



Shell Oil Products US

April 15, 2003

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

Alameda County
APR 18 2003
Environmental Health

Subject: **Former Shell Service Station**
 1230 14th Street
 Oakland, California

Dear Mr. Chan:

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

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

Sincerely,

Shell Oil Products US

Karen Petryna

Karen Petryna
Sr. Environmental Engineer

C A M B R I A

April 15, 2003

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

Re: **First Quarter 2003 Monitoring Report**
Former Shell Service Station
1230 14th Street
Oakland, California
Incident #97088250
Cambria Project #245-0233-002



Dear Mr. Chan:

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.

FIRST QUARTER 2003 ACTIVITIES

Groundwater Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged all site wells, measured dissolved oxygen (DO) concentrations, calculated groundwater elevations, and compiled the collected data. Cambria prepared an area vicinity map which includes previously submitted well survey information (Figure 1) and a groundwater elevation contour map (Figure 2). Blaine's report, with supporting field notes, is included as Attachment A.

Groundwater Extraction (GWE): As proposed in the May 23, 2002 *Subsurface Investigation Work Plan*, semi-monthly mobile GWE using MW-5 began on June 11, 2002 in an attempt to reduce hydrocarbon concentrations in groundwater in the suspected source area. Mass-removal data for the site is presented in Table 1. To date, approximately 5.1 pounds of hydrocarbons have been removed by GWE.

Dual Phase Vapor Extraction (DVE): DVE is the process of applying high vacuum through an airtight well seal to simultaneously extract soil vapors from the vadose zone and enhance GWE from the saturated zone. Cambria changed semi-monthly GWE to semi-monthly DVE beginning on September 19, 2002. DVE was discontinued on March 4, 2003. Mass removal data is summarized in Table 2. DVE removed approximately 4.1 pounds of vapor phase hydrocarbons from the subsurface.

**Cambria
Environmental
Technology, Inc.**

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

Corrective Action Implementation: In a letter dated February 18, 2003, the Alameda County Health Care Services Agency (ACHCSA) approved Cambria's August 26, 2002 *Subsurface Investigation Report and Corrective Action Plan* (CAP), September 12, 2002 *Subsurface Investigation Report and Corrective Action Plan Addendum*, and November 18, 2002 *Addendum 2*. From March 17 through 20, 2003, Fast-Tek Engineering Support Services of Point Richmond, California conducted in-situ field testing of hydrogen peroxide injection proposed in the CAP. On March 13, 2003, Blaine collected pre-remediation groundwater samples from wells MW-1, MW-5 and VW/AS-1. Blaine will begin monthly post-remediation sampling on April 17, 2003 and continue through the second quarter of 2003.



Clarification of Cleanup Levels and Goals: On March 10, 2003, Cambria submitted a letter to the ACHCSA to clarify the contents of the February 18, 2003 ACHCSA letter and to confirm that the CAP objective is to reduce onsite chemical concentrations in groundwater to below cleanup levels of 1,400 parts per billion (ppb) benzene and 500 ppb total petroleum hydrocarbons as gasoline. Cambria presented these cleanup levels, which come from the Oakland risk-based screening levels (RBSLs), in the November 18, 2002 CAP *Addendum 2*.

In the February 18, 2003 letter, ACHCSA concurred with the final cleanup levels, but requested that the water quality objectives established in the San Francisco Bay - Regional Water Quality Control Board Basin Plan, be used as the "cleanup goals" for groundwater at the site. Cambria's March 10, 2003 letter noted our understanding that the Oakland RBSLs were established in order to allow case closure when site conditions are sufficiently protective of human health and the environment, prior to achieving the cleanup goals. Furthermore, although we have established site-specific cleanup levels, we understand that ACHCSA is more comfortable with the lower cleanup levels established in the Oakland RBSLs. While we expect that the cleanup goals will eventually be achieved, we would like to clarify that we understand that ACHCSA will grant case closure when groundwater concentrations reach the Oakland RBSLs as demonstrated by post-remediation sampling.

ANTICIPATED SECOND QUARTER 2003 ACTIVITIES

Groundwater Monitoring: Blaine will gauge and sample all wells, measure DO concentrations, and tabulate the data. Groundwater samples are collected semi-annually in the second and fourth quarters. Cambria will prepare a monitoring report.

Remediation Report and Verification Sampling Work Plan: Cambria will prepare a report of the activities conducted during the in-situ field test of hydrogen peroxide/Fenton's reagent and

C A M B R I A

Barney Chan
April 15, 2003

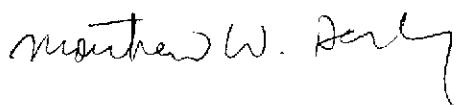
verification sampling. As noted above, monthly post-remediation sampling will commence on April 17, 2003. Cambria will include the initial set of post-remediation sampling data in our remediation report, which will be submitted no later than May 30, 2003. Subsequent monthly sampling data will be presented in the second quarter monitoring report.

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

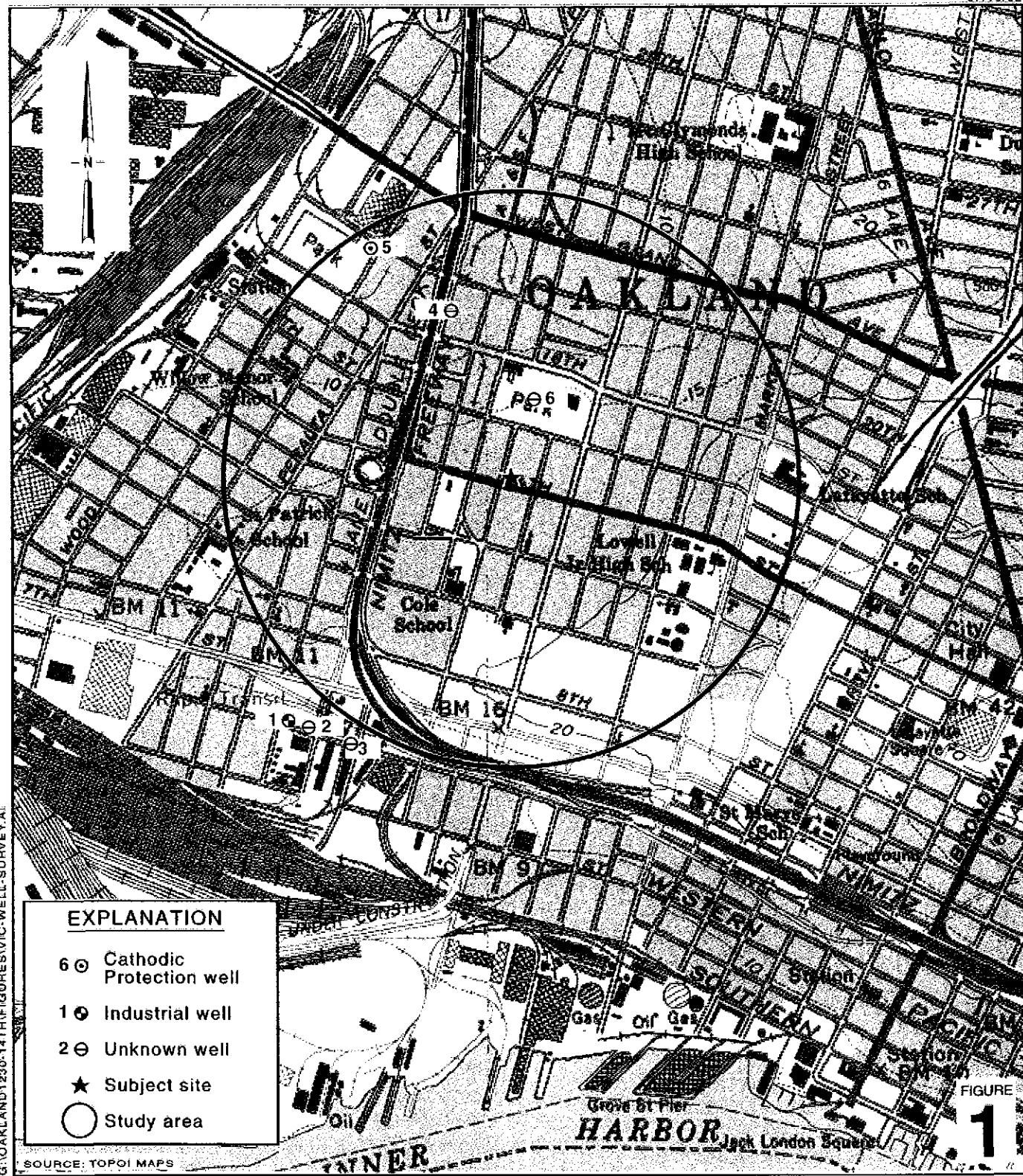
Figures: 1 - Vicinity/Area Well Survey Map
 2 - Groundwater Elevation Contour Map

