	NA	NA	23.26	7.38	15.88	NA
V-1	01/04/2001	128	1.77	<0.500	<0.500	<0.500	6.40	<10.0b	NA	NA	NA	NA	23.26	8.41	14.85	NA
V-1	05/03/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	23.26	7.20	16.06	NA
V-1	07/09/2001	110	4.4	<0.50	0.88	1.7	NA	<5.0	NA	NA	NA	NA	23.26	9.22	14.04	NA
V-1	10/18/2001	1,500	180	12	43	46	NA	<5.0	NA	NA	NA	NA	23.26	10.08	13.18	0.8
V-1	01/24/2002	210	7.1	15	4.6	32	NA	<5.0	NA	NA	NA	NA	23.26	6.44	16.82	3.5

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V-1	04/04/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	23.26	6.18	17.08	1.0
V-1	07/18/2002	100	1.6	1.2	1.2	6.1	NA	<5.0	NA	NA	NA	NA	23.26	8.08	15.18	1.7
V-1	10/21/2002	210	1.4	<0.50	1.0	1.3	NA	<5.0	NA	NA	NA	NA	29.26	8.94	20.32	1.2
V-1	01/21/2003	61	5.2	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	29.26	6.62	22.64	0.6
V-1	04/17/2003	<50	<0.50	<0.50	<0.50	1.2	NA	<5.0	NA	NA	NA	NA	29.26	6.00	23.26	1.3
V-1	07/22/2003	Well inaccessible		NA	NA	NA	NA	NA	NA	NA	NA	NA	29.26	NA	NA	NA
V-1	10/20/2003	540	11	1.6	6.0	8.9	NA	<0.50	NA	NA	NA	NA	29.26	9.53	19.73	0.1
V-1	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	29.26	6.62	22.64	NA
V-1	01/22/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29.26	9.08	20.18	0.1
V-1	04/01/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	NA	NA	NA	NA	29.26	6.24	23.02	0.1
V-1	07/13/2004	120	1.8	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	29.26	8.78	20.48	0.1
V-2	08/02/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.80	NA	NA	NA
V-2	08/05/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.80	7.94	14.86	NA
V-2	10/17/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.80	9.30	13.50	NA
V-2	01/08/1997	69,000	4,800	2,800	2,700	13,000	750	NA	NA	NA	NA	NA	22.80	5.82	16.98	NA
V-2	04/07/1997	90,000	4,400	1,900	3,300	14,000	<500	NA	NA	NA	NA	NA	22.80	7.10	15.70	NA
V-2 (D)	04/07/1997	77,000	4,400	2,000	3,200	14,000	<250	NA	NA	NA	NA	NA	22.80	NA	NA	NA
V-2	07/02/1997	82,000	5,500	2,700	3,500	16,000	530	<100	NA	NA	NA	NA	22.80	8.35	14.45	NA
V-2 (D)	07/02/1997	85,000	5,600	2,800	3,600	17,000	520	<100	NA	NA	NA	NA	22.80	NA	NA	NA
V-2	10/24/1997	7,300	1,100	97	230	180	91	<12	NA	NA	NA	NA	22.80	10.03	12.77	NA
V-2 (D)	10/24/1997	12,000	1,700	340	650	630	120	<20	NA	NA	NA	NA	22.80	NA	NA	NA
V-2	01/09/1998	40,000	4,100	1,500	2,500	9,000	280	NA	NA	NA	NA	NA	22.80	6.94	15.86	NA
V-2	04/02/1998	62,000	6,800	2,400	3,400	14,000	<250	NA	NA	NA	NA	NA	22.80	5.35	17.45	NA
V-2	07/14/1998	43,000	4,700	1,100	2,500	6,600	<250	NA	NA	NA	NA	NA	22.80	6.48	16.32	NA
V-2 (D)	07/14/1998	48,000	5,100	1,300	2,600	8,100	<250	NA	NA	NA	NA	NA	22.80	NA	NA	NA

