

20-156

# C A M B R I A

April 7, 2003

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

Alameda County  
APR 09 2003  
Environmental Health

Re: **First Quarter 2003 Monitoring Report**  
Shell-branded Service Station  
1285 Bancroft Avenue  
San Leandro, California  
Incident #98996067  
Cambria Project #245-0504-002



Dear Ms. chu:

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.

## REMEDIATION SUMMARY

Dual-phase vapor extraction (DVE) is the process of applying high vacuum through an airtight well seal to simultaneously extract soil vapors from the vadose zone and to enhance groundwater extraction from the saturated zone. In November 2000, Cambria initiated monthly mobile DVE on wells MW-5 and MW-6 to facilitate hydrocarbon and oxygenate removal from groundwater and the vadose zones. To date, approximately 9.1 pounds of liquid-phase total petroleum hydrocarbons as gasoline (TPHg), 0.46 pounds of liquid-phase methyl tertiary butyl ether (MTBE), 36.3 pounds of vapor-phase TPHg and 0.51 pounds of vapor-phase MTBE have been removed from the subsurface.

## FIRST QUARTER 2003 ACTIVITIES

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

**Cambria  
Environmental  
Technology, Inc.**

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

**DVE:** During the first quarter of 2003, PSC Industrial Services of Benicia, California performed monthly mobile DVE using wells MW-5 and MW-6. Cambria tabulated the groundwater and vapor-extraction mass removal data (Tables 1 and 2) and prepared graphs depicting groundwater monitoring and extraction data for the target wells (Figures 3 and 4).

**Agency Correspondence:** On February 20, 2003 Cambria received a letter from Alameda County Health Care Services Agency (ACHCSA) dated February 6, 2003. The letter contained technical comments regarding the historical, current and proposed characterization of the site. Cambria requested, and was granted, an extension until April 7, 2003 to respond to the letter.



**Proposed Offsite Monitoring Well Installation:** Cambria submitted a *Subsurface Investigation Work Plan* dated October 15, 2002 proposing to install two offsite monitoring wells to further define the extent of the MTBE and hydrocarbon plume. In the February 6, 2003 letter referenced above, ACHCSA requested an amended work plan to advance soil borings prior to installing monitoring wells. Cambria will submit the requested *Subsurface Investigation Work Plan Amendment* no later than April 7, 2003.

**ANTICIPATED SECOND QUARTER 2003 ACTIVITIES**

**Groundwater Monitoring:** Blaine will gauge and sample all wells, measure DO concentrations in all wells, and tabulate the data. Cambria will prepare a monitoring report.

**Additional Groundwater Sample Analysis:** As requested ACHCSA's February 6, 2003 letter, the samples collected in the second quarter of 2003 will be analyzed for tert-amyl methyl ether (TAME), ethyl tert-butyl ether (ETBE), di-isopropyl ether (DIPE), tert-butyl alcohol (TBA), ethanol, ethylene dibromide (EDB) and ethylene dichloride (1,2-DCA). Chemicals will be analyzed using the following laboratory reporting limits:

TPHg	50 parts per billion (ppb)	Benzene	0.5 ppb
Toluene	0.5 ppb	Ethylbenzene	0.5 ppb
Xylenes	1.0 ppb	MTBE	0.5 ppb
TAME	2.0 ppb	ETBE	2.0 ppb
DIPE	2.0 ppb	TBA	2.0 ppb
Ethanol	50 ppb	EDB	0.5 ppb
1,2 DCA	0.5 ppb		

**Mobile DVE:** Mobile DVE will be performed monthly in the second quarter using wells MW-5 and MW-6.

**Subsurface Investigation Work Plan Amendment:** Cambria will submit the *Subsurface Investigation Work Plan Amendment* requested in ACHCSA's February 6, 2003 letter no later than April 7, 2003.

**Agency Correspondence:** Cambria will respond to the technical comments contained in the February 6, 2003 ACHCSA letter no later than April 7, 2003.



