

C A M B R I A

JUL 15 2002

July 10, 2002

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

JUL 10 2002  
R0433

Re: **Second Quarter 2002 Monitoring Report**  
Former Shell Service Station  
1230 14th Street  
Oakland, California  
Incident #97088250  
Cambria Project #244-0233-002



Dear Mr. Chan:

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

## SECOND QUARTER 2002 ACTIVITIES

**Groundwater Monitoring:** Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged and sampled 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.

**Subsurface Investigation Work Plan:** On May 23, 2002 Cambria submitted a *Subsurface Investigation Work Plan* to further define the extent of impacted soil in the former underground storage tank (UST) area, to further characterize the extent of impacted groundwater downgradient of the site, and to further research the existence and potential impact to water wells or basements in the vicinity. The work plan was requested by The Alameda County Health Care Services Agency (ACHCSA) in the May 6, 2002 meeting which included representatives from Cambria, Shell, ACHCSA and the Alameda County District Attorney's office. The scope of work was further clarified during a phone conversation between Barney Chan and Stephan Bork (Cambria) on May 9, 2002 and in an email from Barney Chan dated May 16, 2002. The ACHCSA confirmed acceptance of the work plan in a letter dated May 29, 2002.

OAKLAND, CA  
SAN RAMON, CA  
SONOMA, CA

Cambria  
Environmental  
Technology, Inc.

1144 65th Street  
Suite B  
Oakland, CA 94608  
Tel (510) 420-0700  
Fax (510) 420-9170

**Onsite Subsurface Investigation:** On June 9 and 10, 2002, Cambria completed the onsite portion of the May 23, 2002 *Subsurface Investigation Work Plan* which included advancing eight Geoprobe® borings in the former tank pit area and one shallow boring near the former pump islands. Selected samples were submitted for additional analysis to determine whether hydrogen peroxide injection will be a feasible remediation technique for the site. The results will be reported in a subsurface investigation report to be submitted upon completion of the offsite portion of the work plan, as described below.



**DeFremery Park Well Research:** On May 22, 2002, Cambria spoke to City of Oakland Parks, Recreation and Cultural Services Area 1 Supervisor, Mr. James Abercrombie, to research the potential existence of the previously identified water well number 6 at DeFremery Park (Figure 1). Mr. Abercrombie indicated that, to his knowledge, the well has not been seen (or used) since 1975. Cambria sent a request for confirmation of this conversation via certified mail on June 24, 2002.

**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 0.14 pounds of hydrocarbons have been removed by GWE.

## ANTICIPATED THIRD QUARTER 2002 ACTIVITIES

**Groundwater Monitoring:** Blaine will gauge 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.

**Offsite Subsurface Investigation:** In order to complete the offsite portion of Cambria's May 23, 2002 *Subsurface Investigation Work Plan*, Cambria will advance four hand-auger borings to collect grab-groundwater samples at two residential properties adjacent to the site. Right-of-entry agreements were sent to owners of these properties in June 2002. Cambria will proceed with the work as soon as the agreements are finalized. Results will be reported in a forthcoming subsurface investigation report.

**Door-to-Door Well Survey:** Cambria will perform a door-to-door well survey including residences in the residential block downgradient of, and including, the site. The survey will attempt to determine whether there are any active water wells or basements in the survey area. Results of the survey will be included in the forthcoming subsurface investigation report.

# C A M B R I A

Barney Chan  
July 10, 2002

## 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

*Melody W. Munz*  
Matthew W. Derby, P.E.  
Senior Project Engineer



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

Table:        1- Groundwater Extraction – Mass Removal

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

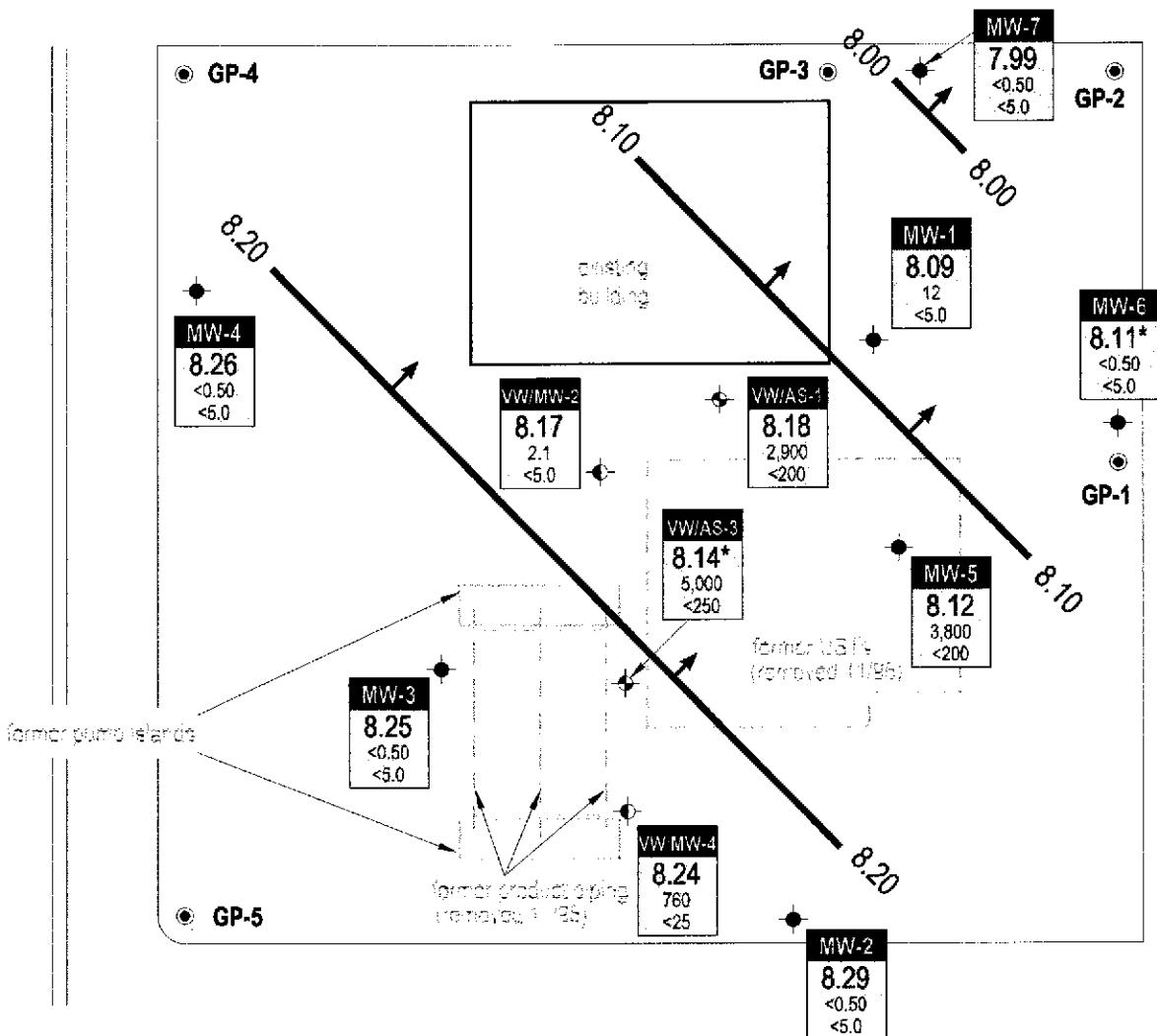
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**Former Shell Service Station**  
 1230 14th Street  
 Oakland, California  
 Incident #97088250