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V-2	10/01/1998	53,000	5,200	1,800	3,200	10,000	83	NA	NA	NA	NA	NA	22.80	8.41	14.39	NA
V-2 (D)	10/01/1998	55,000	5,300	1,900	3,300	11,000	65	NA	NA	NA	NA	NA	22.80	NA	NA	NA
V-2	01/18/1999	47,100	5,800	1,960	3,450	10,200	<100	NA	NA	NA	NA	NA	22.80	8.29	14.51	NA
V-2	04/29/1999	65,000	6,100	2,800	3,200	12,000	540	NA	NA	NA	NA	NA	22.80	8.19	14.61	NA
V-2	08/23/1999	59,600	6,240	2,190	3,900	14,700	390	NA	NA	NA	NA	NA	22.80	8.44	14.36	NA
V-2	10/06/1999	63,800	4,820	1,860	2,840	11,100	<1000	NA	NA	NA	NA	NA	22.80	8.96	13.84	NA
V-2	01/27/2000	59,600	10,200	2,840	3,450	12,100	<500	NA	NA	NA	NA	NA	22.80	7.57	15.23	NA
V-2	04/18/2000	45,000	6,050	2,700	3,340	12,200	<250	NA	NA	NA	NA	NA	22.80	8.14	14.66	NA
V-2	07/19/2000	31,800	4,440	1,270	2,390	6,820	<500	NA	NA	NA	NA	NA	22.80	8.21	14.59	NA
V-2	10/24/2000	40,100	4,810	1,730	2,960	8,650	734	<10.0	NA	NA	NA	NA	22.80	8.53	14.27	NA
V-2	01/04/2001	37,500	4,510	1,390	2,710	6,880	375	NA	NA	NA	NA	NA	22.80	8.03	14.77	NA
V-2	05/03/2001	51,000	4,000	1,900	2,800	8,200	NA	<200	NA	NA	NA	NA	22.80	6.63	16.17	NA
V-2	07/09/2001	9,600	710	190	180	1,400	NA	<25	NA	NA	NA	NA	22.80	8.75	14.05	NA
V-2	10/18/2001	20,000	2,000	540	560	6,000	NA	<50	NA	NA	NA	NA	22.80	9.60	13.20	0.4
V-2	01/24/2002	36,000	2,900	870	1,700	5,900	NA	<100	NA	NA	NA	NA	22.80	5.93	16.87	4.0
V-2	04/04/2002	49,000	3,900	1,500	2,900	9,300	NA	<200	NA	NA	NA	NA	22.80	5.78	17.02	0.9
V-2	07/18/2002	50,000	3,600	1,300	2,800	9,300	NA	<200	NA	NA	NA	NA	22.80	7.58	15.22	1.3
V-2	10/21/2002	86,000	6,000	1,900	4,200	20,000	NA	<250	NA	NA	NA	NA	28.80	8.40	20.40	1.3
V-2	01/21/2003	13,000	630	200	300	2,400	NA	<25	NA	NA	NA	NA	28.80	6.52	22.28	1.2
V-2	04/17/2003	26,000	2,000	570	750	6,000	NA	<100	NA	NA	NA	NA	28.80	5.93	22.87	1.1
V-2	07/22/2003	6,800	130	34	150	440	NA	<2.5	NA	NA	NA	NA	28.80	7.96	20.84	1.4
V-2	10/20/2003	14,000	660	160	260	2,400	NA	<10	NA	NA	NA	NA	28.80	9.21	19.59	0.7
V-2	01/13/2004	20,000	1,400	410	700	4,200	NA	<13	NA	NA	NA	NA	28.80	6.90	21.90	NA
V-2	01/22/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28.80	8.50	20.30	0.1
V-2	04/01/2004	28,000	2,000	520	650	8,700	NA	NA	NA	NA	NA	NA	28.80	6.84	21.96	0.2
V-2	07/13/2004	21,000	1,900	460	1,000	4,300	NA	NA	NA	NA	NA	NA	28.80	8.28	20.52	0.1

**WELL CONCENTRATIONS**  
**Former Shell Service Station**  
**2703 Martin Luther King Jr. Way**  
**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)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
---------	------	----------------	-------------	-------------	-------------	-------------	------------------------	------------------------	----------------	----------------	----------------	---------------	--------------	----------------------------	--------------------------	------------------------

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to May 3, 2001, analyzed by EPA Method 8015.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to May 3, 2001, analyzed by EPA Method 8020.

MTBE = Methyl tertiary butyl ether

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

ETBE = Ethyl tertiary butyl ether, analyzed by EPA Method 8260B

TAME = Tertiary amyl methyl ether, analyzed by EPA Method 8260B

TBA = Tertiary butyl alcohol, analyzed by EPA Method 8260B

TOC = Top of Casing Elevation

SPH = Separate-Phase Hydrocarbons

GW = Groundwater

DO = Dissolved Oxygen reading

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**  
**Former Shell Service Station**  
**2703 Martin Luther King Jr. Way**  
**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)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
---------	------	----------------	-------------	-------------	-------------	-------------	------------------------	------------------------	----------------	----------------	----------------	---------------	--------------	----------------------------	--------------------------	------------------------

Notes:

a = This sample analyzed outside of EPA recommended holding time.

b = Due to error of Sequoia Analytical laboratories, well V-1 confirmed for MTBE by EPA Method 8260 instead of V-2.