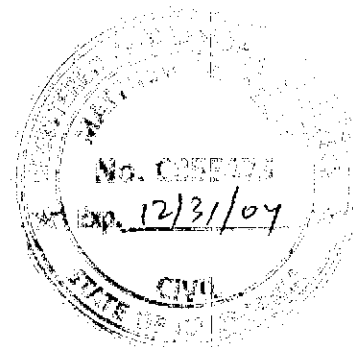
## CLOSING

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

Sincerely,  
**Cambria Environmental Technology, Inc**

Melody Munz  
Project Engineer

Matthew W. Derby, P.E.  
Senior Project Engineer

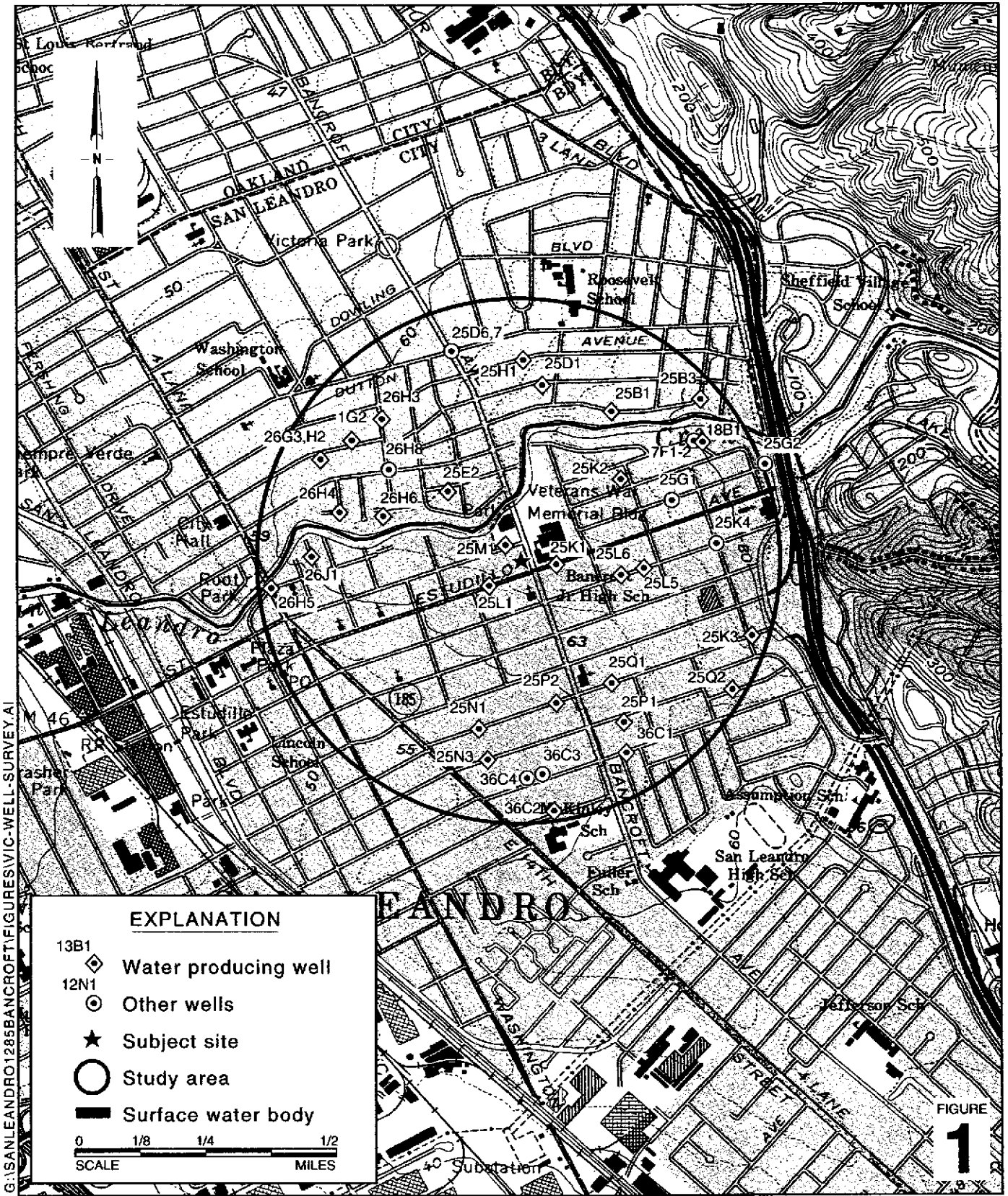


Figures:    1 - Vicinity/Area Well Survey Map  
              2 - Groundwater Elevation Contour Map  
              3 - VacOps/DVE Effect on MTBE Concentration – MW-5  
              4 - VacOps/DVE Effect on MTBE Concentration – MW-6

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

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc:        Karen Petryna , Shell Oil Products US, P.O. Box 7869, Burbank, CA 91510-7869  
            Mike Bakaldin, City of San Leandro, 835 East 14th Street, San Leandro, CA 94577



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**Shell-branded Service Station**  
 1285 Bancroft Avenue  
 San Leandro, California  
 Incident #98996067



C A M B R I A

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

**EXPLANATION**

- SB-1 Proposed soil boring location
- MW-1 Monitoring well location
- Irrigation well location
- B-1 Soil vapor survey location (6/00)
- NS Not surveyed
- \* Data anomalous, not used for contouring
- Groundwater flow direction
- XX.XX Groundwater elevation contour, in feet above mean sea level (msl), approximately located; dashed where inferred
- Creek flow direction

Well	ELEV
Well designation	Groundwater elevation, in feet above msl
Benzene	Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8260.
MTBE	

