

# TOXICHEM Management Systems, Inc.

Environmental & Occupational Health Services

1562 44th Avenue  
San Francisco, California 94122  
(415) 681-8816 / Fax (415) 681-8132

Industrial Hygiene - Exposure Assessment  
Quantitative Risk Assessment  
Compliance Audits  
Real Property Environmental Assessments  
Remedial Investigations  
Air, Soil, and Groundwater Sampling  
Remedial Engineering and Construction  
Regulatory Compliance and Negotiation  
Litigation Support Services

# 435

FEB 14 2002

February 11, 2002  
Project EQ-02.1A

## REPORTS

Mr. Barney M. Chan  
Alameda County Health Care Services Agency  
Environmental Protection Division  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

*new i Todd DeFuria - Defuria  
EM Consultant  
3164 Gold Camp Drive Suite  
Rancho Cordova 200  
95670*

Re: **Quarterly Monitoring Report - Fourth Quarter 2001**  
Former Texaco/Current Broadway Discount Gas Station  
3810 Broadway, Oakland, California  
Equiva Incident No. 93995026, SAP No. 128141

Dear Mr. Chan:

On behalf of Equiva Services LLC, this letter transmits the results of fourth quarter 2001 groundwater monitoring and sampling conducted at the site referenced above. This report presents an interpretation of results and recommendations and schedule for future actions. The groundwater elevation and analytical data are shown on Figures 1 and 2, respectively.

### **INTERPRETATION OF RESULTS**

#### **Groundwater Elevation**

Groundwater monitoring and sampling data for the reporting was collected by Blaine Tech Services, Inc. on December 20, 2001. The average groundwater elevation at the site decreased approximately 2 to 4 feet since the previous quarterly groundwater monitoring and sampling event, and it remains within the historical range of groundwater elevation.

#### **Groundwater Flow Direction and Gradient**

During the reporting quarter, the predominant direction of groundwater flow was to the northwest and the groundwater gradient was estimated to range from 0.006.

#### **Analytical Results**

During the reporting quarter, separate phase hydrocarbons (SPH) were not measured in any well. Overall, the dissolved groundwater concentrations appear stable with no apparent fluctuations outside historical ranges. The analysis for methyl tertiary butyl ether by EPA Method 8260 has resumed, pursuant to Alameda County Health Care Services Agency's (ACHCSA's) request dated March 29, 2001.

February 11, 2002

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**RECOMMENDATIONS AND SCHEDULE FOR FUTURE ACTIONS**

1. Continue the quarterly groundwater monitoring and sampling program.
2. Awaiting ACHCSA approval of the proposed scope of work described in the *Quarterly Monitoring Report - Second Quarter 2001* (TOXICHEM, August 8, 2001) to properly destroy and replace Well MW-5, and install one new well to replace previously destroyed Wells MW-3 and MW-8.

If you have any questions regarding this site, please contact me at (415) 681-8816.

Sincerely,

Toxichem Management Systems, Inc.



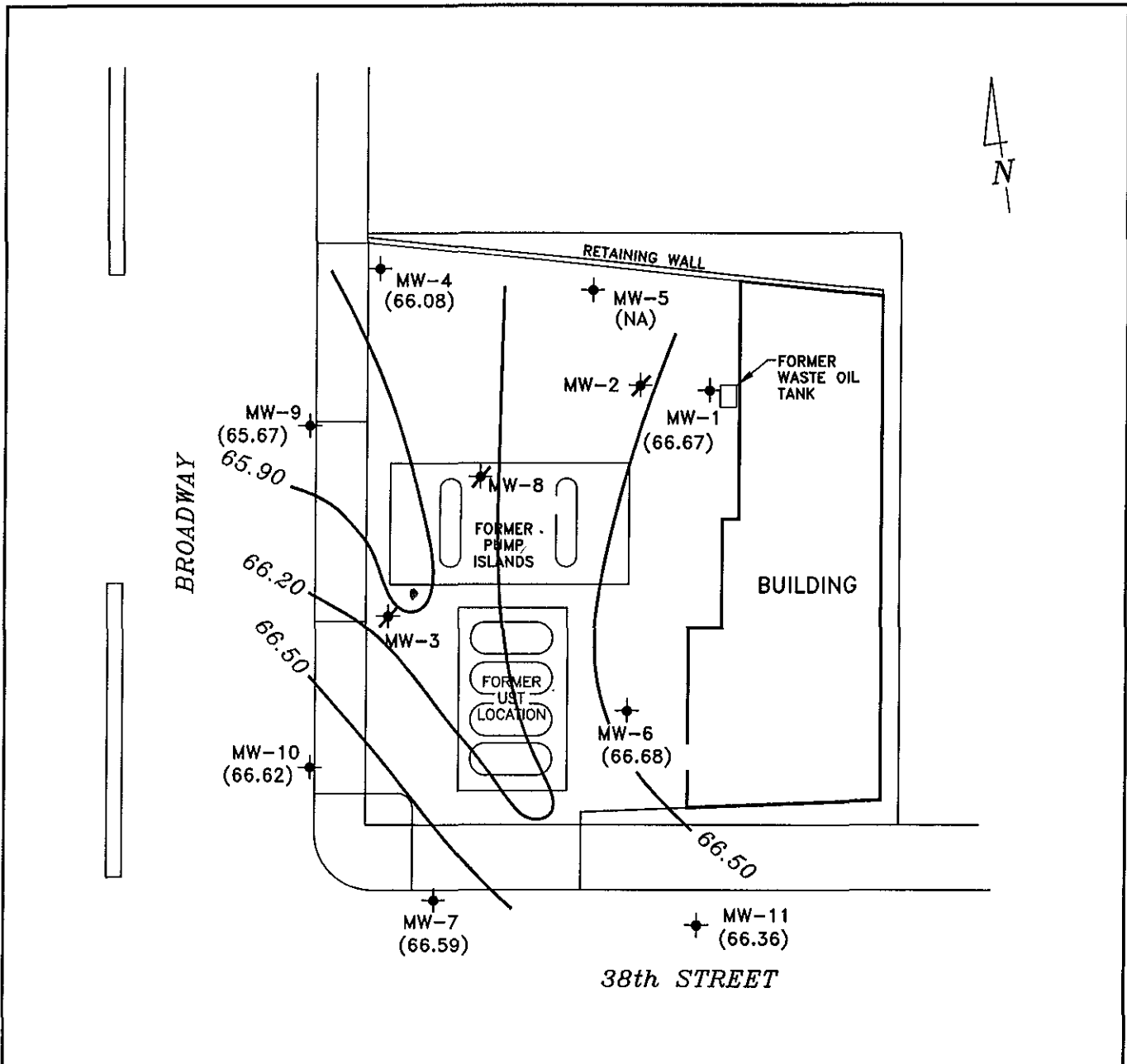
Keith Winemiller, P.E.  
Senior Engineer



cc: Ms. Karen Petryna, P.E., Equiva Services LLC, P. O. Box 7869, Burbank, CA 91510-7869


cc (without CAR/COC and Field Data Sheets):