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

\* = Water sample from Boring

Site surveyed June 14, 2001 by Virgil Chavez Land Surveying of Vallejo, CA.

Site surveyed August 13, 2002 by Virgil Chavez Land Surveying of Vallejo, CA.

**Blaine Tech Services, Inc.**

July 27, 2004

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Attn.: Leon Gearhart  
Project#: 040713-DW2  
Project: 97093397  
Site: 2703 Martin Luther King Jr. Way, Oakland

Dear Mr. Gearhart,

Attached is our report for your samples received on 07/14/2004 15:38  
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  
08/28/2004 unless you have requested otherwise.

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

You can also contact me via email. My email address is: [vvancil@stl-inc.com](mailto:vvancil@stl-inc.com)

Sincerely,



Vincent Vancil  
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) 573-7771

Project: 040713-DW2  
97093397

Received: 07/14/2004 15:38

Site: 2703 Martin Luther King Jr. Way, Oakland

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
MW-4	07/13/2004 11:23	Water	1
MW-5	07/13/2004 11:40	Water	2
V-1	07/13/2004 11:15	Water	3
V-2	07/13/2004 11:30	Water	4

Severn Trent Laboratories, Inc.

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

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

07/27/2004 14:52

Page 1 of 10

**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: 040713-DW2  
97093397

Received: 07/14/2004 15:38

Site: 2703 Martin Luther King Jr. Way, Oakland

Prep(s)	5030B	Test(s)	8260B
Sample ID	MW-4	Lab ID	2004-07-0431
Sampled	07/13/2004 11:25	Extracted	07/26/2004 15:17
Main	Water	QC Batch#	2004/07/26-1B-65
Analysis Flag(s): (See Legend and Note Section)			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	12000	2500	ug/L	50.00	07/26/2004 15:17	
Benzene	3600	25	ug/L	50.00	07/26/2004 15:17	
Toluene	39	25	ug/L	50.00	07/26/2004 15:17	
Ethylbenzene	160	25	ug/L	50.00	07/26/2004 15:17	
Total xylenes	58	50	ug/L	50.00	07/26/2004 15:17	
tert-Butyl alcohol (TBA)	ND	250	ug/L	50.00	07/26/2004 15:17	
Methyl tert-butyl ether (MTBE)	ND	25	ug/L	50.00	07/26/2004 15:17	
Di-isopropyl Ether (DIPE)	ND	100	ug/L	50.00	07/26/2004 15:17	
Ethyl tert-butyl ether (ETBE)	ND	100	ug/L	50.00	07/26/2004 15:17	
tert-Amyl methyl ether (TAME)	ND	100	ug/L	50.00	07/26/2004 15:17	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	107.3	76-130	%	50.00	07/26/2004 15:17	
Toluene-d8	101.0	78-115	%	50.00	07/26/2004 15:17	



**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: 040713-DW2  
97093397

Received: 07/14/2004 15:38

Site: 2703 Martin Luther King Jr. Way, Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	MW-5	Lab ID:	2004-07-0431
Sampled:	07/03/2004 11:30	Extracted:	07/24/2004 10:56
Matrix:	Water	GC Batch#:	2004/07/24 1A-68
Analysis Flag: 0 (See Legend and Note Section)			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	66000	5000	ug/L	100.00	07/24/2004 10:56	
Benzene	5900	50	ug/L	100.00	07/24/2004 10:56	
Toluene	10000	50	ug/L	100.00	07/24/2004 10:56	
Ethylbenzene	1900	50	ug/L	100.00	07/24/2004 10:56	
Total xylenes	16000	100	ug/L	100.00	07/24/2004 10:56	
tert-Butyl alcohol (TBA)	ND	500	ug/L	100.00	07/24/2004 10:56	
Methyl tert-butyl ether (MTBE)	ND	50	ug/L	100.00	07/24/2004 10:56	
Di-isopropyl Ether (DIPE)	ND	200	ug/L	100.00	07/24/2004 10:56	
Ethyl tert-butyl ether (ETBE)	ND	200	ug/L	100.00	07/24/2004 10:56	
tert-Amyl methyl ether (TAME)	ND	200	ug/L	100.00	07/24/2004 10:56	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	114.5	76-130	%	100.00	07/24/2004 10:56	
Toluene-d8	102.7	78-115	%	100.00	07/24/2004 10:56	