Tables: 1 - Groundwater Extraction – Mass Removal Data
 2 - Vapor Extraction – Mass Removal Data

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, Shell Oil Products US, P.O. Box 7869, Burbank, CA 91510-7869
 Tom Saberi, 1045 Airport Boulevard, Suite 12, South San Francisco, CA 94080
 Matthew Dudley, Sedgwick, Detert, Moran, & Arnold, 1 Embarcadero Center,
 16th Floor, San Francisco, CA 94111-3628
 Ms. Ellen Wyrick-Parkinson, 1420 Magnolia Street, Oakland, CA 94607

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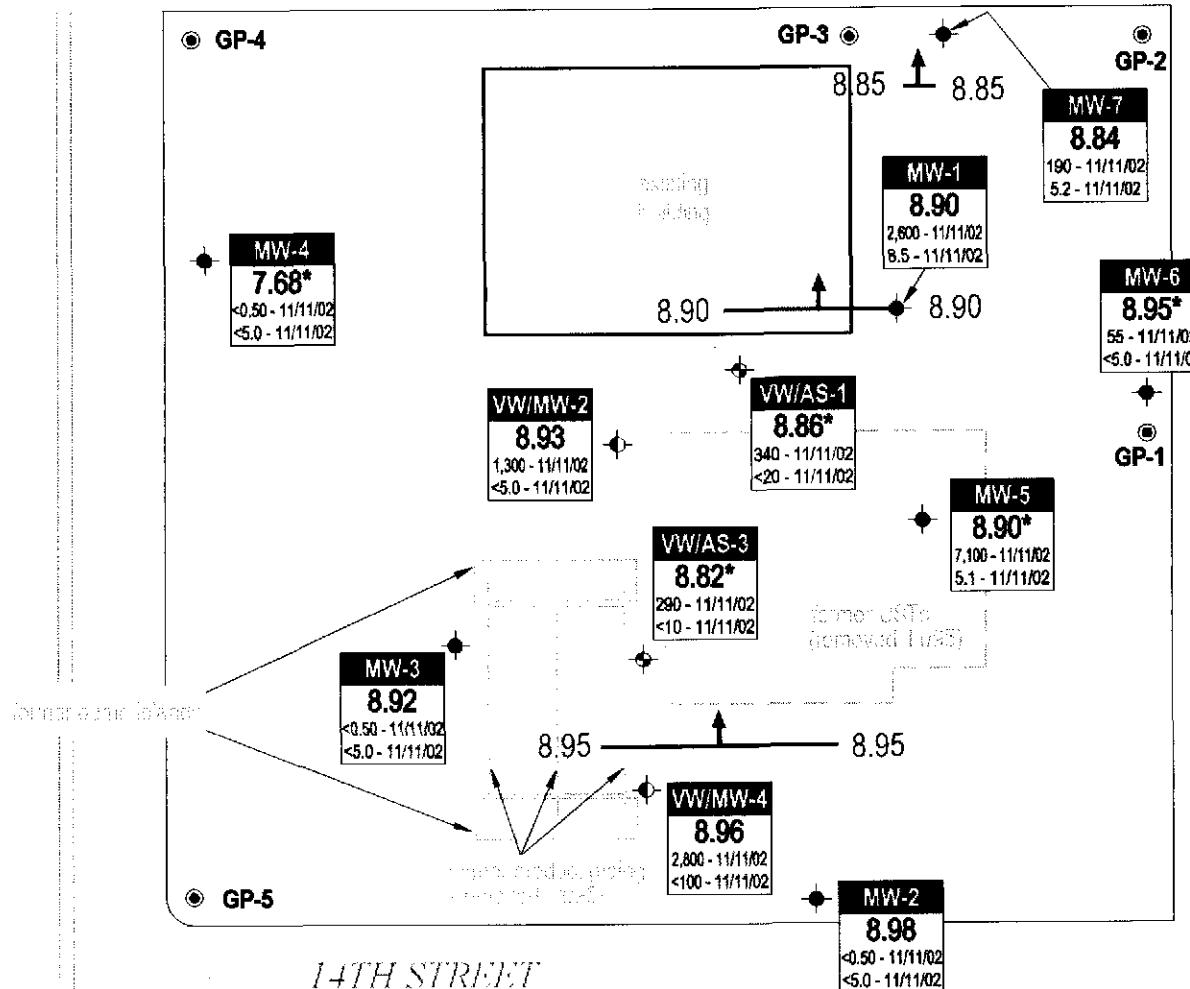


Former Shell Service Station
 1230 14th Street
 Oakland, California
 Incident #97088250



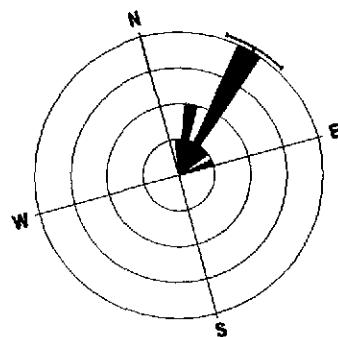
Vicinity/Area Well Survey Map
 (1/2-Mile Radius)

UNION SERVICE



EXPLANATION

- MW-1** • Monitoring well location
- VW/AS-1** • Combination air sparge/soil vapor extraction well
- VW/MW-2** • Combination soil vapor extraction well/monitoring well
- GP-1** • Soil boring location (12/11/00)
- * Data anomalous, not used for contouring
- Groundwater flow direction
- XX.XX Groundwater elevation contour, in feet above mean sea level (msl), approximately located, dashed where inferred
- Well designation
- ELEV Groundwater elevation, in feet above msl
- Benzene MTBE Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8260



Groundwater Flow Direction
(3Q00 through 1Q03)

0 10 20
Scale (ft)

FIGURE
2

**Table 1: Groundwater Extraction - Mass Removal Data - Former Shell Service Station, Incident #97088250,
1230 14th St., Oakland, California**

| Date Purged | Well ID | Cumulative | | | <u>TPPH</u> | | | <u>Benzene</u> | | |
|---------------------------------|------------|---------------------------|---------------------------|-------------------------------|--------------------------------|-----------------------------|--|-----------------------------------|--------------------------------|--------------------------------|
| | | Volume Pumped (gal) | Volume Pumped (gal) | Date Sampled | TPPH Concentration (ppb) | TPPH Removed (pounds) | TPPH Removed To Date (pounds) | Benzene Concentration (ppb) | Benzene Removed (pounds) | Benzene To Date (pounds) |
| 06/11/02 | MW-5 | 300 | 300 | 04/17/02 | 33,000 | 0.08261 | 0.08261 | 3,800 | 0.00951 | 0.00951 |
| 06/25/02 | MW-5 | 200 | 500 | 04/17/02 | 33,000 | 0.05507 | 0.13768 | 3,800 | 0.00634 | 0.01585 |
| 07/09/02 | MW-5 | 415 | 915 | 04/17/02 | 33,000 | 0.11428 | 0.25196 | 3,800 | 0.01316 | 0.02901 |
| 07/23/02 | MW-5 | 300 | 1,215 | 04/17/02 | 33,000 | 0.08261 | 0.33457 | 3,800 | 0.00951 | 0.03853 |
| 08/06/02 | MW-5 | 300 | 1,515 | 04/17/02 | 33,000 | 0.08261 | 0.41718 | 3,800 | 0.00951 | 0.04804 |
| 08/20/02 | MW-5 | 185 | 1,700 | 04/17/02 | 33,000 | 0.05094 | 0.46812 | 3,800 | 0.00587 | 0.05390 |
| 09/03/02 | MW-5 | 151 | 1,851 | 04/17/02 | 33,000 | 0.04158 | 0.50970 | 3,800 | 0.00479 | 0.05869 |
| 09/19/02 | MW-5 | 400 | 2,251 | 04/17/02 | 33,000 | 0.11015 | 0.61984 | 3,800 | 0.01268 | 0.07138 |
| 10/01/02 | MW-5 | 375 | 2,626 | 04/17/02 | 33,000 | 0.10326 | 0.72311 | 3,800 | 0.01189 | 0.08327 |
| 10/17/02 | MW-5 | 150 | 2,776 | 04/17/02 | 33,000 | 0.04130 | 0.76441 | 3,800 | 0.00476 | 0.08802 |
| 11/01/02 | MW-5 | 327 | 3,103 | 04/17/02 | 33,000 | 0.09004 | 0.85445 | 3,800 | 0.01037 | 0.09839 |
| 11/15/02 | MW-5 | 200 | 3,303 | 11/11/02 | 100,000 | 0.16689 | 1.02134 | 7,100 | 0.01185 | 0.11024 |
| 12/03/02 | MW-5 | 200 | 3,503 | 11/11/02 | 100,000 | 0.16689 | 1.18823 | 7,100 | 0.01185 | 0.12209 |
| 12/31/02 | MW-5 | 391 | 3,894 | 11/11/02 | 100,000 | 0.32626 | 1.51449 | 7,100 | 0.02316 | 0.14525 |
| 01/17/03 | MW-5 | 463 | 4,357 | 11/11/02 | 100,000 | 0.38634 | 1.90084 | 7,100 | 0.02743 | 0.17268 |
| 01/29/03 | MW-5 | 2,780 | 7,137 | 11/11/02 | 100,000 | 2.31973 | 4.22057 | 7,100 | 0.16470 | 0.33739 |
| 02/04/03 | MW-5 | 250 | 7,387 | 11/11/02 | 100,000 | 0.20861 | 4.42918 | 7,100 | 0.01481 | 0.35220 |
| 02/18/03 | MW-5 | 400 | 7,787 | 11/11/02 | 100,000 | 0.33377 | 4.76295 | 7,100 | 0.02370 | 0.37589 |
| 03/04/03 | MW-5 | 350 | 8,137 | 11/11/02 | 100,000 | 0.29205 | 5.05500 | 7,100 | 0.02074 | 0.39663 |
| Total Gallons Extracted: | | 8,437 | | Total Pounds Removed: | | 5,05500 | | 0.39663 | | |
| | | | | Total Gallons Removed: | | 0.82869 | | 0.05433 | | |