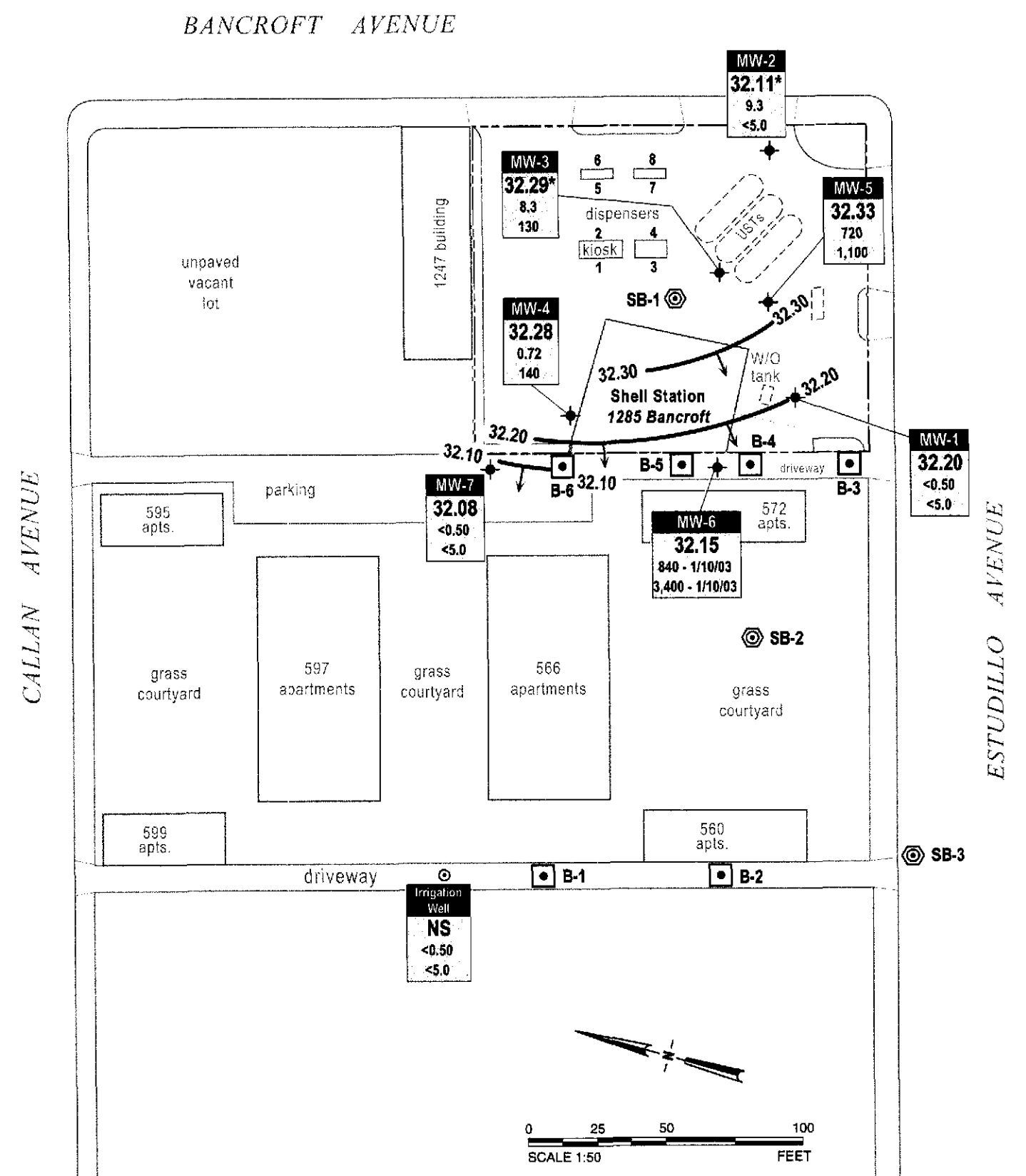
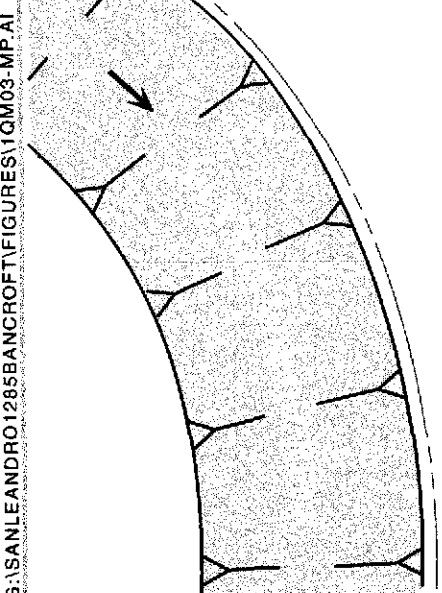
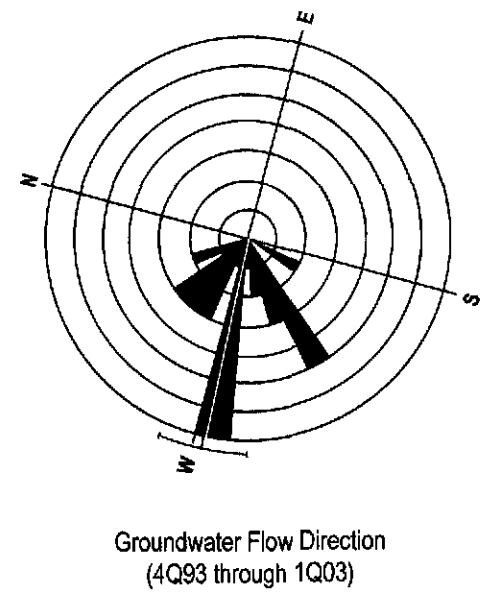
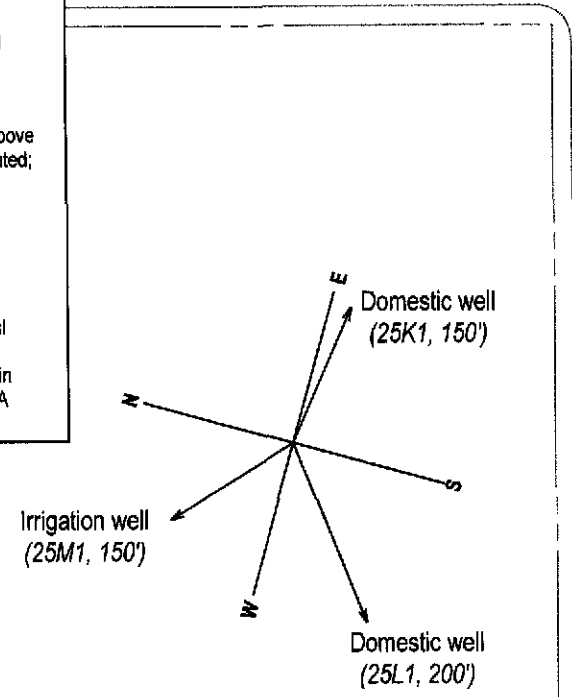