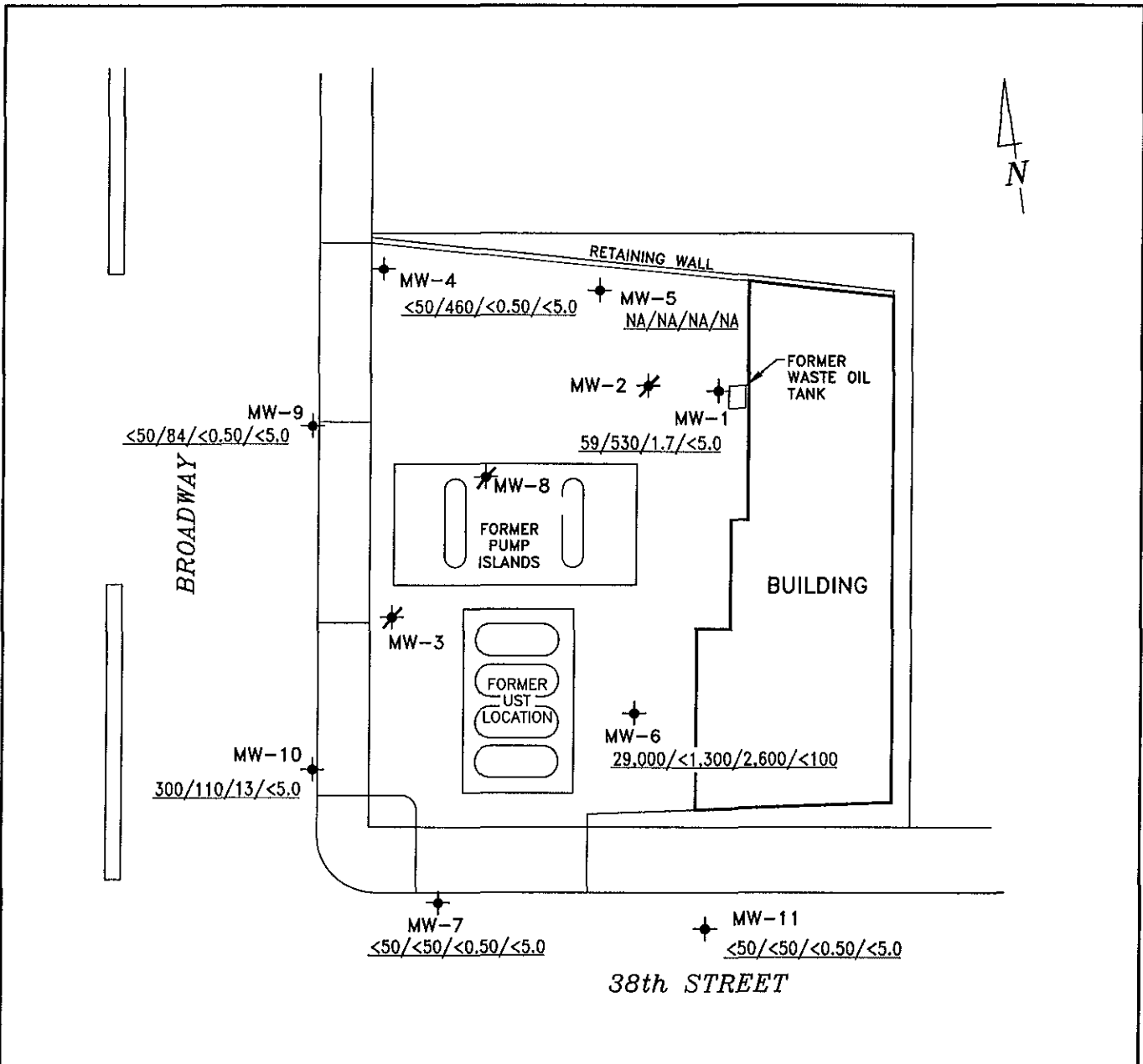
Mr. Joe Zadik, 8255 San Leandro Street, Oakland, CA 94621



- EXPLANATION**
- ⊕ MONITORING WELL
  - ✱ DESTROYED WELL
  - (64.69) GROUNDWATER ELEVATION IN FEET-MSL, 12-20-01
  - 66.50 — GROUNDWATER ELEVATION CONTOUR IN FEET-MSL, 12-20-01
  - NA NOT AVAILABLE
  - ↑ APPROXIMATE DIRECTION OF GROUNDWATER; APPROXIMATE GRADIENT = 0.006
- SCALE (ft)  
0 30

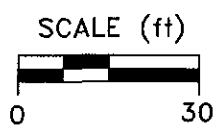
Reference: EQ-02.1A/EQ02QMR.DWG  
 Base map from Remediation Risk Management, Inc.

 <p><b>TOXICHEM</b> Management Systems, Inc. Environmental &amp; Occupational Health Services</p>	<p><b>GROUNDWATER ELEVATION CONTOUR MAP, DECEMBER 20, 2001</b></p> <p>Former Texaco/Current Broadway Discount Gas Station          3810 Broadway          Oakland, California</p>	<p>FIGURE: <b>1</b></p> <p>PROJECT: EQ-02</p>



**EXPLANATION**

- ◆ MONITORING WELL
- ✱ DESTROYED WELL
- 300/110/13/<5.0 TPPH/TEPH/BENZENE CONCENTRATION IN GROUNDWATER, IN MICROGRAMS PER LITER, 12-20-01
- NA DATA NOT AVAILABLE



Reference: EQ-02.1A/EQ02QMR.DWG  
 Basemap from Remediation Risk Management, Inc.



TPPH/TEPH/BENZENE CONCENTRATION MAP, DECEMBER 20, 2001  
 Former Texaco/Current Broadway Discount Gas Station  
 3810 Broadway  
 Oakland, California

FIGURE: 2  
 PROJECT: EQ-02

**BLAINE**  
TECH SERVICES, INC.



1680 ROGERS AVENUE  
SAN JOSE, CA 95112-1105  
(408) 573-7771 FAX  
(408) 573-0555 PHONE  
CONTRACTOR'S LICENSE #746684  
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January 16, 2002

Karen Petryna  
Equiva Services LLC  
P.O. Box 7869  
Burbank, CA 91510-7869

Fourth Quarter 2001 Groundwater Monitoring at  
Former Texaco Service Station  
3800 Broadway  
Oakland, CA

Monitoring performed on December 20, 2001

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Groundwater Monitoring Report **011220-DA-1**

This report covers the routine monitoring of groundwater wells at this former Texaco 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/mrb

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

cc: Keith Winemiller  
Toxichem Management Systems, Inc.  
1562 44<sup>th</sup> Avenue  
San Francisco, CA 94122