**Table 1: Groundwater Extraction - Mass Removal Data - Former Shell Service Station, Incident #97088250,
1230 14th St., Oakland, California**

| Date Purged | Well ID | Cumulative | | | TPPH | | | Benzene | | |
|----------------|------------|------------------|------------------|-----------------|-----------------------|-----------------|--------------------|--------------------------|--------------------|--------------------|
| | | Volume Pumped | Volume Pumped | Date Sampled | TPPH Concentration | TPPH Removed | Removed To Date | Benzene Concentration | Benzene Removed | Benzene To Date |
| (gal) | (gal) | | (ppb) | (pounds) | (pounds) | (ppb) | (pounds) | (pounds) | (pounds) | (pounds) |

Abbreviations & Notes:

TPPH = Total purgeable hydrocarbons as gasoline

ppb = Parts per billion

gal = Gallons

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

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

TPPH and benzene analyzed by EPA Method 8260

Concentrations based on most recent groundwater monitoring results

If concentration is less than the laboratory detection limit, one half of the detection limit concentration is used in the mass removal calculation.

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

Table 2: Vapor Extraction - Mass Removal Data - Former Shell Service Station, Incident #97088250, 1230 14th Street, Oakland, California

| Date Purged | Well ID | Interval (hours) | System Flow Rate (CFM) | Hydrocarbon Concentrations | | TPPH | | Benzene | |
|------------------------------|---------|------------------|------------------------|----------------------------|---------|----------------------------|-----------------------------|-------------------------------|--------------------------------|
| | | | | TPHg | Benzene | TPHg Removal Rate (#/hour) | Cumulative TPHg Removed (#) | Benzene Removal Rate (#/hour) | Cumulative Benzene Removed (#) |
| | | | | (Concentrations in ppmv) | | | | | |
| 09/19/02 | MW-5 | 4.00 | 10.1 | 150 | 25 | 0.020 | 0.081 | 0.003 | 0.012 |
| 10/01/02 | MW-5 | 4.00 | 11.1 | 2,100 | 23 | 0.312 | 1.327 | 0.003 | 0.025 |
| 10/17/02 | MW-5 | 4.00 | 9.3 | 1,100 | 20 | 0.137 | 1.874 | 0.002 | 0.034 |
| 11/01/02 | MW-5 | 4.00 | 10.0 | 520 | 8.9 | 0.070 | 2.152 | 0.001 | 0.038 |
| 11/15/02 | MW-5 | 4.00 | 8.5 | 1,500 | 16 | 0.170 | 2.834 | 0.002 | 0.045 |
| 12/03/02 | MW-5 | 4.00 | 7.7 | 1,300 | 15 | 0.134 | 3.370 | 0.001 | 0.050 |
| 12/31/02 | MW-5 | 4.25 | 10.9 | 560 | 13 | 0.082 | 3.716 | 0.002 | 0.057 |
| 01/17/03 | MW-5 | 4.00 | 9.1 | 260 | 14 | 0.032 | 3.843 | 0.002 | 0.064 |
| 01/29/03 | MW-5 | 4.08 | 13.4 | 340 | 12 | 0.061 | 4.091 | 0.002 | 0.072 |
| 02/04/03 | MW-5 | 2.50 | NA | 190 | 1.1 | 0.000 | 4.091 | 0.000 | 0.072 |
| 02/18/03 | MW-5 | 4.00 | NA | 56 | 0.29 | 0.000 | 4.091 | 0.000 | 0.072 |
| 03/04/03 | MW-5 | 4.00 | 21.5 | 31 | 2.8 | 0.009 | 4.127 | 0.001 | 0.075 |
| Total Pounds Removed: | | | | | | TPHg = 4.127 | | Benzene = 0.075 | |

Abbreviations and Notes:

CFM = Cubic feet per minute

TPHg = Total petroleum hydrocarbons as gasoline (C6-C12) by modified EPA Method 8015 in 1 liter tedlar bag samples

ppmv = Parts per million by volume

= Pounds

NA = Not available

TPHG, Benzene, and MTBE analyzed by EPA Method 8015/8020 in 1 liter tedlar bag samples

TPHg / Benzene / MTBE removal rate = Rate based on Bay Area Air Quality Management District's Manual of Procedures for Soil Vapor Extraction dated July 17, 1991.

(Rate = Concentration (ppmv) x system flow rate (cfm) x (1lb-mole/386ft³) x molecular weight (86 lb/lb-mole for TPHg, 78 lb/lb-mole for benzene, 88 lb/lb-mole for MTBE)
x 60 min/hour x 1/1,000,000)

Table 2: Vapor Extraction - Mass Removal Data - Former Shell Service Station, Incident #97088250, 1230 14th Street, Oakland, California

Cumulative TPHg / Benzene / MTBE removal = Previous removal rate multiplied by the hour-interval of operation plus the previous total

If concentration is less than the laboratory detection limit, one half of the detection limit concentration is used in the mass removal calculation.

ATTACHMENT A

Blaine Groundwater Monitoring Report

and Field Notes

BLAINE
TECH SERVICES INC.



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

January 22, 2003

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

First Quarter 2003 Groundwater Monitoring at
Former Shell Service Station
1230 14th Street
Oakland, CA

Monitoring performed on January 16, 2003

Groundwater Monitoring Report 030116-DA-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/jt

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

cc: Anni Kreml
Cambria Environmental Technology, Inc.
1144 65th Street, Ste. C
Oakland, CA 94608-2411