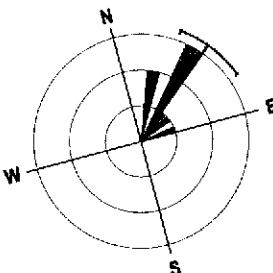
**Vicinity/Area Well Survey Map**  
 (1/2-Mile Radius)



### 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

### 14TH STREET



Groundwater Flow Direction  
(3Q00 through 2Q02)

0 10 20  
Scale (ft)

FIGURE  
**2**

### Former Shell Service Station

1230 14th Street  
Oakland, California  
Incident #97088250

  
C A M B R I A

### Groundwater Elevation Contour Map

April 17, 2002

# CAMBRIA

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**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 (gal)	Pumped (gal)	Date Sampled	TPPH Concentration (ppb)	TPPH Removed (pounds)	TPPH Removed (pounds)	To Date (pounds)	Benzene Concentration (ppb)	Benzene Removed (pounds)
06/11/02	MW-5	300	300	04/17/02	33,000	0.08261	0.08261	3800	0.00951	0.00951
06/25/02	MW-5	200	500	04/17/02	33,000	0.05507	0.05507	3800	0.00634	0.00634
<b>Total Gallons Extracted:</b>			<b>500</b>		<b>Total Pounds Removed:</b>			<b>0.13768</b>		
					<b>Total Gallons Removed:</b>			<b>0.02257</b>		

**Abbreviations & Notes:**

TPPH = Total purgeable hydrocarbons as gasoline

MtBE = Methyl tert-butyl ether

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, benzene, and MTBE 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.

**ATTACHMENT A**

**Blaine Groundwater Monitoring Report**

**and Field Notes**

**BLAINE**  
TECH SERVICES



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

April 26, 2002

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

Second Quarter 2002 Groundwater Monitoring at  
Former Shell Service Station  
1230 14<sup>th</sup> Street  
Oakland, CA

Monitoring performed on April 17, 2002

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**Groundwater Monitoring Report 020417-DA-1**

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 65<sup>th</sup> Street, Ste. C  
Oakland, CA 94608-2411

**WELL CONCENTRATIONS**  
**Former Shell Service Station**  
**1230 14th Street**  
**Oakland, CA**  
**Wic #204-5508-3103**

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

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**Wic #204-5508-3103**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)	
MW-1	01/23/2002	NA	NA	NA	NA	NA	NA	NA	18.58	9.33	9.25	0.1	
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-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	<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	

**WELL CONCENTRATIONS**  
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**Wic #204-5508-3103**

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-3	03/25/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	8.47	9.71	NA	
MW-3	06/21/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	10.40	7.78	NA	
MW-3	09/26/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	12.45	5.73	NA	
MW-3	12/19/1996	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	18.18	12.14	6.02	NA	
MW-3	03/25/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	9.54	8.64	2.2	
MW-3	06/26/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	11.66	6.52	3.6	
MW-3	09/26/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	12.85	5.33	1.1	
MW-3	12/05/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	11.44	6.74	0.6	
MW-3	02/19/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	6.78	11.40	3.6	
MW-3	06/08/1998	<50	<0.30	<0.30	<0.30	<0.60	<10	NA	18.18	6.82	11.36	3.8	
MW-3	06/08/1998	<50	<0.30	<0.30	<0.30	<0.60	<10	NA	18.18	6.82	11.36	3.8	
MW-3	08/25/1998	NA	NA	NA	NA	NA	NA	NA	18.18	11.09	7.09	1.2	
MW-3	12/28/1998	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	18.18	11.84	6.34	0.9/0.6	
MW-3	03/26/1999	NA	NA	NA	NA	NA	NA	NA	18.18	8.57	9.61	0.8	
MW-3	06/30/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	18.18	10.61	7.57	4.8	
MW-3	09/30/1999	NA	NA	NA	NA	NA	NA	NA	18.18	11.53	6.65	1.4	
MW-3	12/27/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	18.18	12.35	5.83	1.4/2.5	
MW-3	03/07/2000	NA	NA	NA	NA	NA	NA	NA	18.17	7.36	10.81	5.8	
MW-3	04/17/2000	<50.0	<0.500	<0.500	<0.500	<0.500	19.3	NA	18.17	8.39	9.78	6.5/5.1	
MW-3	09/21/2000	NA	NA	NA	NA	NA	NA	NA	18.17	12.01	6.16	3.0	
MW-3	10/17/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	18.17	12.10	6.07	2.0/1.0	
MW-3	01/09/2001	NA	NA	NA	NA	NA	NA	NA	18.17	12.43	5.74	1.9	
MW-3	04/27/2001	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	18.17	10.10	8.07	2.3/2.4