**WELL CONCENTRATIONS**  
**Former Texaco Service Station**  
**3800 Broadway**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	D.O. Readings (ppm)
MW-1	06/28/1996	<100	<50	<0.5	<1.0	<1.0	<2.0	NA	NA	86.69	21.77	NA	64.92	NA	NA
MW-1	10/10/1996	520	<400	9.2	53	17	70	22	16**	86.69	23.26	NA	63.43	NA	NA
MW-1	11/07/1996	NA	NA	NA	NA	NA	NA	NA	NA	86.69	23.27	NA	63.42	NA	NA
MW-1	12/18/1997	2,200	<50	<3.0	<3.0	<3.0	<3.0	<200	NA	86.69	19.70	NA	66.99	NA	NA
MW-1	04/06/1998	1,600	<50	16.4	0.8	<0.5	<0.5	38.3	NA	86.69	16.88	NA	69.81	NA	NA
MW-1	06/18/1998	330	280	7.8	<0.5	<0.5	<0.5	<0.5	NA	86.69	19.78	NA	66.91	NA	NA
MW-1	08/31/1998	<50	150	1.5	<0.5	<0.5	<0.5	<2.5	NA	86.69	21.71	NA	64.98	NA	NA
MW-1	12/21/1998	130	130	2.3	0.90	<0.5	<0.5	110	13	86.69	22.15	NA	64.54	NA	NA
MW-1	03/24/1999	1,520	305	11.7	<2.50	<2.50	<2.50	21.6	<25.0	86.69	19.55	NA	67.14	NA	NA
MW-1	06/25/1999	231	207	5.29	<0.500	<0.500	<0.500	3.94	1.01	86.69	21.60	NA	65.09	NA	NA
MW-1	09/24/1999	58.6	71.7	6.03	<0.500	<0.500	<0.500	3.70	NA	86.69	22.58	NA	64.11	NA	NA
MW-1	12/29/1999	117	345	4.26	<0.500	<0.500	1.97	26.2	<0.500	86.69	22.81	NA	63.88	NA	NA
MW-1	03/21/2000	834	319	<0.500	<0.500	<0.500	<0.500	21.5	NA	86.69	19.00	NA	67.69	NA	NA
MW-1	07/26/2000	<50.0	125	<0.500	<0.500	<0.500	<0.500	<2.50	NA	86.69	21.50	NA	65.19	NA	NA
MW-1	09/06/2000	88.1	192	15.60	<0.500	<0.500	<0.500	NA	NA	86.69	21.90	NA	64.79	NA	NA
MW-1	11/29/2000	<50.0	331	3.52	<0.500	<0.500	<0.500	NA	NA	86.92	22.05	NA	64.87	NA	NA
MW-1	03/06/2001	NA	NA	NA	NA	NA	NA	NA	NA	86.92	19.79	NA	67.13	NA	NA
MW-1	03/23/2001	204	d	10.7	<0.500	<0.500	<0.500	NA	NA	86.92	20.15	NA	66.77	NA	NA
MW-1	06/19/2001	<50	330	<0.50	<0.50	<0.50	<0.50	NA	0.87	86.92	21.78	NA	65.14	NA	NA
MW-1	09/05/2001	74	400	<0.50	0.63	<0.50	2.7	NA	<5.0	86.92	24.37	NA	62.55	NA	NA
MW-1	12/20/2001	59	530	1.7	<0.50	<0.50	<0.50	NA	<5.0	86.92	20.25	NA	66.67	NA	NA
MW-2	06/28/1996	NA	NA	NA	NA	NA	NA	NA	NA	85.83	22.10	NA	63.73	1.35	NA
MW-2	10/10/1996	99,000	1,800	4,100	9,400	2,300	9,900	390	<25**	85.83	22.36	NA	63.47	NA	NA
MW-2	11/07/1996	NA	NA	NA	NA	NA	NA	NA	NA	85.83	22.39	NA	63.45	0.01	NA
MW-2	12/18/1997	24,000	4,700	600	1,800	750	2,400	<2,000	NA	85.83	20.19	NA	65.64	NA	NA
MW-2	04/06/1998	20,100	9.5	252	448	430	1,410	<200	NA	85.83	18.00	NA	67.83	NA	NA
MW-2	06/18/1998	20,000	5,200	240	370	270	790	<50	NA	85.83	19.63	NA	66.20	NA	NA

**WELL CONCENTRATIONS**  
**Former Texaco Service Station**  
**3800 Broadway**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	D.O. Readings (ppm)
MW-2	08/31/1998	72,000	19,000	270	990	630	1,700	<125	NA	85.83	21.01	NA	64.82	NA	NA
MW-2	12/21/1998	290	13,000	8.7	18	9.7	38	10	29	85.83	21.31	NA	64.52	NA	NA
MW-2	03/24/1999	80,400	5,590	651	1,860	1,120	3,730	<40.0	<100	85.83	19.18	NA	66.65	NA	NA
MW-2	06/25/1999	34,700	12,100	504	1,300	716	2,160	<40.0	NA	85.83	20.78	NA	65.05	NA	NA
MW-2	09/24/1999	6,510	108	1,030	350	183	680	<50.0	NA	85.83	21.82	NA	64.01	NA	1.0/.80
MW-2	12/29/1999	NA	NA	NA	NA	NA	NA	NA	NA	85.83	22.17	21.87	63.90	0.30	2.6
MW-2	01/07/2000	NA	NA	NA	NA	NA	NA	NA	NA	85.83	22.84	22.45	63.30	0.39	NA
MW-2	03/21/2000	54,100	41,100	1,260	3,320	2,180	8,200	<1,250	NA	a	18.19	NA	NA	NA	3.3/3.6
MW-2	NA	Well destroyed		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3	06/28/1996	NA	NA	NA	NA	NA	NA	NA	NA	83.18	19.04	NA	64.14	NA	NA
MW-3	10/10/1996	110,000	1,200	6,600	16,000	2,200	12,000	<250	NA	83.18	19.51	NA	63.67	NA	NA
MW-3	11/07/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	19.40	NA	19.84	NA	NA
MW-3	12/18/1997	180,000	6,100,000	1,500	16,000	4,600	23,000	<3,000	NA	83.18	18.79	NA	64.39	NA	NA
MW-3	04/06/1998	NA	NA	NA	NA	NA	NA	NA	NA	83.18	16.58	NA	66.64	0.05	NA
MW-3	06/18/1998	NA	NA	NA	NA	NA	NA	NA	NA	83.18	NA*	NA	NA	>2.0	NA
MW-3	08/31/1998	NA	NA	NA	NA	NA	NA	NA	NA	83.18	19.56	NA	63.68	0.07	NA
MW-3	12/21/1998	NA	NA	NA	NA	NA	NA	NA	NA	83.18	20.23	NA	65.13	2.73	NA
MW-3	03/24/1999	NA	NA	NA	NA	NA	NA	NA	NA	83.18	16.76	15.90	67.11	0.86	NA
MW-3	06/25/1999	NA	NA	NA	NA	NA	NA	NA	NA	83.18	18.47	18.17	64.95	0.30	NA
MW-3	09/24/1999	NA	NA	NA	NA	NA	NA	NA	NA	83.18	19.43	19.35	63.81	0.08	NA
MW-3	12/29/1999	NA	NA	NA	NA	NA	NA	NA	NA	83.18	19.25	19.21	63.96	0.04	NA
MW-3	01/07/2000	NA	NA	NA	NA	NA	NA	NA	NA	83.18	19.87	19.80	63.37	0.07	NA
MW-3	NA	Well destroyed		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	06/28/1996	<100	<50	<0.5	<1.0	<1.0	<2.0	NA	NA	83.31	18.83	NA	64.48	NA	NA
MW-4	10/10/1996	650	<50	3.9	65	22	120	<5.0	NA	83.31	19.84	NA	63.47	NA	NA
MW-4	11/07/1996	NA	NA	NA	NA	NA	NA	NA	NA	83.31	19.84	NA	63.47	NA	NA



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**3800 Broadway**  
**Oakland, CA**