WELL CONCENTRATIONS
Former Shell Service Station
1230 14th Street
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) | DO Reading (ppm) |
|---------|------------|----------------|-------------|-------------|-------------|-------------|------------------------|------------------------|--------------|----------------------------|--------------------------|------------------------|
| MW-1 | 03/25/1996 | 37,000 | 7,400 | 1,500 | 720 | 3,300 | <500 | NA | 18.58 | 9.53 | 9.05 | NA |
| MW-1 | 06/21/1996 | 35,000 | 9,900 | 460 | 340 | 3,500 | 890 | NA | 18.58 | 10.72 | 7.86 | NA |
| MW-1 | 09/26/1996 | 19,000 | 8,200 | 510 | 780 | 790 | <250 | NA | 18.58 | 12.88 | 5.70 | NA |
| MW-1 | 12/19/1996 | 27,000 | 120 | 1,200 | 1,400 | 2,800 | <100 | NA | 18.58 | 12.59 | 5.99 | NA |
| MW-1 | 12/19/1996 | 32,000 | 12,000 | 1,300 | 1,600 | 3,100 | 830 | NA | 18.58 | 12.59 | 5.99 | NA |
| MW-1 | 03/25/1997 | 39,000 | 13,000 | 1,600 | 840 | 3,100 | 730 | NA | 18.58 | 11.10 | 7.48 | 1.2 |
| MW-1 | 06/26/1997 | NA | NA | NA | NA | NA | NA | NA | 18.58 | 12.42 | 6.16 | NA |
| MW-1 | 09/26/1997 | NA | NA | NA | NA | NA | NA | NA | 18.58 | 13.31 | 5.27 | 0.8 |
| MW-1 | 12/05/1997 | NA | NA | NA | NA | NA | NA | NA | 18.58 | 12.65 | 5.93 | 0.3 |
| MW-1 | 02/19/1998 | 16,000 | 5,500 | 450 | 500 | 800 | <500 | NA | 18.58 | 6.46 | 12.12 | 2.4 |
| MW-1 | 06/08/1998 | NA | NA | NA | NA | NA | NA | NA | 18.58 | 6.62 | 11.96 | 1.2 |
| MW-1 | 08/25/1998 | NA | NA | NA | NA | NA | NA | NA | 18.58 | 11.83 | 6.75 | 2.8 |
| MW-1 | 12/28/1998 | NA | NA | NA | NA | NA | NA | NA | 18.58 | 12.01 | 6.57 | 2.6 |
| MW-1 | 03/26/1999 | NA | NA | NA | NA | NA | NA | NA | 18.58 | 9.15 | 9.43 | 2.2 |
| MW-1 | 06/30/1999 | NA | NA | NA | NA | NA | NA | NA | 18.58 | 11.22 | 7.36 | 3.8 |
| MW-1 | 09/30/1999 | NA | NA | NA | NA | NA | NA | NA | 18.58 | 11.89 | 6.69 | 3.0 |
| MW-1 | 12/27/1999 | 34,800 | 8,660 | 953 | 956 | 2,770 | <1,000 | NA | 18.58 | 13.55 | 5.03 | 2.4/2.1 |
| MW-1 | 01/21/2000 | 40,600 | 14,700 | 1,850 | 1,210 | 3,670 | <500 | NA | 18.58 | 13.42 | 5.16 | 2.8 |
| MW-1 | 03/07/2000 | NA | NA | NA | NA | NA | NA | NA | 18.58 | 8.11 | 10.47 | 0.4 |
| MW-1 | 04/17/2000 | NA | NA | NA | NA | NA | NA | NA | 18.58 | 9.78 | 8.80 | 3.0/3.4 |
| MW-1 | 04/18/2000 | 18,300 | 8,060 | 543 | 528 | 872 | <50.0 | NA | 18.58 | NA | NA | NA |
| MW-1 | 09/21/2000 | NA | NA | NA | NA | NA | NA | NA | 18.58 | 13.11 | 5.47 | 5.2 |
| MW-1 | 10/17/2000 | 15,800 | 6,720 | 435 | 587 | 887 | 351 | <66.7 | 18.58 | 12.61 | 5.97 | 1.2/0.8 |
| MW-1 | 01/09/2001 | NA | NA | NA | NA | NA | NA | NA | 18.58 | 12.94 | 5.64 | 0.3 |
| MW-1 | 04/27/2001 | 1,400 | 650 | 28 | 58 | 48 | NA | <10 | 18.58 | 10.73 | 7.85 | 1.8/2.1 |
| MW-1 | 07/03/2001 | NA | NA | NA | NA | NA | NA | NA | 18.58 | 12.00 | 6.58 | 1.8 |
| MW-1 | 12/06/2001 | 4,500 | 1,500 | 85 | 160 | 210 | NA | <50 | 18.58 | 10.53 | 8.05 | 2.5/2.9 |
| MW-1 | 01/23/2002 | NA | NA | NA | NA | NA | NA | NA | 18.58 | 9.33 | 9.25 | 0.1 |

WELL CONCENTRATIONS
Former Shell Service Station
1230 14th Street
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) | DO Reading (ppm) |
|---------|------|----------------|-------------|-------------|-------------|-------------|------------------------|------------------------|--------------|----------------------------|--------------------------|------------------------|
|---------|------|----------------|-------------|-------------|-------------|-------------|------------------------|------------------------|--------------|----------------------------|--------------------------|------------------------|

| | | | | | | | | | | | | |
|------|------------|--------|-------|-------|-----|-----|----|------|-------|-------|------|---------|
| MW-1 | 04/17/2002 | 230 | 12 | <0.50 | 4.6 | 2.5 | NA | <5.0 | 18.58 | 10.49 | 8.09 | 6.3/5.3 |
| MW-1 | 07/18/2002 | NA | NA | NA | NA | NA | NA | NA | 18.58 | 11.98 | 6.60 | 1.2 |
| MW-1 | 11/11/2002 | 12,000 | 2,600 | 240 | 470 | 640 | NA | 8.5 | 18.58 | 13.00 | 5.58 | 0.2/0.2 |
| MW-1 | 01/16/2003 | NA | NA | NA | NA | NA | NA | NA | 18.58 | 9.68 | 8.90 | 4.4 |

| | | | | | | | | | | | | |
|------|------------|-------|--------|--------|--------|--------|-------|-------|-------|-------|-------|---------|
| MW-2 | 03/25/1996 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 17.90 | 8.19 | 9.71 | NA |
| MW-2 | 06/21/1996 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 17.90 | 9.94 | 7.96 | NA |
| MW-2 | 09/26/1996 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 17.90 | 12.15 | 5.75 | NA |
| MW-2 | 12/19/1996 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | NA | 17.90 | 11.70 | 6.20 | NA |
| MW-2 | 03/25/1997 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 17.90 | 9.25 | 8.65 | 1.8 |
| MW-2 | 06/26/1997 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 17.90 | 11.36 | 6.54 | 2.4 |
| MW-2 | 09/26/1997 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 17.90 | 12.56 | 5.34 | 1.1 |
| MW-2 | 09/26/1997 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 17.90 | 12.56 | 5.34 | 1.1 |
| MW-2 | 12/05/1997 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 17.90 | 11.15 | 6.75 | 0.7 |
| MW-2 | 02/19/1998 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 17.90 | 5.61 | 12.29 | 2.7 |
| MW-2 | 06/08/1998 | <50 | <0.30 | <0.30 | <0.30 | <0.60 | <10 | NA | 17.90 | 5.58 | 12.32 | 3.2 |
| MW-2 | 08/25/1998 | NA | NA | NA | NA | NA | NA | NA | 17.90 | 10.67 | 7.23 | 1.7 |
| MW-2 | 12/28/1998 | <50.0 | <0.500 | <0.500 | <0.500 | <0.500 | <2.00 | NA | 17.90 | 11.65 | 6.25 | 0.4/0.8 |
| MW-2 | 03/26/1999 | NA | NA | NA | NA | NA | NA | NA | 17.90 | 8.60 | 9.30 | 0.7 |
| MW-2 | 06/30/1999 | <50.0 | <0.500 | <0.500 | <0.500 | <0.500 | <5.00 | NA | 17.90 | 10.30 | 7.60 | 2.3 |
| MW-2 | 09/30/1999 | NA | NA | NA | NA | NA | NA | NA | 17.90 | 10.77 | 7.13 | 1.9 |
| MW-2 | 12/27/1999 | <50.0 | <0.500 | <0.500 | <0.500 | <0.500 | <5.00 | NA | 17.90 | 12.21 | 5.69 | 0.7/0.7 |
| MW-2 | 03/07/2000 | NA | NA | NA | NA | NA | NA | NA | 17.90 | 7.13 | 10.77 | 1.1 |
| MW-2 | 04/17/2000 | <50.0 | <0.500 | <0.500 | <0.500 | <0.500 | <2.50 | NA | 17.90 | 8.35 | 9.55 | 1.8/1.8 |
| MW-2 | 09/21/2000 | NA | NA | NA | NA | NA | NA | NA | 17.90 | 11.76 | 6.14 | 2.1 |
| MW-2 | 10/17/2000 | <50.0 | <0.500 | <0.500 | <0.500 | <0.500 | <2.50 | NA | 17.90 | 11.80 | 6.10 | 0.9/0.6 |
| MW-2 | 01/09/2001 | NA | NA | NA | NA | NA | NA | NA | 17.90 | 12.14 | 5.76 | 0.7 |
| MW-2 | 04/27/2001 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | NA | <0.50 | 17.90 | 9.85 | 8.05 | 1.1/0.9 |
| MW-2 | 07/03/2001 | NA | NA | NA | NA | NA | NA | NA | 17.90 | 11.20 | 6.70 | 1.2 |