**WELL CONCENTRATIONS**  
**Former Shell Service Station**  
**1230 14th Street**  
**Oakland, CA**  
**Wic #204-5508-3103**

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	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-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	
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	<0.500	<2.50	NA	18.01	11.96	6.05	5.5/1.2

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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-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-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-7	12/03/2001	NA	NA	NA	NA	NA	NA	NA	19.20	12.66	6.54	NA
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
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

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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
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-4	03/25/1996	83,000	6,500	7,000	2,000	11,000	<250	NA	18.14	8.45	9.69	NA

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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
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

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

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

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**WIC #204-5508-3103**

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	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

**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/n = 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.



Report Number : 25972

Date : 4/24/02

Leon Gearhart  
Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112-1105

Subject : 11 Water Samples  
Project Name : 1230 14th Street, Oakland  
Project Number : 020417-DA-1  
P.O. Number : 97088250

Dear Mr. Gearhart,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

A handwritten signature in black ink that reads "Joel Kiff". Below the signature, the name "Joel Kiff" is printed in a smaller, black, sans-serif font.



Report Number : 25972

Date : 4/24/02

Project Name : 1230 14th Street, Oakland

Project Number : 020417-DA-1

Sample : MW-1

Matrix : Water

Lab Number : 25972-01

Sample Date : 4/17/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	12	0.50	ug/L	EPA 8260B	4/19/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Ethylbenzene	4.6	0.50	ug/L	EPA 8260B	4/19/02
Total Xylenes	2.5	0.50	ug/L	EPA 8260B	4/19/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	4/19/02
TPH as Gasoline	230	50	ug/L	EPA 8260B	4/19/02
Toluene - d8 (Surr)	99.2		% Recovery	EPA 8260B	4/19/02
4-Bromofluorobenzene (Surr)	94.7		% Recovery	EPA 8260B	4/19/02

Sample : MW-2

Matrix : Water

Lab Number : 25972-02

Sample Date : 4/17/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	4/19/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/19/02
Toluene - d8 (Surr)	98.8		% Recovery	EPA 8260B	4/19/02
4-Bromofluorobenzene (Surr)	97.3		% Recovery	EPA 8260B	4/19/02

Approved By: Joel Kiff



Report Number : 25972

Date : 4/24/02

Project Name : 1230 14th Street, Oakland

Project Number : 020417-DA-1

Sample : MW-3

Matrix : Water

Lab Number : 25972-03

Sample Date : 4/17/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	4/19/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/19/02
Toluene - d8 (Surr)	98.6		% Recovery	EPA 8260B	4/19/02
4-Bromofluorobenzene (Surr)	96.2		% Recovery	EPA 8260B	4/19/02

Sample : MW-4

Matrix : Water

Lab Number : 25972-04

Sample Date : 4/17/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	4/19/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/19/02
Toluene - d8 (Surr)	97.9		% Recovery	EPA 8260B	4/19/02
4-Bromofluorobenzene (Surr)	95.0		% Recovery	EPA 8260B	4/19/02

Approved By: Joel Kiff



Report Number : 25972

Date : 4/24/02

Project Name : 1230 14th Street, Oakland

Project Number : 020417-DA-1

Sample : MW-5

Matrix : Water

Lab Number : 25972-05

Sample Date : 4/17/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	3800	20	ug/L	EPA 8260B	4/22/02
Toluene	2400	20	ug/L	EPA 8260B	4/22/02
Ethylbenzene	1300	20	ug/L	EPA 8260B	4/22/02
Total Xylenes	4400	20	ug/L	EPA 8260B	4/22/02
Methyl-t-butyl ether (MTBE)	< 200	200	ug/L	EPA 8260B	4/22/02
TPH as Gasoline	33000	2000	ug/L	EPA 8260B	4/22/02
Toluene - d8 (Surr)	99.1		% Recovery	EPA 8260B	4/22/02
4-Bromofluorobenzene (Surr)	99.9		% Recovery	EPA 8260B	4/22/02

Sample : MW-6

Matrix : Water

Lab Number : 25972-06

Sample Date : 4/17/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	4/19/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/19/02
Toluene - d8 (Surr)	99.0		% Recovery	EPA 8260B	4/19/02
4-Bromofluorobenzene (Surr)	98.0		% Recovery	EPA 8260B	4/19/02

Approved By: Joel Kiff



Report Number : 25972

Date : 4/24/02

Project Name : 1230 14th Street, Oakland

Project Number : 020417-DA-1

Sample : MW-7

Matrix : Water

Lab Number : 25972-07

Sample Date : 4/17/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/20/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/20/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/20/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/20/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	4/20/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/20/02
Toluene - d8 (Surr)	99.3		% Recovery	EPA 8260B	4/20/02
4-Bromofluorobenzene (Surr)	96.3		% Recovery	EPA 8260B	4/20/02

Sample : VW/MW-2

Matrix : Water

Lab Number : 25972-08

Sample Date : 4/17/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	2.1	0.50	ug/L	EPA 8260B	4/19/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	4/19/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/19/02
Toluene - d8 (Surr)	97.9		% Recovery	EPA 8260B	4/19/02
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	4/19/02

Approved By: Joel Kiff



Report Number : 25972

Date : 4/24/02

Project Name : 1230 14th Street, Oakland

Project Number : 020417-DA-1

Sample : VW/MW-4

Matrix : Water

Lab Number : 25972-09

Sample Date : 4/17/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	760	2.5	ug/L	EPA 8260B	4/19/02
Toluene	27	2.5	ug/L	EPA 8260B	4/19/02
Ethylbenzene	240	2.5	ug/L	EPA 8260B	4/19/02
Total Xylenes	150	2.5	ug/L	EPA 8260B	4/19/02
Methyl-t-butyl ether (MTBE)	< 25	25	ug/L	EPA 8260B	4/19/02
TPH as Gasoline	4800	250	ug/L	EPA 8260B	4/19/02
Toluene - d8 (Surr)	98.3		% Recovery	EPA 8260B	4/19/02
4-Bromofluorobenzene (Surr)	99.0		% Recovery	EPA 8260B	4/19/02