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MW-4	12/18/1997	<50	2,000	<0.5	<0.5	<0.5	<0.5	<30	NA	83.31	17.77	NA	65.54	NA	NA
MW-4	04/06/1998	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	83.31	15.45	NA	67.86	NA	NA
MW-4	06/18/1998	<50	53	<0.5	<0.5	<0.5	<0.5	<0.5	NA	83.31	16.89	NA	66.42	NA	NA
MW-4	08/31/1998	<50	60	<0.5	<0.5	<0.5	<0.5	<2.5	NA	83.31	18.48	NA	64.83	NA	NA
MW-4	12/21/1998	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	83.31	18.80	NA	64.51	NA	NA
MW-4	03/24/1999	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	83.31	16.70	NA	66.61	NA	NA
MW-4	06/25/1999	<50.0	128	<0.500	<0.500	<0.500	<0.500	<2.00	NA	83.31	18.16	NA	65.15	NA	NA
MW-4	09/24/1999	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	83.31	19.12	NA	64.19	NA	NA
MW-4	12/29/1999	<50.0	169	<0.500	<0.500	<0.500	<0.500	<5.00	NA	83.31	19.08	NA	64.23	NA	NA
MW-4	03/21/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	83.31	16.10	NA	67.21	NA	NA
MW-4	07/26/2000	Obstruction in well		NA	NA	NA	NA	NA	NA	83.31	NA	NA	NA	NA	NA
MW-4	09/06/2000	<50.0	c	<0.500	<0.500	<0.500	<0.500	NA	NA	83.31	18.52	NA	64.79	NA	NA
MW-4	11/29/2000	<50.0	183	<0.500	<0.500	<0.500	<0.500	NA	NA	83.63	18.75	NA	64.88	NA	NA
MW-4	03/06/2001	<50.0	50.9	<0.500	<0.500	<0.500	<0.500	NA	NA	83.63	17.81	NA	65.82	NA	NA
MW-4	06/19/2001	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	83.63	18.55	NA	65.08	NA	NA
MW-4	09/05/2001	<50	710	<0.50	<0.50	<0.50	<0.50	NA	<5.0	83.63	19.10	NA	64.53	NA	NA
MW-4	12/20/2001	<50	460	<0.50	<0.50	<0.50	<0.50	NA	<5.0	83.63	17.55	NA	66.08	NA	NA
MW-5	10/10/1996	1,800	<50	34	4.7	11	44	21	5.0**	85.41	21.93	NA	63.48	NA	NA
MW-5	11/07/1996	NA	NA	NA	NA	NA	NA	NA	NA	85.41	21.96	NA	63.45	NA	NA
MW-5	12/18/1997	1,200	<50	15	<1.0	15	<1.0	72	NA	85.41	19.81	NA	65.60	NA	NA
MW-5	04/06/1998	1,000	<50	126	0.5	0.8	1.5	<30	NA	85.41	17.43	NA	67.98	NA	NA
MW-5	06/18/1998	110	100	6.9	<0.5	<0.5	<0.5	<0.5	NA	85.41	19.15	NA	66.26	NA	NA
MW-5	08/31/1998	480	120	5.3	<2.5	<2.5	<2.5	<12	NA	85.41	20.46	NA	64.95	NA	NA
MW-5	12/21/1998	270	100	16	2.9	1.3	<1.0	34	<2.0	85.41	20.91	NA	64.50	NA	NA
MW-5	03/24/1999	143	93.3	2.80	<0.500	0.749	<0.500	<2.00	<5.00	85.41	18.74	NA	66.67	NA	NA
MW-5	06/25/1999	847	125	6.61	<0.500	0.611	<0.500	2.69	<2.00	85.41	20.31	NA	65.10	NA	NA
MW-5	09/24/1999	563	94.0	6.00	<2.50	<2.50	<2.50	25.1	NA	85.41	21.36	NA	64.05	NA	NA

**WELL CONCENTRATIONS**  
**Former Texaco Service Station**  
**3800 Broadway**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	D.O. Readings (ppm)
MW-5	12/29/1999	896	173	16.6	1.48	8.92	2.67	61.1	<0.500	85.41	21.41	NA	64.00	NA	NA
MW-5	03/21/2000	858	158	53.7	<1.00	21.4	8.00	11.6	NA	85.41	18.13	NA	67.28	NA	NA
MW-5	07/26/2000	Obstruction in well		NA	NA	NA	NA	NA	NA	85.41	NA	NA	NA	NA	NA
MW-5	09/06/2000	670	231	153	<2.50	7.87	<2.50	NA	NA	85.41	20.33	NA	65.08	NA	NA
MW-5	11/29/2000	Obstruction in well		NA	NA	NA	NA	NA	NA	85.13	NA	NA	NA	NA	NA
MW-5	03/06/2001	Obstruction in well		NA	NA	NA	NA	NA	NA	85.13	NA	NA	NA	NA	NA
MW-5	06/19/2001	Obstruction in well		NA	NA	NA	NA	NA	NA	85.13	NA	NA	NA	NA	NA
MW-5	09/05/2001	Obstruction in well		NA	NA	NA	NA	NA	NA	85.13	NA	NA	NA	NA	NA
MW-5	12/20/2001	Obstruction in well		NA	NA	NA	NA	NA	NA	85.13	NA	NA	NA	NA	NA
MW-6	10/10/1996	45,000	500	8,300	2,900	810	3,100	190	40**	86.09	22.44	NA	63.65	NA	NA
MW-6	11/07/1996	NA	NA	NA	NA	NA	NA	NA	NA	86.09	22.60	NA	63.49	NA	NA
MW-6	12/18/1997	60,000	1,900	12,000	9,800	1,800	8,600	<2,000	NA	86.09	22.28	NA	63.81	NA	NA
MW-6	04/06/1998	30,500	<50	5,950	3,720	952	3,750	<1,000	NA	86.09	19.90	NA	66.19	NA	NA
MW-6	06/18/1998	23,000	1,100	2,600	540	410	1,300	<250	NA	86.09	20.49	NA	65.60	NA	NA
MW-6	08/31/1998	17,000	1,800	3,400	460	530	1,800	<250	NA	86.09	21.05	NA	65.04	NA	NA
MW-6	12/21/1998	7,900	930	1,900	510	280	730	150	2.6	86.09	21.74	NA	64.35	NA	NA
MW-6	03/24/1999	12,200	763	1,970	327	338	794	<40.0	<50.0	86.09	21.18	NA	64.91	NA	NA
MW-6	06/25/1999	14,800	1,050	2,040	1,080	406	1,430	<40.0	NA	86.09	21.34	NA	64.75	NA	NA
MW-6	09/24/1999	17,200	1,720	2,810	1,330	489	2,340	<50.0	NA	86.09	22.28	NA	63.81	NA	1.0/1.2
MW-6	12/29/1999	14,700	1,480	2,790	974	469	1,720	<500	NA	86.09	24.96	NA	61.13	NA	1.3/1.5
MW-6	03/21/2000	20,000	1,120	4,160	962	719	2,330	<250	NA	86.09	18.70	NA	67.39	NA	3.0/4.3
MW-6	07/26/2000	Well inaccessible		NA	NA	NA	NA	NA	NA	86.09	NA	NA	NA	NA	NA
MW-6	09/06/2000	Well inaccessible		NA	NA	NA	NA	NA	NA	86.09	NA	NA	NA	NA	NA
MW-6	11/29/2000	22,800	2,060	4,120	2,010	872	3,180	NA	NA	86.48	21.30	NA	65.18	NA	2.0/1.8
MW-6	03/06/2001	32,100	2,220	3,760	4,590	1,160	5,360	NA	NA	86.48	19.05	NA	67.43	NA	3.7/4.0
MW-6	06/19/2001	40,000	<1,500	2,800	6,000	1,200	5,300	NA	<25	86.48	21.11	NA	65.37	NA	3.0/3.4
MW-6	09/05/2001	18,000	<1,000	3,800	800	730	1,400	NA	<200	86.48	21.37	NA	65.11	NA	10.4/10.8