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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 | 12/06/2001 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | NA | <5.0 | 17.90 | 10.77 | 7.13 | 3.9/2.1 |
| MW-2 | 01/23/2002 | NA | NA | NA | NA | NA | NA | NA | 17.90 | 8.64 | 9.26 | 2.5 |
| MW-2 | 04/17/2002 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | NA | <5.0 | 17.90 | 9.61 | 8.29 | 3.5/5.2 |
| MW-2 | 07/18/2002 | NA | NA | NA | NA | NA | NA | NA | 17.90 | 11.09 | 6.81 | 1.4 |
| MW-2 | 11/11/2002 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | NA | <5.0 | 17.90 | 12.16 | 5.74 | 0.2/0.3 |
| MW-2 | 01/16/2003 | NA | NA | NA | NA | NA | NA | NA | 17.90 | 8.92 | 8.98 | 1.7 |
| MW-3 | 03/25/1996 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.18 | 8.47 | 9.71 |
| MW-3 | 06/21/1996 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.18 | 10.40 | 7.78 |
| MW-3 | 09/26/1996 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.18 | 12.45 | 5.73 |
| MW-3 | 12/19/1996 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | NA | 18.18 | 12.14 | 6.02 |
| MW-3 | 03/25/1997 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.18 | 9.54 | 8.64 |
| MW-3 | 06/26/1997 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.18 | 11.66 | 6.52 |
| MW-3 | 09/26/1997 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.18 | 12.85 | 5.33 |
| MW-3 | 12/05/1997 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.18 | 11.44 | 6.74 |
| MW-3 | 02/19/1998 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.18 | 6.78 | 11.40 |
| MW-3 | 06/08/1998 | <50 | <0.30 | <0.30 | <0.30 | <0.30 | <0.60 | <10 | NA | 18.18 | 6.82 | 11.36 |
| MW-3 | 06/08/1998 | <50 | <0.30 | <0.30 | <0.30 | <0.30 | <0.60 | <10 | NA | 18.18 | 6.82 | 11.36 |
| MW-3 | 08/25/1998 | NA | NA | NA | NA | NA | NA | NA | NA | 18.18 | 11.09 | 7.09 |
| MW-3 | 12/28/1998 | <50.0 | <0.500 | <0.500 | <0.500 | <0.500 | <0.500 | <2.00 | NA | 18.18 | 11.84 | 6.34 |
| MW-3 | 03/26/1999 | NA | NA | NA | NA | NA | NA | NA | NA | 18.18 | 8.57 | 9.61 |
| MW-3 | 06/30/1999 | <50.0 | <0.500 | <0.500 | <0.500 | <0.500 | <0.500 | <5.00 | NA | 18.18 | 10.61 | 7.57 |
| MW-3 | 09/30/1999 | NA | NA | NA | NA | NA | NA | NA | NA | 18.18 | 11.53 | 6.65 |
| MW-3 | 12/27/1999 | <50.0 | <0.500 | <0.500 | <0.500 | <0.500 | <0.500 | <5.00 | NA | 18.18 | 12.35 | 5.83 |
| MW-3 | 03/07/2000 | NA | NA | NA | NA | NA | NA | NA | NA | 18.17 | 7.36 | 10.81 |
| MW-3 | 04/17/2000 | <50.0 | <0.500 | <0.500 | <0.500 | <0.500 | <0.500 | 19.3 | NA | 18.17 | 8.39 | 9.78 |
| MW-3 | 09/21/2000 | NA | NA | NA | NA | NA | NA | NA | NA | 18.17 | 12.01 | 6.16 |
| MW-3 | 10/17/2000 | <50.0 | <0.500 | <0.500 | <0.500 | <0.500 | <0.500 | <2.50 | NA | 18.17 | 12.10 | 6.07 |
| MW-3 | 01/09/2001 | NA | NA | NA | NA | NA | NA | NA | NA | 18.17 | 12.43 | 5.74 |

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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 | 04/27/2001 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | NA | <0.50 | 18.17 | 10.10 | 8.07 | 2.3/2.4 |
| MW-3 | 07/03/2001 | NA | NA | NA | NA | NA | NA | NA | 18.17 | 11.45 | 6.72 | 1.4 |
| MW-3 | 12/06/2001 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | NA | <5.0 | 18.17 | 11.07 | 7.10 | 2.8/3.9 |
| MW-3 | 01/23/2002 | NA | NA | NA | NA | NA | NA | NA | 18.17 | 8.89 | 9.28 | 3.1 |
| MW-3 | 04/17/2002 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | NA | <5.0 | 18.17 | 9.92 | 8.25 | 3.7/3.2 |
| MW-3 | 07/18/2002 | NA | NA | NA | NA | NA | NA | NA | 18.17 | 11.42 | 6.75 | 1.6 |
| MW-3 | 11/11/2002 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | NA | <5.0 | 18.17 | 12.44 | 5.73 | 0.3/0.4 |
| MW-3 | 01/16/2003 | NA | NA | NA | NA | NA | NA | NA | 18.17 | 9.25 | 8.92 | 2.1 |
| MW-4 | 03/25/1996 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.01 | 9.20 | 8.81 | NA |
| MW-4 | 06/21/1996 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.01 | 10.25 | 7.76 | NA |
| MW-4 | 09/26/1996 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.01 | 12.29 | 5.72 | NA |
| MW-4 | 12/19/1996 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | NA | 18.01 | 12.47 | 5.54 | NA |
| MW-4 | 03/25/1997 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.01 | 9.44 | 8.57 | 1.8 |
| MW-4 | 06/26/1997 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.01 | 11.57 | 6.44 | 6.2 |
| MW-4 (D) | 06/26/1997 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.01 | 11.57 | 6.44 | 6.2 |
| MW-4 | 09/26/1997 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.01 | 12.75 | 5.26 | 2.1 |
| MW-4 | 12/05/1997 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.01 | 11.37 | 6.64 | 1.0 |
| MW-4 (D) | 12/05/1997 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.01 | 11.37 | 6.64 | 1.0 |
| MW-4 | 02/19/1998 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | 18.01 | 5.59 | 12.42 | 6.5 |
| MW-4 | 06/08/1998 | <50 | <0.30 | <0.30 | <0.30 | <0.60 | <10 | NA | 18.01 | 5.65 | 12.36 | 2.6 |
| MW-4 | 08/25/1998 | NA | NA | NA | NA | NA | NA | NA | 18.01 | 10.98 | 7.03 | 2.4 |
| MW-4 | 12/28/1998 | <50.0 | <0.500 | <0.500 | <0.500 | <0.500 | <2.00 | NA | 18.01 | 11.83 | 6.18 | 1.3/1.2 |
| MW-4 | 03/26/1999 | NA | NA | NA | NA | NA | NA | NA | 18.01 | 8.40 | 9.61 | 1.9 |
| MW-4 | 06/30/1999 | <50.0 | <0.500 | <0.500 | <0.500 | <0.500 | <5.00 | NA | 18.01 | 10.53 | 7.48 | 7.6 |
| MW-4 | 09/30/1999 | NA | NA | NA | NA | NA | NA | NA | 18.01 | 11.03 | 6.98 | 2.6 |
| MW-4 | 12/27/1999 | <50.0 | <0.500 | <0.500 | <0.500 | <0.500 | <5.00 | NA | 18.01 | 12.53 | 5.48 | 1.9/0.8 |
| MW-4 | 03/07/2000 | NA | NA | NA | NA | NA | NA | NA | 18.01 | 7.00 | 11.01 | 6.5 |
| MW-4 | 04/17/2000 | <50.0 | <0.500 | <0.500 | <0.500 | <0.500 | <2.50 | NA | 18.01 | 8.57 | 9.44 | 5.1/5.1 |