Sample : VW/AS-1

Matrix : Water

Lab Number : 25972-10

Sample Date : 4/17/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	2900	20	ug/L	EPA 8260B	4/21/02
Toluene	57	20	ug/L	EPA 8260B	4/21/02
Ethylbenzene	1400	20	ug/L	EPA 8260B	4/21/02
Total Xylenes	98	20	ug/L	EPA 8260B	4/21/02
Methyl-t-butyl ether (MTBE)	< 200	200	ug/L	EPA 8260B	4/21/02
TPH as Gasoline	12000	2000	ug/L	EPA 8260B	4/21/02
Toluene - d8 (Surr)	99.3		% Recovery	EPA 8260B	4/21/02
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	4/21/02

Approved By: Joel Kiff



Report Number : 25972

Date : 4/24/02

Project Name : 1230 14th Street, Oakland

Project Number : 020417-DA-1

Sample : VW/AS-3

Matrix : Water

Lab Number : 25972-11

Sample Date : 4/17/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	5000	25	ug/L	EPA 8260B	4/19/02
Toluene	< 25	25	ug/L	EPA 8260B	4/19/02
Ethylbenzene	1100	25	ug/L	EPA 8260B	4/19/02
Total Xylenes	390	25	ug/L	EPA 8260B	4/19/02
Methyl-t-butyl ether (MTBE)	< 250	250	ug/L	EPA 8260B	4/19/02
TPH as Gasoline	17000	2500	ug/L	EPA 8260B	4/19/02
Toluene - d8 (Surr)	98.0		% Recovery	EPA 8260B	4/19/02
4-Bromofluorobenzene (Surr)	99.7		% Recovery	EPA 8260B	4/19/02

Approved By: Joel Kiff

Report Number : 25972

Date : 4/24/02

## QC Report : Method Blank Data

Project Name : 1230 14th Street, Oakland

Project Number : 020417-DA-1

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/21/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/21/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/21/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/21/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	4/21/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/21/02
Toluene - d8 (Surr)	100		%	EPA 8260B	4/21/02
4-Bromofluorobenzene (Surr)	97.8		%	EPA 8260B	4/21/02
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/18/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/18/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/18/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/18/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	4/18/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/18/02
Toluene - d8 (Surr)	99.1		%	EPA 8260B	4/18/02
4-Bromofluorobenzene (Surr)	94.7		%	EPA 8260B	4/18/02
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	4/19/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/19/02
Toluene - d8 (Surr)	98.9		%	EPA 8260B	4/19/02
4-Bromofluorobenzene (Surr)	95.6		%	EPA 8260B	4/19/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/19/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	4/19/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/19/02
Toluene - d8 (Surr)	97.0		%	EPA 8260B	4/19/02
4-Bromofluorobenzene (Surr)	98.5		%	EPA 8260B	4/19/02

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Approved By: Joel Kiff



Project Name : 1230 14th Street, Oakland

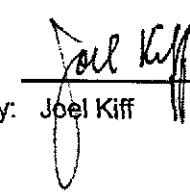
Project Number : 020417-DA-1

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	25984-05	0.99	19.8	19.5	20.0	19.7	ug/L	EPA 8260B	4/21/02	95.9	96.1	0.220	70-130	25
Toluene	25984-05	0.64	19.8	19.5	20.2	19.9	ug/L	EPA 8260B	4/21/02	98.6	98.7	0.145	70-130	25
Tert-Butanol	25984-05	<5.0	99.2	97.5	103	100	ug/L	EPA 8260B	4/21/02	104	103	1.51	70-130	25
Methyl-t-Butyl Ether	25984-05	1.1	19.8	19.5	20.3	18.6	ug/L	EPA 8260B	4/21/02	96.5	89.8	7.12	70-130	25
Benzene	25968-03	<0.50	40.0	40.0	34.9	34.4	ug/L	EPA 8260B	4/18/02	87.2	85.9	1.53	70-130	25
Toluene	25968-03	<0.50	40.0	40.0	35.8	35.4	ug/L	EPA 8260B	4/18/02	89.5	88.6	1.01	70-130	25
Tert-Butanol	25968-03	<5.0	200	200	175	182	ug/L	EPA 8260B	4/18/02	87.4	91.2	4.29	70-130	25
Methyl-t-Butyl Ether	25968-03	<0.50	40.0	40.0	33.7	35.4	ug/L	EPA 8260B	4/18/02	84.3	88.5	4.80	70-130	25
Benzene	25980-10	<0.50	40.0	40.0	36.7	36.5	ug/L	EPA 8260B	4/19/02	91.6	91.2	0.437	70-130	25
Toluene	25980-10	<0.50	40.0	40.0	37.0	38.0	ug/L	EPA 8260B	4/19/02	92.4	95.1	2.80	70-130	25
Tert-Butanol	25980-10	<5.0	200	200	193	192	ug/L	EPA 8260B	4/19/02	96.7	96.2	0.565	70-130	25
Methyl-t-Butyl Ether	25980-10	<0.50	40.0	40.0	32.7	32.5	ug/L	EPA 8260B	4/19/02	81.7	81.2	0.645	70-130	25
Benzene	25983-01	<0.50	40.0	40.0	37.0	35.8	ug/L	EPA 8260B	4/19/02	92.6	89.4	3.46	70-130	25
Toluene	25983-01	<0.50	40.0	40.0	37.7	36.8	ug/L	EPA 8260B	4/19/02	94.2	91.9	2.47	70-130	25
Tert-Butanol	25983-01	<5.0	200	200	191	188	ug/L	EPA 8260B	4/19/02	95.6	93.9	1.84	70-130	25
Methyl-t-Butyl Ether	25983-01	<0.50	40.0	40.0	35.1	34.5	ug/L	EPA 8260B	4/19/02	87.8	86.2	1.75	70-130	25