**WELL CONCENTRATIONS**  
**Former Texaco Service Station**  
**3800 Broadway**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	D.O. Readings (ppm)
MW-6	12/20/2001	29,000	<1,300	2,600	3,700	1,100	4,100	NA	<100	86.48	19.80	NA	66.68	NA	1.3/1.5

MW-7	10/10/1996	<50	<50	0.6	<0.5	<0.5	<0.5	<5.0	NA	84.11	20.78	NA	63.33	NA	NA
MW-7	11/07/1996	NA	NA	NA	NA	NA	NA	NA	NA	84.11	20.80	NA	63.31	NA	NA
MW-7	12/18/1997	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	84.11	17.27	NA	66.84	NA	NA
MW-7	04/06/1998	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	84.11	15.91	NA	68.20	NA	NA
MW-7	06/18/1998	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	NA	84.11	17.95	NA	66.16	NA	NA
MW-7	08/31/1998	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	84.11	19.40	NA	64.71	NA	NA
MW-7	12/21/1998	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	84.11	19.75	NA	64.36	NA	NA
MW-7	03/24/1999	<50.0	51.3	<0.500	<0.500	<0.500	<0.500	<2.00	NA	84.11	17.54	NA	66.57	NA	NA
MW-7	06/25/1999	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	84.11	19.22	NA	64.89	NA	NA
MW-7	09/24/1999	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	84.11	20.18	NA	63.93	NA	1.4/1.6
MW-7	12/29/1999	<50.0	99.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	84.11	20.15	NA	63.96	NA	2.3/1.8
MW-7	03/21/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	84.11	16.35	NA	67.76	NA	5.8/9.0
MW-7	07/26/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	84.11	18.99	NA	65.12	NA	6.0/6.6
MW-7	09/06/2000	<50.0	c	<0.500	<0.500	<0.500	<0.500	NA	NA	84.11	19.49	NA	64.62	NA	4.3/5.0
MW-7	11/29/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	84.44	19.52	NA	64.92	NA	4.0/3.7
MW-7	03/06/2001	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	84.44	17.15	NA	67.29	NA	4.7/5.1
MW-7	06/19/2001	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	84.44	19.30	NA	65.14	NA	3.8/4.2
MW-7	09/05/2001	<50	<50	0.64	0.84	0.94	5.2	NA	<5.0	84.44	20.22	NA	64.22	NA	6.7/7.1
MW-7	12/20/2001	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	84.44	17.85	NA	66.59	NA	4.9/5.0

MW-8	10/10/1996	17,000	110	1,300	1,200	64	1,300	110	<5.0**	84.01	20.82	NA	63.19	NA	NA
MW-8	11/07/1996	NA	NA	NA	NA	NA	NA	NA	NA	84.01	20.44	NA	63.57	NA	NA
MW-8	12/18/1997	15,000	630	3,600	1,800	410	930	<600	NA	84.01	19.36	NA	64.65	NA	NA
MW-8	04/06/1998	32,300	<50	8,230	5,900	718	2,120	<1,000	NA	84.01	16.19	NA	67.82	NA	NA
MW-8	06/18/1998	74,000	<50	5,400	4,500	700	2,200	2,400	NA	84.01	17.75	NA	66.26	NA	NA
MW-8	08/31/1998	Well inaccessible		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

**WELL CONCENTRATIONS**  
**Former Texaco Service Station**  
**3800 Broadway**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	D.O. Readings (ppm)
MW-8	12/21/1998	9,600	1,200	2,600	410	220	300	700	<2.0	84.01	19.48	NA	64.53	NA	NA
MW-8	03/24/1999	86,100	2,890	9,890	11,700	1,650	7,130	<200	<250	84.01	17.44	NA	66.57	NA	NA
MW-8	06/25/1999	NA	NA	NA	NA	NA	NA	NA	NA	84.01	20.69	20.59	63.40	0.10	NA
MW-8	07/01/1999	NA	NA	NA	NA	NA	NA	NA	NA	84.01	20.45	18.56	65.07	1.89	NA
MW-8	09/24/1999	NA	NA	NA	NA	NA	NA	NA	NA	84.01	20.98	19.45	64.25	1.53	NA
MW-8	12/29/1999	NA	NA	NA	NA	NA	NA	NA	NA	84.01	20.25	19.99	63.97	0.26	NA
MW-8	01/07/2000	NA	NA	NA	NA	NA	NA	NA	NA	84.01	21.00	20.60	63.33	0.40	NA
MW-8	NA	Well destroyed		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

MW-9	10/10/1996	80	520	2.5	13	2.2	13	<5.0	NA	82.17	18.62	NA	63.55	NA	NA
MW-9	11/07/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	63.53	NA	63.53	NA	NA
MW-9	12/18/1997	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	82.17	16.42	NA	65.75	NA	NA
MW-9	04/06/1998	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	82.17	14.00	NA	68.17	NA	NA
MW-9	06/18/1998	<50	100	<0.5	<0.5	<0.5	<0.5	<0.5	NA	82.17	15.33	NA	66.84	NA	NA
MW-9	08/31/1998	<50	57	<0.5	<0.5	<0.5	<0.5	<2.5	NA	82.17	17.14	NA	65.03	NA	NA
MW-9	12/21/1998	<50	71	<0.5	<0.5	<0.5	<0.5	<2.5	NA	82.17	17.40	NA	64.77	NA	NA
MW-9	03/24/1999	<50.0	84.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	82.17	16.22	NA	65.95	NA	NA
MW-9	06/25/1999	<50.0	92.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	82.17	16.90	NA	65.27	NA	NA
MW-9	09/24/1999	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	82.17	17.89	NA	64.28	NA	1.0/1.2
MW-9	12/29/1999	<50.0	52.8	<0.500	<0.500	<0.500	<0.500	<5.00	NA	82.17	18.01	NA	64.16	NA	3.3/2.7
MW-9	03/21/2000	<50.0	72.4	<0.500	<0.500	<0.500	<0.500	<2.50	NA	82.17	14.80	NA	67.37	NA	3.2/7.3
MW-9	07/26/2000	<50.0	83.6	<0.500	<0.500	<0.500	<0.500	<2.50	NA	82.17	17.17	NA	65.00	NA	3.6/1.8
MW-9	09/06/2000	<50.0	74.3	<0.500	<0.500	<0.500	<0.500	NA	NA	82.17	17.95	NA	64.22	NA	3.8/4.0
MW-9	11/29/2000	<50.0	96.2	<0.500	<0.500	<0.500	<0.500	NA	NA	82.52	18.10	NA	64.42	NA	2.0/2.0
MW-9	03/06/2001	<50.0	94.2	<0.500	<0.500	<0.500	<0.500	NA	NA	82.52	16.75	NA	65.77	NA	4.0/4.9
MW-9	06/19/2001	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	82.52	17.83	NA	64.69	NA	3.4/4.0
MW-9	09/05/2001	<50	<50	<0.50	<0.50	<0.50	1.6	NA	<5.0	82.52	17.98	NA	64.54	NA	2.7/2.0
MW-9	12/20/2001	<50	84	<0.50	<0.50	<0.50	<0.50	NA	<5.0	82.52	16.85	NA	65.67	NA	2.2/2.2