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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) |
|---------|------------|----------------|-------------|-------------|-------------|-------------|------------------------|------------------------|--------------|----------------------------|--------------------------|------------------------|
| MW-4 | 09/21/2000 | NA | NA | NA | NA | NA | NA | NA | 18.01 | 12.05 | 5.96 | 3.0 |
| MW-4 | 10/17/2000 | <50.0 | <0.500 | <0.500 | <0.500 | <0.500 | <2.50 | NA | 18.01 | 11.96 | 6.05 | 5.5/1.2 |
| MW-4 | 01/09/2001 | NA | NA | NA | NA | NA | NA | NA | 18.01 | 12.33 | 5.68 | 2.1 |
| MW-4 | 04/27/2001 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | NA | <0.50 | 18.01 | 9.96 | 8.05 | 5.3/3.8 |
| MW-4 | 07/03/2001 | NA | NA | NA | NA | NA | NA | NA | 18.01 | 11.35 | 6.66 | 4.5 |
| MW-4 | 12/06/2001 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | NA | <5.0 | 18.01 | 10.99 | 7.02 | 10.23/6.5 |
| MW-4 | 01/23/2002 | NA | NA | NA | NA | NA | NA | NA | 18.01 | 8.80 | 9.21 | 8.8 |
| MW-4 | 04/17/2002 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | NA | <5.0 | 18.01 | 9.75 | 8.26 | 7.0/5.1 |
| MW-4 | 07/18/2002 | NA | NA | NA | NA | NA | NA | NA | 18.01 | 11.32 | 6.69 | 5.3 |
| MW-4 | 11/11/2002 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | NA | <5.0 | 18.01 | 12.36 | 5.65 | 3.6/2.0 |
| MW-4 | 01/16/2003 | NA | NA | NA | NA | NA | NA | NA | 18.01 | 10.33 | 7.68 | 6.5 |
| MW-5 | 12/03/2001 | NA | NA | NA | NA | NA | NA | NA | 18.47 | 11.86 | 6.61 | NA |
| MW-5 | 12/06/2001 | 31,000 | 3,000 | 2,000 | 1,100 | 3,000 | NA | <50 | 18.47 | 11.40 | 7.07 | 3.1/3.2 |
| MW-5 | 01/23/2002 | NA | NA | NA | NA | NA | NA | NA | 18.47 | 9.24 | 9.23 | 0.9 |
| MW-5 | 04/17/2002 | 33,000 | 3,800 | 2,400 | 1,300 | 4,400 | NA | <200 | 18.47 | 10.35 | 8.12 | 5.3/3.8 |
| MW-5 | 07/18/2002 | NA | NA | NA | NA | NA | NA | NA | 18.47 | 11.82 | 6.65 | 0.8 |
| MW-5 | 11/11/2002 | 100,000 | 7,100 | 12,000 | 3,000 | 17,000 | NA | 5.1 | 18.47 | 12.86 | 5.61 | 1.2/1.4 |
| MW-5 | 01/16/2003 | NA | NA | NA | NA | NA | NA | NA | 18.47 | 9.57 | 8.90 | 0.0 |
| MW-6 | 12/03/2001 | NA | NA | NA | NA | NA | NA | NA | 18.84 | 12.19 | 6.65 | NA |
| MW-6 | 12/06/2001 | 76 | 5.7 | 3.8 | 1.4 | 7.0 | NA | <5.0 | 18.84 | 11.70 | 7.14 | 6.3/6.1 |
| MW-6 | 01/23/2002 | NA | NA | NA | NA | NA | NA | NA | 18.84 | 9.57 | 9.27 | 8.7 |
| MW-6 | 04/17/2002 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | NA | <5.0 | 18.84 | 10.73 | 8.11 | 9.8/9.1 |
| MW-6 | 07/18/2002 | NA | NA | NA | NA | NA | NA | NA | 18.84 | 12.27 | 6.57 | 1.7 |
| MW-6 | 11/11/2002 | 580 | 55 | <0.50 | <0.50 | 2.8 | NA | <5.0 | 18.84 | 13.24 | 5.60 | 0.3/0.6 |
| MW-6 | 01/16/2003 | NA | NA | NA | NA | NA | NA | NA | 18.84 | 9.89 | 8.95 | 6.4 |
| MW-7 | 12/03/2001 | NA | NA | NA | NA | NA | NA | NA | 19.20 | 12.66 | 6.54 | 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-7 | 12/06/2001 | 1,800 | 390 | <2.0 | 6.2 | <2.0 | NA | <20 | 19.20 | 12.20 | 7.00 | 3.9/3.8 |
| MW-7 | 01/23/2002 | NA | NA | NA | NA | NA | NA | NA | 19.20 | 10.00 | 9.20 | 9.4 |
| MW-7 | 04/17/2002 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | NA | <5.0 | 19.20 | 11.21 | 7.99 | 8.8/7.3 |
| MW-7 | 07/18/2002 | NA | NA | NA | NA | NA | NA | NA | 19.20 | 12.69 | 6.51 | 0.8 |
| MW-7 | 11/11/2002 | 3,000 | 190 | <0.50 | <0.50 | 4.3 | NA | 5.2 | 19.20 | 13.69 | 5.51 | 0.4/0.8 |
| MW-7 | 01/16/2003 | NA | NA | NA | NA | NA | NA | NA | 19.20 | 10.36 | 8.84 | 7.9 |
| VW/MW-2 | 03/25/1996 | 13,000 | 900 | 920 | 180 | 1,500 | <250 | NA | 18.30 | 9.04 | 9.26 | NA |
| VW/MW-2 | 06/21/1996 | 27,000 | 4,100 | 1,100 | 1,400 | 3,200 | 700 | NA | 18.30 | 10.48 | 7.82 | NA |
| VW/MW-2 | 09/26/1996 | 27,000 | 5,300 | 1,900 | 980 | 2,200 | <500 | NA | 18.30 | 12.52 | 5.78 | NA |
| VW/MW-2 (D) | 09/26/1996 | 29,000 | 5,800 | 2,200 | 1,100 | 2,500 | <250 | NA | 18.30 | 12.52 | 5.78 | NA |
| VW/MW-2 | 12/19/1996 | 50,000 | 6,200 | 5,100 | 1,700 | 5,600 | 590 | NA | 18.30 | 12.42 | 5.88 | NA |
| VW/MW-2 | 03/25/1997 | 210 | 5.6 | <0.50 | 0.52 | <0.50 | 14 | NA | 18.30 | 9.83 | 8.47 | 2.0 |
| VW/MW-2 (D) | 03/25/1997 | 250 | 1.7 | 0.58 | 0.51 | <0.50 | 4.7 | NA | 18.30 | 9.83 | 8.47 | 2.0 |
| VW/MW-2 | 06/26/1997 | NA | NA | NA | NA | NA | NA | NA | 18.30 | 12.43 | 5.87 | NA |
| VW/MW-2 | 09/26/1997 | NA | NA | NA | NA | NA | NA | NA | 18.30 | 12.98 | 5.32 | 0.9 |
| VW/MW-2 | 12/05/1997 | NA | NA | NA | NA | NA | NA | NA | 18.30 | 12.20 | 6.10 | 0.4 |
| VW/MW-2 | 02/19/1998 | <50 | 1.5 | <0.50 | <0.50 | 0.71 | <2.5 | NA | 18.30 | 5.83 | 12.47 | 3.6 |
| VW/MW-2 | 06/08/1998 | NA | NA | NA | NA | NA | NA | NA | 18.30 | 5.80 | 12.50 | 1.0 |
| VW/MW-2 | 08/25/1998 | NA | NA | NA | NA | NA | NA | NA | 18.30 | 11.72 | 6.58 | 4.8 |
| VW/MW-2 | 12/28/1998 | NA | NA | NA | NA | NA | NA | NA | 18.30 | 11.69 | 6.61 | 2.7 |
| VW/MW-2 | 03/26/1999 | NA | NA | NA | NA | NA | NA | NA | 18.30 | 8.75 | 9.55 | 2.8 |
| VW/MW-2 | 06/30/1999 | NA | NA | NA | NA | NA | NA | NA | 18.30 | 10.72 | 7.58 | 4.7 |
| VW/MW-2 | 09/30/1999 | NA | NA | NA | NA | NA | NA | NA | 18.30 | 12.24 | 6.06 | 4.9 |
| VW/MW-2 | 12/27/1999 | 13,500 | 1,330 | 1,310 | 490 | 1,400 | <250 | NA | 18.30 | 13.92 | 4.38 | 2.1/1.9 |
| VW/MW-2 | 01/21/2000 | 12,100 | 2,200 | 1,080 | 429 | 1,120 | <250 | NA | 18.30 | 13.26 | 5.04 | 2.8 |
| VW/MW-2 | 03/07/2000 | NA | NA | NA | NA | NA | NA | NA | 18.28 | 7.87 | 10.41 | 3.7 |
| VW/MW-2 | 04/17/2000 | NA | NA | NA | NA | NA | NA | NA | 18.28 | 9.65 | 8.63 | 3.7/4.1 |
| VW/MW-2 | 04/18/2000 | <50.0 | <0.500 | <0.500 | <0.500 | <0.500 | <2.50 | NA | 18.28 | NA | NA | 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) |
|-------------|------------|----------------|-------------|-------------|-------------|-------------|------------------------|------------------------|--------------|----------------------------|--------------------------|------------------------|
| VW/MW-2 | 09/21/2000 | NA | NA | NA | NA | NA | NA | NA | 18.28 | 12.75 | 5.53 | 6.2 |
| VW/MW-2 | 10/17/2000 | 4,070 | 763 | 589 | 214 | 501 | <50.0 | NA | 18.28 | 12.21 | 6.07 | 0.8/0.7 |
| VW/MW-2 | 01/09/2001 | NA | NA | NA | NA | NA | NA | NA | 18.28 | 12.51 | 5.77 | 0.7 |
| VW/MW-2 | 04/27/2001 | 80 | 5.7 | <0.50 | 2.7 | 4.9 | NA | <0.50 | 18.28 | 10.21 | 8.07 | 2.3/2.8 |
| VW/MW-2 | 07/03/2001 | NA | NA | NA | NA | NA | NA | NA | 18.28 | 11.60 | 6.68 | 0.6 |
| VW/MW-2 | 12/06/2001 | 160 | 1.7 | 1.0 | 1.8 | 4.6 | NA | <5.0 | 18.28 | 11.15 | 7.13 | 3.7/2.3 |
| VW/MW-2 | 01/23/2002 | NA | NA | NA | NA | NA | NA | NA | 18.28 | 9.07 | 9.21 | 0.5 |
| VW/MW-2 | 04/17/2002 | <50 | 2.1 | <0.50 | <0.50 | <0.50 | NA | <5.0 | 18.28 | 10.11 | 8.17 | 4.9/4.4 |
| VW/MW-2 | 07/18/2002 | NA | NA | NA | NA | NA | NA | NA | 18.28 | 11.61 | 6.67 | 0.9 |
| VW/MW-2 | 11/11/2002 | 15,000 | 1,300 | 1,300 | 680 | 1,800 | NA | <5.0 | 18.28 | 12.63 | 5.65 | 0.2/0.2 |
| VW/MW-2 | 01/16/2003 | NA | NA | NA | NA | NA | NA | NA | 18.28 | 9.35 | 8.93 | 0.4 |
| VW/MW-4 | 03/25/1996 | 83,000 | 6,500 | 7,000 | 2,000 | 11,000 | <250 | NA | 18.14 | 8.45 | 9.69 | NA |
| VW/MW-4 (D) | 03/25/1996 | 84,000 | 6,400 | 7,000 | 2,100 | 12,000 | <250 | NA | 18.14 | 8.45 | 9.69 | NA |
| VW/MW-4 | 06/21/1996 | 110,000 | 14,000 | 15,000 | 3,700 | 17,000 | 1,700 | NA | 18.14 | 10.38 | 7.76 | NA |
| VW/MW-4 (D) | 06/21/1996 | 100,000 | 12,000 | 12,000 | 2,900 | 13,000 | <1,000 | NA | 18.14 | 10.38 | 7.76 | NA |
| VW/MW-4 | 09/26/1996 | 52,000 | 13,000 | 2,700 | 2,100 | 3,200 | <500 | NA | 18.14 | 12.43 | 5.71 | NA |
| VW/MW-4 | 12/19/1996 | 75,000 | 15,000 | 6,600 | 3,000 | 7,600 | <1,250 | NA | 18.14 | 11.87 | 6.27 | NA |
| VW/MW-4 | 03/25/1997 | 56,000 | 4,700 | 1,500 | 2,500 | 6,300 | 580 | NA | 18.14 | 9.60 | 8.54 | 2.4 |
| VW/MW-4 | 06/26/1997 | NA | NA | NA | NA | NA | NA | NA | 18.14 | 12.36 | 5.78 | NA |
| VW/MW-4 | 09/26/1997 | NA | NA | NA | NA | NA | NA | NA | 18.14 | 12.82 | 5.32 | 0.4 |
| VW/MW-4 | 12/05/1997 | NA | NA | NA | NA | NA | NA | NA | 18.14 | 12.15 | 5.99 | 0.3 |
| VW/MW-4 | 02/19/1998 | 4,100 | 320 | 40 | 44 | 520 | <50 | NA | 18.14 | 5.85 | 12.29 | 1.8 |
| VW/MW-4 (D) | 02/19/98 | 4,300 | 340 | 44 | 47 | 540 | <50 | NA | 18.14 | 5.85 | 12.29 | 1.8 |
| VW/MW-4 | 06/08/1998 | NA | NA | NA | NA | NA | NA | NA | 18.14 | 5.87 | 12.27 | 1.8 |
| VW/MW-4 | 08/25/1998 | NA | NA | NA | NA | NA | NA | NA | 18.14 | 10.96 | 7.18 | 2.5 |
| VW/MW-4 | 12/28/1998 | NA | NA | NA | NA | NA | NA | NA | 18.14 | 11.28 | 6.86 | 0.9 |
| VW/MW-4 | 03/26/1999 | NA | NA | NA | NA | NA | NA | NA | 18.14 | 8.45 | 9.69 | 1.9 |
| VW/MW-4 | 06/30/1999 | NA | NA | NA | NA | NA | NA | NA | 18.14 | 9.70 | 8.44 | 3.6 |