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Approved By: Joel Kiff



## QC Report : Laboratory Control Sample (LCS)

Project Name : 1230 14th Street, Oakland

Project Number : 020417-DA-1

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	4/21/02	96.7	70-130
Toluene	40.0	ug/L	EPA 8260B	4/21/02	99.0	70-130
Tert-Butanol	200	ug/L	EPA 8260B	4/21/02	97.4	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	4/21/02	93.6	70-130
Benzene	40.0	ug/L	EPA 8260B	4/18/02	97.7	70-130
Toluene	40.0	ug/L	EPA 8260B	4/18/02	99.4	70-130
Tert-Butanol	200	ug/L	EPA 8260B	4/18/02	100	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	4/18/02	101	70-130
Benzene	40.0	ug/L	EPA 8260B	4/19/02	96.8	70-130
Toluene	40.0	ug/L	EPA 8260B	4/19/02	97.8	70-130
Tert-Butanol	200	ug/L	EPA 8260B	4/19/02	97.5	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	4/19/02	99.0	70-130
Benzene	40.0	ug/L	EPA 8260B	4/19/02	96.5	70-130
Toluene	40.0	ug/L	EPA 8260B	4/19/02	98.1	70-130
Tert-Butanol	200	ug/L	EPA 8260B	4/19/02	98.6	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	4/19/02	99.0	70-130

KIFF ANALYTICAL, LLC

Approved By:

Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

# SHELL Chain Of Custody Record

Lab Identification (if necessary):

Address:

City, State, Zip:

## Shell Project Manager to be invoiced:

<input checked="" type="checkbox"/> SCIENCE & ENGINEERING
<input type="checkbox"/> TECHNICAL SERVICES
<input type="checkbox"/> CMMT-HOUSTON

Karen Petryna

INCIDENT NUMBER (S&E ONLY)

9 7 0 8 8 2 5 0

SAP/C ORIEN NUMBER (TS/COM)

DATE: 4/17/02

PAGE: 1 of 2

25972

SAMPLING COMPANY Blaine Tech Services	LOG CODE: BTSS	SITE ADDRESS (Street and City): 1230 14th Street, Oakland	GLOBAL ID NO.: T0600101691
ADDRESS: 1680 Rogers Avenue, San Jose, CA 95112	EDF DELIVERABLE TO (Responsible Party or Designee): Anni Kremi	PHONE NO.: 510-420-3335	E-MAIL: ShellOaklandEDF@cambrria-env.com
PROJECT CONTACT (Handcopy of PDF Report to): Leon Gearhart	SAMPLER NAME(S) (Print): David Allbut	CONSULTANT PROJECT NO.: BTS # 020417-DA-1	
TELEPHONE: 408-573-0555	FAX: 408-573-7771	E-MAIL: lgearhart@blainetech.com	LAB USE ONLY

### TURNAROUND TIME (BUSINESS DAYS):

10 DAYS  5 DAYS  72 HOURS  48 HOURS  24 HOURS  LESS THAN 24 HOURS

### REQUESTED ANALYSIS

LA - RWQCB REPORT FORMAT  UST AGENCY:

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

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

### FIELD NOTES:

Container/Preservative  
or PID Readings  
or Laboratory Notes

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.									TEMPERATURE ON RECEIPT C°	
		DATE	TIME			TPH - Gas, Purgeable	BTX	MTBE (821B - 5ppb RL)	MTBE (820B - 0.5ppb RL)	Oxygenates (5) by (820B)	Ethanol (820B)	Methanol	1,2-DCA (820B)	EDB (820B)	
	MW-1	4/17/02	1229	W	3	X	X	X							-01
	MW-2	0953				X	X	X							-02
	MW-3	1020				X	X	X							-03
	MW-4	1045				X	X	X							-04
	MW-5	1448				X	X	X							-05
	MW-6	1402				X	X	X							-06
	MW-7	1426				X	X	X							-07
	VW/MW-2	1114				X	X	X							-08
	VW/MW-4	1255				X	X	X							-09
	VW/AS-1	1342				X	X	X							-10

Relinquished by: (Signature)

David Allbut

Received by: (Signature)

Date:

4/18/02

Time:

11:27

Relinquished by: (Signature)

Received by: (Signature)

Date:

Time:

Relinquished by: (Signature)

Received by: (Signature)

Date:

04/18/02

Time:

11:27

## **SHELL Chain Of Custody Record**

**Lab identification (if necessary)**

### **Address:**

City State Zip

Lab Identification (if necessary):				Shell Project Manager to be invoiced:				INCIDENT NUMBER (S&E ONLY)				DATE: 4/17/02			
				Karen Petryna 25972				9 7 0 8 8 2 5 0							
<input checked="" type="checkbox"/> SCIENCE & ENGINEERING <input type="checkbox"/> TECHNICAL SERVICES <input type="checkbox"/> CRMT-HOUSTON								SAP or CRMT NUMBER: TTS/CRMT							
SAMPLING COMPANY: <b>Blaine Tech Services</b>		LOG CODE: <b>BTSS</b>		SITE ADDRESS (Street and City): <b>1230 14th Street, Oakland</b>				GLOBAL ID NO.: <b>T0600101691</b>							
ADDRESS: <b>1680 Rogers Avenue, San Jose, CA 95112</b>		EDF DELIVERABLE TO (Responsible Party or Designee): <b>Anni Kreml</b>				PHONE NO.: <b>510-420-3335</b>		E-MAIL: <b>ShellOaklandEDF@cambrria-env.com</b>		CONSULTANT PROJECT NO.: <b>STS # 0CD417-DA-</b>					
PROJECT CONTACT (Hardcopy or PDF Report to): <b>Leon Gearhart</b>		TELEPHONE: <b>408-573-0555</b>		FAX: <b>408-573-7771</b>		E-MAIL: <b>lgearhart@blainetech.com</b>		LAB USE ONLY							
TURNAROUND TIME (BUSINESS DAYS): <input checked="" type="checkbox"/> 10 DAYS <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 22 HOURS <input type="checkbox"/> 48 HOURS <input type="checkbox"/> 24 HOURS <input type="checkbox"/> LESS THAN 24 HOURS		REQUESTED ANALYSIS													
<input type="checkbox"/> LA - RWQCB REPORT FORMAT <input type="checkbox"/> UST AGENCY:															
GC/MS MTBE CONFIRMATION: HIGHEST _____ HIGHEST per BORING _____ ALL _____															
SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED <input type="checkbox"/>															
FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes															
TEMPERATURE ON RECEIPT C°: <b>-11</b>															
Field Sample Identification		SAMPLING		MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTX	MTBE (8260B - 5 ppb RL)	MTBE (8260B - 0.5 ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	1,2-DCA (8260B)	EDB (8260B)	TPH - Diesel, Extractable (80/5m)
<b>VW/AS-3</b>		4/17/02 1322		<b>W</b>	<b>3</b>	<b>X</b>	<b>X</b>	<b>X</b>							
Relinquished by: (Signature) <b>David Alibut</b>		Received by: (Signature)												Date: <b>4/18/02</b>	Time: <b>11:27</b>
Relinquished by: (Signature)		Received by: (Signature)												Date: <b>4/18/02</b>	Time: <b>11:27</b>
Relinquished by: (Signature)		Received by: (Signature)												Date: <b>04/18/02</b>	Time: <b>11:27</b>