**WELL CONCENTRATIONS**  
**Former Texaco Service Station**  
**3800 Broadway**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	D.O. Readings (ppm)
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MW-10	10/10/1996	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	81.83	18.40	NA	63.43	NA	NA
MW-10	11/07/1996	NA	NA	NA	NA	NA	NA	NA	NA	81.83	18.43	NA	63.40	NA	NA
MW-10	12/18/1997	350	<50	6.9	0.87	0.88	0.77	<30	NA	81.83	16.18	NA	65.65	NA	NA
MW-10	04/06/1998	2,300	<50	224	168	81.4	253	<30	NA	81.83	14.39	NA	67.44	NA	NA
MW-10	06/18/1998	7,200	320	310	210	83	280	<0.5	NA	81.83	15.11	NA	66.72	NA	NA
MW-10	08/31/1998	460	120	51	8.2	5.1	10	<5.0	NA	81.83	17.03	NA	64.80	NA	NA
MW-10	12/21/1998	120	79	5.5	<1.0	<1.0	<1.0	8.7	<2.0	81.83	17.32	NA	64.51	NA	NA
MW-10	03/24/1999	1,330	923	85.9	42.9	29.7	95.2	20.4	<25.0	81.83	15.25	NA	66.58	NA	NA
MW-10	06/25/1999	1,130	167	115	32.6	17.2	36.3	<4.00	NA	81.83	16.82	NA	65.01	NA	NA
MW-10	09/24/1999	382	76.7	20.0	<1.00	2.21	1.37	8.83	NA	81.83	17.75	NA	64.08	NA	NA
MW-10	12/29/1999	114	107	9.03	<0.500	0.531	<0.500	<5.00	NA	81.83	18.13	NA	63.70	NA	NA
MW-10	03/21/2000	1,270	194	86.3	52.3	38.1	102	19.5	NA	81.83	14.22	NA	67.61	NA	NA
MW-10	07/26/2000	562	192	74.8	7.51	24.3	14.8	13.3	<1.00b	81.83	16.61	NA	65.22	NA	NA
MW-10	09/06/2000	606	205	93.4	5.36	16.7	38.9	NA	NA	81.83	17.08	NA	64.75	NA	NA
MW-10	11/29/2000	583	258	40.0	1.46	4.69	15.8	NA	NA	82.16	16.90	NA	65.26	NA	NA
MW-10	03/06/2001	837	199	34.2	26.4	20.8	27.5	NA	NA	82.16	14.80	NA	67.36	NA	NA
MW-10	06/19/2001	400	<50	47	2.6	8.8	17	NA	0.60	82.16	16.85	NA	65.31	NA	NA
MW-10	09/05/2001	230	<100	20	<0.50	1.2	5.3	NA	<5.0	82.16	17.87	NA	64.29	NA	NA
MW-10	12/20/2001	300	110	13	2.5	1.7	4.6	NA	<5.0	82.16	15.54	NA	66.62	NA	NA

MW-11	08/08/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	25.61	NA	NA	NA	NA
MW-11	08/16/2000	<50.0	56.80	<0.500	<0.500	<0.500	<0.500	NA	NA	NA	25.50	NA	NA	NA	NA
MW-11	09/06/2000	<50.0	c	<0.500	<0.500	<0.500	<0.500	NA	NA	NA	25.90	NA	NA	NA	NA
MW-11	11/29/2000	<50.0	63.8	<0.500	<0.500	<0.500	<0.500	NA	NA	90.63	25.80	NA	64.83	NA	NA
MW-11	03/06/2001	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	90.63	23.32	NA	67.31	NA	NA
MW-11	06/19/2001	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	90.63	25.57	NA	65.06	NA	NA
MW-11	09/05/2001	<50	<50	<0.50	<0.50	<0.50	0.68	NA	<5.0	90.63	26.42	NA	64.21	NA	NA

**WELL CONCENTRATIONS**  
**Former Texaco Service Station**  
**3800 Broadway**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	D.O. Readings (ppm)
MW-11	12/20/2001	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	90.63	24.27	NA	66.36	NA	NA

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to June 19, 2001, analyzed by EPA Method 8015.

TEPH = Total petroleum hydrocarbons as diesel by modified EPA Method 8015.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to June 19, 2001, analyzed by EPA Method 8020.

MTBE = methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

SPH = Separate-Phase Hydrocarbons

GW = Groundwater

D.O. = Dissolved Oxygen

ug/L = parts per billion

ppm = parts per million

msl = Mean sea level

ft = Feet

<n = Below detection limit

D = Duplicate sample

NA = Not applicable

n/n = Pre-purge/Post-purge D.O. reading.

**WELL CONCENTRATIONS**  
**Former Texaco Service Station**  
**3800 Broadway**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	D.O. Readings (ppm)
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Notes:

- \* Free product could not be accurately measured (>2.0 feet of product in well).
- \*\* MTBE confirmation by 8240.
- a = TOC for MW-2 has changed.
- b = This sample analyzed outside of EPA recommended hold time.
- c = During shipment by laboratory, sample containers for MW-4, MW-7, and MW-11 were broken.
- d = Sample containers for TEPH broke during transport to lab.

Survey information provided by Toxichem Management Systems, Inc., on December 11, 2000.



Report Number : 24049

Date : 1/8/02

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

Subject : 7 Water Samples  
Project Name : 3800 Broadway, Oakland  
Project Number : 011220-DA1  
P.O. Number : 93995026

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". The signature is written in a cursive style with a large, stylized "J" and "K".

Joel Kiff






Report Number : 24049

Date : 1/8/02

Subject : 7 Water Samples  
Project Name : 3800 Broadway, Oakland  
Project Number : 011220-DA1  
P.O. Number : 93995026

## Case Narrative

The Method Reporting Limit for TPH as Diesel is increased due to interference from Gasoline-Range Hydrocarbons for sample MW-6. Hydrocarbons reported as TPH as Diesel do not exhibit a typical Diesel chromatographic pattern for sample MW-10. Matrix Spike/Matrix Spike Duplicate Results associated with sample MW-6 for the analyte Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.

Approved By:  Joel Kiff



Report Number : 24049

Date : 1/8/02

Project Name : 3800 Broadway, Oakland

Project Number : 011220-DA1


Sample : MW-1

Matrix : Water

Lab Number : 24049-01

Sample Date :12/20/01

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>1.7</b>	0.50	ug/L	EPA 8260B	12/27/01
<b>Toluene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	12/27/01
<b>Ethylbenzene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	12/27/01
<b>Total Xylenes</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	12/27/01
<b>Methyl-t-butyl ether (MTBE)</b>	<b>&lt; 5.0</b>	5.0	ug/L	EPA 8260B	12/27/01
<b>TPH as Gasoline</b>	<b>59</b>	50	ug/L	EPA 8260B	12/27/01
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	12/27/01
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	12/27/01
<b>TPH as Diesel</b>	<b>530</b>	50	ug/L	M EPA 8015	1/2/02

Approved By:  Joel Kiff



Report Number : 24049

Date : 1/8/02

Project Name : 3800 Broadway, Oakland

Project Number : 011220-DA1

Sample : MW-4

Matrix : Water

Lab Number : 24049-02

Sample Date :12/20/01

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/27/01
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/27/01
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/27/01
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/27/01
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	12/27/01
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/27/01
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	12/27/01
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	12/27/01
TPH as Diesel	460	50	ug/L	M EPA 8015	12/30/01