WELL CONCENTRATIONS
Former Shell Service Station
1230 14th Street
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) | DO Reading (ppm) |
|---------|------|----------------|-------------|-------------|-------------|-------------|------------------------|------------------------|--------------|----------------------------|--------------------------|------------------------|
|---------|------|----------------|-------------|-------------|-------------|-------------|------------------------|------------------------|--------------|----------------------------|--------------------------|------------------------|

| | | | | | | | | | | | | |
|---------|------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| VW/MW-4 | 09/30/1999 | NA | NA | NA | NA | NA | NA | NA | 18.14 | 11.78 | 6.36 | 2.6 |
| VW/MW-4 | 12/27/1999 | 33,900 | 3,740 | 2,000 | 1,130 | 5,090 | 587 | NA | 18.14 | 12.63 | 5.51 | 0.4/0.2 |
| VW/MW-4 | 01/21/2000 | 13,900 | 1,560 | 568 | 227 | 1,990 | <500 | 21.0a | 18.14 | 13.07 | 5.07 | 1.0 |
| VW/MW-4 | 03/07/2000 | NA | NA | NA | NA | NA | NA | NA | 18.13 | 7.82 | 10.31 | 0.9 |
| VW/MW-4 | 04/17/2000 | NA | NA | NA | NA | NA | NA | NA | 18.13 | 9.18 | 8.95 | 1.4/1.9 |
| VW/MW-4 | 04/18/2000 | 757 | 103 | 8.59 | 30.8 | 84.2 | <25.0 | NA | 18.13 | NA | NA | NA |
| VW/MW-4 | 09/21/2000 | NA | NA | NA | NA | NA | NA | NA | 18.13 | 12.18 | 5.95 | 5.0 |
| VW/MW-4 | 10/17/2000 | 8,360 | 2,060 | 391 | 468 | 1,170 | 147 | NA | 18.13 | 12.03 | 6.10 | 0.7/0.8 |
| VW/MW-4 | 01/09/2001 | NA | NA | NA | NA | NA | NA | NA | 18.13 | 12.42 | 5.71 | 0.9 |
| VW/MW-4 | 04/27/2001 | 7,100 | 2,300 | 50 | 460 | 250 | NA | <10 | 18.13 | 10.13 | 8.00 | 1.0/1.4 |
| VW/MW-4 | 07/03/2001 | NA | NA | NA | NA | NA | NA | NA | 18.13 | 11.42 | 6.71 | 1.2 |
| VW/MW-4 | 12/06/2001 | 7,700 | 750 | 90 | 300 | 350 | NA | <25 | 18.13 | 11.02 | 7.11 | 2.5/1.9 |
| VW/MW-4 | 01/23/2002 | NA | NA | NA | NA | NA | NA | NA | 18.13 | 8.89 | 9.24 | 0.4 |
| VW/MW-4 | 04/17/2002 | 4,800 | 760 | 27 | 240 | 150 | NA | <25 | 18.13 | 9.89 | 8.24 | 4.7/5.1 |
| VW/MW-4 | 07/18/2002 | NA | NA | NA | NA | NA | NA | NA | 18.13 | 11.37 | 6.76 | 0.6 |
| VW/MW-4 | 11/11/2002 | 14,000 | 2,800 | 480 | 700 | 1,300 | NA | <100 | 18.13 | 12.41 | 5.72 | 0.3/0.3 |
| VW/MW-4 | 01/16/2003 | NA | NA | NA | NA | NA | NA | NA | 18.13 | 9.17 | 8.96 | 0.8 |

| | | | | | | | | | | | | |
|---------|------------|----|----|----|----|----|----|----|-------|-------|-------|-----|
| VW/AS-1 | 03/25/1996 | NA | 18.60 | 8.98 | 9.62 | NA |
| VW/AS-1 | 06/21/1996 | NA | 18.60 | 10.95 | 7.65 | NA |
| VW/AS-1 | 09/26/1996 | NA | 18.60 | 12.98 | 5.62 | NA |
| VW/AS-1 | 12/19/1996 | NA | 18.60 | 12.67 | 5.93 | NA |
| VW/AS-1 | 03/25/1997 | NA | 18.60 | 10.12 | 8.48 | NA |
| VW/AS-1 | 06/26/1997 | NA | 18.60 | 12.34 | 6.26 | NA |
| VW/AS-1 | 09/26/1997 | NA | 18.60 | 13.40 | 5.20 | NA |
| VW/AS-1 | 12/05/1997 | NA | 18.60 | 11.96 | 6.64 | 5.2 |
| VW/AS-1 | 02/19/1998 | NA | 18.60 | 6.22 | 12.38 | 1.3 |
| VW/AS-1 | 06/08/1998 | NA | 18.60 | 6.20 | 12.40 | 1.0 |
| VW/AS-1 | 08/25/1998 | NA | 18.60 | 11.59 | 7.01 | 1.6 |