DISTRIBUTION: White with final report. Green In File. Yellow and Pink In Collection.

## WELL GAUGING DATA

Project # 020417-DAI Date 4-17-02 Client SIEbel

Site 1230 14<sup>TH</sup> ST. OAKLAND

# EQUIVA WELL MONITORING DATA SHEET

BTS #: 020417-DA-1	Site: 1230 14th St. Oakland, CA		
Sampler: David A.	Date: 4/17/02		
Well I.D.: MW - 1	Well Diameter: (2) 3 4 6 8		
Total Well Depth: 20.87	Depth to Water: 10.49		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: PVC	Grade	D.O. Meter (if req'd): YSI	HACH

Purge Method:  Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible

Waterra  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method:  Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

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

Case Volume	Specified Volumes	Calculated Volume	Well Diameter	Multiplier	Well Diameter	Multiplier
1.7	(Gals.) X 3	= 5.1 Gals.	1"	0.04	4"	0.65
			2"	0.16	6"	1.47
			3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1219	60.8	7.2	805	>200	2	cloudy, foul
1221	61.1	7.2	812	7200	4	"
1224	61.1	7.2	812	>200	6-5.5	"

Did well dewater? Yes  Gallons actually evacuated: 5.5

Sampling Time: 1225 Sampling Date: 4/17/02

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

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable): \_\_\_\_\_

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

D.O. (if req'd): Pre-purge: 6.3 mg/L Post-purge: 5.3 mg/L

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

# EQUIVA WELL MONITORING DATA SHEET

BTS #: 020417-DA-1	Site: 1230 14 <sup>th</sup> st. Oakland, CA		
Sampler: <u>David A.</u>	Date: 4/17/02		
Well I.D.: MW - 2	Well Diameter: <u>②</u> 3 4 6 8		
Total Well Depth: 21.54	Depth to Water: 9.61		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: <u>PVD</u>	Grade	D.O. Meter (if req'd): <u>YSI</u>	HACH

Purge Method: <input checked="" type="checkbox"/> Bailer Disposable Bailer Middleburg Electric Submersible	Waterm Peristaltic Extraction Pump Other _____	Sampling Method: <input checked="" type="checkbox"/> Bailer Disposable Bailer Extraction Port Dedicated Tubing Other _____																
<u>1.9</u> (Gals.) X <u>3</u> = <u>5.7</u> Gals.		<table border="1"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td><u>2"</u></td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>3</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	<u>2"</u>	0.16	6"	1.47	3"	0.37	Other	radius <sup>3</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier															
1"	0.04	4"	0.65															
<u>2"</u>	0.16	6"	1.47															
3"	0.37	Other	radius <sup>3</sup> * 0.163															
1 Case Volume	Specified Volumes	Calculated Volume																

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
0933	62.2	7.4	957	>200	2	reddish brown, cloudy
0941	63.3	6.9	867	>200	4	"
0948	64.2	6.9	832	>200	6	"

Did well dewater? Yes  Gallons actually evacuated: 6

Sampling Time: 0953 Sampling Date: 4/17/02

Sample I.D.: MW - 2 Laboratory:  Kiff Sequoia Other \_\_\_\_\_

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

D.O. (if req'd): <input checked="" type="checkbox"/> Pre-purge:	<u>3.5</u> mg/L	<input checked="" type="checkbox"/> Post-purge:	<u>5.2</u> mg/L
O.R.P. (if req'd): <input checked="" type="checkbox"/> Pre-purge:	mV	Post-purge:	mV

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# EQUIVA WELL MONITORING DATA SHEET

BTS #: 020417-DA-1	Site: 1230 14 <sup>th</sup> st. Oakland, CA		
Sampler: DeidA.	Date: 4/17/02		
Well I.D.: Mw - 3	Well Diameter: <input checked="" type="radio"/> 3    4    6    8		
Total Well Depth: 21.54	Depth to Water: <del>9.65</del> 9.92		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: <input checked="" type="checkbox"/> PWD	Grade	D.O. Meter (if req'd): <input checked="" type="checkbox"/> YSI	HACH

Purge Method:  Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible

Waterm  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method:  
 Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

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

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

1.9 (Gals.) X 3 = 5.7 Gals.  
Case Volume      Specified Volumes      Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1008	62.9	6.8	1059 μS	>200	2	cloudy, tan
1013	63.7	6.7	1034	>200	4	"
1015	63.9	6.7	1020	>200	6	"

Did well dewater? Yes  No Gallons actually evacuated: 6

Sampling Time: 1020 Sampling Date: 4/17/02

Sample I.D.: Mw - 3 Laboratory:  Kiff  Sequoia  Other \_\_\_\_\_

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

IB I.D. (if applicable): @ \_\_\_\_\_ Duplicate I.D. (if applicable): \_\_\_\_\_

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

D.O. (if req'd):  Pre-purge: 3.7 mg/L Post-purge: 3.2 mg/L

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

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# EQUIVA WELL MONITORING DATA SHEET