Approved By:  Joel Kiff



Report Number : 24049

Date : 1/8/02

Project Name : 3800 Broadway, Oakland

Project Number : 011220-DA1

Sample : MW-6

Matrix : Water

Lab Number : 24049-03

Sample Date :12/20/01

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>2600</b>	10	ug/L	EPA 8260B	12/30/01
<b>Toluene</b>	<b>3700</b>	25	ug/L	EPA 8260B	1/1/02
<b>Ethylbenzene</b>	<b>1100</b>	10	ug/L	EPA 8260B	12/30/01
<b>Total Xylenes</b>	<b>4100</b>	10	ug/L	EPA 8260B	12/30/01
<b>Methyl-t-butyl ether (MTBE)</b>	<b>&lt; 100</b>	100	ug/L	EPA 8260B	12/30/01
<b>TPH as Gasoline</b>	<b>29000</b>	1000	ug/L	EPA 8260B	12/30/01
Toluene - d8 (Surr)	99.4		% Recovery	EPA 8260B	12/30/01
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	12/30/01
<b>TPH as Diesel</b>	<b>&lt; 1300</b>	1300	ug/L	M EPA 8015	12/30/01

Approved By:  Joel Kiff



Report Number : 24049

Date : 1/8/02

Project Name : 3800 Broadway, Oakland

Project Number : 011220-DA1

Sample : MW-7

Matrix : Water

Lab Number : 24049-04

Sample Date :12/20/01

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	< 0.50	0.50	ug/L	EPA 8260B	12/27/01
<b>Toluene</b>	< 0.50	0.50	ug/L	EPA 8260B	12/27/01
<b>Ethylbenzene</b>	< 0.50	0.50	ug/L	EPA 8260B	12/27/01
<b>Total Xylenes</b>	< 0.50	0.50	ug/L	EPA 8260B	12/27/01
<b>Methyl-t-butyl ether (MTBE)</b>	< 5.0	5.0	ug/L	EPA 8260B	12/27/01
<b>TPH as Gasoline</b>	< 50	50	ug/L	EPA 8260B	12/27/01
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	12/27/01
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	12/27/01
<b>TPH as Diesel</b>	< 50	50	ug/L	M EPA 8015	12/30/01

Approved By:  Joel Kiff



Report Number : 24049

Date : 1/8/02

Project Name : 3800 Broadway, Oakland

Project Number : 011220-DA1

Sample : MW-9

Matrix : Water

Lab Number : 24049-05

Sample Date :12/20/01

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	12/27/01
<b>Toluene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	12/27/01
<b>Ethylbenzene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	12/27/01
<b>Total Xylenes</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	12/27/01
<b>Methyl-t-butyl ether (MTBE)</b>	<b>&lt; 5.0</b>	5.0	ug/L	EPA 8260B	12/27/01
<b>TPH as Gasoline</b>	<b>&lt; 50</b>	50	ug/L	EPA 8260B	12/27/01
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	12/27/01
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	12/27/01
<b>TPH as Diesel</b>	<b>84</b>	50	ug/L	M EPA 8015	12/30/01

Approved By:  Joel Kiff



Report Number : 24049

Date : 1/8/02

Project Name : 3800 Broadway, Oakland

Project Number : 011220-DA1

Sample : MW-10

Matrix : Water

Lab Number : 24049-06

Sample Date :12/20/01

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>13</b>	0.50	ug/L	EPA 8260B	12/27/01
<b>Toluene</b>	<b>2.5</b>	0.50	ug/L	EPA 8260B	12/27/01
<b>Ethylbenzene</b>	<b>1.7</b>	0.50	ug/L	EPA 8260B	12/27/01
<b>Total Xylenes</b>	<b>4.6</b>	0.50	ug/L	EPA 8260B	12/27/01
<b>Methyl-t-butyl ether (MTBE)</b>	<b>&lt; 5.0</b>	5.0	ug/L	EPA 8260B	12/27/01
<b>TPH as Gasoline</b>	<b>300</b>	50	ug/L	EPA 8260B	12/27/01
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	12/27/01
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	12/27/01
<b>TPH as Diesel</b>	<b>110</b>	50	ug/L	M EPA 8015	12/30/01

Approved By:  Joel Kiff



Report Number : 24049

Date : 1/8/02

Project Name : 3800 Broadway, Oakland

Project Number : 011220-DA1

Sample : MW-11

Matrix : Water

Lab Number : 24049-07

Sample Date :12/20/01

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/27/01
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/27/01
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/27/01
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/27/01
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	12/27/01
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/27/01
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	12/27/01
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	12/27/01
TPH as Diesel	< 50	50	ug/L	M EPA 8015	12/30/01

Approved By:  Joel Kiff



Report Number : 24049

Date : 1/8/02

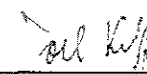
**QC Report : Method Blank Data**

Project Name : **3800 Broadway, Oakland**

Project Number : **011220-DA1**

<u>Parameter</u>	<u>Measured Value</u>	<u>Method Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Date Analyzed</u>
TPH as Diesel	< 50	50	ug/L	M EPA 8015	12/29/01
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/29/01
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/29/01
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/29/01
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/29/01
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	12/29/01
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/29/01
Toluene - d8 (Surr)	100		%	EPA 8260B	12/29/01
4-Bromofluorobenzene (Surr)	101		%	EPA 8260B	12/29/01
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/27/01
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/27/01
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/27/01
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/27/01
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	12/27/01
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/27/01
Toluene - d8 (Surr)	102		%	EPA 8260B	12/27/01
4-Bromofluorobenzene (Surr)	102		%	EPA 8260B	12/27/01

<u>Parameter</u>	<u>Measured Value</u>	<u>Method Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Date Analyzed</u>
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Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

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

## QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : 3800 Broadway, Oakland

Project Number : 011220-DA1

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
TPH as Diesel	Blank	<50	1000	1000	800	816	ug/L	M EPA 8015	12/29/01	80.0	81.6	1.92	70-130	25
Benzene	24067-04	<0.50	38.9	37.8	40.0	39.2	ug/L	EPA 8260B	12/29/01	103	104	0.847	70-130	25
Toluene	24067-04	<0.50	38.9	37.8	38.3	37.5	ug/L	EPA 8260B	12/29/01	98.5	99.2	0.733	70-130	25
Tert-Butanol	24067-04	<5.0	194	189	189	183	ug/L	EPA 8260B	12/29/01	97.2	96.6	0.624	70-130	25
Methyl-t-Butyl Ether	24067-04	130	38.9	37.8	155	153	ug/L	EPA 8260B	12/29/01	50.9	47.6	6.77	70-130	25
Benzene	24035-01	<0.50	40.0	40.0	37.1	36.7	ug/L	EPA 8260B	12/27/01	92.8	91.7	1.16	70-130	25
Toluene	24035-01	0.60	40.0	40.0	38.7	38.2	ug/L	EPA 8260B	12/27/01	95.2	94.0	1.19	70-130	25
Tert-Butanol	24035-01	<5.0	200	200	176	184	ug/L	EPA 8260B	12/27/01	88.2	92.3	4.47	70-130	25
Methyl-t-Butyl Ether	24035-01	<0.50	40.0	40.0	37.9	37.8	ug/L	EPA 8260B	12/27/01	94.7	94.5	0.211	70-130	25

  
 Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

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

Report Number : 24049

Date : 1/8/02

QC Report : Laboratory Control Sample (LCS)