FIGURE 2

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VacOps/DVE effect on MTBE concentration  
1285 Bancroft, San Leandro - MW-5

Date	DTW-ft
7/22/99	33.29
12/8/99	37.80
1/7/00	38.40
4/5/00	30.72
7/12/00	34.42
10/19/00	36.89
01/15/01	37.10
4/30/01	34.75
7/24/01	37.30
10/31/01	39.05
01/03/02	35.15
04/05/02	34.18
07/11/02	36.28
10/28/02	38.44
1/7/03	34.17

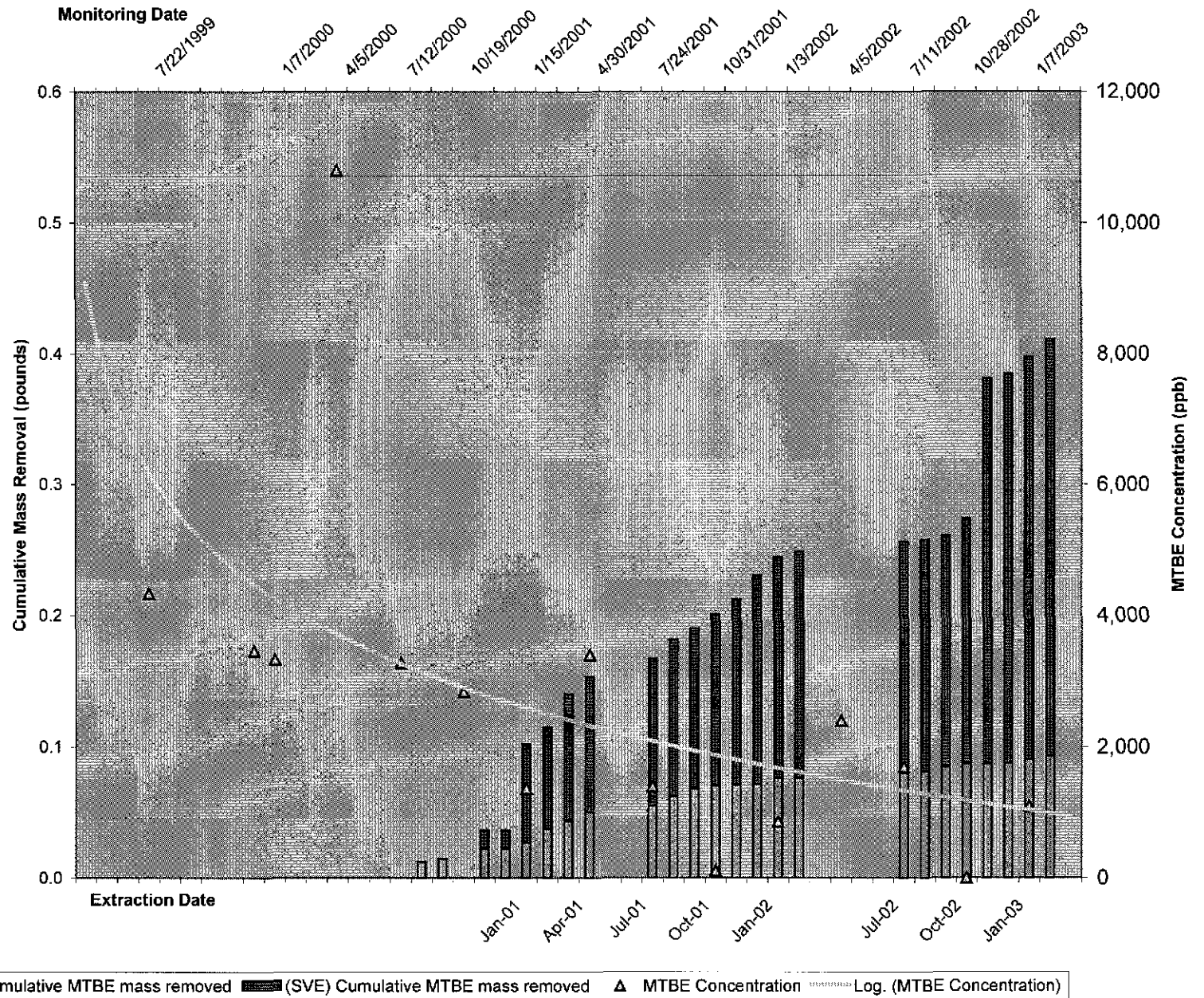


Figure 3



VacOps/DVE effect on MTBE concentration  
1285 Bancroft, San Leandro - MW-6

Date	DTW-ft
6/4/99	32.13
7/22/99	32.09
12/8/99	36.62
1/7/00	37.03
4/5/00	29.37
7/12/00	33.04
10/19/00	35.62
1/15/01	35.91
4/30/01	33.70
7/2/01	35.98
10/31/01	37.55
01/03/02	33.34
04/05/02	34.18
07/11/02	35.02
10/28/02	37.78
1/10/03	32.75