BTS #: 020417-DA-1	Site: 1230 14 <sup>th</sup> St. Oakland, CA		
Sampler: David A.	Date: 4/17/02		
Well I.D.: Mw-4	Well Diameter: ② 3 4 6 8		
Total Well Depth: 19.80	Depth to Water: 9.75		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: <input checked="" type="radio"/> PVC	Grade	D.O. Meter (if req'd): <input checked="" type="radio"/> YSI	HACH

Purge Method: <input checked="" type="checkbox"/> Bailer	Water	Sampling Method: <input checked="" type="checkbox"/> Bailer																
Disposable Bailer	Peristaltic	Disposable Bailer																
Middleburg	Extraction Pump	Extraction Port																
Electric Submersible	Other _____	Dedicated Tubing																
Other: _____																		
<table border="1"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td><input checked="" type="radio"/> 2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>			Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	<input checked="" type="radio"/> 2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier															
1"	0.04	4"	0.65															
<input checked="" type="radio"/> 2"	0.16	6"	1.47															
3"	0.37	Other	radius <sup>2</sup> * 0.163															
1.6 (Gals.) X 3	= 4.8 Gals.																	
1 Case Volume	Specified Volumes	Calculated Volume																

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1036	63.2	7.1	30/MS	>200	2	light brown, cloudy
1039	63.8	6.9	240	>200	3	"
1041	64.1	6.9	239	>200	5	"

Did well dewater? Yes  No Gallons actually evacuated: 5

Sampling Time: 1045 Sampling Date: 4/17/02

Sample I.D.: Mw-4 Laboratory:  Kiff Sequoia Other \_\_\_\_\_

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable): \_\_\_\_\_

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

D.O. (if req'd): Pre-purge: 7.03 mg/L Post-purge: 5.1 mg/L

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

# EQUIVA WELL MONITORING DATA SHEET

BTS #: 020417-D4-1	Site: 1230 14 <sup>th</sup> St. Oakland, CA		
Sampler: David A.	Date: 4/17/02		
Well I.D.: MW - 5	Well Diameter: 2 3 <b>4</b> 6 8		
Total Well Depth: 19.63	Depth to Water: 10.35		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: <input checked="" type="checkbox"/> PVC	Grade	D.O. Meter (if req'd): <input checked="" type="checkbox"/> YSI	HACH

Purge Method:  Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible

Water:  Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method:  Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

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

Case Volume	Specified Volumes	Calculated Volume	Well Diameter	Multipplier	Well Diameter	Multipplier
6.0 (Gals.) X	3	= 18.0 Gals.	1"	0.04	<b>4"</b>	0.65
			2"	0.16	6"	1.47
			3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1442	63.9	7.1	1826	50	6	cloudy, light grey sediment
1443	64.0	7.2	1893	58	12	"
1444	64.0	7.1	1912	38	18	"

Did well dewater? Yes  No Gallons actually evacuated: 18

Sampling Time: 1448 Sampling Date: 4/17/02

Sample I.D.: MW - 5 Laboratory:  Kiff Sequoia Other \_\_\_\_\_

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable): \_\_\_\_\_

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

D.O. (if req'd):  Pre-purge: 5.3 mg/L Post-purge: 3.8 mg/L

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

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# EQUIVA WELL MONITORING DATA SHEET

STS #: 020417-DA-1	Site: 1230 14 <sup>th</sup> st. Oakland, CA		
Sampler: David A.	Date: 4/17/02		
Well I.D.: MW - 6	Well Diameter: 2 3 <input checked="" type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8		
Total Well Depth: 19.62	Depth to Water: 10.73		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: <input checked="" type="checkbox"/> DPD	Grade	D.O. Meter (if req'd): <input checked="" type="checkbox"/> YSI	HACH

Purge Method:  Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible

Waterra  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method:  Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

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

Case Volume	(Gals.) X	Specified Volumes	=	Calculated Volume	Well Diameter	Multiplier	Well Diameter	Multiplier
5.8		3		17.4 Gals.	1"	0.04	4"	0.65
					2"	0.16	6"	1.47
					3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1359	62.1	7.8	627	7200	6	cloudy, grey
1400	61.6	7.3	628	164	12	"
1401	61.4	7.2	623	7200	18	"

Did well dewater? Yes  Gallons actually evacuated: 18

Sampling Time: ~~1400~~ 1402 Sampling Date: 4/17/02

Sample I.D.: MW-4 MW-6 Laboratory:  Kiff Sequoia Other \_\_\_\_\_

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

EB I.D. (if applicable):  Duplicate I.D. (if applicable): \_\_\_\_\_

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

D.O. (if req'd):  Pre-purge: 9.8  mg/L Post-purge: 9.1  mg/L

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

# EQUIVA WELL MONITORING DATA SHEET

TS #: 020417-D4-1	Site: 1230 14 <sup>th</sup> St. Oakland, CA		
Sampler: David A.	Date: 4/17/02		
Well I.D.: Mw - 7	Well Diameter: 2 3 <input checked="" type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8		
Total Well Depth: 19.70	Depth to Water: 11.21		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: <input checked="" type="checkbox"/> PVD	Grade	D.O. Meter (if req'd): <input checked="" type="checkbox"/> YSI	HACH

Purge Method:  Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible

Waterra   
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method:  Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

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

Case Volume	(Gals.) X	Specified Volumes	=	Calculated Volume	Well Diameter	Multiplier	Well Diameter	Multiplier
5.5	X	3	=	16.5 Gals.	1"	0.04	4"	0.65
					2"	0.16	6"	1.47
					3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1414	62.7	7.3	439	>700	6	tan, cloudy
1421	62.9	7.3	429	>700	12	"
1422	62.9	7.3	424	>700	17	"

Did well dewater? Yes  Gallons actually evacuated: 17

Sampling Time: 1426 Sampling Date: 4/17/02

Sample I.D.: Mw - 7 Laboratory:  Kiff Sequoia Other \_\_\_\_\_

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

EB I.D. (if applicable):  Duplicate I.D. (if applicable): \_\_\_\_\_

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

D.O. (if req'd):  Pre-purge: 8.4 mg/L Post-purge: 7.3 mg/L

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

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# EQUIVA WELL MONITORING DATA SHEET