**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: 040713-DW2  
97093397

Received: 07/14/2004 15:38

Site: 2703 Martin Luther King Jr. Way, Oakland

Prep(s)	5030B	Test(s)	8260B
Sample ID	V-10	Lab ID	2004-07-04-1153
Sampled	07/13/2004 11:15	Extracted	7/24/2004 11:15
Matrix	Water	QC Batch#	2004/07/24 1A-68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	120	50	ug/L	1.00	07/24/2004 11:15	
Benzene	1.8	0.50	ug/L	1.00	07/24/2004 11:15	
Toluene	ND	0.50	ug/L	1.00	07/24/2004 11:15	
Ethylbenzene	ND	0.50	ug/L	1.00	07/24/2004 11:15	
Total xylenes	ND	1.0	ug/L	1.00	07/24/2004 11:15	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	07/24/2004 11:15	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	07/24/2004 11:15	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	07/24/2004 11:15	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	07/24/2004 11:15	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	07/24/2004 11:15	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	105.0	76-130	%	1.00	07/24/2004 11:15	
Toluene-d8	97.5	78-115	%	1.00	07/24/2004 11:15	

**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: 040713-DW2  
97093397

Received: 07/14/2004 15:38

Site: 2703 Martin Luther King Jr. Way, Oakland

Prep(s)	5030B	Test(s)	8260B
Sample ID	V-2	Lab ID	2004-07-0431-1
Sampled	07/13/2004 11:30	Extracted	07/24/2004 11:34
Matrix	Water	GC Batch#	2004/07/24-1A 68
Analysis Flag: 0 (See Legend and Note Section)			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	21000	1300	ug/L	25.00	07/24/2004 11:34	
Benzene	1900	13	ug/L	25.00	07/24/2004 11:34	
Toluene	460	13	ug/L	25.00	07/24/2004 11:34	
Ethylbenzene	1000	13	ug/L	25.00	07/24/2004 11:34	
Total xylenes	4300	25	ug/L	25.00	07/24/2004 11:34	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	114.2	76-130	%	25.00	07/24/2004 11:34	
Toluene-d8	103.6	78-115	%	25.00	07/24/2004 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

07/27/2004 14:52

**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: 040713-DW2  
97093397

Received: 07/14/2004 15:38

Site: 2703 Martin Luther King Jr. Way, Oakland

Batch QC Report		
Prep(s): 5030B	Water	Test(s): 8260B
Method: Blank		QC Batch #: 2004/07/24/1A-88
MB: 2004/07/24-1A-68-048		Date Extracted: 07/24/2004 10:48

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/24/2004 07:48	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	07/24/2004 07:48	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/24/2004 07:48	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	07/24/2004 07:48	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	07/24/2004 07:48	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	07/24/2004 07:48	
Benzene	ND	0.5	ug/L	07/24/2004 07:48	
Toluene	ND	0.5	ug/L	07/24/2004 07:48	
Ethylbenzene	ND	0.5	ug/L	07/24/2004 07:48	
Total xylenes	ND	1.0	ug/L	07/24/2004 07:48	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	96.2	76-130	%	07/24/2004 07:48	
Toluene-d8	103.0	78-115	%	07/24/2004 07:48	

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

Blaine Tech Services, Inc.

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

Project: 040713-DW2  
97093397

Received: 07/14/2004 15:38

Site: 2703 Martin Luther King Jr. Way, Oakland

Batch QC Report			
Prep(s): 50311B	Water	Class(s): 8260B	
Method: BJan		QC Batch #: 2004/07/26-1B/65	
MB: 2004/07/26-1B/65-045		Date Extracted: 07/26/2004 09:45	

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/26/2004 09:45	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	07/26/2004 09:45	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/26/2004 09:45	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	07/26/2004 09:45	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	07/26/2004 09:45	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	07/26/2004 09:45	
Benzene	ND	0.5	ug/L	07/26/2004 09:45	
Toluene	ND	0.5	ug/L	07/26/2004 09:45	
Ethylbenzene	ND	0.5	ug/L	07/26/2004 09:45	
Total xylenes	ND	1.0	ug/L	07/26/2004 09:45	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	98.0	76-130	%	07/26/2004 09:45	
Toluene-d8	95.4	78-115	%	07/26/2004 09:45	

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

Blaine Tech Services, Inc.