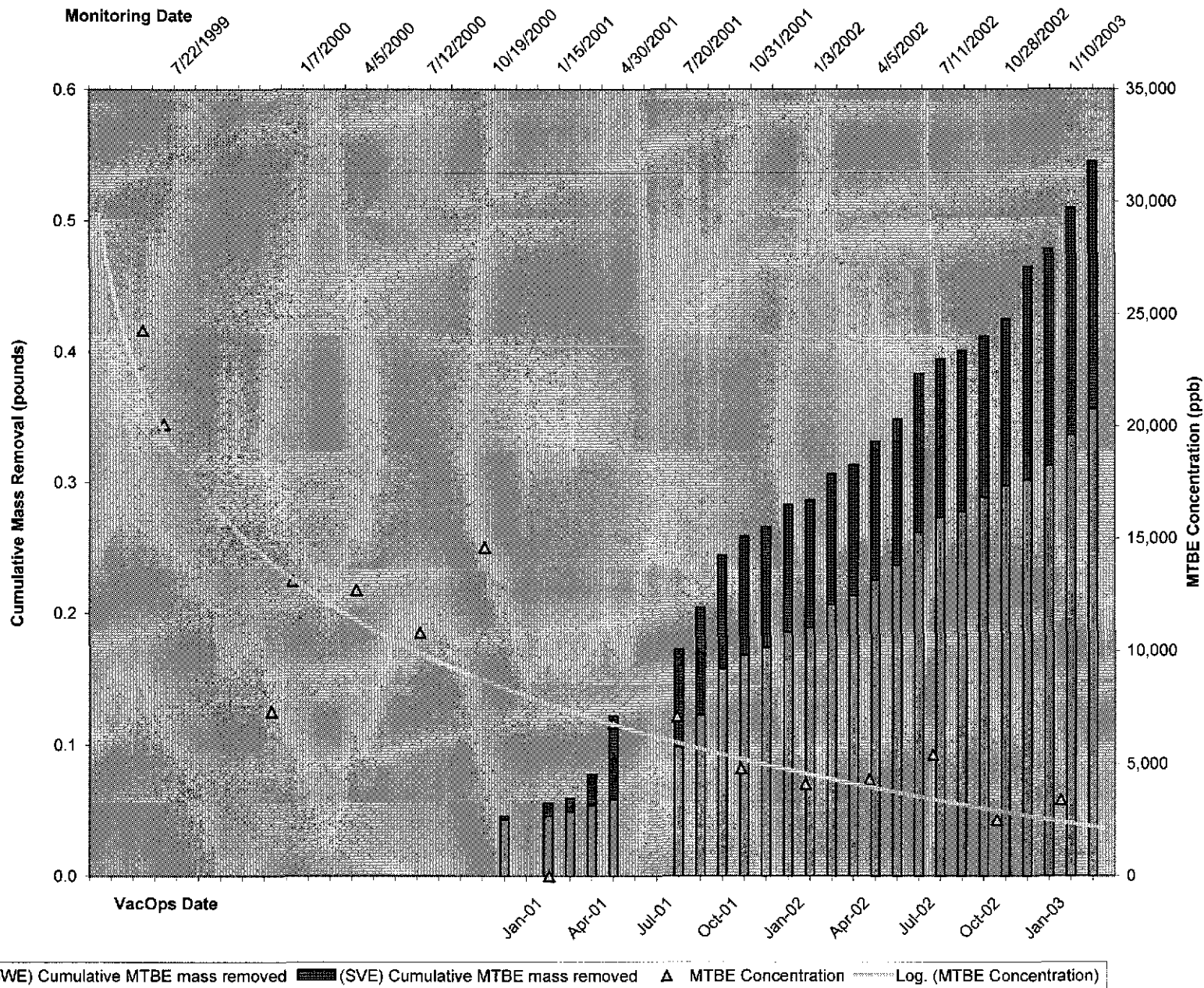


Figure 4

**Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98996067, 1285 Bancroft Avenue, San Leandro, California**

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	<u>TPPH</u>			<u>Benzene</u>			<u>MTBE</u>		
					TPPH Concentration (ppb)	TPPH Removed (pounds)	TPPH Removed To Date (pounds)	Benzene Concentration (ppb)	Benzene Removed (pounds)	Benzene Removed To Date (pounds)	MTBE Concentration (ppb)	MTBE Removed (pounds)	MTBE Removed To Date (pounds)
09/02/98	MW-1	130	130	07/15/98	<50	0.00003	0.00003	2.5	0.00000	0.00000	12	0.00001	0.00001
07/30/99	MW-1	0	130	07/22/99	<50	0.00000	0.00003	<0.500	0.00000	0.00000	2.17	0.00000	0.00001
08/05/99	MW-1	0	130	07/22/99	<50	0.00000	0.00003	<0.500	0.00000	0.00000	2.17	0.00000	0.00001
08/11/99	MW-1	0	130	07/22/99	<50	0.00000	0.00003	<0.500	0.00000	0.00000	2.17	0.00000	0.00001
08/12/99	MW-1	0	130	07/22/99	<50	0.00000	0.00003	<0.500	0.00000	0.00000	2.17	0.00000	0.00001
08/13/99	MW-1	400	530	07/22/99	<50	0.00008	0.00011	<0.500	0.00000	0.00000	2.17	0.00001	0.00002
08/19/99	MW-1	278	808	07/22/99	<50	0.00006	0.00017	<0.500	0.00000	0.00000	2.17	0.00001	0.00003
08/30/99	MW-1	240	1048	07/22/99	<50	0.00005	0.00022	<0.500	0.00000	0.00000	2.17	0.00000	0.00003
09/09/99	MW-1	247	1295	07/22/99	<50	0.00005	0.00027	<0.500	0.00000	0.00001	2.17	0.00000	0.00003