WELL CONCENTRATIONS
Former Shell Service Station
1230 14th Street
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) | DO Reading (ppm) |
|---------|------|----------------|-------------|-------------|-------------|-------------|------------------------|------------------------|--------------|----------------------------|--------------------------|------------------------|
|---------|------|----------------|-------------|-------------|-------------|-------------|------------------------|------------------------|--------------|----------------------------|--------------------------|------------------------|

| | | | | | | | | | | | | |
|---------|------------|--------|-------|-------|-------|-------|------|------|-------|-------|-------|---------|
| VW/AS-1 | 12/28/1998 | NA | NA | NA | NA | NA | NA | NA | 18.60 | 11.74 | 6.86 | 1.3 |
| VW/AS-1 | 03/26/1999 | NA | NA | NA | NA | NA | NA | NA | 18.60 | 9.20 | 9.40 | 1.3 |
| VW/AS-1 | 06/30/1999 | NA | NA | NA | NA | NA | NA | NA | 18.60 | 11.08 | 7.52 | 2.1 |
| VW/AS-1 | 09/30/1999 | NA | NA | NA | NA | NA | NA | NA | 18.60 | 11.94 | 6.66 | 1.9 |
| VW/AS-1 | 12/27/1999 | 8,940 | 2,000 | 95.7 | 1,200 | 570 | 606 | NA | 18.60 | 11.01 | 7.59 | 1.6/1.8 |
| VW/AS-1 | 03/07/2000 | NA | NA | NA | NA | NA | NA | NA | 18.59 | 7.35 | 11.24 | NA |
| VW/AS-1 | 04/17/2000 | NA | NA | NA | NA | NA | NA | NA | 18.59 | 9.08 | 9.51 | 1.9/2.0 |
| VW/AS-1 | 04/18/2000 | 20,800 | 6,550 | 1,220 | 2,270 | 1,720 | <250 | NA | 18.59 | NA | NA | NA |
| VW/AS-1 | 09/21/2000 | NA | NA | NA | NA | NA | NA | NA | 18.59 | 11.98 | 6.61 | 2.1 |
| VW/AS-1 | 10/17/2000 | 38,400 | 7,240 | 5,980 | 1,960 | 5,730 | 534 | 72.4 | 18.59 | 12.62 | 5.97 | 2.5/1.0 |
| VW/AS-1 | 01/09/2001 | NA | NA | NA | NA | NA | NA | NA | 18.59 | 13.03 | 5.56 | 1.9 |
| VW/AS-1 | 04/27/2001 | 34,000 | 8,000 | 2,100 | 2,500 | 2,000 | NA | <25 | 18.59 | 10.71 | 7.88 | 2.9/2.1 |
| VW/AS-1 | 07/03/2001 | NA | NA | NA | NA | NA | NA | NA | 18.59 | 12.03 | 6.56 | 2.0 |
| VW/AS-1 | 12/06/2001 | 6,000 | 990 | 35 | 820 | 59 | NA | <25 | 18.59 | 11.63 | 6.96 | 1.2/0.8 |
| VW/AS-1 | 01/23/2002 | NA | NA | NA | NA | NA | NA | NA | 18.59 | 9.34 | 9.25 | 0.9 |
| VW/AS-1 | 04/17/2002 | 12,000 | 2,900 | 57 | 1,400 | 98 | NA | <200 | 18.59 | 10.41 | 8.18 | 3.3/2.9 |
| VW/AS-1 | 07/18/2002 | NA | NA | NA | NA | NA | NA | NA | 18.59 | 12.13 | 6.46 | 0.3 |
| VW/AS-1 | 11/11/2002 | 2,200 | 340 | 7.3 | 250 | 24 | NA | <20 | 18.59 | 13.15 | 5.44 | 1.2/1.3 |
| VW/AS-1 | 01/16/2003 | NA | NA | NA | NA | NA | NA | NA | 18.59 | 9.73 | 8.86 | 2.3 |

| | | | | | | | | | | | | |
|---------|------------|----|----|----|----|----|----|----|-------|-------|-------|-----|
| VW/AS-3 | 03/25/1996 | NA | 18.17 | 8.50 | 9.67 | NA |
| VW/AS-3 | 06/21/1996 | NA | 18.17 | 10.42 | 7.75 | NA |
| VW/AS-3 | 09/26/1996 | NA | 18.17 | 12.49 | 5.68 | NA |
| VW/AS-3 | 12/19/1996 | NA | 18.17 | 12.28 | 5.89 | NA |
| VW/AS-3 | 03/25/1997 | NA | 18.17 | 9.61 | 8.56 | NA |
| VW/AS-3 | 06/26/1997 | NA | 18.17 | 11.80 | 6.37 | NA |
| VW/AS-3 | 09/26/1997 | NA | 18.17 | 12.89 | 5.28 | NA |
| VW/AS-3 | 12/05/1997 | NA | 18.17 | 11.38 | 6.79 | 1.8 |
| VW/AS-3 | 02/19/1998 | NA | 18.17 | 6.24 | 11.93 | 1.3 |

WELL CONCENTRATIONS
Former Shell Service Station
1230 14th Street
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) | DO Reading (ppm) |
|---------|------------|----------------|-------------|-------------|-------------|-------------|------------------------|------------------------|--------------|----------------------------|--------------------------|------------------------|
| VW/AS-3 | 06/08/1998 | NA | NA | NA | NA | NA | NA | NA | 18.17 | 6.25 | 11.92 | 1.2 |
| VW/AS-3 | 08/25/1998 | NA | NA | NA | NA | NA | NA | NA | 18.17 | 11.43 | 6.74 | 1.3 |
| VW/AS-3 | 12/28/1998 | NA | NA | NA | NA | NA | NA | NA | 18.17 | 11.63 | 6.54 | 1.7 |
| VW/AS-3 | 03/26/1999 | NA | NA | NA | NA | NA | NA | NA | 18.17 | 8.92 | 9.25 | 1.5 |
| VW/AS-3 | 06/30/1999 | NA | NA | NA | NA | NA | NA | NA | 18.17 | 10.71 | 7.46 | 2.5 |
| VW/AS-3 | 09/30/1999 | NA | NA | NA | NA | NA | NA | NA | 18.17 | 11.78 | 6.39 | 1.5 |
| VW/AS-3 | 12/27/1999 | 488 | 47.9 | 2.60 | 16.9 | 8.50 | 35.4 | NA | 18.17 | 12.57 | 5.60 | 1.5/2.1 |
| VW/AS-3 | 03/07/2000 | NA | NA | NA | NA | NA | NA | NA | 18.14 | 4.82 | 13.32 | NA |
| VW/AS-3 | 04/17/2000 | NA | NA | NA | NA | NA | NA | NA | 18.14 | 8.69 | 9.45 | 2.0/2.4 |
| VW/AS-3 | 04/18/2000 | 3,110 | 871 | <5.00 | 141 | 56.8 | 78.2 | NA | 18.14 | NA | NA | NA |
| VW/AS-3 | 09/21/2000 | NA | NA | NA | NA | NA | NA | NA | 18.14 | 11.65 | 6.49 | 2.5 |
| VW/AS-3 | 10/17/2000 | 7,730 | 2,700 | <50.0 | 542 | 344 | <250 | 42.1 | 18.14 | 12.13 | 6.01 | 1.6/1.0 |
| VW/AS-3 | 01/09/2001 | NA | NA | NA | NA | NA | NA | NA | 18.14 | 12.51 | 5.63 | 2.2 |
| VW/AS-3 | 04/27/2001 | 14,000 | 3,900 | 62 | 690 | 560 | NA | 46 | 18.14 | 10.20 | 7.94 | 2.8/1.6 |
| VW/AS-3 | 07/03/2001 | NA | NA | NA | NA | NA | NA | NA | 18.14 | 11.55 | 6.59 | 2.6 |
| VW/AS-3 | 12/06/2001 | 5,000 | 1,200 | 19 | 380 | 320 | NA | <50 | 18.14 | 11.10 | 7.04 | 0.9/1.1 |
| VW/AS-3 | 01/23/2002 | NA | NA | NA | NA | NA | NA | NA | 18.14 | 8.93 | 9.21 | 1.1 |
| VW/AS-3 | 04/17/2002 | 17,000 | 5,000 | <25 | 1,100 | 390 | NA | <250 | 18.14 | 10.00 | 8.14 | 3.2/3.2 |
| VW/AS-3 | 07/18/2002 | NA | NA | NA | NA | NA | NA | NA | 18.14 | 11.49 | 6.65 | 0.4 |
| VW/AS-3 | 11/11/2002 | 1,700 | 290 | 1.5 | 150 | 2.8 | NA | <10 | 18.14 | 12.43 | 5.71 | 1.0/1.1 |
| VW/AS-3 | 01/16/2003 | NA | NA | NA | NA | NA | NA | NA | 18.14 | 9.32 | 8.82 | 4.7 |

WELL CONCENTRATIONS
Former Shell Service Station
1230 14th Street
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) | DO Reading (ppm) |
|---------|------|----------------|-------------|-------------|-------------|-------------|------------------------|------------------------|--------------|----------------------------|--------------------------|------------------------|
|---------|------|----------------|-------------|-------------|-------------|-------------|------------------------|------------------------|--------------|----------------------------|--------------------------|------------------------|

Abbreviations:

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

BTEX = benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to April 27, 2001, analyzed by EPA Method 8020.

MTBE = Methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

GW = Groundwater

DO = Dissolved Oxygen

NA = Not applicable

ug/L = Parts per billion

ppm = Parts per million

MSL = Mean sea level

ft = Feet

<n = Below detection limit

D = Duplicate sample

n/h = Pre-purge/Post-purge DO Readings

Notes:

a = Sample was analyzed outside of the EPA recommended holding time.

Site surveyed November 1, 2001 by Virgil Chavez Land Surveying of Vallejo, California.

WELL GAUGING DATA

Project # 030116-PA-2 Date 1/16/03 Client Shull

Site 1230 14th St., Oakland, CA

Haine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (408) 573-0555