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Project: 040713-DW2  
97093397

Received: 07/14/2004 15:38

Site: 2703 Martin Luther King Jr. Way, Oakland

Batch QC Report										
Prep(s):	5030B								Test(S):	8260B
Laboratory/Control Spike			Water						QC Batch #:	2004/07/24/17/168
LCS	2004/07/24/1A/68-007		Extracted:	07/24/2004					Analyzed:	07/24/2004 08:07
LCSD	2004/07/24/1A/68-026		Extracted:	07/24/2004					Analyzed:	07/24/2004 08:26

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	24.8	26.1	25	99.2	104.4	5.1	65-165	20		
Benzene	25.8	27.0	25	103.2	108.0	4.5	69-129	20		
Toluene	29.5	27.6	25	118.0	110.4	6.7	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	472	459	500	94.4	91.8		76-130			
Toluene-d8	544	533	500	108.8	106.6		78-115			

Severn Trent Laboratories, Inc.

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

Blaine Tech Services, Inc.

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San Jose, CA 95112-1105

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

Project: 040713-DW2  
97093397

Received: 07/14/2004 15:38

Site: 2703 Martin Luther King Jr. Way, Oakland

Batch QC Report			
Prep. # 5030B	Water		Test(s) 8260B
Laboratory Control Spike	QC Batch # 2004/07/26-1B-65		
LCS 2004/07/26-1B-65-06	Extracted: 07/26/2004	Analyzed: 07/26/2004 08:56	
LCSD 2004/07/26-1B-65-02	Extracted: 07/26/2004	Analyzed: 07/26/2004 09:21	

Compound	Conc. ug/L		Exp. Conc.	Recovery %		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	26.9	26.4	25	107.6	105.6	1.9	65-165	20		
Benzene	23.7	24.8	25	94.8	99.2	4.5	69-129	20		
Toluene	22.7	24.2	25	90.8	96.8	6.4	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	489	454	500	97.8	90.8		76-130			
Toluene-d8	432	473	500	86.4	94.6		78-115			

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07/27/2004 14:52

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Project: 040713-DW2  
97093397

Received: 07/14/2004 15:38

Site: 2703 Martin Luther King Jr. Way, Oakland

**Legend and Notes**

**Analysis Flag**

o

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

Severn Trent Laboratories, Inc.

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07/27/2004 14:52

Page 10 of 10



# SHELL Chain of Custody Record

87294

Lab Identification (if necessary):

Address:

City, State, Zip

Shell Project Manager to be invoiced:

Karen Petryna

- SCIENCE & ENGINEERING
- TECHNICAL SERVICES
- CRMT HOUSTON

2004-07-0431

INCIDENT NUMBER (SKE ONLY)

9 7 0 9 3 3 9 7

SAP or CRMT NUMBER (TS/CRMT)

DATE: 7-13-04

PAGE: 1 of 1

<b>LABORATORY</b> Blaine Tech Services 1680 Rogers Avenue, San Jose, CA 95112 Leon Gearhart 408-573-0555 / 408-573-7771 / kgearhart@blainetech.com		<b>LOG CODE</b> BTSS	<b>SITE ADDRESS (Street and City)</b> 2703 Martin Luther King Jr. Way, Oakland	<b>GLOBAL ID NO.</b> T0600101876
RECEIVED FROM (Company or POC Report to): Ana Friel (707) 442-2700 / sonomasdf@cambria-env.com		<b>CONTRACT PROJECT NO.</b> 040713-00-2	<b>BTSS #</b>	
<b>TURNAROUND TIME (BUSINESS DAYS)</b> <input checked="" type="checkbox"/> 10 DAYS <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 72 HOURS <input type="checkbox"/> 48 HOURS <input type="checkbox"/> 24 HOURS <input type="checkbox"/> LESS THAN 24 HOURS		<b>LAB USE ONLY</b>		
<b>SPECIAL INSTRUCTIONS OR NOTES:</b>		Dave Walter		

**REQUESTED ANALYSIS**

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (M011B - Spill RL)	MTBE (M250B - 0.5ppb RL)	Oxygenates (S) by (M2000E)	Ethanol (M2000E)	Methanol	1,2-DCA (M250B)	EDB (M250B)	TPH - Diesel, Extractable (M0150E)	TEMPERATURE ON RECEIPT (°F)	FIELD NOTES: Containers/Preservative or PID Readings or Laboratory Notes	
		DATE	TIME															
	MW-4	7-13	11:33	W	3	X	X			X							5.0	
	MW-5		11:40			X	X			X								
	V-1		11:15			X	X			X								
	V-2		11:30			X	X											

Released by (Signature): <i>Daniel C. Stahl</i>	Received by (Signature): <i>[Signature]</i>	Date: 7/14/04	Time: 1535
Released by (Signature): <i>[Signature]</i>	Received by (Signature): <i>[Signature]</i>	Date: 7/14/04	Time: 1812

Color coding: White with final report, Green to File, Yellow and Pink to Client.

CSISO Graphics (714) 950-9702