BTS #: 020417-DA-1	Site: 1230 14 <sup>th</sup> st. Oakland, CA		
Sampler: David A.	Date: 4/17/02		
Well I.D.: VW/MW - 2	Well Diameter: <input checked="" type="radio"/> 3 4 6 8		
Total Well Depth: 20.20	Depth to Water: 10.10		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: <input checked="" type="checkbox"/> PVD	Grade	D.O. Meter (if req'd): <input checked="" type="checkbox"/> YSI	HACH

Purge Method:  Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible

Water:  Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method:  Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

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

Case Volume	(Gals.) X	Specified Volumes	=	Calculated Volume	Well Diameter	Multiplier	Well Diameter	Multiplier
1.6	X	3	=	4.8 Gals.	1"	0.04	4"	0.65
					<input checked="" type="radio"/> 2"	0.16	6"	1.47
					3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1104	62.0	7.0	847 ms	7200	2	Cloudy brown
1107	62.7	7.0	858	7200	3	11
1109	62.5	7.1	855	7200	5	11

Did well dewater? Yes  Gallons actually evacuated: 5

Sampling Time: 1114 Sampling Date: 4/17/02

Sample I.D.: VW/MW - 2 Laboratory:  Kiff Sequoia Other \_\_\_\_\_

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable): \_\_\_\_\_

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

D.O. (if req'd): Pre-purge: 4.9 mg/L Post-purge: 4.4 mg/L

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

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# EQUIVA WELL MONITORING DATA SHEET

BTS #: 020417-DA-1	Site: 1230 14 <sup>th</sup> st. Oakland, CA		
Sampler: DuidA.	Date: 4/17/02		
Well I.D.: Vw/Mw -4	Well Diameter: <input checked="" type="radio"/> 3    4    6    8		
Total Well Depth: 18.54	Depth to Water: 9.89		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: <input checked="" type="radio"/>	Grade	D.O. Meter (if req'd): <input checked="" type="radio"/>	HACH

Purge Method:  Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible

Waterm \_\_\_\_\_ Sampling Method:  Bailer  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Disposable Bailer  
Extraction Port  
Dedicated Tubing

Case Volume	(Gals.) X	Specified Volumes	Calculated Volume	Well Diameter	Multiplier	Well Diameter	Multiplier
1.4		3	4.2 Gals.	1"	0.04	4"	0.65
				<input checked="" type="radio"/> 2"	0.16	6"	1.47
				3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1245	62.1	6.9	1422	>200	1.5	grey, cloudy
1247	63.8	6.9	1529	>200	3	"
1251	65.0	7.0	1520	>200	4.5	"

Did well dewater? Yes  No Gallons actually evacuated: 4.5

Sampling Time: 1255 Sampling Date: 4/17/02

Sample I.D.: Vw/Mw -4 Laboratory:  Kiff Sequoia Other \_\_\_\_\_

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

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

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

D.O. (if req'd): <input checked="" type="radio"/> Pre-purge:	4.7	mg/L	<input checked="" type="radio"/> Post-purge:	5.1	mg/L
D.R.P. (if req'd): <input checked="" type="radio"/> Pre-purge:		mV	<input checked="" type="radio"/> Post-purge:		mV

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# EQUIVA WELL MONITORING DATA SHEET

TS #: 020417-DA-1	Site: 1230 14 <sup>th</sup> st. Oakland, CA		
Sampler: David A.	Date: 4/17/02		
Well I.D.: 41- Vw/As-1	Well Diameter: 2 3 4 6 8 1		
Total Well Depth: 20.87	Depth to Water: 10.44		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: <input checked="" type="checkbox"/>	Grade	D.O. Meter (if req'd): <input checked="" type="checkbox"/>	HACH

Purge Method: Bailer Disposable Bailer Middleburg Electric Submersible	Waterra Peristaltic Extraction Pump Other _____	Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Pin bailed																
<i>x pin bailed</i>		Other: _____																
<i>0.4</i>	<i>(Gals.) X 3 = 1.2 Gals.</i>	<table border="1"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier															
1"	0.04	4"	0.65															
2"	0.16	6"	1.47															
3"	0.37	Other	radius <sup>2</sup> * 0.163															

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1335	65.1	7.2	1451	>200	0.5	grey, cloudy, odor
1338	64.6	7.2	1456	>200	1	"
1340	64.0	7.2	1462	>200	1.5	"

Did well dewater? Yes  Gallons actually evacuated: 1.5

Sampling Time: 1342 Sampling Date: 4/17/02

Sample I.D.: 41- Vw/As-1 Laboratory:  Ciff Sequoia Other \_\_\_\_\_

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

D.O. (if req'd): Pre-purge: 3.3 mg/L Post-purge: 2.9 mg/L

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

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# EQUIVA WELL MONITORING DATA SHEET

TS#:	020417-DA-1	Site:	1230 14th st. Oakland, CA
Sampler:	David A.	Date:	4/17/02
Well I.D.:	VW MW - VW/AS-3	Well Diameter:	2 3 4 6 8 <u>1</u>
Total Well Depth:	19.60	Depth to Water:	10.00
Depth to Free Product:		Thickness of Free Product (feet):	
Referenced to:	<input checked="" type="checkbox"/>	Grade	D.O. Meter (if req'd): <input checked="" type="checkbox"/> HACH

Purge Method:  Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible  
 pin bailed

Water:  Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method:  Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 pin bailed

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

0.4 (Gals.) X 3 = 1.2 Gals.  
 Case Volume Specified Volumes Calculated Volume

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1313	64.1	7.0	1425	>200	0.5	grey, cloudy, odor-
1315	64.4	7.0	1465	>200	1	//
1318	64.7	7.0	1481	>200	1.5	

Did well dewater? Yes  Gallons actually evacuated: 1.5

Sampling Time: 1322 Sampling Date: 4/17/02

Sample I.D.: A100 - VW/AS-3 Laboratory:  Kliff Sequoia Other \_\_\_\_\_

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

EB I.D. (if applicable): @ Duplicate I.D. (if applicable): \_\_\_\_\_

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

D.O. (if req'd): Pre-purge: 3.2 mg/l Post-purge: 3.2 mg/l

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

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