Project Name : 3800 Broadway, Oakland

Project Number : 011220-DA1

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	12/29/01	103	70-130
Toluene	40.0	ug/L	EPA 8260B	12/29/01	99.4	70-130
Tert-Butanol	200	ug/L	EPA 8260B	12/29/01	94.4	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	12/29/01	92.9	70-130
Benzene	40.0	ug/L	EPA 8260B	12/27/01	108	70-130
Toluene	40.0	ug/L	EPA 8260B	12/27/01	108	70-130
Tert-Butanol	200	ug/L	EPA 8260B	12/27/01	104	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	12/27/01	118	70-130

KIFF ANALYTICAL, LLC

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

Approved By:  Joel Kiff



# WELL GAUGING DATA

Project # 011220-DA1

Date 12/20/01

Client Equiva

Site 3800 Broadway

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or <del>TOB</del>	Order
MW-1	2					20.25	28.80	 ↓	6
MW-4	2					17.55	35.00		7
MW-5	2	obstruction in well @		7.93	-	7.93			5
MW-6	2					19.80	32.65		8
MW-7	2					17.85	33.87		2
MW-9	2					16.85	34.10		3
MW-10	2					15.54	33.40		4
MW-11	2					24.27	39.30		1





## EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>01220-0A1</u>	Site: <u>3600 BROADWAY, OAKLAND</u>
Sampler: <u>DAWD</u>	Date: <u>12-20-01</u>
Well I.D.: <u>MW-5</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth: <u>7.93</u>	Depth to Water: <u>DRY</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> 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: \_\_\_\_\_

\_\_\_\_\_ (Gals.) X \_\_\_\_\_ = \_\_\_\_\_ Gals.  
 1 Case Volume      Specified Volumes      Calculated Volume

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
						<u>WELL OBSTRUCTED @ 7.93 AND DRY</u>
						<u>NO PURGE OR SAMPLE</u>

Did well dewater?    Yes    No

Gallons actually evacuated: \_\_\_\_\_

Sampling Time: \_\_\_\_\_      Sampling Date: \_\_\_\_\_

Sample I.D.: \_\_\_\_\_      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:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV



### EQUIVA WELL MONITORING DATA SHEET

BTS #: 011220-DA1	Site: 3800 Broadway, Oakland
Sampler: DA	Date: 12/20/01
Well I.D.: MW-6	Well Diameter: <input checked="" type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8
Total Well Depth: 32.65	Depth to Water: 19.80
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"/> YSD    HACH

Purge Method:  Bailer     Disposable Bailer     Middleburg     Electric Submersible

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

Sampling Method:  Bailer     Disposable Bailer     Extraction Port     Dedicated Tubing

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

<u>2.0</u> (Gals.) X <u>3</u> = <u>6</u> Gals.			
1 Case Volume	Specified Volumes	Calculated Volume	

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1452	62.2	6.6	957	>200	2	cloudy, grey, odor
1502	63.0	6.8	960	"	4	"
1508	63.9	6.7	981	"	6	"

Did well dewater?    Yes     No    Gallons actually evacuated: 6

Sampling Time: 1512    Sampling Date: 12/20/01

Sample I.D.: MW-6    Laboratory:  KIPP    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="radio"/> Pre-purge	<del>35</del> 1.3 mg/L	<input checked="" type="radio"/> Post-purge	1.5 mg/L
O.R.P. (if req'd): <input checked="" type="radio"/> Pre-purge	-35 mV	<input checked="" type="radio"/> Post-purge	-50 mV

## EQUIVA WELL MONITORING DATA SHEET

BTS #: 011220-DA1	Site: 3800 Broadway, Oakland
Sampler: DA	Date: 12/20/01
Well I.D.: MW-7	Well Diameter: <input checked="" type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8
Total Well Depth: 33.87	Depth to Water: 17.85
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"/> YSD    HACH

Purge Method: Bailer <input checked="" type="radio"/> Disposable Bailer Middleburg Electric Submersible	Waterra Peristaltic Extraction Pump Other _____	Sampling Method: Bailer <input checked="" type="radio"/> Disposable Bailer Extraction Port Dedicated Tubing Other: _____
--	--	--

2.6 (Gals.) X 3 = 7.8 Gals.  
 I Case Volume      Specified Volumes      Calculated Volume

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1029	63.1	6.5	513	7200	2.6	cloudy, tan
1035	63.7	6.1	513	"	5.2	"
1046	64.0	6.5	516	"	7.8	"

Did well dewater?    Yes     No    Gallons actually evacuated: 7.8

Sampling Time: 1045    Sampling Date: 12/20/01

Sample I.D.: MW-7    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:	5.0	mg/L
O.R.P. (if req'd):	Pre-purge:	190	mV	Post-purge:	183	mV

## EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>011220-DA1</u>	Site: <u>3800 Broadway, Oakland</u>
Sampler: <u>DA</u>	Date: <u>12/20/01</u>
Well I.D.: <u>MW-9</u>	Well Diameter: <input checked="" type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8 <input type="checkbox"/> _____
Total Well Depth: <u>34.10</u>	Depth to Water: <u>16.85</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Grade	D.O. Meter (if req'd): <input checked="" type="checkbox"/> YSI <input type="checkbox"/> HACH

Purge Method: <input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> Middleburg <input type="checkbox"/> Electric Submersible	<input type="checkbox"/> Waterra <input type="checkbox"/> Peristaltic <input type="checkbox"/> Extraction Pump <input type="checkbox"/> Other _____	Sampling Method: <input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> Extraction Port <input type="checkbox"/> Dedicated Tubing Other: _____
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$2.8$ (Gals.) X $3$ = $8.4$ Gals. 1 Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td><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														

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1342	63.2	6.2	394	>200	2.8	cloudy, brown
1348	64.5	6.3	408	"	5.6	"
1357	63.7	6.8	398	"	8.4	"

Did well dewater?    Yes     No    Gallons actually evacuated: 8.4

Sampling Time: 1400    Sampling Date: 12/20/01

Sample I.D.: MW-9    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:	<u>2.2</u> mg/L	Post-purge:	<u>2.2</u> mg/L
O.R.P. (if req'd):	Pre-purge:	<u>88</u> mV	Post-purge:	<u>90</u> mV



## EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>011220-DA1</u>	Site: <u>3800 Broadway, Oakland</u>
Sampler: <u>DA</u>	Date: <u>12/20/01</u>
Well I.D.: <u>MW-11</u>	Well Diameter: <input checked="" type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8    _____
Total Well Depth: <u>39.30</u>	Depth to Water: <u>24.27</u>
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: Bailer <input checked="" type="radio"/> Disposable Bailer Middleburg Electric Submersible	Waterra Peristaltic Extraction Pump Other: _____	Sampling Method: Bailer <input checked="" type="radio"/> Disposable Bailer Extraction Port Dedicated Tubing Other: _____
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$2.4$ (Gals.) X $3$ = $7.2$ Gals. I Case Volume        Specified Volumes        Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td><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> </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															

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
0944	60.1	6.4	725	> 200	2.4	cloudy, brown
0949	62.2	6.5	735	7200	4.8	"
0957	62.2	6.7	751	7200	7.2	"

Did well dewater?    Yes     No    Gallons actually evacuated: 7.2

Sampling Time: 1000    Sampling Date: 12/20/01

Sample I.D.: MW-11    Laboratory:  Kirt    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:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV