



Shell Oil Products US

May 12, 2003

20220

Amir K. Gholami, REHS  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Alameda County  
MAY 14 2003  
Environmental Health

**Subject:** Shell-branded Service Station  
285 Hegenberger Road  
Oakland, California

Dear Mr. Gholami:

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

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

Sincerely,

Shell Oil Products US

*Karen Petryna*

Karen Petryna  
Sr. Environmental Engineer

May 12, 2003

Amir K. Gholami, REHS  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Re: **First Quarter 2003 Monitoring Report**  
Shell-branded Service Station  
285 Hegenberger Road  
Oakland, California  
Incident #98995749  
Cambria Project #245-0734-002



Dear Mr. Gholami:

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

## FIRST QUARTER 2003 ACTIVITIES


**Groundwater Monitoring:** Blaine Tech Services, Inc. (Blaine) of San Jose, California collected dissolved oxygen (DO) measurements, gauged water levels, sampled selected wells, calculated groundwater elevations and compiled the gasoline constituents analytical data. Cambria prepared a vicinity map (Figure 1), compiled the non-gasoline constituents analytical data (Table 1) and prepared a groundwater elevation contour map (Figure 2). Blaine's report, presenting the laboratory report and supporting field documents, is included as Attachment A.

**Bio-Attenuation Parameter Monitoring:** Bio-attenuation parameters have been measured in groundwater samples to determine the status of, and trends in, biological degradation of the site hydrocarbons in groundwater. In typical reducing environments, in the absence of other influences such as air-sparging, an inverse relationship between benzene, toluene, ethylbenzene and xylenes (BTEX) concentrations and oxygen, nitrate, and sulfate concentrations, and a direct relationship between BTEX and ferrous iron concentrations are expected. The observed relationships between measured BTEX concentrations and the bioparameters are indicated in

**Cambria  
Environmental  
Technology, Inc.**

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Suite A  
Emeryville, CA 94608  
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Table 1. In general, the variations in biological parameter measurements suggest that biological degradation of BTEX is occurring in groundwater at the site and monitoring of bio-attenuation parameters will be discontinued.



***Air-Sparge and Soil Vapor Extraction (AS/SVE) System Operation:*** An AS/SVE system operated at the site using AS/SVE wells AS-1/VEW-5, AS-2/VEW-6 and AS-3/VEW-7 from March 25, 2002 to February 14, 2003. In accordance with Bay Area Air Quality Management District Permit to Operate #3356, vapor monitoring using an organic vapor analyzer (OVA) was conducted monthly. In addition to OVA monitoring, influent, midfluent and effluent vapor samples were collected and analyzed for total petroleum hydrocarbons as gasoline, BTEX and methyl tertiary butyl ether using EPA Method 8260B. Analytical results and vapor monitoring data are summarized in Table 2.

Due to the low to non-detect concentrations of chemicals of concern in groundwater in the AS/SVE wells and consistently high groundwater elevations in the vapor extraction wells, the system has been shut down. Cambria will continue to monitor the site to determine whether AS/SVE operation should be reinstated.

#### **ANTICIPATED SECOND QUARTER 2003 ACTIVITIES**

***Groundwater Monitoring:*** The next sampling event is scheduled for the second quarter of 2003. At that time, Blaine will gauge water levels, sample selected site wells and tabulate the data. Cambria will prepare a monitoring report.

**CLOSING**

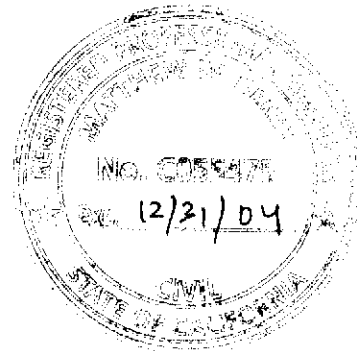
We appreciate the opportunity to work with you on this project. Please call Melody Munz at (510) 420-3324 if you have any questions or comments.

Sincerely,  
**Cambria Environmental Technology, Inc**



*M. Munz*  
Melody Munz  
Project Engineer

*Matthew W. Derby*  
Matthew W. Derby, P.E.  
Senior Project Manager



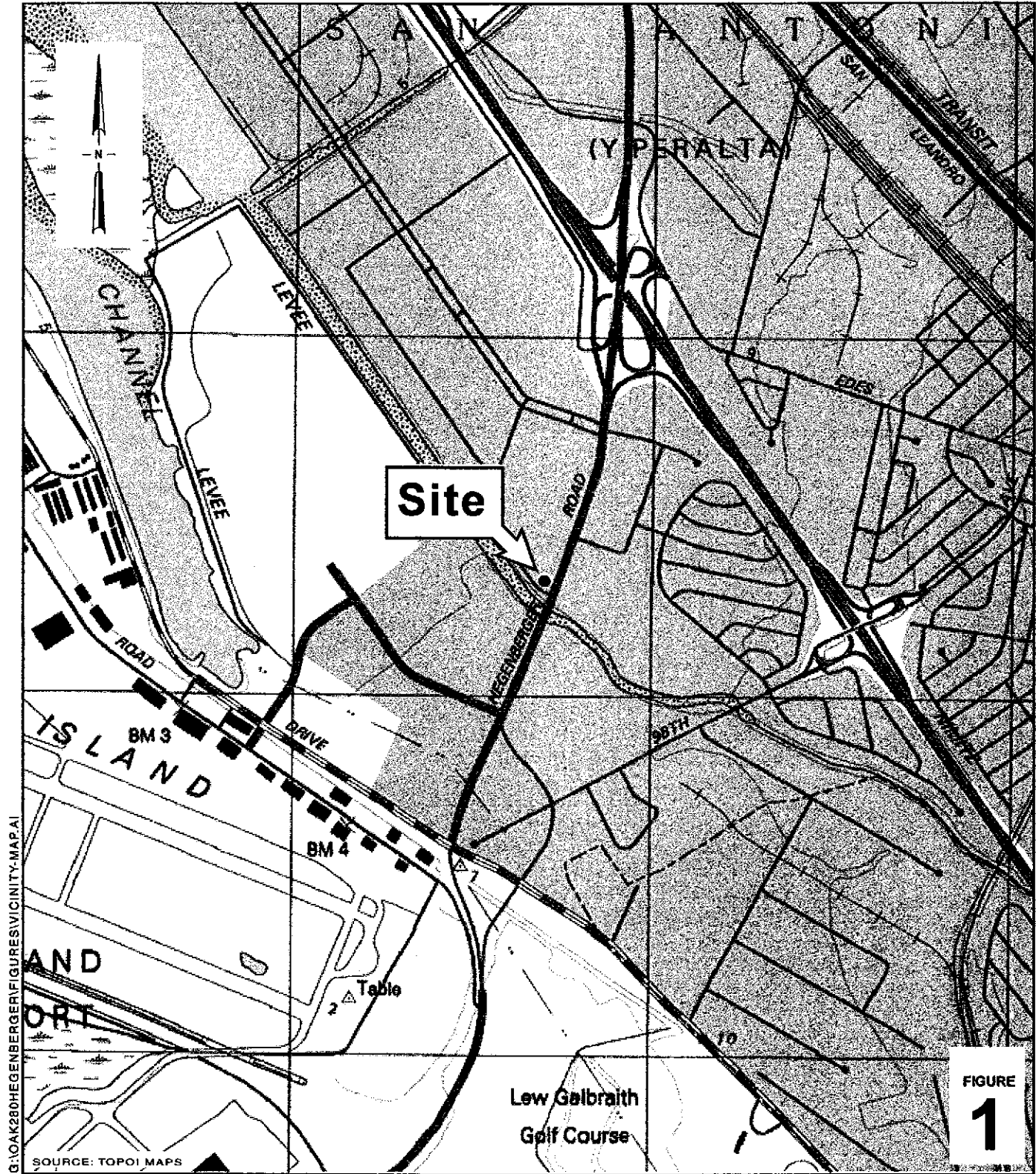
Figures: 1 - Vicinity Map  
2 - Groundwater Elevation Contour Map

Tables: 1 - Groundwater Analytical Data – Other Constituents  
2 - Analytical Results and Monitoring Data for Vapor Extraction System

Attachments: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, Shell Oil Products US, P.O. Box 7869, Burbank, CA 91510-7869  
J.T., Elizabeth G., W.T., and Jeanette Watters, Tr., c/o Property Tax Dept, PO Box 2099,  
Houston, TX 77252-1413  
Doug Herman, Port of Oakland, Division of Environmental Health and Safety, 530 Water  
Street, Oakland, CA 94607

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### Shell-branded Service Station

285 Hegenberger Road

Oakland, California

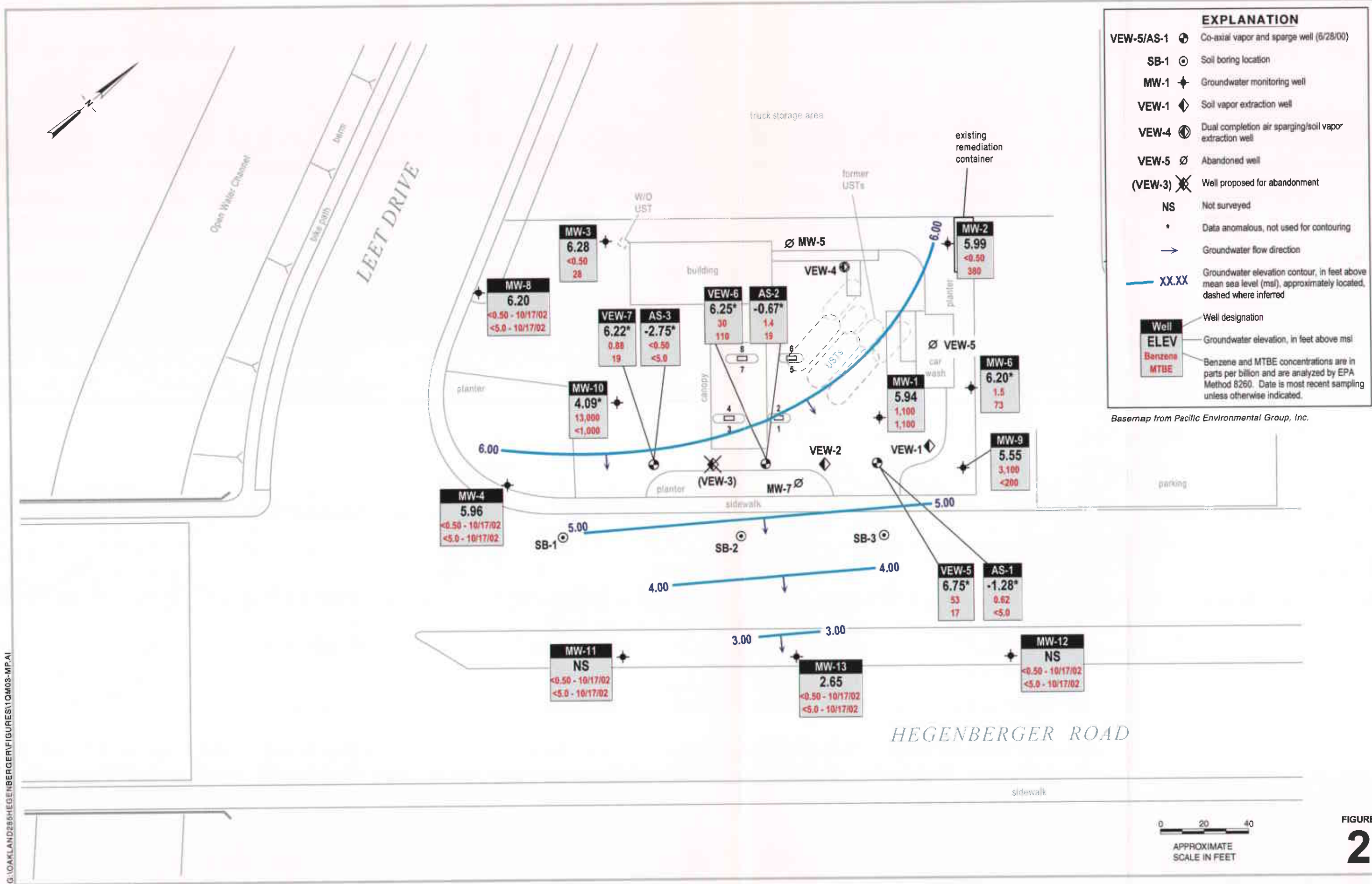
Incident #98995749



C A M B R I A

### Vicinity Map

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CAMBRIA

Shell-branded Service Station  
285 Hegenberger Road  
Oakland, California  
Incident #98995749



FIGURE 2

**Table 1. Groundwater Analytical Data - Other Constituents - Shell-branded Service Station, Incident #98995749, 285 Hegenberger Road, Oakland, California**

Well ID	Date	Motor Oil	Nitrate as Nitrate	Sulfate	Ferrous Iron	DO	ORP
		(Concentrations in ppm)					
MW-1	06/10/98	----	<1.0	3.3	14	0.5/0.5	-163/-178
	06/10/98 <sup>dup</sup>	----	<1.0	5.1	14	0.5/0.5	-163/-178
	12/30/98	<0.250	<1.0	6.8	9.2	1.6/1.4	-119/-107
	06/25/99	----	0.0800	1.39	11.40	1.2/2.1	-150/-148
	12/28/99	0.507	<5.00	<5.00	3.80	1.4/1.8	-156/-152
	05/31/00	<0.500	<1.00	11.9	1.30	0.98/2.27	2/-130
	10/17/00	<0.5	<0.200	2.68	7.98	4.0/3.1	-122/-114
	05/01/01	0.297	<0.2	<1	0.541	1.6/1.3	-125/-130
	11/07/01	<5	<0.2	<1	3.4	2.1/1.4	-42/-56
	05/01/02	<0.1	<0.2	<1	4.7	3.4/2.3	-87/-108
	07/16/02	<5	<0.50	2.0	<0.10	0.9/0.8	-120/-134
	10/17/02	<5	0.12	1.2	0.10	0.8/1.2	-117/-170
	01/21/03	<5	<0.10	18	4.1	0.3/0.7	-92/-107
MW-2	06/10/98	----	<1.0	47	5.1	0.7/0.6	-155/-161
	12/30/98	<0.250	<1.0	84	7.6	1.3/1.2	-96/-107
	06/25/99	----	<0.0500	126	7.97	2.3/2.5	-101/-106
	12/28/99	<0.500	<5.00	98.8	0.380	2.1/2.4	-112/-120
	05/31/00	<0.500	6.89	129	0.130	1.8/2.7	-15/-73
	10/17/00	---	---	---	---	---	---
	11/05/01	<0.1	<0.2	3	0.43	0.6/1.1	-81/-111
	05/01/02	<0.1	<0.2	380	0.19	6.2/0.9	-62/-50
	07/16/02	<5	0.60	62	<0.10	0.9/1.3	-79/-67
	10/17/02	<5	0.11	14	<0.10	0.6/2.2	-95/-48
	01/21/03	<5	0.13	99	<0.10	0.5/1.0	40/3
MW-3	06/10/98	----	<1.0	15	3.5	0.8/0.9	-101/-149
	12/30/98	<0.250	<1.0	21	2.1	1.3/1.4	-84/-76
	06/25/99	----	<0.0500	4.74	8.73	1.4/1.9	-138/-148
	12/28/99	<0.500	<5.00	5.10	0.260	1.3/1.5	-86/-74
	05/31/00	<0.500	<1.00	19.3	22.6	1.2/2.2	-68/-103
	10/17/00	<0.5	<1.00	21.2	5.78	2.0/2.1	152/138
	05/01/01	<0.25	---	8.72	0.328	1.9/2.7	-63/-95
	05/29/01	---	0.45	---	---	3.0/1.9	78/-8
	11/05/01	<0.1	<0.2	6.6	0.19	0.5/1.9	-119/113

**Table 1. Groundwater Analytical Data - Other Constituents - Shell-branded Service Station, Incident #98995749, 285 Hegenberger Road, Oakland, California**

Well ID	Date	Motor Oil	Nitrate as Nitrate	Sulfate	Ferrous Iron	DO	ORP
		(Concentrations in ppm)					
MW-3 (cont.)	05/01/02	0.39	0.83	20	<0.1	4.1/0.7	-82/-44
	07/16/02	<5	<0.50	2.5	<0.10	0.3/1.7	-95/-112
	10/17/02	<5	0.11	4.9	<0.10	0.8/2.4	-30/-47
	<b>01/21/03</b>	<b>&lt;5</b>	<b>0.21</b>	<b>15</b>	<b>&lt;0.10</b>	<b>1.2/1.0</b>	<b>164/3.0</b>
MW-4	12/30/98	<0.250	<1.0	9.6	1.6	1.7/1.6	-118/-111
	12/28/99	<0.500	<5.00	<5.00	<0.0100	1.4/1.5	-121/-117
	05/31/00	<0.500	---	---	---	---	---
	10/17/00	0.513	1.05	16.0	0.338	3.8/4.0	167/131
	11/05/01	<0.1	0.2	12	0.46	1.3/1.5	-126/112
	05/01/02	<0.1	<0.2	7.4	0.43	2.6/1.1	146/-90
	10/17/02	<5	<0.10	13	<0.10	1.4/2.4	533/0
MW-6	06/10/98	---	<1.0	7.4	1.8	0.4/0.4	-159/-155
	12/30/98	<0.250	<1.0	120	0.46	2.1/1.6	-98/-107
	06/25/99	---	0.101	22.1	12.80	1.4/3.6	-143/-136
	12/28/99	0.568	<5.00	147	0.320	1.8/2.0	-108/-96
	05/31/00	<0.500	<1.00	19.2	0.704	0.92/2.30	-31/-91
	10/17/00	<0.5	<1.00	<5.00	3.31	2.5/2.1	-107/-126
	05/01/01	0.416	---	4.88	<0.1	2.2/1.6	-107/-112
	05/29/01	---	<0.1	---	---	2.0/1.3	33/-65
	11/07/01	<5	<0.2	44	2.4	2.4/1.8	60/51
	05/01/02	<0.1	<0.2	10	<0.1	2.5/2.0	-111/-130
	07/16/02	<5	<0.50	1.7	<0.10	0.6/0.6	-108/-105
	10/17/02	<5	0.11	17	<0.10	1.2/1.1	-92/-119
	<b>01/21/03</b>	<b>&lt;5</b>	<b>0.11</b>	<b>56</b>	<b>0.73</b>	<b>0.8/0.6</b>	<b>15/-27</b>
MW-8	12/30/98	<0.250	12	54	0.031	0.8/0.9	-128/-121
	12/28/99	<0.500	<5.00	<5.00	<0.0100	1.0/0.9	-136/-121
	05/31/00	---	---	---	---	---	---
	10/17/00	<0.5	<1.00	23.2	1.12	4.0/4.1	114/119
	11/05/01	<0.1	0.59	22	0.13	0.6/1.3	-66/-75
	05/01/02	<0.1	2.1	18	<0.1	0.6/3.6	30/87
	10/17/02	<5	0.71	17	1.7	3.3/2.2	-99/-42



**Table 1. Groundwater Analytical Data - Other Constituents - Shell-branded Service Station, Incident #98995749, 285 Hegenberger Road, Oakland, California**

Well ID	Date	Motor Oil	Nitrate as Nitrate	Sulfate	Ferrous Iron	DO	ORP
		(Concentrations in ppm)					
MW-9	06/10/98	----	<1.0	6.6	21	0.3/0.4	-169/-188
	12/30/98	<0.250	<1.0	6.4	9.3	1.1/1.2	-107/-111
	06/25/99	----	0.0900	1.25	19.80	1.2/2.4	-164/-153
	12/28/99	<0.500	<5.00	<5.00	0.660	1.0/1.1	-111/-115
	05/31/00	<0.500	<1.00	13.9	1.41	2.8/a	-21/162
	10/17/00	<0.5	<1.00	<5.00	13.3	3.0/3.5	-126/-132
	05/01/01	<0.250	---	<1	2.66	1.6/1.0	-144/-154
	05/29/01	---	<0.1	---	---	1.9/1.5	45/-96
	11/07/01	<5	<0.2	<1	2.7	1.4/1.1	-39/-54
	05/01/02	<0.1	<0.2	<1	12	2.9/1.1	-111/-181
	07/16/02	<5	<0.50	1.4	0.12	0.7/0.4	-54/-121
	10/17/02	<5	<0.40	<4.0	1.6	1.0/1.2	-100/-140
	<b>01/21/03</b>	<b>&lt;5</b>	<b>&lt;0.10</b>	<b>3.1</b>	<b>&lt;0.10</b>	<b>0.4/0.8</b>	<b>-102/-113</b>
MW-10	06/10/98	----	<1.0	6.3	17	0.7/0.5	-149/-162
	12/30/98	<0.250	<1.0	8.0	17	1.0/0.7	-72/-89
	06/25/99	----	0.134	<1.00	15.80	0.9/2.5	-139/-119
	12/28/99	0.604	0.998	<5.00	2.20	1.2/1.4	-87/-92
	05/31/00	<0.500	<1.00	12.4	3.22	2.8/3.9	-28/-93
	10/17/00	<0.5	<1.00	<5.00	8.30	2.3/3.0	-160/-113
	05/01/01	0.884	---	<1	2.34	2.0/1.1	-129/-137
	05/29/01	---	<0.1	---	---	3.70/1.8	-15/-50
	11/07/01	<5	<0.2	<1	2.4	1.8/1.0	-139/-147
	05/01/02	<0.1	<0.2	<1	1.9	4.0/0.5	-121/-113
	07/16/02	<5	<0.50	0.82	<0.10	0.5/1.5	-120/-118
	10/17/02	<5	0.10	<1.0	0.21	0.8/1.2	-56/-40
	<b>01/21/03</b>	<b>&lt;5</b>	<b>&lt;0.10</b>	<b>&lt;1.0</b>	<b>&lt;0.10</b>	<b>0.3/0.6</b>	<b>-88/-113</b>
MW-11	12/30/98	<0.250	<1.0	1,000	0.21	0.7/0.6	-86/-74
	12/28/99	<0.500	<5.00	<5.00	<0.0100	0.8/1.0	-94/-67
	05/31/00	---	---	---	---	---	---
	10/17/00	<0.50	<1.00	1,140	1.74	4.1/4.0	81/64
	05/08/02	<5	3.8	1,000	1.2	1.0/1.1	-33/-21
	10/17/02	<5	<10.0	860	0.60	1.3/1.0	67/-57

**Table 1. Groundwater Analytical Data - Other Constituents - Shell-branded Service Station, Incident #98995749, 285 Hegenberger Road, Oakland, California**

Well ID	Date	Motor Oil	Nitrate as Nitrate	Sulfate	Ferrous Iron	DO	ORP
		(Concentrations in ppm)					
MW-12	12/30/98	<0.250	6.1	1,500	0.06	1.3/0.9	-119/-106
	12/28/99	<0.500	<5.00	<5.00	<0.0100	1.0/1.2	-120/-110
	05/31/00	---	---	---	---	---	---
	10/17/00	<0.50	<1.00	182	0.0107	5.1/3.0	15/24
	05/08/02	<5	12	170	<0.10	1.2/0.9	17/26
	10/17/02	<5	0.91	92	<0.10	1.8/1.5	-20/10
MW-13	12/30/98	<0.250	7.2	230	0.031	1.1/0.8	-111/-104
	12/28/99	<0.500	<5.00	<5.00	<0.0100	0.8/1.0	-117/-115
	05/31/00	---	---	---	---	---	---
	10/17/00	<0.5	<1.00	1,800	0.169	2.5/2.8	-10/19
	05/01/02	<0.1	10	280	<0.1	3.5/3.5	96/102
	10/17/02	<5	1.8	220	<0.10	1.4/0.9	-94/-42
VEW-5	10/17/00	<1	<1.00	15.0	2.64	3.0/3.1	-112/-126
	05/01/01	1.45	---	---	2.4	0.4/0.6	-95/-133
	11/05/01	<100	<0.2	<1	5.6	0.6/a	-108/a
	05/01/02	<0.1	0.2	21	19	4.7/2.9	492/-0
	07/16/02	<5	<0.50	3.0	0.61	0.4/0.3	-96/-185
	10/17/02	<5	8.4	82	<0.10	1.1/1.0	-107/-126
	<b>01/21/03</b>	<b>&lt;5</b>	<b>0.11</b>	<b>150</b>	<b>&lt;0.10</b>	<b>1.6/0.5</b>	<b>166/-6</b>
VEW-6	10/17/00	<1	<1.00	17.7	4.16	2.0/2.1	-92/-115
	05/01/01	0.805	---	---	1.67	0.8/1.2	-108/-129
	05/29/01	---	0.49	---	---	3.0/1.7	-13//-53
	11/05/01	<100	<0.2	14	5.6	0.8/1.3	-145/-127
	05/01/02	<0.1	<0.2	13	3.3	0.2/0.4	-177/-182
	07/16/02	<5	<0.50	41	<0.10	0.3/0.2	-125/-108
	10/17/02	<5	9.0	130	<0.10	0.9/1.3	-170/-266
	<b>01/21/03</b>	<b>&lt;5</b>	<b>0.18</b>	<b>130</b>	<b>&lt;0.10</b>	<b>4.6/5.6</b>	<b>56/-100</b>
VEW-7	10/17/00	<1	<0.200	1.96	508	3.5/4.1	-87/-82
	05/01/01	0.348	---	---	1.97	0.8/0.8	-102/-120
	05/29/01	---	0.43	---	---	2.5/1.4	-21/-75
	11/05/01	<100	<0.2	4.1	4.8	3.52/a	-113/-147

**Table 1. Groundwater Analytical Data - Other Constituents - Shell-branded Service Station, Incident #98995749, 285 Hegenberger Road, Oakland, California**

Well ID	Date	Motor Oil	Nitrate as Nitrate	Sulfate	Ferrous Iron	DO	ORP
		(Concentrations in ppm)					
VEW-7 (cont.)	05/01/02	<0.1	<0.2	41	0.62	2.9/3.3	110/0
	07/16/02	<5	25	240	<0.10	3.6/2.5	-102/-36
	10/17/02	<5	9.3	480	<0.10	3.0/1.9	-226/-184
	01/21/03	<5	5.4	360	<0.10	0.3/0.8	-127/-119
AS-1	10/17/00	<1	<1.00	965	0.708	2.0/2.5	-109/-79
	11/05/01	<100	<0.2	830	0.21	0.4/0.5	-122/150
	07/16/02	<5	<0.50	1,800	<0.10	4.6/2.8	-51/-95
	01/21/03	<5	0.88	1,800	<0.10	2.2/2.5	36/40
AS-2	10/17/00	<0.5	<1.00	3,810	2.46	3.1/3.0	-65/-69
	11/05/01	<100	<10	4,100	8.8	0.8/0.6	-97/-132
	05/01/02	<0.1	<2	5,500	0.34	1.0/0.8	0/-163
	07/16/02	<5	<2.5	5,300	<0.10	0.7/0.9	-71/-93
	01/21/03	<5	<2.0	7,400	<0.10	1.4/1.6	-529/43
AS-3	10/17/00	1.26	<1.00	493	0.0402	3.1/3.0	26/29
	11/05/01	<100	<0.2	450	0.13	1.1/3.2	-71/-62
	01/21/03	<5	1.5	7,000	<0.10	2.2/1.1	-506/62

Ideal Aerobic Degradation Relationship:  
Observed Relationship:

Inverse	Inverse	Direct	Inverse	Direct
Moderately Inverse	Inverse	Inconclusive	Direct	Inverse

**Abbreviations:**

ppm = Parts per million  
DO = Dissolved oxygen, measured in the field, reported as pre-purge/post-purge  
ORP = Oxidation reduction potential, measured in the field, reported as pre-purge/post-purge

**Notes:**

--- = Not analyzed  
<n = Below detection limit of n ppm  
Motor oil by DHS LUFT  
Ferrous iron analyzed by EPA Method 200.7  
Nitrate as nitrate and sulfate analyzed by EPA Method 300.0  
a = Post-purge reading not taken

# CAMBRIA

**Table 2: Analytical Results and Monitoring Data for Vapor Extraction System - Shell-branded Service Station, Incident #98995749, 285 Hegenberger Road, Oakland, CA 94621**

Sample Date (mm/dd/yy)	INFLUENT				MIDFLUENT				EFFLUENT			
	TPHg Conc. (ppmv)	Benzene Conc. (ppmv)	MTBE Conc. (ppmv)	OVA Conc. (ppmv)	TPHg Conc. (ppmv)	Benzene Conc. (ppmv)	MTBE Conc. (ppmv)	OVA Conc. (ppmv)	TPHg Conc. (ppmv)	Benzene Conc. (ppmv)	MTBE Conc. (ppmv)	OVA Conc. (ppmv)
03/25/02	<5.0	<0.050	<0.10	1.0	<5.0	<0.050	<0.10	0	<5.0	<0.050	<0.10	0
03/26/02				1.0				0				0
03/27/02				0.0				0				0
03/28/02	<5.0	<0.050	<0.10	1.0	<5.0	<0.050	<0.10	0	<5.0	<0.050	<0.10	0
03/29/02				0.0				0				0
04/30/02	300	3.40	<0.20		14	0.12	<0.10		5	0.05	<1.0	--
05/09/02				438				29				4
05/14/02	52	1.70	0.32	519	<5.0	<0.050	<0.10	74	<5.0	<0.050	<0.10	18
06/03/02				1,070				89				0
06/25/02				1,152				112				0
07/05/02	91	1.60	0.12	1,724	<5.0	<0.050	<0.10	129	<5.0	<0.050	<0.10	0
07/16/02				1,611				150				0.0
07/30/02	120	1.50	0.16	1,470	<5.0	<0.050	<0.10	110	20	<0.050	1.40	0.0
08/13/02				1,941				142				0.0
08/13/02	System shut down for Carbon Change Out											
09/23/02	930	5.6	<4.0	340	---	---	---	0.2	---	---	---	0.0
10/15/02	90	0.31	<0.10	66	---	---	---	0.0	---	---	---	0.0
11/11/02	<5.0	<0.050	<0.10	0.0	---	---	---	0.0	---	---	---	0.0
12/9/2002 <sup>(1)</sup>	34	<0.050	<0.10	6.0	---	---	---	1.3	<5.0	<0.050	<0.10	1.1
01/31/03	28	<0.050	<0.10	1.0	---	---	---	0.0	<5.0	<0.050	<0.10	0.0
02/14/03	ns	ns	ns	0.3	ns	ns	ns	0.0	ns	ns	ns	0.0

**Table 2: Analytical Results and Monitoring Data for Vapor Extraction System - Shell-branded Service Station,  
Incident #98995749, 285 Hegenberger Road, Oakland, CA 94621**

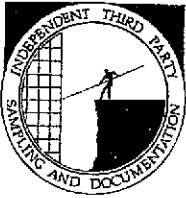
Sample Date (mm/dd/yy)	<u>INFLUENT</u>				<u>MIDFLUENT</u>				<u>EFFLUENT</u>			
	TPHg Conc. (ppmv)	Benzene Conc. (ppmv)	MTBE Conc. (ppmv)	OVA Conc. (ppmv)	TPHg Conc. (ppmv)	Benzene Conc. (ppmv)	MTBE Conc. (ppmv)	OVA Conc. (ppmv)	TPHg Conc. (ppmv)	Benzene Conc. (ppmv)	MTBE Conc. (ppmv)	OVA Conc. (ppmv)

**Abbreviations & Notes:**

TPHg = Total petroleum hydrocarbons as gasoline  
 BTEX = benzene, toluene, ethylbenzene and xylenes  
 MTBE = Methyl tert-butyl ether  
 ppmv = parts per million by volume  
 OVA = organic vapor analyzer  
 BTEX and MTBE analyzed by EPA Method 8060B  
 "--" no reading taken  
 (1) background concentration was 1.0 ppm  
 ns = not sampled

**ATTACHMENT A**  
**Blaine Groundwater Monitoring Report**  
**and Field Notes**

BLAINE  
TECH SERVICES, INC.



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(408) 573-7771 FAX  
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February 25, 2003

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

First Quarter 2003 Groundwater Monitoring at  
Shell-branded Service Station  
285 Hegenberger Road  
Oakland, CA

Monitoring performed on January 21, 2003

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Groundwater Monitoring Report **030121-DA-1**

This report covers the routine monitoring of groundwater wells at this Shell-branded facility. In accordance with standard procedures that conform to Regional Water Quality Control Board requirements, routine field data collection includes depth to water, total well depth, thickness of any separate immiscible layer, water column volume, calculated purge volume (if applicable), elapsed evacuation time (if applicable), total volume of water removed (if applicable), and standard water parameter instrument readings. Sample material is collected, contained, stored, and transported to the laboratory in conformance with EPA standards. Purgewater (if applicable) is, likewise, collected and transported to the Martinez Refining Company.

Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL CONCENTRATIONS**. The full analytical report for the most recent samples and the field data sheets are attached to this report.

At a minimum, Blaine Tech Services, Inc. field personnel are certified on completion of a forty-hour Hazardous Materials and Emergency Response training course per 29 CFR 1910.120. Field personnel are also enrolled in annual eight-hour refresher courses.

Blaine Tech Services, Inc. conducts sampling and documentation assignments of this type as an independent third party. Our activities at this site consisted of objective data and sample collection only. No interpretation of analytical results, defining of hydrological conditions or formulation of recommendations was performed.

Please call if you have any questions.

Yours truly,

Leon Gearhart  
Project Coordinator

LG/jt

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

cc: Anni Kreml  
Cambria Environmental Technology, Inc.  
5900 Hollis Street, Suite A  
Oakland, CA 94608



**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**285 Hegenberger Road**  
**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.)	GW Elevation (MSL)	DO Reading (ppm)
MW-1	02/16/1989	99,000	NA	20,000	23,000	5,700	2,300	NA	NA	6.64	3.83	2.81	NA
MW-1	05/23/1989	48,000	11,000	4,200	5,200	1,200	7,700	NA	NA	6.64	3.59	3.05	NA
MW-1	08/03/1989	63,000	11,000	5,500	5,500	3,200	9,500	NA	NA	6.64	4.04	2.60	NA
MW-1	12/15/1989	30,000	11,000	ND	ND	ND	ND	NA	NA	6.64	4.22	2.42	NA
MW-1	02/07/1990	93,000	10,000	13,000	9,600	2,400	14,000	NA	NA	6.64	4.60	2.04	NA
MW-1	04/18/1990	55,000	8,700	14,000	8,400	3,200	13,000	NA	NA	6.64	4.02	2.62	NA
MW-1	07/23/1990	73,000	3,600	16,000	7,400	2,800	15,000	NA	NA	6.64	4.17	2.47	NA
MW-1	09/27/1990	45,000	1,700	8,000	4,300	2,000	11,000	NA	NA	6.64	4.60	2.04	NA
MW-1	01/03/1991	43,000	3,100	10,000	3,400	1,900	11,000	NA	NA	6.64	4.88	1.76	NA
MW-1	04/10/1991	67,000	1,800	20,000	9,600	3,500	16,000	NA	NA	6.64	3.55	3.09	NA
MW-1	07/12/1991	NA	NA	NA	NA	NA	NA	NA	NA	6.64	3.97	2.67	NA
MW-1	10/08/1991	55,000	7,400	18,000	3,500	2,300	8,600	NA	NA	6.64	4.26	2.38	NA
MW-1	02/06/1992	48,000	15,000 a	12,000	2,800	1,900	7,400	NA	NA	6.64	4.94	1.70	NA
MW-1	05/04/1992	71,000	10,000 a	16,000	6,000	3,100	14,000	NA	NA	6.64	3.58	3.06	NA
MW-1	07/28/1992	68,000	18,000 a	21,000	5,500	3,400	15,000	NA	NA	6.64	3.91	2.73	NA
MW-1 (D)	07/28/1992	70,000	19,000 a	17,000	5,000	2,700	13,000	NA	NA	6.64	3.91	2.73	NA
MW-1	10/27/1992	53,000	1,300	18,000	3,700	3,400	11,000	NA	NA	6.64	4.79	1.85	NA
MW-1 (D)	10/27/1992	48,000	2,500 a	17,000	3,600	3,100	9,900	NA	NA	6.64	4.79	1.85	NA
MW-1	01/14/1993	84,000	2,200 a	17,000	5,400	3,000	13,000	NA	NA	6.64	3.39	3.25	NA
MW-1	04/23/1993	100,000	2,300 a	18,000	7,800	4,700	20,000	NA	NA	6.64	2.67	3.97	NA
MW-1	07/20/1993	41a	3,100 a	12,000	870	1,500	4,400	NA	NA	9.50	3.48	6.02	NA
MW-1	10/18/1993	33,000	8,100 a	14,000	1,200	2,000	4,900	NA	NA	9.50	4.20	5.30	NA
MW-1 (D)	10/18/1993	44,000	3,700 a	14,000	1,200	2,000	4,900	NA	NA	9.50	4.20	5.30	NA
MW-1	01/06/1994	71,000	9,000 a	9,000	870	1,600	5,100	NA	NA	9.50	4.13	5.37	NA
MW-1	04/12/1994	42,000	5,900	6,600	170	2,300	4,700	NA	NA	9.50	2.42	7.08	NA
MW-1 (D)	04/12/1994	40,000	4,700	6,300	180	2,000	4,400	NA	NA	9.50	2.42	7.08	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**285 Hegenberger Road**  
**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.)	GW Elevation (MSL)	DO Reading (ppm)
MW-1	07/25/1994	13,000	7,000 a	4,400	110	460	1,400	NA	NA	9.50	3.37	6.13	NA
MW-1	10/25/1994	19,000	3,900	5,500	210	880	2,000	NA	NA	9.50	4.07	5.43	NA
MW-1	01/09/1995	37,000	8,600 a	6,700	800	2,800	8,900	NA	NA	9.50	2.65	6.85	NA
MW-1	04/11/1995	26,000	5,500	4,700	270	1,800	3,400	NA	NA	9.50	2.38	7.12	NA
MW-1	07/18/1995	57,000	7,000	7,500	880	4,100	11,000	NA	NA	9.50	3.49	6.01	NA
MW-1 (D)	07/19/1995	46,000	6,600	6,000	670	3,200	7,500	NA	NA	9.50	3.49	6.01	NA
MW-1	10/18/1995b	37,000	3,200	5,400	450	2,600	7,400	10,000	NA	9.50	NA	NA	NA
MW-1	01/09/1996	32,000	NA	3,000	240	1,900	3,500	6,100	NA	9.50	2.95	6.55	NA
MW-1	04/02/1996	30,000	NA	3,100	260	2.0	3,900	8.0	NA	9.50	2.00	7.50	NA
MW-1	10/03/1996	18,000	2,800	3,000	120	1,200	1,700	7,500	NA	9.50	3.21	6.29	2.2
MW-1	04/03/1997	29,000	3,000	2,300	170	2,300	2,900	4,300	NA	9.50	2.84	6.66	2.2
MW-1	10/08/1997	22,000	3,600	920	71	2,400	2,200	820	NA	9.50	2.58	6.92	1.5
MW-1	06/10/1998	13,000	2,900	860	<100	1,300	500	29,000	32,000	9.50	2.67	6.83	0.5/0.5
MW-1 (D)	06/10/1998	9,400	2,100	870	<50	1,300	520	28,000	NA	9.50	2.67	6.83	0.5/0.5
MW-1	12/30/1998	6,930	1,540	714	52.7	243	<25.0	9,000	NA	9.50	4.68	4.82	1.6/1.4
MW-1 *	06/25/1999	12,600	NA	1,110	44.7	1,340	710	6,080	NA	9.50	2.86	6.64	1.2/2.1
MW-1	12/28/1999	3,260	1,170	527	14.0	50.7	40.3	5,430	7,060b	9.50	3.23	6.27	1.4/1.8
MW-1	05/31/2000	6,820	2,050	1,620	<50.0	116	<50.0	6,070	4,710	9.50	2.39	7.11	0.98/2.27
MW-1	10/17/2000	2,530	995 a	388	<10.0	16.4	22.1	917	NA	9.50	2.05	7.45	4.0/3.1
MW-1	05/01/2001	12,300	1,510	1,480	19.5	205	111	4,160	NA	9.50	3.55	5.95	1.6/1.3
MW-1	11/05/2001	NA	NA	NA	NA	NA	NA	NA	NA	9.85 e	4.43	5.42	0.4
MW-1	11/07/2001	3,000	<1,000	290	6.0	11	15	NA	870	9.85	4.00	5.85	2.1/1.4
MW-1	05/01/2002	11,000	<2,000	2,100	29	180	68	NA	1,500	9.85	3.14	6.71	3.4/2.3
MW-1	07/16/2002	7,400	<1,500	1,200	22	37	24	NA	1,900	9.85	3.69	6.16	0.9/0.8
MW-1	10/17/2002	4,600	<2,000	810	16	68	31	NA	1,600	9.44	4.76	4.68	0.8/1.2
MW-1	01/21/2003	11,000	<7,000	1,100	28	210	53	NA	1,100	9.44	3.50	5.94	0.3/0.7

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**285 Hegenberger Road**  
**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.)	GW Elevation (MSL)	DO Reading (ppm)
MW-2	02/16/1989	20,000	NA	200	900	2,700	9,600	NA	NA	7.68	5.33	2.35	NA
MW-2	05/23/1989	1,500	1,600	4.3	2.9	11	150	NA	NA	7.68	5.23	2.45	NA
MW-2	08/03/1989	15,000	7,400	75	120	850	2,200	NA	NA	7.68	6.03	1.65	NA
MW-2	12/15/1989	5,000	2,600	52	13	4.1	290	NA	NA	7.68	6.43	1.25	NA
MW-2	02/07/1990	13,000	4,800	32	34	230	640	NA	NA	7.68	5.82	1.86	NA
MW-2	04/18/1990	9,800	3,200	33	19	460	1,700	NA	NA	7.68	5.88	1.80	NA
MW-2	07/23/1990	9,600	2,700	41	27	540	940	NA	NA	7.68	6.05	1.63	NA
MW-2	10/01/1990	390	1,600	3.4	15	8.5	25	NA	NA	7.68	NA	NA	NA
MW-2	01/03/1991	1,800	830	56	4.4	4.8	92	NA	NA	7.68	6.82	0.86	NA
MW-2	04/10/1991	1,900	280	ND	28	140	490	NA	NA	7.68	4.80	2.88	NA
MW-2	07/12/1991	8,100	1,100	89	66	350	930	NA	NA	7.68	5.70	1.98	NA
MW-2	10/08/1991	1,400	2,600	5.1	1.5	36	270	NA	NA	7.68	6.40	1.28	NA
MW-2	02/06/1992	2,000	5,400 a	7.8	2.5	130	210	NA	NA	7.68	6.40	1.28	NA
MW-2	05/04/1992	21	1,000	ND	ND	300	960	NA	NA	7.68	4.68	3.00	NA
MW-2	07/28/1992	2,100	830 a	7.7	3.3	130	310	NA	NA	7.68	5.86	1.82	NA
MW-2	10/27/1992	1,100	530	16	3.1	4.5	25	NA	NA	7.68	6.96	0.72	NA
MW-2	01/14/1993	290	170 a	5.2	3.1	8.4	21	NA	NA	7.68	4.12	3.56	NA
MW-2	04/23/1993	2,400	1,200 a	ND	ND	210	610	NA	NA	7.68	3.84	3.84	NA
MW-2	07/20/1993	440	130	1.7	1.7	15	38	NA	NA	10.55	5.17	5.38	NA
MW-2	10/18/1993	2,100	1,600 a	ND	ND	90	110	NA	NA	10.55	6.20	4.35	NA
MW-2	01/06/1994	1.9a	130	ND	6.7	7.1	12	NA	NA	10.55	5.39	5.16	NA
MW-2	04/12/1994	120	130	ND	ND	3.4	4.3	NA	NA	10.55	4.72	5.83	NA
MW-2	07/25/1994	0.18a	280 a	5.3	ND	6.2	8.2	NA	NA	10.55	5.44	5.11	NA
MW-2	10/25/1994	170	400	ND	ND	ND	ND	NA	NA	10.55	6.73	3.82	NA
MW-2	01/09/1995	ND	ND	ND	ND	ND	ND	NA	NA	10.55	4.34	6.21	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**285 Hegenberger Road**  
**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.)	GW Elevation (MSL)	DO Reading (ppm)
MW-2	04/11/1995	ND	ND	ND	ND	ND	ND	NA	NA	10.55	3.72	6.83	NA
MW-2	07/18/1995	250	160	2.8	0.5	12	13	NA	NA	10.55	4.91	5.64	NA
MW-2	10/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	10.55	5.88	4.67	NA
MW-2	01/09/1996	790	130	5.1	1.5	2.4	4.6	1,400	NA	10.55	4.75	5.80	NA
MW-2	04/02/1996	260	NA	<2	<2	13	6.9	540	NA	10.55	3.25	7.30	NA
MW-2	10/03/1996	<2,000	620	<20	<20	<20	<20	13,000	NA	10.55	5.27	5.28	2.3
MW-2	04/03/1997	<1,000	190	<10	<10	<10	<10	2,800	NA	10.55	3.99	6.56	2.2
MW-2	10/08/1997	<5,000	1,100	<50	<50	<50	<50	d	NA	10.55	5.03	5.52	1.6
MW-2	06/10/1998	120	310	1.7	<1.0	<1.0	<1.0	3,800	NA	10.55	4.11	6.44	0.7/0.6
MW-2	12/30/1998	<5,000	1,050	<50.0	<50.0	<50.0	<50.0	12,100	15,300	10.55	4.76	5.79	1.3/1.2
MW-2 *	06/25/1999	<1,000	NA	<10.0	<10.0	<10.0	<10.0	7,570	NA	10.55	4.63	5.92	2.3/2.5
MW-2	12/28/1999	228	446	4.54	<0.500	<0.500	<0.500	4,260	NA	10.55	4.95	5.60	2.1/2.4
MW-2	05/31/2000	597	187	19.3	<0.500	0.860	<0.500	2,480	NA	10.55	4.06	6.49	1.8/2.7
MW-2	10/17/2000	Well inaccessible		NA	NA	NA	NA	NA	NA	10.55	NA	NA	NA
MW-2	05/01/2001	Well inaccessible		NA	NA	NA	NA	NA	NA	10.55	NA	NA	NA
MW-2	11/05/2001	<500	610	<5.0	<5.0	<5.0	<5.0	NA	1,800	10.55	6.12	4.43	0.6/1.1
MW-2	05/01/2002	440	<50	<2.5	<2.5	<2.5	<2.5	NA	1,300	10.55	3.85	6.70	6.2/0.9
MW-2	07/16/2002	<500	250	<5.0	<5.0	<5.0	<5.0	NA	2,100	10.55	4.56	5.99	0.9/1.3
MW-2	10/17/2002	280	240	<1.0	<1.0	<1.0	<1.0	NA	270	10.10	5.90	4.20	0.6/2.2
<b>MW-2</b>	<b>01/21/2003</b>	<b>160</b>	<b>72</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>NA</b>	<b>380</b>	<b>10.10</b>	<b>4.11</b>	<b>5.99</b>	<b>0.5/1.0</b>
MW-3	02/16/1989	60,000	NA	5,500	ND	3,200	5,200	NA	NA	7.81	5.17	2.64	NA
MW-3	05/23/1989	ND	1,500	ND	200	ND	ND	NA	NA	7.81	5.09	2.72	NA
MW-3	08/03/1989	2,000	1,200	120	ND	ND	86	NA	NA	7.81	5.34	2.47	NA
MW-3	12/15/1989	5,200	1,700	380	12	17	410	NA	NA	7.81	6.02	1.79	NA
MW-3	02/07/1990	260	230	17	47	5.4	2.5	NA	NA	7.81	4.95	2.86	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**285 Hegenberger Road**  
**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.)	GW Elevation (MSL)	DO Reading (ppm)
MW-3	04/18/1990	260	ND	ND	ND	ND	9.4	NA	NA	7.81	5.55	2.26	NA
MW-3	07/23/1990	510	210	46	ND	ND	9.3	NA	NA	7.81	5.81	2.00	NA
MW-3	09/27/1990	460	350	6.3	1.2	ND	15	NA	NA	7.81	6.86	0.95	NA
MW-3	01/03/1991	4,800	630	920	1.7	ND	190	NA	NA	7.81	6.84	0.97	NA
MW-3	04/10/1991	120	60	1.2	8.8	3.5	21	NA	NA	7.81	4.93	2.88	NA
MW-3	07/12/1991	430	ND	12	0.8	ND	7.7	NA	NA	7.81	5.56	2.25	NA
MW-3	10/08/1991	770	560	140	ND	ND	53	NA	NA	7.81	6.62	1.19	NA
MW-3	02/06/1992	500	340 a	74	0.7	5.2	5.3	NA	NA	7.81	6.28	1.53	NA
MW-3	05/04/1992	310	290 a	47	0.9	17	16	NA	NA	7.81	4.65	3.16	NA
MW-3	07/28/1992	780	100 a	130	ND	13	4.2	NA	NA	7.81	5.56	2.25	NA
MW-3	10/27/1992	740	69a	92	ND	7.8	9.6	NA	NA	7.81	6.65	1.16	NA
MW-3	01/14/1993	ND	ND	2.4	2.8	ND	ND	NA	NA	7.81	3.88	3.93	NA
MW-3	04/23/1993b	NA	NA	NA	NA	NA	NA	NA	NA	7.81	NA	NA	NA
MW-3	07/20/1993b	NA	NA	NA	NA	NA	NA	NA	NA	11.25 (TOB)	NA	NA	NA
MW-3	10/18/1993b	NA	NA	NA	NA	NA	NA	NA	NA	11.25 (TOB)	NA	NA	NA
MW-3	01/06/1994	130	64	1.7	ND	ND	0.93	NA	NA	11.25 (TOB)	5.54	NA	NA
MW-3	04/12/1994	ND	75	0.82	ND	ND	0.7	NA	NA	11.25 (TOB)	4.82	NA	NA
MW-3	07/25/1994	0.06a	ND	2.8	ND	ND	0.7	NA	NA	11.25 (TOB)	6.03 (TOB)	5.22	NA
MW-3	10/25/1994	70	100	ND	ND	ND	ND	NA	NA	11.25 (TOB)	6.48	NA	NA
MW-3	01/09/1995	ND	ND	ND	ND	ND	ND	NA	NA	11.25 (TOB)	4.86 (TOB)	6.39	NA
MW-3	04/11/1995	ND	ND	ND	ND	ND	ND	NA	NA	11.25 (TOB)	4.22 (TOB)	7.03	NA
MW-3	07/18/1995	ND	90	2.8	ND	ND	ND	NA	NA	11.25 (TOB)	5.44 (TOB)	5.81	NA
MW-3	10/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	11.25 (TOB)	5.72	NA	NA
MW-3	01/09/1996	90	90	1.7	ND	<0.5	<0.5	61	NA	11.25 (TOB)	4.96	NA	NA
MW-3	04/02/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	24	NA	11.25 (TOB)	3.43	NA	NA
MW-3	10/03/1996	<500	180	<5	<5	<5	<5	1,200	NA	11.25 (TOB)	5.39	NA	2.4

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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.)	GW Elevation (MSL)	DO Reading (ppm)
MW-3	04/03/1997	150	83	3.2	<0.50	<0.50	0.81	280	NA	11.25 (TOB)	4.20	NA	2.0
MW-3	10/08/1997	180	120	7.3	0.68	0.54	3.9	1,700	NA	11.25 (TOB)	5.51(TOB)	5.74	2.1
MW-3	06/10/1998	130	120	12	0.85	<0.50	2.1	600	NA	11.25 (TOB)	3.91(TOB)	7.34	0.8/0.9
MW-3	12/30/1998	<250	108	<2.50	<2.50	<2.50	<2.50	1,010	NA	11.25 (TOB)	5.76 (TOB)	5.49	1.3/1.4
MW-3 *	06/25/1999	269	NA	4.24	<2.50	<2.50	<2.50	1,180	NA	11.25 (TOB)	4.73	NA	1.4/1.9
MW-3	12/28/1999	333	122	41.4	6.48	6.57	21.3	2,680	NA	11.25 (TOB)	5.75 (TOB)	5.50	1.3/1.5
MW-3	05/31/2000	1,180	89.2	19.1	1.92	3.26	<1.00	2,130	NA	11.25 (TOB)	4.96 (TOB)	6.29	1.2/2.2
MW-3	10/17/2000	156	183 a	5.22	0.819	<0.500	1.53	2,250	NA	11.25 (TOB)	5.70 (TOB)	5.55	2.0/2.1
MW-3	05/01/2001	286	95.9	<2.50	<2.50	<2.50	<2.50	1,470	NA	11.25 (TOB)	4.88 (TOB)	6.37	1.9/2.7
MW-3	05/29/2001	NA	NA	NA	NA	NA	NA	NA	NA	11.25 (TOB)	5.25 (TOB)	6.00	3.0/1.9
MW-3	11/05/2001	<500	<50	<5.0	<5.0	<5.0	<5.0	NA	2,100	11.25 (TOB)	6.25 (TOB)	5.00	0.5/1.9
MW-3	05/01/2002	<100	80	<1.0	<1.0	<1.0	<1.0	NA	430	11.25 (TOB)	4.77 (TOB)	6.48	4.1/0.7
MW-3	07/16/2002	410	340	12	2.0	<2.0	3.5	NA	530	11.25 (TOB)	5.44 (TOB)	5.81	0.3/1.7
MW-3	10/17/2002	220	82	2.5	<2.0	<2.0	2.3	NA	25	10.58	6.03	4.55	0.8/2.4
<b>MW-3</b>	<b>01/21/2003</b>	<b>&lt;50</b>	<b>150</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>NA</b>	<b>28</b>	<b>10.58</b>	<b>4.30</b>	<b>6.28</b>	<b>1.2/1.0</b>
MW-4	05/23/1989	ND	ND	ND	ND	ND	ND	NA	NA	7.38	5.60	1.78	NA
MW-4	08/03/1989	ND	ND	ND	ND	ND	ND	NA	NA	7.38	6.37	1.01	NA
MW-4	12/15/1989	ND	ND	ND	ND	ND	ND	NA	NA	7.38	6.91	0.47	NA
MW-4	03/08/1990	ND	ND	ND	ND	ND	ND	NA	NA	7.38	6.06	1.32	NA
MW-4	04/18/1990	NA	NA	NA	NA	NA	NA	NA	NA	7.38	5.84	1.54	NA
MW-4	07/23/1990	ND	ND	ND	ND	ND	ND	NA	NA	7.38	6.92	0.46	NA
MW-4	09/27/1991	ND	ND	ND	ND	ND	ND	NA	NA	7.38	8.03	0.65	NA
MW-4	01/03/1991	NA	NA	NA	NA	NA	NA	NA	NA	7.38	7.54	-0.16	NA
MW-4	04/10/1991	ND	ND	ND	ND	ND	ND	NA	NA	7.38	5.06	2.32	NA
MW-4	07/12/1991	ND	ND	ND	ND	ND	ND	NA	NA	7.38	6.86	0.52	NA

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MW-4	10/08/1991	ND	ND	ND	ND	ND	ND	NA	NA	7.38	7.44	-0.06	NA
MW-4	02/06/1992	120	2,500 a	ND	ND	ND	ND	NA	NA	7.38	7.29	0.09	NA
MW-4	05/04/1992	ND	53	ND	ND	ND	ND	NA	NA	7.38	5.33	2.05	NA
MW-4	07/28/1992	ND	60	ND	ND	ND	ND	NA	NA	7.38	6.95	0.43	NA
MW-4	10/27/1992	ND	ND	ND	ND	ND	ND	NA	NA	7.38	7.65	-0.27	NA
MW-4	01/14/1993	ND	ND	ND	ND	ND	ND	NA	NA	7.38	4.84	2.54	NA
MW-4	04/23/1993	ND	ND	ND	ND	ND	ND	NA	NA	7.38	4.84	2.54	NA
MW-4	07/20/1993	ND	ND	2.2	ND	1.1	7.7	NA	NA	10.28	6.47	3.81	NA
MW-4	10/18/1993	ND	ND	ND	1.2	ND	ND	NA	NA	10.28	7.35	2.93	NA
MW-4	01/06/1994	ND	ND	ND	ND	ND	ND	NA	NA	10.28	7.64	2.64	NA
MW-4	04/12/1994	ND	76	ND	ND	ND	ND	NA	NA	10.28	6.39	3.89	NA
MW-4	07/25/1994	ND	ND	ND	ND	ND	ND	NA	NA	10.28	7.00	3.28	NA
MW-4	10/25/1994	ND	ND	ND	ND	ND	ND	NA	NA	10.28	7.53	2.75	NA
MW-4	01/09/1995	ND	70 a	ND	ND	ND	ND	NA	NA	10.28	4.90	5.38	NA
MW-4	04/11/1995	ND	140	1.5	ND	0.6	3.4	NA	NA	10.28	5.04	5.24	NA
MW-4	07/18/1995	ND	160	13	3.4	ND	ND	NA	NA	10.28	6.18	4.10	NA
MW-4	10/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	10.28	6.63	3.65	NA
MW-4	01/09/1996	<50	ND	<0.5	ND	<0.5	<0.5	ND	NA	10.28	3.82	6.46	NA
MW-4	04/02/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.5	NA	10.28	3.97	6.31	NA
MW-4	10/03/1996	<50	81	<0.5	<0.5	<0.5	<0.5	<2.5	NA	10.28	3.74	6.54	NA
MW-4	04/03/1997	<50	69	<0.50	<0.50	<0.50	<0.50	<2.5	NA	10.28	3.74	6.54	1.8
MW-4	10/08/1997	<50	75	<0.50	<0.50	<0.50	<0.50	13	NA	10.28	4.89	5.39	2.0
MW-4 (D)	10/08/1997	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	10.28	4.89	5.39	2.0
MW-4	06/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	10.28	4.39	5.89	NA
MW-4	12/30/1998	<50.0	94.1	<0.500	<0.500	<0.500	0.580	7.33	NA	10.28	5.58	4.70	1.7/1.6
MW-4	06/25/1999	NA	NA	NA	NA	NA	NA	NA	NA	10.28	4.17	6.11	NA

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MW-4	12/28/1999	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	10.28	4.54	5.74	1.4/1.5
MW-4	05/31/2000	NA	NA	NA	NA	NA	NA	NA	NA	10.28	3.85	6.43	NA
MW-4	10/17/2000	<50.0	274a	<0.500	<0.500	<0.500	<0.500	9.40	NA	10.28	3.50	6.78	3.8/4.0
MW-4	05/01/2001	NA	NA	NA	NA	NA	NA	NA	NA	10.28	4.10	6.18	NA
MW-4	11/05/2001	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	8.4	10.28	5.21	5.07	1.3/1.5
MW-4	05/01/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	10.28	4.28	6.00	2.6/1.1
MW-4	07/16/2002	NA	NA	NA	NA	NA	NA	NA	NA	10.28	3.87	6.41	NA
MW-4	10/17/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	9.83	4.66	5.17	1.4/2.4
<b>MW-4</b>	<b>01/21/2003</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>9.83</b>	<b>3.87</b>	<b>5.96</b>	<b>NA</b>
MW-5	05/23/1989	26,000	7,000	1,500	280	ND	8,100	NA	NA	8.18	5.47	2.71	NA
MW-5	08/03/1989	12,000	8,700	860	94	ND	2,600	NA	NA	8.18	5.94	2.24	NA
MW-5	12/15/1989	1,000	710	22	35	18	44	NA	NA	8.18	6.75	1.43	NA
MW-5	02/07/1990	ND	620	0.8	ND	ND	ND	NA	NA	8.18	6.03	2.15	NA
MW-5	04/18/1990	19,000	5,000	4,500	850	97	8,000	NA	NA	8.18	5.80	2.38	NA
MW-5	07/23/1990	23,000	2,700	3,600	400	160	6,500	NA	NA	8.18	6.00	2.18	NA
MW-5	09/23/1990	5,400	550	1,400	26	13	1,300	NA	NA	8.18	7.18	1.00	NA
MW-5	01/03/1991	860	560	280	2.8	0.8	45	NA	NA	8.18	7.17	1.01	NA
MW-5	04/10/1991	12,000	1,800	710	130	500	2,400	NA	NA	8.18	5.25	2.93	NA
MW-5	07/12/1991	24,000	1,700	2,200	280	430	5,700	NA	NA	8.18	5.70	2.48	NA
MW-5	10/08/1991	2,800	1,400	860	13	ND	580	NA	NA	8.18	6.50	1.68	NA
MW-5	02/06/1992	1,000	1,200	300	ND	14	62	NA	NA	8.18	6.35	1.83	NA
MW-5	05/04/1992	10,000	4,100 a	1,500	350	710	2,300	NA	NA	8.18	4.87	3.31	NA
MW-5	07/28/1992	12,000	3,800 a	2,200	63	1,400	3,500	NA	NA	8.18	5.73	2.45	NA
MW-5	10/27/1992	7,500	480 a	1,100	59	230	900	NA	NA	8.18	6.98	1.20	NA
MW-5	01/14/1993	7,700	1,100 a	420	49	570	840	NA	NA	8.18	4.70	3.48	NA



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MW-5	04/23/1993	110,000	1,600 a	2,900	2,500	3,400	12,000	NA	NA	8.18	4.19	3.99	NA
MW-5	07/20/1993	18a	1,200 a	1,400	84	1,500	3,200	NA	NA	10.87	5.10	5.77	NA
MW-5	10/18/1993	14,000	5,800 a	2,000	100	2,300	5,100	NA	NA	10.87	5.79	5.08	NA
MW-5	01/06/1994	81,000	1,100 a	11,000	9,300	3,600	12,000	NA	NA	10.87	5.56	5.31	NA
MW-5	04/12/1994	17,000	4,100	2,900	380	430	1,300	NA	NA	10.87	4.90	5.97	NA
MW-5	07/25/1994	5,900	5,400 a	1,500	42	34	170	NA	NA	10.87	5.38	5.49	NA
MW-5	10/25/1994	2,300	1,900 a	35	3	ND	8	NA	NA	10.87	6.16	4.71	NA
MW-5	01/09/1995	8,300	3,700 a	1,500	95	330	1,900	NA	NA	10.87	4.60	6.27	NA
MW-5	04/11/1995	7,300	9,800	1,200	230	600	550	NA	NA	10.87	3.74	7.13	NA
MW-5	07/18/1995	17,000	5,100	2,300	730	770	2,500	NA	NA	10.87	4.97	5.90	NA
MW-5	10/18/1995	Well abandoned		NA	NA	NA	NA	NA	NA	10.87	5.67	5.20	NA
MW-6	05/23/1989	22,000	7,000	16	6.5	7	3,400	NA	NA	8.21	5.47	2.74	NA
MW-6	08/03/1989	28,000	8,800	1,200	130	2,100	2,800	NA	NA	8.21	5.91	2.30	NA
MW-6	12/15/1989	16,000	5,500	370	92	200	180	NA	NA	8.21	5.98	2.23	NA
MW-6	02/07/1990	22,000	2,600	520	85	630	770	NA	NA	8.21	5.47	2.74	NA
MW-6	04/18/1990	21,000	5,700	900	77	2,700	2,700	NA	NA	8.21	5.80	2.41	NA
MW-6	07/23/1990	24,000	3,000	1,000	94	3,400	2,700	NA	NA	8.21	5.85	2.36	NA
MW-6	09/27/1990	22,000	ND	700	93	2,500	2,400	NA	NA	8.21	6.42	1.79	NA
MW-6	01/03/1991	25,000	960	1,000	88	2,600	3,700	NA	NA	8.21	6.73	1.48	NA
MW-6	04/10/1991	18,000	920	560	190	480	830	NA	NA	8.21	5.24	2.97	NA
MW-6	07/12/1991	9,500	1,900	670	51	1,100	920	NA	NA	8.21	5.78	2.43	NA
MW-6	10/08/1991	11,000	5,100	1,000	43	ND	ND	NA	NA	8.21	6.36	1.85	NA
MW-6	02/06/1992	7,200	1,500 a	560	8	720	160	NA	NA	8.21	6.15	2.06	NA
MW-6	05/04/1992	7,900	2,900 a	610	ND	1,500	240	NA	NA	8.21	5.07	3.14	NA
MW-6	07/28/1992	17,000	3,200 a	1,200	ND	3,000	610	NA	NA	8.21	5.85	2.36	NA

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MW-6	10/27/1992	15,000	1,300 a	1,300	130	1,700	490	NA	NA	8.21	6.69	1.52	NA
MW-6	01/14/1993	4,900	1,600 a	80	31	330	37	NA	NA	8.21	4.52	3.69	NA
MW-6	04/23/1993	4,800	1,800 a	120	ND	780	73	NA	NA	8.21	4.32	3.89	NA
MW-6	07/20/1993	19a	910 a	570	18	1,100	130	NA	NA	11.04	5.39	5.65	NA
MW-6	10/18/1993	24,000	2,500 a	770	440	1,600	830	NA	NA	11.04	6.67	4.37	NA
MW-6	01/06/1994	20 a	2,300 a	450	30	530	52	NA	NA	11.04	5.66	5.38	NA
MW-6	04/12/1994	3,600	1,600	150	ND	340	21	NA	NA	11.04	4.91	6.13	NA
MW-6	07/25/1994	1,600	2,200 a	160	ND	ND	10	NA	NA	11.04	5.55	5.49	NA
MW-6 (D)	07/25/1994	1,000	2,400 a	160	ND	ND	18	NA	NA	11.04	5.55	5.49	NA
MW-6	10/25/1994	9,800	3,000 a	390	22	300	57	NA	NA	11.04	6.24	4.80	NA
MW-6	01/09/1995	2,200	800 a	74	12	400	39	NA	NA	11.04	4.58	6.46	NA
MW-6	04/11/1995	5,000	7,700	330	15	760	85	NA	NA	11.04	4.04	7.00	NA
MW-6	07/18/1995	4,200	1,700	320	11	490	22	NA	NA	11.04	5.01	6.03	NA
MW-6	10/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	11.04	5.86	5.18	NA
MW-6	01/09/1996	5,600	790	59	<5	180	12	14,000	NA	11.04	4.75	6.29	NA
MW-6	04/02/1996	1,500	NA	12	<5	170	9	1,900	NA	11.04	3.82	7.22	NA
MW-6	10/03/1996	2,600	1,800	110	<25	<25	<25	11,000	NA	11.04	5.27	5.77	2.2
MW-6	04/03/1997	<2,500	650	30	<25	32	<25	10,000	NA	11.04	4.42	6.62	2.0
MW-6	10/08/1997	1,900	1,100	31	<5.0	6.1	<5.0	2,600	NA	11.04	4.70	6.34	1.0
MW-6	06/10/1998	<1,000	1,500	17	12	14	88	14,000	NA	11.04	4.36	6.68	0.4/0.4
MW-6	12/30/1998	260	528	<2.50	<2.50	<2.50	<2.50	909	NA	11.04	4.98	6.06	2.1/1.6
MW-6 *	06/25/1999	<2,500	NA	<25.0	<25.0	<25.0	<25.0	8,850	7,630	11.04	4.81	6.23	1.4/3.6
MW-6	12/28/1999	526	416	7.60	<1.00	<1.00	<1.00	1,510	NA	11.04	5.17	5.87	1.8/2.0
MW-6	05/31/2000	2,870	998	45.7	4.70	8.61	<2.50	3,780	NA	11.04	4.58	6.46	0.92/2.30
MW-6	10/17/2000	2,370	944a	49.8	5.36	<5.00	<5.00	746	NA	11.04	4.80	6.24	2.5/2.1
MW-6	05/01/2001	3,000	706	2.72	<2.50	4.46	<2.50	473	NA	11.04	4.75	6.29	2.2/1.6

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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.)	GW Elevation (MSL)	DO Reading (ppm)
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MW-6	05/29/2001	NA	NA	NA	NA	NA	NA	NA	NA	11.04	4.86	6.18	2.0/1.3
MW-6	11/05/2001	NA	NA	NA	NA	NA	NA	NA	NA	11.04	5.73	5.31	0.6
MW-6	11/07/2001	1,700	180	1.3	1.2	1.3	1.1	NA	430	11.04	5.75	5.29	2.4/1.8
MW-6	05/01/2002	1,400	<300	2.0	0.61	4.3	0.68	NA	220	11.04	4.47	6.57	2.5/2.0
MW-6	07/16/2002	3,500	<600	31	1.5	5.7	1.2	NA	220	11.04	5.05	5.99	0.6/0.6
MW-6	10/17/2002	3,000	<700	27	1.7	2.9	1.8	NA	340	10.59	5.80	4.79	1.2/1.1
<b>MW-6</b>	<b>01/21/2003</b>	<b>900</b>	<b>&lt;200</b>	<b>1.5</b>	<b>&lt;0.50</b>	<b>1.4</b>	<b>&lt;0.50</b>	<b>NA</b>	<b>73</b>	<b>10.59</b>	<b>4.39</b>	<b>6.20</b>	<b>0.8/0.6</b>

MW-7	05/23/1989	47,000	11,000	3,500	5,000	1,500	7,800	NA	NA	7.44	5.48	1.96	NA
MW-7	08/03/1989	68,000	22,000	6,200	6,600	3,600	8,800	NA	NA	7.44	4.22	3.22	NA
MW-7	12/15/1989	100,000	12,000	4,500	5,300	1,300	5,300	NA	NA	7.44	4.58	2.86	NA
MW-7	02/07/1990	96,000	8,100	15,000	15,000	2,500	14,000	NA	NA	7.44	5.34	2.10	NA
MW-7	04/18/1990	94,000	10,000	25,000	13,000	3,300	13,000	NA	NA	7.44	4.92	2.52	NA
MW-7	07/23/1990	84,000	12,000	3,800	26,000	13,000	3,000	NA	NA	7.44	4.99	2.45	NA
MW-7	09/27/1990	43,000	ND	25,000	6,100	2,400	9,000	NA	NA	7.44	6.16	1.28	NA
MW-7	01/03/1991	78,000	3,100	26,000	16,000	3,000	14,000	NA	NA	7.44	4.96	2.48	NA
MW-7	04/10/1991	140,000	1,800	26,000	16,000	2,200	14,000	NA	NA	7.44	4.13	3.31	NA
MW-7	07/12/1991	79,000	1,100	7,700	7,200	2,300	10,000	NA	NA	7.44	4.98	2.46	NA
MW-7	10/08/1991	55,000	390 a	29,000	7,500	1,800	9,300	NA	NA	7.44	5.48	1.96	NA
MW-7	02/06/1992	63,000	9,600 a	16,000	8,700	1,600	7,400	NA	NA	7.44	5.05	2.39	NA
MW-7	05/04/1992	67,000	9,800 a	22,000	13,000	1,800	9,400	NA	NA	7.44	4.43	3.01	NA
MW-7	07/28/1992	85,000	13,000 a	26,000	17,000	2,900	15,000	NA	NA	7.44	4.88	2.56	NA
MW-7	10/27/1992	63,000	1,900 a	21,000	11,000	3,000	11,000	NA	NA	7.44	5.39	2.05	NA
MW-7	01/14/1993	120,000	2,300 a	28,000	21,000	1,600	15,000	NA	NA	7.44	4.26	3.18	NA
MW-7	04/23/1993	60,000	12,000 a	17,000	3,700	2,200	11,000	NA	NA	7.44	4.04	3.40	NA
MW-7 (D)	04/23/1993	50,000	14,000 a	17,000	4,200	2,200	11,000	NA	NA	7.44	4.04	3.40	NA

**WELL CONCENTRATIONS**  
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**285 Hegenberger Road**  
**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.)	GW Elevation (MSL)	DO Reading (ppm)
MW-7	07/20/1993	47,000	13,000	23,000	9,900	2,200	12,000	NA	NA	10.28	4.36	5.92	NA
MW-7	10/18/1993	44,000	10,000 a	22,000	3,800	2,600	10,000	NA	NA	10.28	5.14	5.14	NA
MW-7	01/06/1994	65,000	5,200 a	16,000	4,900	1,900	8,500	NA	NA	10.28	4.83	5.45	NA
MW-7	04/12/1994	68,000	3,400	12,000	2,000	580	6,400	NA	NA	10.28	4.24	6.04	NA
MW-7	07/25/1994	63,000	4,200 a	16,000	5,800	300	8,300	NA	NA	10.28	4.58	5.70	NA
MW-7	10/25/1994	46,000	3,800 a	16,000	3,700	1,200	7,300	NA	NA	10.28	5.07	5.21	NA
MW-7	01/09/1995	62,000	3,300 a	24,000	8,500	1,100	9,400	NA	NA	10.28	3.38	6.90	NA
MW-7 (D)	01/11/1995	57,000	3,200 a	9,500	7,900	620	8,000	NA	NA	10.28	3.38	6.90	NA
MW-7	04/11/1995	53,000	7,000	13,000	4,200	1,500	7,700	NA	NA	10.28	3.52	6.76	NA
MW-7 (D)	04/12/1995	55,000	7,600	11,000	3,700	1,300	6,400	NA	NA	10.28	3.52	6.76	NA
MW-7	07/18/1995	95,000	2,700	24,000	8,000	2,100	12,000	NA	NA	10.28	4.70	5.58	NA
MW-7	10/18/1995	Well abandoned		NA	NA	NA	NA	NA	NA	10.28	5.25	5.03	NA
MW-8	05/23/1989	ND	100	ND	ND	ND	ND	NA	NA	7.79	6.62	1.17	NA
MW-8	08/03/1989	ND	75	ND	ND	ND	ND	NA	NA	7.79	6.62	1.17	NA
MW-8	12/15/1989	ND	ND	ND	ND	ND	ND	NA	NA	7.79	6.71	1.08	NA
MW-8	03/08/1990	ND	ND	ND	ND	ND	ND	NA	NA	7.79	4.95	2.84	NA
MW-8	04/18/1990	NA	NA	NA	NA	NA	NA	NA	NA	7.79	6.40	1.89	NA
MW-8	07/23/1990	ND	ND	ND	ND	ND	ND	NA	NA	7.79	6.62	1.17	NA
MW-8	09/27/1990	ND	1,100	ND	ND	ND	ND	NA	NA	7.79	6.98	0.81	NA
MW-8	01/03/1991	ND	ND	1.3	ND	ND	ND	NA	NA	7.79	7.03	0.76	NA
MW-8	04/10/1991	50	ND	0.7	1.1	0.8	1	NA	NA	7.79	4.40	3.39	NA
MW-8	07/12/1991	ND	ND	ND	ND	ND	ND	NA	NA	7.79	6.80	0.99	NA
MW-8	10/08/1991	ND	ND	1.4	ND	ND	ND	NA	NA	7.79	7.56	0.23	NA
MW-8	02/06/1992	ND	60 a	ND	0.7	ND	ND	NA	NA	7.79	6.94	0.85	NA
MW-8	05/04/1992	ND	210 a	ND	ND	ND	ND	NA	NA	7.79	5.86	1.93	NA

**WELL CONCENTRATIONS**  
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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.)	GW Elevation (MSL)	DO Reading (ppm)
MW-8	07/28/1992	51	ND	ND	ND	1	0.6	NA	NA	7.79	6.94	0.85	NA
MW-8	10/27/1992	ND	ND	ND	6.6	ND	ND	NA	NA	7.79	7.83	-0.04	NA
MW-8	01/14/1993	ND	64a	ND	ND	ND	ND	NA	NA	7.79	3.60	4.19	NA
MW-8 (D)	01/14/1993	ND	NA	ND	ND	ND	ND	NA	NA	7.79	3.60	4.19	NA
MW-8	04/23/1993	ND	ND	ND	ND	ND	ND	NA	NA	7.79	4.12	3.67	NA
MW-8	07/20/1993	ND	ND	0.7	0.7	0.8	4.1	NA	NA	10.61	6.38	4.23	NA
MW-8	10/18/1993	ND	ND	ND	800	ND	ND	NA	NA	10.61	7.47	3.14	NA
MW-8	01/06/1994	ND	ND	ND	ND	ND	ND	NA	NA	10.61	7.20	3.41	NA
MW-8	04/12/1994	ND	ND	ND	ND	ND	ND	NA	NA	10.61	6.16	4.45	NA
MW-8	07/25/1994	ND	ND	ND	ND	ND	ND	NA	NA	10.61	6.94	3.67	NA
MW-8	10/25/1994	ND	ND	ND	1	ND	ND	NA	NA	10.61	7.43	3.18	NA
MW-8	01/09/1995	ND	70 a	ND	ND	ND	ND	NA	NA	10.61	3.98	6.63	NA
MW-8	04/11/1995	ND	78	0.63	1.3	ND	0.75	NA	NA	10.61	4.12	6.49	NA
MW-8	07/18/1995	ND	130	ND	ND	ND	ND	NA	NA	10.61	5.21	5.40	NA
MW-8	10/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	10.61	5.58	5.03	NA
MW-8	01/09/1996	<50	ND	<0.5	<0.5	<0.5	<0.5	ND	NA	10.61	5.09	5.52	NA
MW-8	04/02/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.5	NA	10.61	3.42	7.19	NA
MW-8	10/03/1996	<50	<69	<0.5	<0.5	<0.5	<0.5	<2.5	NA	10.61	4.30	6.31	NA
MW-8	04/03/1997	<50	62	<0.50	<0.50	<0.50	0.91	<2.5	NA	10.61	4.58	6.03	2.6
MW-8	10/08/1997	<50	57	<0.50	<0.50	<0.50	<0.50	<2.5	NA	10.61	3.00	7.61	3.6
MW-8	06/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	10.61	2.88	7.73	NA
MW-8	12/30/1998	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	10.61	5.38	5.23	0.8/0.9
MW-8	06/25/1999	NA	NA	NA	NA	NA	NA	NA	NA	10.61	4.53	6.08	NA
MW-8	12/28/1999	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	10.61	4.93	5.68	1.0/0.9
MW-8	05/31/2000	NA	NA	NA	NA	NA	NA	NA	NA	10.61	4.02	6.59	NA
MW-8	10/17/2000	<50.0	143a	<0.500	<0.500	<0.500	<0.500	<2.50	NA	10.61	3.10	7.51	4.0/4.1

**WELL CONCENTRATIONS**  
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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.)	GW Elevation (MSL)	DO Reading (ppm)
MW-8	05/01/2001	NA	NA	NA	NA	NA	NA	NA	NA	10.61	4.12	6.49	NA
MW-8	11/05/2001	<50	<50	<0.50	0.99	<0.50	<0.50	NA	<5.0	10.61	5.00	5.61	0.6/1.3
MW-8	05/01/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	10.61	3.25	7.36	0.6/3.6
MW-8	07/16/2002	NA	NA	NA	NA	NA	NA	NA	NA	10.61	3.64	6.97	NA
MW-8	10/17/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	10.18	4.53	5.65	3.3/2.2
<b>MW-8</b>	<b>01/21/2003</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>10.18</b>	<b>3.98</b>	<b>6.20</b>	<b>NA</b>
MW-9	08/03/1989	47,000	12,000	5,600	6,600	1,500	8,500	NA	NA	7.63	5.78	1.85	NA
MW-9	12/15/1989	88,000	9,200	4,300	5,400	140	5,600	NA	NA	7.63	5.24	2.39	NA
MW-9	02/07/1990	50,000	7,400	1,800	1,400	3,200	1,800	NA	NA	7.63	5.23	2.40	NA
MW-9	04/18/1990	50,000	7,500	14,000	11,000	730	10,000	NA	NA	7.63	5.34	2.29	NA
MW-9	07/23/1990	62,000	3,200	19,000	16,000	950	15,000	NA	NA	7.63	5.65	1.98	NA
MW-9	09/27/1990	30,000	2,700	16,000	6,500	980	11,000	NA	NA	7.63	5.96	1.67	NA
MW-9	01/03/1991	34,000	2,500	9,200	3,200	770	7,000	NA	NA	7.63	6.23	1.40	NA
MW-9	04/10/1991	66,000	2,200	17,000	13,000	1,400	14,000	NA	NA	7.63	4.65	2.98	NA
MW-9	07/12/1991	40,000	2,000	7,700	3,200	1,100	9,400	NA	NA	7.63	5.65	1.98	NA
MW-9	10/08/1991	20,000	4,700 a	11,000	640	240	6,000	NA	NA	7.63	6.08	1.55	NA
MW-9	02/06/1992	36,000	6,600 a	11,000	490	1,100	6,700	NA	NA	7.63	5.92	1.71	NA
MW-9	05/04/1992	31,000	5,800 a	11,000	1,700	1,200	8,700	NA	NA	7.63	4.80	2.83	NA
MW-9	07/28/1992	50,000	14,000	17,000	1,200	1,500	12,000	NA	NA	7.63	5.61	2.02	NA
MW-9	10/27/1992	43,000	880 a	15,000	680	1,700	8,100	NA	NA	7.63	6.24	1.39	NA
MW-9	01/14/1993	52,000	730 a	9,600	1,100	1,100	7,000	NA	NA	7.63	4.95	2.68	NA
MW-9	04/23/1993	45,000	8,000 a	11,000	1,400	1,500	10,000	NA	NA	7.63	4.54	3.09	NA
MW-9	07/20/1993	25,000	5,100	10,000	320	1,100	7,100	NA	NA	10.48	5.25	5.23	NA
MW-9	10/18/1993	32,000	4,900 a	14,000	530	2,000	10,000	NA	NA	10.48	6.00	4.48	NA
MW-9	01/06/1994	41,000	7,700 a	15,000	810	1,400	9,000	NA	NA	10.48	5.62	4.86	NA

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MW-9 (D)	01/06/1994	43,000	8,300 a	15,000	920	1,300	8,000	NA	NA	10.48	5.62	4.86	NA
MW-9	04/12/1994	39,000	2,000	8,300	ND	ND	4,000	NA	NA	10.48	4.31	6.17	NA
MW-9	07/25/1994	22,000	3,600 a	7,500	150	ND	4,100	NA	NA	10.48	5.43	5.05	NA
MW-9	10/25/1994	31,000	3,200 a	13,000	240	1,000	8,500	NA	NA	10.48	6.00	4.48	NA
MW-9 (D)	10/26/1994	31,000	3,500 a	13,000	220	1,100	8,300	NA	NA	10.48	6.00	4.48	NA
MW-9	01/09/1995	4,800	2,300 a	1,200	510	42	1,400	NA	NA	10.48	4.26	6.22	NA
MW-9	04/11/1995	20,000	3,400	5,100	460	400	3,400	NA	NA	10.48	4.08	6.40	NA
MW-9	07/18/1995	43,000	2,900	12,000	1,800	960	9,100	NA	NA	10.48	5.07	5.41	NA
MW-9	10/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	10.48	5.82	4.66	NA
MW-9	01/09/1996	64,000	2,800	12,000	5,400	1,800	10,000	2100	NA	10.48	4.36	6.12	NA
MW-9	04/02/1996	39,000	NA	10,000	100	520	4,100	<500	NA	10.48	3.86	6.62	NA
MW-9	10/03/1996	46,000	3,100	12,000	180	1,400	6,700	2,300	NA	10.48	4.90	5.58	1.4
MW-9	04/03/1997	36,000	2,300	9,700	140	580	3,900	<500	NA	10.48	3.98	6.50	1.8
MW-9	10/08/1997	34,000	3,500	6,900	<100	830	4,500	<125	NA	10.48	4.17	6.31	0.8
MW-9	06/10/1998	20,000	2,500	9,900	250	3,100	170	460	NA	10.48	3.84	6.64	0.3/0.4
MW-9	12/30/1998	30,100	1,900	8,500	166	603	3,340	<100	NA	10.48	4.72	5.76	1.1/1.2
MW-9 *	06/25/1999	26,300	NA	8,090	73.5	409	2,730	<100	NA	10.48	4.47	6.01	1.2/2.4
MW-9	12/28/1999	4,130	839	1,260	57.9	103	213	1,470	NA	10.48	4.82	5.66	1.0/1.1
MW-9	05/31/2000	8,210	1,300	9,290	62.3	141	908	565	NA	10.48	3.87	6.61	2.8/c
MW-9	10/17/2000	19,000	1,510 a	5,420	54.5	479	2,680	<250	NA	10.48	3.87	6.61	3.0/3.5
MW-9	05/01/2001	24,300	976	11,200	52.9	159	1,610	<250	NA	10.48	4.44	6.04	1.6/1.0
MW-9	05/29/2001	NA	NA	NA	NA	NA	NA	NA	NA	10.48	3.99	6.49	1.9/1.5
MW-9	11/05/2001	NA	NA	NA	NA	NA	NA	NA	NA	10.48	5.41	5.07	0.7
MW-9	11/07/2001	25,000	<1,000	7,300	85	630	4,100	NA	<250	10.48	5.60	4.88	1.4/1.1
MW-9	05/01/2002	27,000	<700	11,000	79	260	1,300	NA	<500	10.48	3.38	7.10	2.9/1.1
MW-9	07/16/2002	29,000	<700	12,000	<50	74	810	NA	<500	10.48	4.04	6.44	0.7/0.4

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MW-9	10/17/2002	15,000	<800	10,000	31	36	490	NA	53	10.07	4.92	5.15	1.0/1.2
MW-9	01/21/2003	8,500	<400	3,100	39	190	590	NA	<200	10.07	4.52	5.55	0.4/0.8
MW-10	12/15/1989	ND	3,100	1,500	ND	ND	ND	NA	NA	7.45	6.33	0.82	NA
MW-10	03/08/1990	25,000	1,800	17,000	330	2,100	1,400	NA	NA	7.45	5.41	2.00	NA
MW-10	04/18/1990	23,000	3,600	15,000	1,200	190	3,300	NA	NA	7.45	5.60	1.85	NA
MW-10	07/23/1990	18,000	1,900	12,000	380	ND	1,400	NA	NA	7.45	5.81	1.64	NA
MW-10	09/27/1990	9,500	430	13,000	100	1,800	230	NA	NA	7.45	6.64	0.81	NA
MW-10	01/03/1991	4,300	630	3,700	10	ND	110	NA	NA	7.45	6.96	0.49	NA
MW-10	04/10/1991	45,000	1,400	16,000	4,600	3,000	6,900	NA	NA	7.45	4.70	2.75	NA
MW-10	07/12/1991	ND	ND	ND	ND	ND	ND	NA	NA	7.45	5.90	1.55	NA
MW-10	10/08/1991	3,800	1,500 a	13,000	82	9	500	NA	NA	7.45	6.68	0.77	NA
MW-10	02/06/1992	22,000	1,600 a	12,000	ND	600	170	NA	NA	7.45	7.04	0.41	NA
MW-10	05/04/1992	39,000	8,000 a	14,000	5,000	1,800	5,000	NA	NA	7.45	4.69	2.76	NA
MW-10	07/28/1992	38,000	8,700 a	17,000	2,800	1,500	4,000	NA	NA	7.45	6.00	1.45	NA
MW-10	10/27/1992b	NA	NA	NA	NA	NA	NA	NA	NA	7.45	NA	NA	NA
MW-10	01/14/1993	26,000	950 a	10,000	ND	ND	160	NA	NA	7.45	6.07	1.38	NA
MW-10	04/23/1993	80,000	1,900 a	21,000	13,000	3,400	12,000	NA	NA	7.45	4.14	3.31	NA
MW-10	07/20/1993	31,000	4,800	14,000	4,200	1,700	5,500	NA	NA	10.61	5.62	4.99	NA
MW-10	10/18/1993	13,000	1,200 a	8,600	220	ND	450	NA	NA	10.61	6.43	4.18	NA
MW-10	01/06/1994	16,000	670 a	9,700	<125	<125	210	NA	NA	10.61	6.74	3.87	NA
MW-10	04/12/1994	16,000	860	5,600	ND	ND	ND	NA	NA	10.61	5.98	4.63	NA
MW-10	07/25/1994	2,300	2,100 a	1,400	26	25	51	NA	NA	10.61	6.31	4.30	NA
MW-10	10/25/1994	1,400	1,000 a	290	5	2	38	NA	NA	10.61	6.64	3.97	NA
MW-10	01/09/1995	16,000	2,300 a	7,500	1,400	230	1,500	NA	NA	10.61	5.70	4.91	NA
MW-10	04/11/1995	54,000	5,000	13,000	4,500	1,500	4,500	NA	NA	10.61	5.82	4.79	NA



**WELL CONCENTRATIONS**  
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**285 Hegenberger Road**  
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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.)	GW Elevation (MSL)	DO Reading (ppm)
MW-10	07/18/1995	72,000	2,600	20,000	7,200	2,800	9,000	NA	NA	10.61	6.79	3.82	NA
MW-10	10/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	10.61	5.31	5.30	NA
MW-10	01/09/1996	32,000	2,100	8,000	1,600	880	3,200	12,000	NA	10.61	5.92	4.69	NA
MW-10	04/02/1996	68,000	NA	9,100	2,300	1,100	3,700	3,300	NA	10.61	5.43	5.18	NA
MW-10	10/03/1996	33,000	2,900	11,000	1,300	830	2,400	7,300	NA	10.61	6.07	4.54	1.7
MW-10 (D)	10/03/1996	40,000	3,300	12,000	1,700	1,100	3,100	6,500	NA	10.61	6.07	4.54	1.7
MW-10	04/03/1997	36,000	3,400	12,000	2,300	1,400	4,500	2,300	NA	10.61	3.45	7.16	1.8
MW-10 (D)	04/03/1997	52,000	3,000	12,000	2,300	1,400	4,500	2,100	NA	10.61	3.45	7.16	1.8
MW-10	10/08/1997	20,000	3,100	7,500	420	470	1,300	1,500	NA	10.61	3.72	6.89	1.2
MW-10	06/10/1998	48,000	2,500	14,000	2,600	1,500	4,800	1,800	NA	10.61	4.00	6.61	0.7/0.5
MW-10	12/30/1998	17,800	2,820	6,000	136	344	639	1,250	NA	10.61	5.26	5.35	1.0/0.7
MW-10 *	06/25/1999	17,600	NA	6,150	212	287	687	1,740	NA	10.61	4.49	6.12	0.9/2.5
MW-10	12/28/1999	10,800	1,400	3,370	155	321	626	3,740	NA	10.61	4.87	5.74	1.2/1.4
MW-10	05/31/2000	3,020	2,270	1,080	34.3	118	251	775	NA	10.61	3.48	7.13	2.8/3.9
MW-10	10/17/2000	15,500	1,750 a	7,450	54.7	387	308	3,840	4,300	10.61	4.25	6.36	2.3/3.0
MW-10	05/01/2001	27,900	2,260	9,920	1,050	1,020	2,370	2,180	NA	10.61	5.40	5.21	2.0/1.1
MW-10	05/29/2001	NA	NA	NA	NA	NA	NA	NA	NA	10.61	3.74	6.87	3.70/1.8
MW-10	11/05/2001	NA	NA	NA	NA	NA	NA	NA	NA	10.61	6.08	4.53	0.6
MW-10	11/07/2001	14,000	360	5,300	260	430	810	NA	1,700	10.61	5.45	5.16	1.8/1.0
MW-10	05/01/2002	79,000	<1,500	16,000	4,400	3,300	8,800	NA	890	10.61	4.62	5.99	4.0/0.5
MW-10	07/16/2002	21,000	<1,000	6,500	350	460	1,000	NA	1,200	10.61	5.80	4.81	0.5/1.5
MW-10	10/17/2002	17,000	<1,800	5,800	290	520	1,100	NA	980	9.81	5.27	4.54	0.8/1.2
<b>MW-10</b>	<b>01/21/2003</b>	<b>52,000</b>	<b>&lt;2,000</b>	<b>13,000</b>	<b>2,000</b>	<b>2,100</b>	<b>4,800</b>	<b>NA</b>	<b>&lt;1,000</b>	<b>9.81</b>	<b>5.72</b>	<b>4.09</b>	<b>0.3/0.6</b>
MW-11	07/20/1993	50	ND	2.5	1.9	3.9	18	NA	NA	10.56	8.08	2.48	NA
MW-11	10/18/1993	ND	65	ND	ND	ND	ND	NA	NA	10.56	8.24	2.32	NA

**WELL CONCENTRATIONS**  
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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.)	GW Elevation (MSL)	DO Reading (ppm)
MW-11	01/06/1994	ND	ND	ND	ND	ND	ND	NA	NA	10.56	8.47	2.09	NA
MW-11	04/12/1994	ND	ND	1.1	0.87	ND	1.5	NA	NA	10.56	8.44	2.12	NA
MW-11	07/25/1994	ND	ND	ND	ND	ND	ND	NA	NA	10.56	8.20	2.36	NA
MW-11	10/25/1994	ND	100	ND	ND	ND	ND	NA	NA	10.56	8.67	1.89	NA
MW-11	01/09/1995	ND	ND	ND	ND	ND	ND	NA	NA	10.56	7.63	2.93	NA
MW-11	04/11/1995	ND	140	ND	0.7	ND	0.5	NA	NA	10.56	8.06	2.50	NA
MW-11	07/18/1995	ND	50	ND	ND	ND	ND	NA	NA	10.56	9.31	1.25	NA
MW-11	10/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	10.56	8.34	2.22	NA
MW-11	01/09/1996	<50	ND	<0.5	<0.5	<0.5	<0.5	ND	NA	10.56	8.22	2.34	NA
MW-11	04/02/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.5	NA	10.56	7.97	2.59	NA
MW-11	10/03/1996	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	10.56	8.37	2.19	3.6
MW-11	04/03/1997	<50	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	10.56	8.31	2.25	2.2
MW-11	10/08/1997	<50	54	<0.50	<0.50	<0.50	<0.50	<2.5	NA	10.56	8.56	2.00	1.2
MW-11	06/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	10.56	7.85	2.71	NA
MW-11	12/30/1998	<50.0	66.2	<0.500	<0.500	<0.500	<0.500	<2.00	NA	10.56	8.51	2.05	0.7/0.6
MW-11	06/25/1999	NA	NA	NA	NA	NA	NA	NA	NA	10.56	8.01	2.55	NA
MW-11	12/28/1999	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	10.56	8.39	2.17	0.8/1.0
MW-11	05/31/2000	NA	NA	NA	NA	NA	NA	NA	NA	10.56	7.38	3.18	NA
MW-11	10/17/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	10.56	8.35	2.21	4.1/4.0
MW-11	05/01/2001	NA	NA	NA	NA	NA	NA	NA	NA	10.56	8.15	2.41	NA
MW-11	11/05/2001	Unable to locate		NA	NA	NA	NA	NA	NA	10.56	NA	NA	NA
MW-11	05/01/2002	Unable to locate		NA	NA	NA	NA	NA	NA	10.56	NA	NA	NA
MW-11	05/08/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	10.56	7.82	2.74	1.0/1.1
MW-11	07/16/2002	NA	NA	NA	NA	NA	NA	NA	NA	10.56	7.64	2.92	NA
MW-11	10/17/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	7.95	NA	1.3/1.0
MW-11	01/21/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.57	NA	NA

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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.)	GW Elevation (MSL)	DO Reading (ppm)
MW-12	07/20/1993	ND	1,500	2.8	1.9	3.2	ND	NA	NA	9.56	6.76	2.80	NA
MW-12	10/18/1993	ND	ND	ND	ND	ND	ND	NA	NA	9.56	7.12	2.44	NA
MW-12	01/06/1994	ND	ND	ND	ND	ND	ND	NA	NA	9.56	7.15	2.41	NA
MW-12	04/12/1994	ND	ND	0.61	ND	ND	1.1	NA	NA	9.56	6.68	2.88	NA
MW-12	07/25/1994	ND	ND	ND	ND	ND	ND	NA	NA	9.56	6.83	2.73	NA
MW-12	10/25/1994	ND	ND	ND	ND	ND	ND	NA	NA	9.56	7.34	2.22	NA
MW-12	01/09/1995	ND	80 a	ND	ND	ND	ND	NA	NA	9.56	5.02	4.54	NA
MW-12	04/11/1995	ND	200	ND	ND	ND	ND	NA	NA	9.56	7.38	2.18	NA
MW-12	07/18/1995	ND	90	ND	ND	ND	ND	NA	NA	9.56	8.50	1.06	NA
MW-12	10/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	9.56	6.63	2.93	NA
MW-12	01/09/1996	<50	ND	<0.5	<0.5	<0.5	<0.5	ND	NA	9.56	6.32	3.24	NA
MW-12	04/02/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.5	NA	9.56	5.60	3.96	NA
MW-12	10/03/1996	<50	72	<0.5	<0.5	<0.5	<0.5	<2.5	NA	9.56	3.30	6.26	2.5
MW-12	04/03/1997	<50	74	<0.50	<0.50	<0.50	<0.50	<2.5	NA	9.56	6.13	3.43	2.2
MW-12	10/08/1997	<50	73	<0.50	<0.50	<0.50	<0.50	<2.5	NA	9.56	6.49	3.07	3.0
MW-12	06/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	9.56	5.85	3.71	NA
MW-12	12/30/1998	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	9.56	8.42	1.14	1.3/0.9
MW-12	06/25/1999	NA	NA	NA	NA	NA	NA	NA	NA	9.56	7.89	1.67	NA
MW-12	12/28/1999	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	9.56	8.26	1.30	1.0/1.2
MW-12	05/31/2000	NA	NA	NA	NA	NA	NA	NA	NA	9.56	7.21	2.35	NA
MW-12	10/17/2000	<50.0	82.9 a	<0.500	<0.500	<0.500	<0.500	<2.50	NA	9.56	6.80	2.76	5.1/3.0
MW-12	05/01/2001	NA	NA	NA	NA	NA	NA	NA	NA	9.56	5.95	3.61	NA
MW-12	11/05/2001	Unable to locate		NA	NA	NA	NA	NA	NA	9.56	NA	NA	NA
MW-12	05/01/2002	Unable to locate		NA	NA	NA	NA	NA	NA	9.56	NA	NA	NA
MW-12	05/08/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	9.56	4.75	4.81	1.2/0.9

**WELL CONCENTRATIONS**  
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**285 Hegenberger Road**  
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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.)	GW Elevation (MSL)	DO Reading (ppm)
MW-12	07/16/2002	NA	NA	NA	NA	NA	NA	NA	NA	9.56	4.88	4.68	NA
MW-12	10/17/2002	<50	81	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	5.11	NA	1.8/1.5
<b>MW-12</b>	<b>01/21/2003</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>5.76</b>	<b>NA</b>	<b>NA</b>
MW-13	07/20/1993	ND	1,500	ND	ND	ND	ND	NA	NA	10.10	8.32	1.78	NA
MW-13 (D)	07/21/1993	ND	1,000	ND	ND	ND	ND	NA	NA	10.10	8.32	1.78	NA
MW-13	10/18/1993	ND	ND	ND	ND	ND	ND	NA	NA	10.10	8.66	1.44	NA
MW-13	01/06/1994	ND	ND	ND	ND	ND	ND	NA	NA	10.10	8.70	1.40	NA
MW-13	04/12/1994	ND	100	1.7	1.2	0.59	2.4	NA	NA	10.10	8.20	1.90	NA
MW-13	07/25/1994	ND	ND	ND	ND	ND	ND	NA	NA	10.10	8.39	1.71	NA
MW-13	10/25/1994	ND	ND	ND	ND	ND	ND	NA	NA	10.10	8.70	1.40	NA
MW-13	01/09/1995	ND	ND	ND	ND	ND	ND	NA	NA	10.10	7.35	2.75	NA
MW-13	04/11/1995	ND	320	ND	ND	ND	ND	NA	NA	10.10	5.50	4.60	NA
MW-13	07/18/1995	ND	ND	ND	ND	ND	ND	NA	NA	10.10	6.63	3.47	NA
MW-13	10/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	10.10	8.12	1.98	NA
MW-13	01/09/1996	<50	ND	<0.5	<0.5	<0.5	<0.5	ND	NA	10.10	7.74	2.36	NA
MW-13	04/02/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.5	NA	10.10	6.30	3.80	NA
MW-13	10/03/1996	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	10.10	6.50	3.60	3.0
MW-13	04/03/1997	<50	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	10.10	7.58	2.52	2.0
MW-13	10/08/1997	<50	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	10.10	8.17	1.93	1.0
MW-13	06/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	10.10	7.54	2.56	NA
MW-13	12/30/1998	<50.0	69.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	10.10	6.91	3.19	1.1/0.8
MW-13	06/25/1999	NA	NA	NA	NA	NA	NA	NA	NA	10.10	6.31	3.79	NA
MW-13	12/28/1999	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	10.10	6.65	3.45	0.8/1.0
MW-13	05/31/2000	NA	NA	NA	NA	NA	NA	NA	NA	10.10	5.94	4.16	NA
MW-13	10/17/2000	<50.0	121 a	<0.500	<0.500	<0.500	<0.500	<2.50	NA	10.10	8.38	1.72	2.5/2.8

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**285 Hegenberger Road**  
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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.)	GW Elevation (MSL)	DO Reading (ppm)
MW-13	05/01/2001	NA	NA	NA	NA	NA	NA	NA	NA	10.10	7.65	2.45	NA
MW-13	11/05/2001	Unable to locate		NA	NA	NA	NA	NA	NA	10.10	NA	NA	NA
MW-13	05/01/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	10.10	6.80	3.30	3.5/3.5
MW-13	07/16/2002	NA	NA	NA	NA	NA	NA	NA	NA	10.10	6.84	3.26	NA
MW-13	10/17/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	9.64	6.73	2.91	1.4/0.9
<b>MW-13</b>	<b>01/21/2003</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>9.64</b>	<b>6.99</b>	<b>2.65</b>	<b>NA</b>
VEW-5	09/26/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.91	NA	NA
VEW-5	10/17/2000	74,800	4,180 a	9,090	14,600	2,630	14,500	632	NA	NA	2.65	NA	3.0/3.1
VEW-5	05/01/2001	94,800	5,350	11,300	12,900	4,520	22,200	419	NA	NA	2.86	NA	0.4/0.6
VEW-5	11/05/2001	82,000	<1,600	14,000	7,400	2,900	15,000	NA	740	NA	4.11	NA	0.6/c
VEW-5	05/01/2002	16,000	<3,000	610	320	7.9	3,600	NA	310	NA	2.63	NA	4.7/2.9
VEW-5	07/16/2002	45,000	<3,000	7,900	2,700	1,000	4,600	NA	920	NA	2.96	NA	0.4/0.3
VEW-5	10/17/2002	<50	200	<0.50	<0.50	<0.50	<0.50	NA	46	8.81	3.55	5.26	1.1/1.0
<b>VEW-5</b>	<b>01/21/2003</b>	<b>740</b>	<b>1,200</b>	<b>53</b>	<b>22</b>	<b>17</b>	<b>70</b>	<b>NA</b>	<b>17</b>	<b>8.81</b>	<b>2.06</b>	<b>6.75</b>	<b>1.6/0.5</b>
VEW-6	09/26/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.94	NA	NA
VEW-6	10/17/2000	63,800	4,820 a	6,940	2,750	2,760	18,700	3,700	NA	NA	3.13	NA	2.0/2.1
VEW-6	05/01/2001	57,000	3,460	6,280	697	2,640	15,800	6,240	NA	NA	3.25	NA	0.8/1.2
VEW-6	05/29/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.17	NA	3.0/1.7
VEW-6	11/05/2001	39,000	<1,300	6,800	380	1,900	7,900	NA	8,800	NA	4.35	NA	0.8/1.3
VEW-6	05/01/2002	24,000	<4,500	1,800	270	470	3,700	NA	3,100	NA	2.73	NA	0.2/0.4
VEW-6	07/16/2002	19,000	<2,700	1,900	250	140	3,500	NA	2,900	NA	3.59	NA	0.3/0.2
VEW-6	10/17/2002	<50	110	<0.50	<0.50	<0.50	<0.50	NA	13	9.33	4.33	5.00	0.9/1.3
<b>VEW-6</b>	<b>01/21/2003</b>	<b>900</b>	<b>&lt;500</b>	<b>30</b>	<b>1.1</b>	<b>20</b>	<b>61</b>	<b>NA</b>	<b>110</b>	<b>9.33</b>	<b>3.08</b>	<b>6.25</b>	<b>4.6/5.6</b>

**WELL CONCENTRATIONS**  
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**285 Hegenberger Road**  
**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.)	GW Elevation (MSL)	DO Reading (ppm)
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VEW-7	09/26/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.59	NA	NA
VEW-7	10/17/2000	74,300	3,990 a	11,900	12,500	1,640	15,500	36,600	NA	NA	3.72	NA	3.5/4.1
VEW-7	05/01/2001	46,000	1,930	7,250	5,300	1,960	9,820	15,600	16,900	NA	3.40	NA	0.8/0.8
VEW-7	05/29/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.54	NA	2.5/1.4
VEW-7	11/05/2001	38,000	<900	9,300	610	1,700	6,000	NA	21,000	NA	4.85	NA	3.52/c
VEW-7	05/01/2002	590	<600	6.3	7.2	<2.5	81	NA	1,100	NA	2.62	NA	2.9/3.3
VEW-7	07/16/2002	95	54	1.5	<0.50	1.5	6.1	NA	100	NA	3.84	NA	3.6/2.5
VEW-7	10/17/2002	<50	110	1.4	<0.50	<0.50	<0.50	NA	34	9.49	4.93	4.56	3.0/1.9
VEW-7	01/21/2003	<50	180	0.88	<0.50	<0.50	4.2	NA	19	9.49	3.27	6.22	0.3/0.8

AS-1	09/26/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.67	NA	NA
AS-1	10/17/2000	13,400	3,280 a	1,600	82.8	<20.0	2,600	498	NA	NA	5.50	NA	2.0/2.5
AS-1	05/01/2001	Well inaccessible		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AS-1	11/05/2001	5,300	<900	85	26	46	120	NA	190	NA	6.11	NA	0.4/0.5
AS-1	05/01/2002	Insufficient water		NA	NA	NA	NA	NA	NA	NA	14.73	NA	NA
AS-1	07/16/2002	210	<150	8.2	<0.50	7.9	3.5	NA	25	NA	5.59	NA	4.6/2.8
AS-1	10/17/2002	Well dry		NA	NA	NA	NA	NA	NA	8.23	NA	NA	NA
AS-1	01/21/2003	<50	220	0.62	<0.50	<0.50	<0.50	NA	<5.0	8.23	9.51	-1.28	2.2/2.5

AS-2	09/26/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.38	NA	NA
AS-2	10/17/2000	4,380	1,380 a	167	<10.0	225	680	315	NA	NA	5.50	NA	3.1/3.0
AS-2	05/01/2001	Well inaccessible		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AS-2	11/05/2001	2,200	<300	100	0.99	91	21	NA	220	NA	5.99	NA	0.8/0.6
AS-2	05/01/2002	880	<300	19	<0.50	31	22	NA	57	NA	5.25	NA	1.0/0.8
AS-2	07/16/2002	910	<200	40	4.1	39	43	NA	78	NA	5.53	NA	0.7/0.9
AS-2	10/17/2002	Well dry		NA	NA	NA	NA	NA	NA	8.65	NA	NA	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**285 Hegenberger Road**  
**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.)	GW Elevation (MSL)	DO Reading (ppm)
AS-2	01/21/2003	<50	140	1.4	<0.50	2.0	0.94	NA	19	8.65	9.32	-0.67	1.4/1.6
AS-3	09/26/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.75	NA	NA
AS-3	10/17/2000	3,520	942 a	588	521	41.2	566	1,740	NA	NA	6.18	NA	3.1/3.0
AS-3	05/01/2001	Well inaccessible		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AS-3	11/05/2001	1,600	110	41	4.9	8.2	30	NA	240	NA	6.41	NA	1.1/3.2
AS-3	05/01/2002	Insufficient water		NA	NA	NA	NA	NA	NA	NA	14.90	NA	NA
AS-3	07/16/2002	Well dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AS-3	10/17/2002	Insufficient water		NA	NA	NA	NA	NA	NA	8.84	14.78	-5.94	NA
AS-3	01/21/2003	<50	320	<0.50	<0.50	<0.50	<0.50	NA	<5.0	8.84	11.59	-2.75	2.2/1.1

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**285 Hegenberger Road**  
**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.)	GW Elevation (MSL)	DO Reading (ppm)
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Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to November 5, 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 November 5, 2001, analyzed by EPA Method 8020.

MTBE = Methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

TOB = Top of Wellbox

GW = Groundwater

DO = Dissolved Oxygen

ug/L = Parts per billion

ppm = Parts per million

MSL = Mean sea level

ft = Feet

<n = Below detection limit

D = Duplicate sample

n/n = Dissolved oxygen reading; pre-purge/post-purge.

NA = Not applicable

Notes:

a = Chromatogram pattern indicates an unidentified hydrocarbon.

b = Sample was analyzed outside of EPA recommended holding time.

c = Post-purge DO reading not taken.

d = Lab did not record detected result.

e = Change in casing elevation due to wellhead maintenance.

\* All diesel and motor oil samples for this event were lost in laboratory fire.

Site surveyed (except wells MW-11 and MW-12) March 18, 2002, by Virgil Chavez Land Surveying of Vallejo, California.



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

Subject : 12 Water Samples  
Project Name : 285 Hegenberger Road, Oakland  
Project Number : 030121-DA-1  
P.O. Number : 98995749

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,

  
Joel Kiff



Report Number : 31032

Date : 01/28/2003

Subject : 12 Water Samples  
Project Name : 285 Hegenberger Road, Oakland  
Project Number : 030121-DA-1  
P.O. Number : 98995749

## Case Narrative

The Method Reporting Limit for TPH as Diesel is increased due to interference from Gasoline-Range Hydrocarbons for samples MW-1, MW-6, MW-9, MW-10 and VEW-6. Hydrocarbons reported as TPH as Diesel do not exhibit a typical Diesel chromatographic pattern for samples MW-3 and AS-1. Matrix Spike/Matrix Spike Duplicate Results associated with samples MW-10, MW-9 for the analyte Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample. Matrix Spike/Matrix Spike Duplicate Results associated with sample MW-1 for the analytes Tert-Butanol, Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.

Approved By:  Joel Kiff



Report Number : 31032

Date : 01/28/2003

Project Name : 285 Hegenberger Road, Oakland

Project Number : 030121-DA-1

Sample : MW-1

Matrix : Water

Lab Number : 31032-01

Sample Date :01/21/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>1100</b>	5.0	ug/L	EPA 8260B	01/23/2003
<b>Toluene</b>	<b>28</b>	5.0	ug/L	EPA 8260B	01/23/2003
<b>Ethylbenzene</b>	<b>210</b>	5.0	ug/L	EPA 8260B	01/23/2003
<b>Total Xylenes</b>	<b>53</b>	5.0	ug/L	EPA 8260B	01/23/2003
<b>Methyl-t-butyl ether (MTBE)</b>	<b>1100</b>	50	ug/L	EPA 8260B	01/23/2003
<b>TPH as Gasoline</b>	<b>11000</b>	500	ug/L	EPA 8260B	01/23/2003
Toluene - d8 (Surr)	97.2		% Recovery	EPA 8260B	01/23/2003
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	01/23/2003
<b>TPH as Diesel</b>	<b>&lt; 7000</b>	7000	ug/L	M EPA 8015	01/22/2003
<b>TPH as Motor Oil</b>	<b>&lt; 5000</b>	5000	ug/L	M EPA 8015	01/22/2003

Approved By:  Joel Kiff



Report Number : 31032

Date : 01/28/2003

Project Name : 285 Hegenberger Road, Oakland

Project Number : 030121-DA-1

Sample : MW-2

Matrix : Water

Lab Number : 31032-02

Sample Date :01/21/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Methyl-t-butyl ether (MTBE)	380	5.0	ug/L	EPA 8260B	01/22/2003
TPH as Gasoline	160	50	ug/L	EPA 8260B	01/22/2003
Toluene - d8 (Surr)	109		% Recovery	EPA 8260B	01/22/2003
4-Bromofluorobenzene (Surr)	93.7		% Recovery	EPA 8260B	01/22/2003
TPH as Diesel	72	50	ug/L	M EPA 8015	01/22/2003
TPH as Motor Oil	< 5000	5000	ug/L	M EPA 8015	01/22/2003

Approved By:  Joel Kiff



Report Number : 31032

Date : 01/28/2003

Project Name : 285 Hegenberger Road, Oakland

Project Number : 030121-DA-1

Sample : MW-3

Matrix : Water

Lab Number : 31032-03

Sample Date : 01/21/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Methyl-t-butyl ether (MTBE)	28	5.0	ug/L	EPA 8260B	01/22/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	01/22/2003
Toluene - d8 (Surr)	107		% Recovery	EPA 8260B	01/22/2003
4-Bromofluorobenzene (Surr)	95.2		% Recovery	EPA 8260B	01/22/2003
TPH as Diesel	150	50	ug/L	M EPA 8015	01/23/2003
TPH as Motor Oil	< 5000	5000	ug/L	M EPA 8015	01/23/2003

Approved By:  Joel Kiff



Report Number : 31032

Date : 01/28/2003

Project Name : 285 Hegenberger Road, Oakland

Project Number : 030121-DA-1

Sample : MW-6

Matrix : Water

Lab Number : 31032-04

Sample Date :01/21/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	1.5	0.50	ug/L	EPA 8260B	01/22/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Ethylbenzene	1.4	0.50	ug/L	EPA 8260B	01/22/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Methyl-t-butyl ether (MTBE)	73	5.0	ug/L	EPA 8260B	01/22/2003
TPH as Gasoline	900	50	ug/L	EPA 8260B	01/22/2003
Toluene - d8 (Surr)	98.8		% Recovery	EPA 8260B	01/22/2003
4-Bromofluorobenzene (Surr)	99.4		% Recovery	EPA 8260B	01/22/2003
TPH as Diesel	< 200	200	ug/L	M EPA 8015	01/23/2003
TPH as Motor Oil	< 5000	5000	ug/L	M EPA 8015	01/23/2003

Approved By:  Joel Kiff

Project Name : 285 Hegenberger Road, Oakland

Project Number : 030121-DA-1

Sample : MW-9

Matrix : Water

Lab Number : 31032-05

Sample Date :01/21/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	3100	20	ug/L	EPA 8260B	01/23/2003
Toluene	39	20	ug/L	EPA 8260B	01/23/2003
Ethylbenzene	190	20	ug/L	EPA 8260B	01/23/2003
Total Xylenes	590	20	ug/L	EPA 8260B	01/23/2003
Methyl-t-butyl ether (MTBE)	< 200	200	ug/L	EPA 8260B	01/23/2003
TPH as Gasoline	8500	2000	ug/L	EPA 8260B	01/23/2003
Toluene - d8 (Surr)	99.5		% Recovery	EPA 8260B	01/23/2003
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	01/23/2003
TPH as Diesel	< 400	400	ug/L	M EPA 8015	01/23/2003
TPH as Motor Oil	< 5000	5000	ug/L	M EPA 8015	01/23/2003

Approved By:  Joel Kiff



Report Number : 31032

Date : 01/28/2003

Project Name : 285 Hegenberger Road, Oakland

Project Number : 030121-DA-1

Sample : MW-10

Matrix : Water

Lab Number : 31032-06

Sample Date :01/21/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>13000</b>	100	ug/L	EPA 8260B	01/23/2003
<b>Toluene</b>	<b>2000</b>	100	ug/L	EPA 8260B	01/23/2003
<b>Ethylbenzene</b>	<b>2100</b>	100	ug/L	EPA 8260B	01/23/2003
<b>Total Xylenes</b>	<b>4800</b>	100	ug/L	EPA 8260B	01/23/2003
<b>Methyl-t-butyl ether (MTBE)</b>	<b>&lt; 1000</b>	1000	ug/L	EPA 8260B	01/23/2003
<b>TPH as Gasoline</b>	<b>52000</b>	10000	ug/L	EPA 8260B	01/23/2003
Toluene - d8 (Surr)	98.5		% Recovery	EPA 8260B	01/23/2003
4-Bromofluorobenzene (Surr)	99.0		% Recovery	EPA 8260B	01/23/2003
<b>TPH as Diesel</b>	<b>&lt; 2000</b>	2000	ug/L	M EPA 8015	01/23/2003
<b>TPH as Motor Oil</b>	<b>&lt; 5000</b>	5000	ug/L	M EPA 8015	01/23/2003

Approved By:  Joel Kiff





Report Number : 31032

Date : 01/28/2003

Project Name : 285 Hegenberger Road, Oakland

Project Number : 030121-DA-1

Sample : VEW-5

Matrix : Water

Lab Number : 31032-07

Sample Date :01/21/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>53</b>	0.50	ug/L	EPA 8260B	01/22/2003
<b>Toluene</b>	<b>22</b>	0.50	ug/L	EPA 8260B	01/22/2003
<b>Ethylbenzene</b>	<b>17</b>	0.50	ug/L	EPA 8260B	01/22/2003
<b>Total Xylenes</b>	<b>70</b>	0.50	ug/L	EPA 8260B	01/22/2003
<b>Methyl-t-butyl ether (MTBE)</b>	<b>17</b>	5.0	ug/L	EPA 8260B	01/22/2003
<b>TPH as Gasoline</b>	<b>740</b>	50	ug/L	EPA 8260B	01/22/2003
Toluene - d8 (Surr)	98.0		% Recovery	EPA 8260B	01/22/2003
4-Bromofluorobenzene (Surr)	98.9		% Recovery	EPA 8260B	01/22/2003
<b>TPH as Diesel</b>	<b>1200</b>	50	ug/L	M EPA 8015	01/23/2003
<b>TPH as Motor Oil</b>	<b>&lt; 5000</b>	5000	ug/L	M EPA 8015	01/23/2003

Approved By:  Joel Kiff



Report Number : 31032

Date : 01/28/2003

Project Name : 285 Hegenberger Road, Oakland

Project Number : 030121-DA-1

Sample : VEW-6

Matrix : Water

Lab Number : 31032-08

Sample Date :01/21/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	30	0.50	ug/L	EPA 8260B	01/22/2003
Toluene	1.1	0.50	ug/L	EPA 8260B	01/22/2003
Ethylbenzene	20	0.50	ug/L	EPA 8260B	01/22/2003
Total Xylenes	61	0.50	ug/L	EPA 8260B	01/22/2003
Methyl-t-butyl ether (MTBE)	110	5.0	ug/L	EPA 8260B	01/22/2003
TPH as Gasoline	900	50	ug/L	EPA 8260B	01/22/2003
Toluene - d8 (Surr)	91.4		% Recovery	EPA 8260B	01/22/2003
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	01/22/2003
TPH as Diesel	< 500	500	ug/L	M EPA 8015	01/23/2003
TPH as Motor Oil	< 5000	5000	ug/L	M EPA 8015	01/23/2003

Approved By:  Joel Kiff



Report Number : 31032

Date : 01/28/2003

Project Name : 285 Hegenberger Road, Oakland

Project Number : 030121-DA-1

Sample : VEW-7

Matrix : Water

Lab Number : 31032-09

Sample Date :01/21/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	0.88	0.50	ug/L	EPA 8260B	01/22/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Total Xylenes	4.2	0.50	ug/L	EPA 8260B	01/22/2003
Methyl-t-butyl ether (MTBE)	19	5.0	ug/L	EPA 8260B	01/22/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	01/22/2003
Toluene - d8 (Surr)	90.5		% Recovery	EPA 8260B	01/22/2003
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	01/22/2003
TPH as Diesel	180	50	ug/L	M EPA 8015	01/23/2003
TPH as Motor Oil	< 5000	5000	ug/L	M EPA 8015	01/23/2003

Approved By: Joel Kiff



Report Number : 31032

Date : 01/28/2003

Project Name : 285 Hegenberger Road, Oakland

Project Number : 030121-DA-1

Sample : AS-1

Matrix : Water

Lab Number : 31032-10

Sample Date : 01/21/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	0.62	0.50	ug/L	EPA 8260B	01/22/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	01/22/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	01/22/2003
Toluene - d8 (Surr)	99.1		% Recovery	EPA 8260B	01/22/2003
4-Bromofluorobenzene (Surr)	98.2		% Recovery	EPA 8260B	01/22/2003
TPH as Diesel	220	50	ug/L	M EPA 8015	01/23/2003
TPH as Motor Oil	< 5000	5000	ug/L	M EPA 8015	01/23/2003

Approved By:  Joel Kiff



Report Number : 31032

Date : 01/28/2003

Project Name : 285 Hegenberger Road, Oakland

Project Number : 030121-DA-1

Sample : AS-2

Matrix : Water

Lab Number : 31032-11

Sample Date :01/21/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	1.4	0.50	ug/L	EPA 8260B	01/22/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Ethylbenzene	2.0	0.50	ug/L	EPA 8260B	01/22/2003
Total Xylenes	0.94	0.50	ug/L	EPA 8260B	01/22/2003
Methyl-t-butyl ether (MTBE)	19	5.0	ug/L	EPA 8260B	01/22/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	01/22/2003
Toluene - d8 (Surr)	99.0		% Recovery	EPA 8260B	01/22/2003
4-Bromofluorobenzene (Surr)	91.6		% Recovery	EPA 8260B	01/22/2003
TPH as Diesel	140	50	ug/L	M EPA 8015	01/23/2003
TPH as Motor Oil	< 5000	5000	ug/L	M EPA 8015	01/23/2003

Approved By:  Joel Kiff



Report Number : 31032

Date : 01/28/2003

Project Name : 285 Hegenberger Road, Oakland

Project Number : 030121-DA-1

Sample : AS-3

Matrix : Water

Lab Number : 31032-12

Sample Date :01/21/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	01/23/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/23/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/23/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/23/2003
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	01/23/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	01/23/2003
Toluene - d8 (Surr)	99.2		% Recovery	EPA 8260B	01/23/2003
4-Bromofluorobenzene (Surr)	94.2		% Recovery	EPA 8260B	01/23/2003
TPH as Diesel	320	50	ug/L	M EPA 8015	01/23/2003
TPH as Motor Oil	< 5000	5000	ug/L	M EPA 8015	01/23/2003

Approved By:  Joel Kiff

Report Number : 31032

Date : 01/28/2003

**QC Report : Method Blank Data**

Project Name : **285 Hegenberger Road, Oakland**

Project Number : **030121-DA-1**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 50	50	ug/L	M EPA 8015	01/22/2003
TPH as Motor Oil	< 5000	5000	ug/L	M EPA 8015	01/22/2003
Benzene	< 0.50	0.50	ug/L	EPA 8260B	01/19/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/19/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/19/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/19/2003
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	01/19/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	01/19/2003
Toluene - d8 (Surr)	97.6		%	EPA 8260B	01/19/2003
4-Bromofluorobenzene (Surr)	102		%	EPA 8260B	01/19/2003
Benzene	< 0.50	0.50	ug/L	EPA 8260B	01/23/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/23/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/23/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/23/2003
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	01/23/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	01/23/2003
Toluene - d8 (Surr)	103		%	EPA 8260B	01/23/2003
4-Bromofluorobenzene (Surr)	99.4		%	EPA 8260B	01/23/2003
Benzene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/22/2003
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	01/22/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	01/22/2003
Toluene - d8 (Surr)	100		%	EPA 8260B	01/22/2003
4-Bromofluorobenzene (Surr)	95.9		%	EPA 8260B	01/22/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	01/21/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/21/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/21/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/21/2003
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	01/21/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	01/21/2003
Toluene - d8 (Surr)	91.2		%	EPA 8260B	01/21/2003
4-Bromofluorobenzene (Surr)	100		%	EPA 8260B	01/21/2003

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St. Suite 300 Davis. CA 95616 530-297-4800

## QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : 285 Hegenberger Road,

Project Number : 030121-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
TPH as Diesel	Blank	<50	1000	1000	1010	1020	ug/L	M EPA 8015	1/22/03	101	102	0.364	70-130	25
Benzene	30978-03	<0.50	39.8	40.0	34.5	36.4	ug/L	EPA 8260B	1/19/03	86.5	91.0	5.10	70-130	25
Toluene	30978-03	<0.50	39.8	40.0	34.2	36.3	ug/L	EPA 8260B	1/19/03	85.8	90.8	5.75	70-130	25
Tert-Butanol	30978-03	7.7	199	200	213	207	ug/L	EPA 8260B	1/19/03	103	99.6	3.25	70-130	25
Methyl-t-Butyl Ether	30978-03	310	39.8	40.0	329	330	ug/L	EPA 8260B	1/19/03	55.2	58.0	4.98	70-130	25
Benzene	31029-01	<0.50	55.9	55.9	55.7	55.7	ug/L	EPA 8260B	1/23/03	99.7	99.7	0.00	70-130	25
Toluene	31029-01	<0.50	55.9	55.9	53.8	54.3	ug/L	EPA 8260B	1/23/03	96.3	97.2	0.930	70-130	25
Tert-Butanol	31029-01	960	279	279	1360	1280	ug/L	EPA 8260B	1/23/03	147	118	21.7	70-130	25
Methyl-t-Butyl Ether	31029-01	350	55.9	55.9	386	401	ug/L	EPA 8260B	1/23/03	55.6	83.1	39.7	70-130	25
Benzene	31032-03	<0.50	40.0	40.0	40.6	39.9	ug/L	EPA 8260B	1/22/03	102	99.8	1.66	70-130	25
Toluene	31032-03	<0.50	40.0	40.0	40.6	40.0	ug/L	EPA 8260B	1/22/03	102	100	1.56	70-130	25
Tert-Butanol	31032-03	<5.0	200	200	206	209	ug/L	EPA 8260B	1/22/03	103	105	1.64	70-130	25
Methyl-t-Butyl Ether	31032-03	28	40.0	40.0	73.0	73.2	ug/L	EPA 8260B	1/22/03	112	113	0.489	70-130	25
Benzene	31019-11	<0.50	40.0	40.0	39.1	37.2	ug/L	EPA 8260B	1/21/03	97.6	93.0	4.93	70-130	25
Toluene	31019-11	<0.50	40.0	40.0	36.9	37.6	ug/L	EPA 8260B	1/21/03	92.3	94.0	1.85	70-130	25
Tert-Butanol	31019-11	<5.0	200	200	198	197	ug/L	EPA 8260B	1/21/03	99.1	98.7	0.420	70-130	25
Methyl-t-Butyl Ether	31019-11	<0.50	40.0	40.0	42.5	41.8	ug/L	EPA 8260B	1/21/03	106	104	1.80	70-130	25

Approved By:  Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800



QC Report : Laboratory Control Sample (LCS)

Report Number : 31032

Date : 01/28/2003

Project Name : **285 Hegenberger Road,**

Project Number : **030121-DA-1**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	1/19/03	87.4	70-130
Toluene	40.0	ug/L	EPA 8260B	1/19/03	86.6	70-130
Tert-Butanol	200	ug/L	EPA 8260B	1/19/03	105	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	1/19/03	97.5	70-130
Benzene	20.0	ug/L	EPA 8260B	1/23/03	96.1	70-130
Toluene	20.0	ug/L	EPA 8260B	1/23/03	92.7	70-130
Tert-Butanol	100	ug/L	EPA 8260B	1/23/03	118	70-130
Methyl-t-Butyl Ether	20.0	ug/L	EPA 8260B	1/23/03	87.4	70-130
Benzene	40.0	ug/L	EPA 8260B	1/22/03	92.8	70-130
Toluene	40.0	ug/L	EPA 8260B	1/22/03	105	70-130
Tert-Butanol	200	ug/L	EPA 8260B	1/22/03	91.4	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	1/22/03	102	70-130
Benzene	40.0	ug/L	EPA 8260B	1/21/03	92.8	70-130
Toluene	40.0	ug/L	EPA 8260B	1/21/03	95.1	70-130
Tert-Butanol	200	ug/L	EPA 8260B	1/21/03	96.6	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	1/21/03	102	70-130

KIFF ANALYTICAL, LLC

Approved By: Joel Kiff



**Calscience**  
**Environmental**  
**Laboratories, Inc.**

January 30, 2003

Joel Kiff  
Kiff Analytical  
2795 2nd Street, Suite 300  
Davis, CA 95616-6593

**Subject: Calscience Work Order No.: 03-01-1028**  
**Client Reference: 285 Hegenberger Road, Oakland**

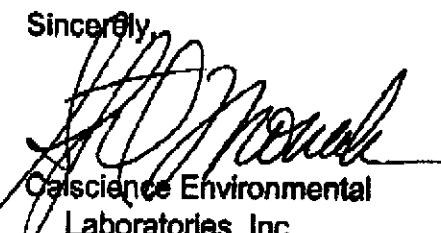
Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 1/22/2003 and analyzed in accordance with the attached chain-of-custody.

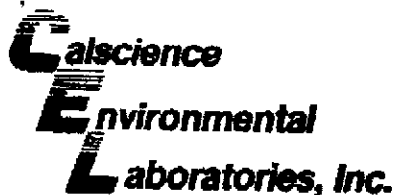
Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The original report of any subcontracted analysis is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

  
Calscience Environmental  
Laboratories, Inc.  
Stephen Nowak  
Project Manager

  
Michael J. Crisostomo  
Quality Assurance Manager



**ANALYTICAL REPORT**

Kiff Analytical  
2795 2nd Street, Suite 300  
Davis, CA 95616-6593

Date Received: 01/22/03  
Work Order No: 03-01-1028  
Preparation: N/A  
Method: EPA 300.0

Project: 285 Hegenberger Road, Oakland

Page 1 of 2

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
MW-1	03-01-1028-1	01/21/03	Aqueous	N/A	01/22/03	030122L01

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Nitrate-N	ND	0.10	1		mg/L	Sulfate	18	10	10	D	mg/L

MW-2	03-01-1028-2	01/21/03	Aqueous	N/A	01/22/03	030122L01
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Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Nitrate-N	0.13	0.10	1		mg/L	Sulfate	99	10	10	D	mg/L

MW-3	03-01-1028-3	01/21/03	Aqueous	N/A	01/22/03	030122L01
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Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Nitrate-N	0.21	0.10	1		mg/L	Sulfate	15	10	10	D	mg/L

MW-4	03-01-1028-4	01/21/03	Aqueous	N/A	01/22/03	030122L01
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Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Nitrate-N	0.11	0.10	1		mg/L	Sulfate	56	10	10	D	mg/L

MW-5	03-01-1028-5	01/21/03	Aqueous	N/A	01/22/03	030122L01
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Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Nitrate-N	ND	0.10	1		mg/L	Sulfate	3.1	1.0	1		mg/L

MW-10	03-01-1028-6	01/21/03	Aqueous	N/A	01/22/03	030122L01
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Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Nitrate-N	ND	0.10	1		mg/L	Sulfate	ND	1.0	1		mg/L

VEW-3	03-01-1028-7	01/21/03	Aqueous	N/A	01/22/03	030122L01
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Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Nitrate-N	0.11	0.10	1		mg/L	Sulfate	150	100	100	D	mg/L

VEW-6	03-01-1028-8	01/21/03	Aqueous	N/A	01/22/03	030122L01
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Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Nitrate-N	0.18	0.10	1		mg/L	Sulfate	130	100	100	D	mg/L

RL - Reporting Limit    DF - Dilution Factor    Qual - Qualifiers

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**ANALYTICAL REPORT**

Kiff Analytical  
2795 2nd Street, Suite 300  
Davis, CA 95616-8593

Date Received: 01/22/03  
Work Order No: 03-01-1028  
Preparation: N/A  
Method: EPA 300.0

Project: 285 Hegenberger Road, Oakland

Page 2 of 2

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
VEW-7	03-01-1028-9	01/21/03	Aqueous	N/A	01/22/03	030122L01

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Nitrate-N	5.4	1.0	10	D	mg/L	Sulfate	360	100	100	D	mg/L

AS-1	03-01-1028-10	01/21/03	Aqueous	N/A	01/22/03	030122L01
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Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Nitrate-N	0.88	0.50	5		mg/L	Sulfate	1800	500	500	D	mg/L

AS-2	03-01-1028-11	01/21/03	Aqueous	N/A	01/22/03	030122L01
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Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Nitrate-N	ND	2.0	20		mg/L	Sulfate	7400	2000	2000	D	mg/L

AS-3	03-01-1028-12	01/21/03	Aqueous	N/A	01/22/03	030122L01
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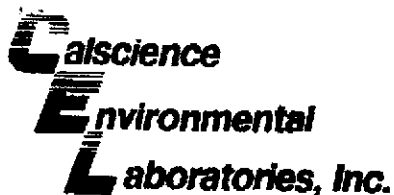
Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Nitrate-N	1.5	1.0	10		mg/L	Sulfate	7000	2000	2000	D	mg/L

Method Blank	03-05-118-1,395	N/A	Aqueous	N/A	01/22/03	030122L01
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Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Nitrate-N	ND	0.10	1		mg/L	Sulfate	ND	1.0	1		mg/L

RL - Reporting Limit    DF - Dilution Factor    Qual - Qualifiers

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## ANALYTICAL REPORT

Kiff Analytical  
2795 2nd Street, Suite 300  
Davis, CA 95616-6593

Date Received: 01/22/03  
Work Order No: 03-01-1028  
Preparation: N/A  
Method: SM3600-FeD

Project: 285 Hegenberger Road, Oakland

Page 1 of 2

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
MW-1	03-01-1028-1	01/21/03	Aqueous	N/A	01/22/03	30122FEL1

Parameter	Result	RL	DF	Qual	Units
Iron (II)	4.1	0.1	1		mg/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
MW-2	03-01-1028-2	01/21/03	Aqueous	N/A	01/22/03	30122FEL1

Parameter	Result	RL	DF	Qual	Units
Iron (II)	ND	0.10	1		mg/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
MW-3	03-01-1028-3	01/21/03	Aqueous	N/A	01/22/03	30122FEL1

Parameter	Result	RL	DF	Qual	Units
Iron (II)	ND	0.10	1		mg/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
MW-4	03-01-1028-4	01/21/03	Aqueous	N/A	01/22/03	30122FEL1

Parameter	Result	RL	DF	Qual	Units
Iron (II)	0.73	0.10	1		mg/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
MW-5	03-01-1028-5	01/21/03	Aqueous	N/A	01/22/03	30122FEL1

Parameter	Result	RL	DF	Qual	Units
Iron (II)	ND	0.10	1		mg/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
MW-10	03-01-1028-6	01/21/03	Aqueous	N/A	01/22/03	30122FEL1

Parameter	Result	RL	DF	Qual	Units
Iron (II)	ND	0.10	1		mg/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
VEW-5	03-01-1028-7	01/21/03	Aqueous	N/A	01/22/03	30122FEL1

Parameter	Result	RL	DF	Qual	Units
Iron (II)	ND	0.10	1		mg/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
VEW-6	03-01-1028-8	01/21/03	Aqueous	N/A	01/22/03	30122FEL1

Parameter	Result	RL	DF	Qual	Units
Iron (II)	ND	0.10	1		mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

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**ANALYTICAL REPORT**

Kiff Analytical  
2795 2nd Street, Suite 300  
Davis, CA 95616-6593

Date Received: 01/22/03  
Work Order No: 03-01-1028  
Preparation: N/A  
Method: SM3500-FeD

Project: 285 Hegenberger Road, Oakland

Page 2 of 2

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
VEW-7	03-01-1028-9	01/21/03	Aqueous	N/A	01/22/03	30122FEL1

Parameter	Result	RL	DF	Qual	Units
Iron (II)	ND	0.10	1		mg/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
AS-1	03-01-1028-10	01/21/03	Aqueous	N/A	01/22/03	30122FEL1

Parameter	Result	RL	DF	Qual	Units
Iron (II)	ND	0.10	1		mg/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
AS-2	03-01-1028-11	01/21/03	Aqueous	N/A	01/22/03	30122FEL1

Parameter	Result	RL	DF	Qual	Units
Iron (II)	ND	0.10	1		mg/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
AS-3	03-01-1028-12	01/21/03	Aqueous	N/A	01/22/03	30122FEL1

Parameter	Result	RL	DF	Qual	Units
Iron (II)	ND	0.10	1		mg/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	099-08-111-1,320	N/A	Aqueous	N/A	01/22/03	30122FEL1

Parameter	Result	RL	DF	Qual	Units
Iron (II)	ND	0.10	1		mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

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**Quality Control - Spike/Spike Duplicate**

Kiff Analytical  
 2795 2nd Street, Suite 300  
 Davis, CA 95616-6593

Date Received: 01/22/03  
 Work Order No: 03-01-1028  
 Preparation: N/A  
 Method: SM3500-FeD

Project: 285 Hegenberger Road, Oakland

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
NW-3	Aqueous	UV 2	N/A	01/22/03	30122FE01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Iron (II)	99	103	70-130	4	0-25	



**Quality Control - Laboratory Control Sample**

Kiff Analytical  
 2795 2nd Street, Suite 300  
 Davis, CA 95616-6593

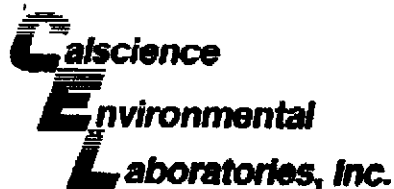
Date Received: 01/22/03  
 Work Order No: 03-01-1028  
 Preparation: N/A  
 Method: SM3500-FeD

Project: 285 Hegenberger Road, Oakland

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	Lab File ID	LCS Batch Number
099-05-111-1,320	Aqueous	UV 2	01/22/03	NONE	30122FEL1

Parameter	Conc Added	Conc Recovered	%Rec	%Rec CL	Qualifier
Iron (II)	1.0	1.0	102	80-120	





**Quality Control - Spike/Spike Duplicate**

Kiff Analytical  
 2795 2nd Street, Suite 300  
 Davis, CA 95616-6593

Date Received: 01/22/03  
 Work Order No: 03-01-1028  
 Preparation: N/A  
 Method: EPA 300.0

Project: 285 Hegenberger Road, Oakland

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-1	Aqueous	IC 2	N/A	01/22/03	030122301

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Nitrate-N	97	98	50-150	1	0-25	
Sulfate	109	107	60-150	2	0-25	



**Quality Control - LCS/LCS Duplicate**

Kiff Analytical  
 2795 2nd Street, Suite 300  
 Davis, CA 95618-6593

Date Received: 01/22/03  
 Work Order No: 03-01-1028  
 Preparation: N/A  
 Method: EPA 300.0

Project: 285 Hegenberger Road, Oakland

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
089-05-118-1,595	Aqueous	IC 2	N/A	01/22/03	030122L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Nitrate-N	99	99	80-120	0	0-25	
Sulfate	109	108	80-120	0	0-25	

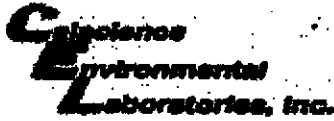
**C**alscience **GLOSSARY OF TERMS AND QUALIFIERS**  
**E**nvironmental  
**L**aboratories, Inc.

Work Order Number: 03-01-1028

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<u>Qualifier</u>	<u>Definition</u>
D	The sample data was reported from a diluted analysis.
ND	Not detected at indicated reporting limit.





WORK ORDER #: 03-01-1028

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: KIFF

DATE: 01/22/03

**TEMPERATURE - SAMPLES RECEIVED BY:**

**CALSCIENCE COURIER:**

Chilled, cooler with temperature blank provided.

Chilled, cooler without temperature blank.

Chilled and placed in cooler with wet ice.

Ambient and placed in cooler with wet ice.

Ambient temperature.

°C Temperature blank.

**LABORATORY (Other than Calscience Courier):**

°C Temperature blank.

°C IR thermometer.

Ambient temperature.

Initial: Th

**CUSTODY SEAL INTACT:**

Sample(s): \_\_\_\_\_ Cooler:  No (Not Intact): \_\_\_\_\_ Not Applicable (N/A): \_\_\_\_\_

Initial: Th

**SAMPLE CONDITION:**

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with custody papers.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Correct containers for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper preservation noted on sample label(s).....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VOA vial(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Initial: Th

**COMMENTS:**

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2795 Second Street, Suite 300  
 Davis, CA 95616  
 Lab: 530.297.4800  
 Fax: 530.297.4808

Cal Science Environmental  
 7440 Lincoln Way  
 Garden Grove, CA 92841  
 714-895-5494

Lab No. **1028**

Page 1 of 2

Project Contact (Hardcopy or PDF to):

Joel Kiff

EDF Report?  Yes  No

**Chain-of-Custody Record and Analysis Request**

Company/Address:

Kiff Analytical, LLC

Recommended but not mandatory to complete this section:

Sampling Company Log Code: **BTSS**

**Analysis Request**

Phone No.:

FAX No.:

Global ID: **T0600101245**

Project Number:

**030121-DA-1**

P.O. No.:

**31032**

EDF Deliverable to (Email Address):

**inbox@kiffanalytical.com**

Project Name:

**285 Hegenberger Road, Oakland**

E-mail address:

**inbox@kiffanalytical.com**

Project Address:

**Sample Designation**

Sampling

Date

Time

Container

Preservative

Matrix

Glass Jar

Poly

Amber

Sleeve

HCl

HNO3

ICE

NONE

WATER

SOIL

NITRATE

SULFATE

FERROUS IRON, FIELD FILTERED

Date Due:

February 4, 2003

For Lab Use Only

MW-1

1/21/2003 1250

1

1

X

X

X

X

X

X

MW-2

1/21/2003 1235

1

1

X

X

X

X

X

X

MW-3

1/21/2003 1220

1

1

X

X

X

X

X

X

MW-6

1/21/2003 1050

1

1

X

X

X

X

X

X

MW-9

1/21/2003 1340

1

1

X

X

X

X

X

X

MW-10

1/21/2003 1315

1

1

X

X

X

X

X

X

VEW-5

1/21/2003 1045

1

1

X

X

X

X

X

X

VEW-6

1/21/2003 1118

1

1

X

X

X

X

X

X

VEW-7

1/21/2003 1234

1

1

X

X

X

X

X

X

Relinquished by:

*Osama Albalan*

Date

1/21/03

Time

1901

Received by:

Remarks:

FERROUS IRON FIELD FILTERED (NP AMBER)

Relinquished by:

Date

Time

Received by:

Relinquished by:

Date

1/22/03

Time

870

Received by laboratory:

*[Signature]*

Bill to:

INCIDENT# 98995749



CHIEF Chain of Custody Record

Lap Identification (if necessary):

Address:

City, State, Zip:

Shell Project Manager to be invoiced:

Karen Petryna

31032

SCIENCE & ENGINEERING  
 TECHNICAL SERVICES  
 CRMT HOUSTON

INCIDENT NUMBER (S&E ONLY)

9 8 9 9 5 7 4 9

SAP or CRMT NUMBER (TS/CRMT)

DATE: 12/1/03

PAGE: 1 of 2

SAMPLING COMPANY: Blaine Tech Services  
 ADDRESS: 1680 Rogers Avenue, San Jose, CA 95112  
 PROJECT CONTACT (Hardcopy or PDF Report to): Leon Gearhart  
 TELEPHONE: 408-573-0555 FAX: 408-573-7771 E-MAIL: lgearhart@blainetech.com  
 LOG CODE: BTSS  
 SITE ADDRESS (Street and City): 285 Hegenberger Road, Oakland  
 EDI DELIVERABLE TO (Responsible Party or Designee): Anni Kremi  
 PHONE NO.: 510-420-3335  
 E-MAIL: akremi@cambria-env.com  
 GLOBAL ID NO.: T0600101245  
 CONSULTANT PROJECT NO.: 030121-DA-1  
 BTS #

David Albut Ryan Hanstedt

REQUESTED ANALYSIS

TURNAROUND TIME (BUSINESS DAYS):  
 10 DAYS  5 DAYS  72 HOURS  48 HOURS  24 HOURS  LESS THAN 24 HOURS  
 LA - RWQCB REPORT FORMAT  LST AGENCY:  
 GC/MS MTBE CONFIRMATION: HIGHEST \_\_\_\_\_ HIGHEST per BORING \_\_\_\_\_ ALL \_\_\_\_\_  
 SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED   
 Ferrous Iron Field Filtered (Not Amber)

FIELD NOTES:

Container/Preservative or PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	1,2-DCA (8260B)	EDB (8260B)	TPH - Diesel, Extractable (8015m)	TPH-Motor Oil	Nitrate 3 cphr. held	Sulfate 3	Ferrous Iron Field Filtered	MTBE (8260B) Confirmation, See Note	TEMPERATURE ON RECEIPT C°	
		DATE	TIME																			
/	MW-1	11/20/03	1250	W	3	X	X	X							X	X	X	X	X			-01
/	MW-2		1235			X	X	X							X	X	X	X	X			-02
/	MW-3		1220			X	X	X							X	X	X	X	X			-03
/	MW-6		1050			X	X	X							X	X	X	X	X			-04
/	MW-9		1340			X	X	X							X	X	X	X	X			-05
/	MW-10		1315			X	X	X							X	X	X	X	X			-06
/	VEW-5		1045			X	X	X							X	X	X	X	X			1-06 Unpreserved v.o.a
/	VEW-6		1118			X	X	X							X	X	X	X	X			-07
/	VEW-7		1234			X	X	X							X	X	X	X	X			-08
						X	X	X							X	X	X	X	X			-09

Relinquished by (Signature): David Albut  
 Received by (Signature): [Signature]  
 Date: 01/21/03 Time: 1425

Relinquished by (Signature): [Signature]  
 Received by (Signature): [Signature]  
 Date: Time:

Relinquished by (Signature): [Signature]  
 Received by (Signature): [Signature]  
 Date: Time:

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client

C&O Graphic (714) 898-9702





# WELL GAUGING DATA

Project # 030121-DA-1 Date 1/21/03 Client Shell

Site 285 Hegenberger Rd. Oakland, CA

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 TOC
MW-1	4					3.50	9.36	TOC
MW-2	4					4.11	9.60	
MW-3	4					4.30	9.87	
MW-4	4					3.87	10.17	
MW-6	4					<del>3.08</del> <sup>4.39</sup>	10.97	
MW-8	4					3.98	9.88	
MW-9	4					4.52	10.76	
MW-10	4					5.72	10.03	
MW-11	4					7.57	13.86	
MW-12	4					5.76	14.41	
MW-13	4					6.99	14.65	
VEW-5	4					2.06	9.54	
VEW-6	4					3.03	9.94	
VEW-7	4					3.27	9.76	
AS-1	1					9.51	14.78	
AS-2	1					9.32	15.00	
AS-3	1					11.59	14.91	

## SHELL WELL MONITORING DATA SHEET

3TS#: 030121-DA-1	Site: 285 Hegenberger Rd. Oakland, CA
Sampler: RH	Date: 1/21/03
Well I.D.: mw-1	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 9.36	Depth to Water (DTW): 3.50
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.67	

Purge Method: Bailer	Water: Peristaltic	Sampling Method: Bailer
Disposable Bailer	Extraction Pump	<u>Disposable Bailer</u>
Middlebury	Other: _____	Extraction Port
<u>Electric Submersible</u>		Dedicated Tubing
		Other: _____

$\frac{3.8 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = \frac{11.4}{\text{Calculated Volume}} \text{ Gals.}$	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <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. (mS or <u>µS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
1107	65.2	6.8	1921	20.2	3.8	clear, odor
1109	65.2	6.8	1836	15.5	7.6	clear
	Well dewatered @ 10.0 gal					DTW = 7.18
1250	64.4	6.9	1380	35.3	10.0	clear

Did well dewater? Yes No      Gallons actually evacuated: 10.0

Sampling Date: 1/21/03      Sampling Time: 1250      Depth to Water: 3.27

Sample I.D.: mw-1      Laboratory: Kaff SPL Other: \_\_\_\_\_

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

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

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

D.O. (if req'd): <u>Pre-purge:</u> 0.3 mg/L	Post-purge: 0.7 mg/L
O.R.P. (if req'd): <u>Pre-purge:</u> -92 mV	Post-purge: -107 mV

## SHELL WELL MONITORING DATA SHEET

BTS #: 030121-DA-1	Site: 285 Hegenberger Rd. Oakland, CA
Sampler: RH	Date: 1/21/03
Well I.D.: mw-2	Well Diameter: 2 3 (4) 6 8
Total Well Depth (TD): 9.60	Depth to Water (DTW): 4.11
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.21	

Purge Method: Bailer Disposable Bailer Middleburg Electric Submersible	Waterra Peristaltic Extraction Pump Other _____	Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____
---	--	---

$\frac{3.6 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = \frac{10.8}{\text{Calculated Volume}} \text{ Gals.}$	<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>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. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
10:18	63.6	6.8	1238	50.2	3.6	clear
10:19	63.9	6.8	1297	20.3	7.2	"
<del>10:20</del> 10:22	64.0	6.8	1325	27.6	10.8	"

Did well dewater? Yes  No  Gallons actually evacuated: 10.8

Sampling Date: 1/21/03 Sampling Time: 1235 Depth to Water: 4.38

Sample I.D.: mw-2 Laboratory: Kiff SPL Other \_\_\_\_\_

Analyzed for: ~~TPH-G~~ BTEX MTBE TPH-D Other: See scope

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:	0.5	mg/L	Post-purge:	1.0	mg/L
O.R.P. (if req'd):	Pre-purge:	40	mV	Post-purge:	3	mV

## SHELL WELL MONITORING DATA SHEET

BTS #: 030121-DA-1	Site: 285 Hegenbergov Rd. Oakland, CA
Sampler: RH	Date: 1/21/03
Well I.D.: mw-3	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 9.87	Depth to Water (DTW): 4.30
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.41	

Purge Method: <u>Bailer</u>	Water: <u>Peristaltic</u>	Sampling Method: <u>Bailer</u>
Disposable Bailer	Extraction Pump	<u>Disposable Bailer</u>
Middleburg	Other: _____	Extraction Port
<u>Electric Submersible</u>		Dedicated Tubing
		Other: _____

$\frac{3.6 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = \frac{10.8}{\text{Calculated Volume}} \text{ Gals.}$	<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>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. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
955	61.6	7.1	941	27.1	3.6	clear
956	62.1	7.0	918	24.0	6.2	"
957	62.7	7.0	756	15.4	10.8	"

Did well dewater? Yes  No  Gallons actually evacuated: 10.8

Sampling Date: 1/21/03      Sampling Time: 1220      Depth to Water: 4.42

Sample I.D.: mw-3      Laboratory: KIT      SPL      Other: \_\_\_\_\_

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

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: 1.4 1.2 mg/L      Post-purge: 1.0 mg/L

O.R.P. (if req'd): Pre-purge: 164 mV      Post-purge: 3.0 mV

## SHELL WELL MONITORING DATA SHEET

3TS #: 030121-DA-1	Site: 285 Hegenberger Rd, Oakland, CA
Sampler: RH	Date: 1/21/03
Well I.D.: mw-6	Well Diameter: 2 3 (4) 6 8
Total Well Depth (TD): 10.37	Depth to Water (DTW): 4.39
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.59	

Purge Method: Bailer Disposable Bailer Middleburg <u>Electric Submersible</u>	Water: Peristaltic Extraction Pump Other _____	Sampling Method: Bailer <u>Disposable Bailer</u> Extraction Port Dedicated Tubing Other: _____
--	--	--

<u>3.9</u> (Gals.) X <u>3</u> = <u>11.7</u> Gals.																	
I 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>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. (mS or <u>µS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
1037	62.1	7.4	1046	84.9	3.9	Clear
1038	61.6	7.0	970	37.2	7.8	"
1040	61.4	6.8	928	14.9	11.7	"

Did well dewater? Yes  No  Gallons actually evacuated: 11.7

Sampling Date: 1/21/03      Sampling Time: 1050      Depth to Water: 5.50

Sample I.D.: mw-6      Laboratory: (Kiff) SPL Other \_\_\_\_\_

Analyzed for: ~~TPH-G~~ ~~BTEX~~ ~~MTBE~~ ~~TPH-D~~ Other: see scope

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 0.8 mg/L      Post-purge: 0.6 mg/L

O.R.P. (if req'd): Pre-purge 15 mV      Post-purge: -27 mV

## SHELL WELL MONITORING DATA SHEET

3TS #: 030121-DA-1	Site: 285 Hegenberger Rd, Oakland, CA
Sampler: RH	Date: 1/21/03
Well I.D.: MW-9	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 10.76	Depth to Water (DTW): 4.52
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): <u>YSI</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.77	

Purge Method: <u>Boiler</u> Disposable Boiler Middleburg <u>Electric Submersible</u>	Waterra Peristaltic Extraction Pump Other: _____	Sampling Method: <u>Boiler</u> <u>Disposable Boiler</u> Extraction Port Dedicated Tubing Other: _____
---	---	---

4.0 (Gals.) X 3 = 12.0 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. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1123	64.5	7.1	2734	12.4	4.0	yellow, odor
						Well dewatered @ 5.0 gal DTW = 8.50
1340	63.6	7.2	2883	23.8	5.0	yellow

Did well dewater? Yes No      Gallons actually evacuated: 5.0

Sampling Date: 1/21/03      Sampling Time: 1340      Depth to Water: 6.93 counter

Sample I.D.: MW-9      Laboratory: Kirt SPL Other: \_\_\_\_\_

Analyzed for: ~~TPH-E~~ ~~BTEX~~ ~~MTBE~~ ~~TPH-D~~ Other: See Scope

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: 0.4 mg/L      Post-purge: 0.8 mg/L

O.R.P. (if req'd): Pre-purge: -102 mV      Post-purge: -113 mV

## SHELL WELL MONITORING DATA SHEET

BTS #: 030121-DA-1	Site: 285 Hegenberger Rd, Oakland, CA
Sampler: RH	Date: 1/21/03
Well I.D.: mw-10	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 10.03	Depth to Water (DTW): 5.72
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>6.58</u>	

Purge Method: <u>Bailer</u> Disposable Bailer Middleburg <u>Electric Submersible</u>	Waterra Peristaltic Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> <u>Disposable Bailer</u> Extraction Port Dedicated Tubing Other: _____
---	---	---

$2.8 \text{ (Gals.)} \times 3 = 8.4 \text{ Gals.}$	<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>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														
Case Volume	Specified Volumes	Calculated Volume															

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1137	65.7	7.0	2986	19.5	2.8	slightly yellow, odor
	Well dewatered @ 3.5 gal					DTW = 7.64
1315	64.0	7.2	2864	12.6	3.5	yellow, odor

Did well dewater? Yes No      Gallons actually evacuated: 3.5

Sampling Date: 1/21/03      Sampling Time: 1315      Depth to Water: 5.88

Sample I.D.: mw-10      Laboratory: Kiff      SPL      Other: \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D      Other: see scope      Note: unpreserved voc

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

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

D.O. (if req'd):	<u>Pre-purge:</u>	<u>0.9</u> mg/L	<u>Post-purge:</u>	<u>0.6</u> mg/L
O.R.P. (if req'd):	<u>Pre-purge:</u>	<u>-88</u> mV	<u>Post-purge:</u>	<u>-113</u> mV

## SHELL WELL MONITORING DATA SHEET

BTS #: 030121-DA-1	Site: 285 Hegenbergov Rd, Oakland, CA
Sampler: David A.	Date: 1/21/03
Well I.D.: VEW-7	Well Diameter: 2 3 <input checked="" type="radio"/> 6 8
Total Well Depth (TD): 9.76	Depth to Water (DTW): 3.27
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="radio"/> PVO Grade	D.O. Meter (if req'd): <input checked="" type="radio"/> SP HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.57	

Purge Method:	Bailer Disposable Bailer Middleburg Electric Submersible	Water Peristaltic Extraction Pump Other: <u>dedicated 5/8" tubing w/ check valve</u>	Sampling Method:	Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: <u>same as purge</u>
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$$2.4 \text{ (Gals.)} \times 3 = 7.2 \text{ Gals.}$$
 Case Volume      Specified Volumes      Calculated Volume

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

Time	Temp (°F)	pH	Cond. (mS or <input checked="" type="radio"/> µS)	Turbidity (NTUs)	Gals. Removed	Observations
1220	64.3	8.4	3089	7200	2.5	tan, cloudy
1223	64.3	8.3	2650	7200	5	"
1227	64.7	8.2	2617	7200	7.5	"

Did well dewater? Yes  No      Gallons actually evacuated: 7.5

Sampling Date: 1/21/03      Sampling Time: 1234      Depth to Water: 4.57

Sample I.D.: VEW-7      Laboratory:  CIB      SPL      Other: \_\_\_\_\_

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

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: 0.3 <sup>mg/l</sup>      Post-purge: 0.8 <sup>mg/l</sup>

O.R.P. (if req'd): Pre-purge: -127 mV      Post-purge: -119 mV



## SHELL WELL MONITORING DATA SHEET

BTS#: 030121-DA-1	Site: 285 Hegenberger Rd, Oakland, CA
Sampler: David A	Date: 1/21/03
Well I.D.: AS-1	Well Diameter: 2 3 4 6 8 <u>1</u>
Total Well Depth (TD): 14.78	Depth to Water (DTW): 9.51
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"/> YSD <input type="checkbox"/> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.576	

Purge Method: <input type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Middleburg <input type="checkbox"/> Electric Submersible	Water: <input type="checkbox"/> Peristaltic <input type="checkbox"/> Extraction Pump Other: <u>5/8" tubing w/ check valve</u>	Sampling Method: <input type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Extraction Port <input type="checkbox"/> Dedicated Tubing Other: <u>pin bailer</u>
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<u>0.2</u> (Gals.) X <u>3</u> = <u>0.6</u> Gals.	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="border: none;">Well Diameter</th> <th style="border: none;">Multiplier</th> <th style="border: none;">Well Diameter</th> <th style="border: none;">Multiplier</th> </tr> </thead> <tbody> <tr> <td style="border: none;">1"</td> <td style="border: none;">0.04</td> <td style="border: none;">4"</td> <td style="border: none;">0.65</td> </tr> <tr> <td style="border: none;">2"</td> <td style="border: none;">0.16</td> <td style="border: none;">6"</td> <td style="border: none;">1.47</td> </tr> <tr> <td style="border: none;">3"</td> <td style="border: none;">0.37</td> <td style="border: none;">Other</td> <td style="border: none;">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														
I Case Volume	Specified Volumes	Calculated Volume															

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
1024	64.8	8.5	8173	65	0.2	cloudy
1027	63.7	8.6	8505	186	0.4	"
1050	63.7	8.5	8515	203	0.6	"
						DTW=12.48

Did well dewater? Yes  No  Gallons actually evacuated: 0.6

Sampling Date: 1/21/03 Sampling Time: 1315 Depth to Water: 13.46 @ site departure

Sample I.D.: AS-1 Laboratory:  MTP  SPL Other: \_\_\_\_\_

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

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>2.5</u>	mg/l
O.R.P. (if req'd):	Pre-purge:	<u>36</u>	mV	Post-purge:	<u>40</u>	mV

## SHELL WELL MONITORING DATA SHEET

BTS #: 030121-DA-1	Site: 285 Hegenbergov Rd. Oakland, CA
Sampler: David A.	Date: 1/21/03
Well I.D.: AS-2	Well Diameter: 2 3 4 6 8 <u>1</u>
Total Well Depth (TD): 15.00	Depth to Water (DTW): 9.32
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(KVP)</u> Grade	D.O. Meter (if req'd): <u>(VSP)</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.46	

Purge Method: Bailer	Water: Peristaltic	Sampling Method: Bailer	Disposal: Disposable Bailer
Disposal: Middleburg	Extraction: Extraction Pump	Disposal: Extraction Port	Disposal: Dedicated Tubing
Disposal: Electric Submersible	Other: <u>5/8" tubing w/ check valve</u>	Other: <u>same as purge</u>	

$0.2 \text{ (Gals.)} \times 3 = 0.6 \text{ Gals.}$ 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>4"</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	4"	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														
4"	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. (mS or <del>µS</del> )	Turbidity (NTUs)	Gals. Removed	Observations
1132	66.4	8.1	57.60	7200	0.2	tan, cloudy
1134	66.7	8.1	58.74	7200	0.4	"
1136	67.0	8.1	58.66	7200	0.6	"

Did well dewater? Yes  No  Gallons actually evacuated: 0.6

Sampling Date: 1/21/03      Sampling Time: 1140      Depth to Water: 9.45

Sample I.D.: AS-2      Laboratory: (KVP)      SPL      Other \_\_\_\_\_

Analyzed for: (TPH-G) (BTEX) (MTBE) (TPH-D)      Other: see scope

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>1.4</u> mg/L	Post-purge: <u>1.6</u> mg/L	
D.R.P. (if req'd):	Pre-purge: <u>-529</u> mV	Post-purge: <u>43</u> mV	

## SHELL WELL MONITORING DATA SHEET

BTS #: 030121-DA-1	Site: 285 Hegenberger Rd, Oakland, CA
Sampler: DA	Date: 11/21/03
Well I.D.: AS-3	Well Diameter: 2 3 4 6 8 <u>1</u>
Total Well Depth (TD): 14.01	Depth to Water (DTW): 11.59
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
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.25	

Purge Method: Bailer	Water: Waterra	Sampling Method: Bailer
Disposable Bailer	Peristaltic	Disposable Bailer
Middleburg	Extraction Pump	Extraction Port
Electric Submersible	Other <u>5/8" tubing w/ check valve</u>	<input checked="" type="checkbox"/> Dedicated Tubing
	Other:	

$\frac{0.1 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = 0.3 \text{ Gals.}$	<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>4"</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> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	4"	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															
4"	0.04	4"	0.65															
2"	0.16	6"	1.47															
3"	0.37	Other	radius <sup>2</sup> * 0.163															
I Case Volume	Specified Volumes	Calculated Volume																

Time	Temp (°F)	pH	Cond. (µS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1250	66.8	8.7	23.43	159	0.1	cloudy
1251	67.9	8.7	24.54	73	0.2	clearing
1252	66.3	8.7	24.75	55	0.3	"

Did well dewater? Yes  No  Gallons actually evacuated: 0.3

Sampling Date: 11/21/03      Sampling Time: 1259      Depth to Water: 12.25

Sample I.D.: AS-3      Laboratory:  GTF SPL Other \_\_\_\_\_

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

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: <u>2.2</u> mg/L	Post-purge: <u>1.1</u> mg/L	
O.R.P. (if req'd):	Pre-purge: <u>-506</u> mV	Post-purge: <u>62</u> mV	