09/02/98	MW-3	240	240	07/18/98	31,000	0.06208	0.06208	1,100	0.00220	0.00220	3,700	0.00741	0.00741
07/30/99	MW-3	0	130	07/22/99	1,970	0.00000	0.06208	51.2	0.00000	0.00220	109	0.00000	0.00741
08/05/99	MW-3	0	130	07/22/99	1,970	0.00000	0.06208	51.2	0.00000	0.00220	109	0.00000	0.00741
08/11/99	MW-3	0	530	07/22/99	1,970	0.00000	0.06208	51.2	0.00000	0.00220	109	0.00000	0.00741
08/12/99	MW-3	100	908	07/22/99	1,970	0.00164	0.06373	51.2	0.00004	0.00225	109	0.00009	0.00750
08/13/99	MW-3	450	1,358	07/22/99	1,970	0.00740	0.07112	51.2	0.00019	0.00244	109	0.00041	0.00791
08/19/99	MW-3	269	1,627	07/22/99	1,970	0.00442	0.07555	51.2	0.00011	0.00255	109	0.00024	0.00815
08/30/99	MW-3	204	1,831	07/22/99	1,970	0.00335	0.07890	51.2	0.00009	0.00264	109	0.00019	0.00834
09/09/99	MW-3	232	2,063	07/22/99	1,970	0.00381	0.08271	51.2	0.00010	0.00274	109	0.00021	0.00855
09/02/98	MW-5	147	147	NA	NA	0.00000	0.00000	NA	0.00000	0.00000	NA	0.00000	0.00000
07/30/99	MW-5	0	147	07/22/99	97,200	0.00000	0.00000	4,580	0.00000	0.00000	4,330	0.00000	0.00000
08/05/99	MW-5	0	147	07/22/99	97,200	0.00000	0.00000	4,580	0.00000	0.00000	4,330	0.00000	0.00000
08/11/99	MW-5	0	147	07/22/99	97,200	0.00000	0.00000	4,580	0.00000	0.00000	4,330	0.00000	0.00000
08/12/99	MW-5	0	147	07/22/99	97,200	0.00000	0.00000	4,580	0.00000	0.00000	4,330	0.00000	0.00000
08/13/99	MW-5	100	247	07/22/99	97,200	0.08111	0.08111	4,580	0.00382	0.00382	4,330	0.00361	0.00361



**Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98996067, 1285 Bancroft Avenue, San Leandro, California**

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH			Benzene			MTBE		
					TPPH Concentration (ppb)	TPPH Removed (pounds)	TPPH To Date (pounds)	Benzene Concentration (ppb)	Benzene Removed (pounds)	Benzene To Date (pounds)	MTBE Concentration (ppb)	MTBE Removed (pounds)	MTBE To Date (pounds)
08/19/99	MW-5	247	494	07/22/99	97,200	0.20033	0.28144	4,580	0.00944	0.01326	4,330	0.00892	0.01254
08/30/99	MW-5	0	494	07/22/99	97,200	0.00000	0.28144	4,580	0.00000	0.01326	4,330	0.00000	0.01254
09/09/99	MW-5	65	559	07/22/99	97,200	0.05272	0.33416	4,580	0.00248	0.01575	4,330	0.00235	0.01489
11/28/00	MW-5	324	883	10/19/00	72,400	0.19574	0.52990	3,010	0.00814	0.02388	2,840	0.00768	0.02256
01/23/01	MW-5	375	1,258	01/15/01	78,300	0.24501	0.77491	2,220	0.00695	0.03083	1,370	0.00429	0.02685
02/16/01	MW-5	950	2,208	01/15/01	78,300	0.62069	1.39561	2,220	0.01760	0.04843	1,370	0.01086	0.03771
03/22/01	MW-5	500	2,708	01/15/01	78,300	0.32668	1.72229	2,220	0.00926	0.05769	1,370	0.00572	0.04343
04/23/01	MW-5	600	3,308	01/15/01	78,300	0.39202	2.11431	2,220	0.01111	0.06881	1,370	0.00686	0.05029
07/16/01	MW-5	165	3,473	04/30/01	83,000	0.11428	2.22858	1,400	0.00193	0.07073	3,400	0.00468	0.05497
08/23/01	MW-5	650	4,123	07/24/01	160,000	0.86781	3.09639	2,400	0.01302	0.08375	1,400	0.00759	0.06256
09/10/01	MW-5	450	4,573	07/24/01	160,000	0.60079	3.69719	2,400	0.00901	0.09276	1,400	0.00526	0.06782
10/30/01	MW-5	250	4,823	07/24/01	160,000	0.33377	4.03096	2,400	0.00501	0.09777	1,400	0.00292	0.07074
11/26/01	MW-5	260	5,083	10/31/01	14,000	0.03037	4.06134	150	0.00033	0.09809	110	0.00024	0.07098
12/17/01	MW-5	300	5,383	10/31/01	14,000	0.03505	4.09638	150	0.00038	0.09847	110	0.00028	0.07125
01/29/02	MW-5	725	6,108	01/03/02	62,000	0.37508	4.47146	660	0.00399	0.10246	860	0.00520	0.07645
07/24/02	MW-5	250	6,358	07/11/02	140,000	0.29205	4.76351	1,900	0.00396	0.10643	1,700	0.00355	0.08000
08/30/02	MW-5	95	6,453	07/11/02	140,000	0.11098	4.87449	1,900	0.00151	0.10793	1,700	0.00135	0.08135
09/26/02	MW-5	250	6,703	07/11/02	140,000	0.29205	5.16655	1,900	0.00396	0.11190	1,700	0.00355	0.08490
10/24/02	MW-5	150	6,853	07/11/02	140,000	0.17523	5.34178	1,900	0.00238	0.11427	1,700	0.00213	0.08702
11/19/02	MW-5	150	7,003	10/28/02	30,000	0.03755	5.37933	340	0.00043	0.11470	<200	0.00013	0.08715
12/26/02	MW-5	525	7,528	10/28/02	30,000	0.13142	5.51075	340	0.00149	0.11619	<200	0.00044	0.08759
01/15/03	MW-5	300	7,828	01/07/03	72,000	0.18024	5.69099	720	0.00180	0.11799	1,100	0.00275	0.09034
02/24/03	MW-5	300	8,128	01/07/03	72,000	0.18024	5.87123	720	0.00180	0.11979	1,100	0.00275	0.09309
11/28/00	MW-6	365	365	10/19/00	39,600	0.12061	0.12061	4,050	0.01234	0.01234	14,200	0.04325	0.04325
01/23/01	MW-6	482	847	01/15/01	64,800	0.26062	0.26062	2,090	0.00841	0.00841	<1,250	0.00251	0.04576

**Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98996067, 1285 Bancroft Avenue, San Leandro, California**

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	<u>TPPH</u>			<u>Benzene</u>			<u>MTBE</u>			
					TPPH Concentration (ppb)	TPPH Removed (pounds)	TPPH Removed To Date (pounds)	Benzene Concentration (ppb)	Benzene Removed (pounds)	Benzene Removed To Date (pounds)	MTBE Concentration (ppb)	MTBE Removed (pounds)	MTBE Removed To Date (pounds)	
02/16/01	MW-6	650	1,497	01/15/01	64,800	0.35146	0.35146	2,090	0.01134	0.01134	<1,250	0.00339	0.04915	
03/22/01	MW-6	980	2,477	01/15/01	64,800	0.52990	0.52990	2,090	0.01709	0.01709	<1,250	0.00511	0.05426	
04/23/01	MW-6	900	3,377	01/15/01	64,800	0.48664	0.48664	2,090	0.01570	0.01570	<1,250	0.00469	0.05896	
07/16/01	MW-6	700	4,077	04/30/01	27,000	0.15771	0.15771	2,300	0.01343	0.01343	6,800	0.03972	0.09868	
08/23/01	MW-6	400	4,477	07/20/01	29,000	0.09679	0.09679	2,100	0.00701	0.00701	7,100	0.02370	0.12237	
09/10/01	MW-6	600	5,077	07/20/01	29,000	0.14519	0.14519	2,100	0.01051	0.01051	7,100	0.03555	0.15792	
10/30/01	MW-6	250	5,327	10/24/01	38,000	0.07927	0.07927	1,400	0.00292	0.00292	4,800	0.01001	0.16793	
11/26/01	MW-6	150	5,477	10/24/01	38,000	0.04756	0.04756	1,400	0.00175	0.00175	4,800	0.00601	0.17394	
12/17/01	MW-6	300	5,777	10/24/01	38,000	0.09513	0.09513	1,400	0.00350	0.00350	4,800	0.01202	0.18596	
01/29/02	MW-6	100	5,877	01/03/02	10,000	0.00834	0.00834	810	0.00068	0.00068	4,100	0.00342	0.18938	
02/19/02	MW-6	500	6,377	01/03/02	10,000	0.04172	0.04172	810	0.00338	0.00338	4,100	0.01711	0.20649	
03/19/02	MW-6	200	6,577	01/03/02	10,000	0.01669	0.01669	810	0.00135	0.00135	4,100	0.00684	0.21333	
04/24/02	MW-6	350	6,927	04/05/02	19,000	0.05549	0.05549	1,100	0.00321	0.00321	4,300	0.01256	0.22589	
05/29/02	MW-6	300	7,227	04/05/02	19,000	0.04756	0.04756	1,100	0.00275	0.00275	4,300	0.01076	0.23665	
06/26/02	MW-6	700	7,927	04/05/02	19,000	0.11098	0.11098	1,100	0.00643	0.00643	4,300	0.02512	0.26177	
07/24/02	MW-6	250	8,177	07/11/02	26,000	0.05424	0.05424	1,100	0.00229	0.00229	5,400	0.01126	0.27303	
08/30/02	MW-6	95	8,272	07/11/02	26,000	0.02061	0.02061	1,100	0.00087	0.00087	5,400	0.00428	0.27731	
09/26/02	MW-6	250	8,522	07/11/02	26,000	0.05424	0.05424	1,100	0.00229	0.00229	5,400	0.01126	0.28858	
10/24/02	MW-6	200	8,722	07/11/02	26,000	0.04339	0.04339	1,100	0.00184	0.00184	5,400	0.00901	0.29759	
11/19/02	MW-6	200	8,922	10/28/02	11,000	0.01836	0.01836	230	0.00038	0.00038	2,500	0.00417	0.30176	
12/26/02	MW-6	525	9,447	10/28/02	11,000	0.04819	0.04819	230	0.00101	0.00101	2,500	0.01095	0.31271	
01/15/03	MW-6	830	10,277	01/10/03	17,000	0.11774	0.11774	840	0.00582	0.00582	3,400	0.02355	0.33626	
02/24/03	MW-6	700	10,977	01/10/03	17,000	0.09930	0.09930	840	0.00491	0.00491	3,400	0.01986	0.35612	
<b>Total Gallons Extracted:</b>			<b>21,895</b>	<b>Total Pounds Removed:</b>			<b>9.06195</b>	<b>Total Pounds Removed:</b>			<b>0.26375</b>	<b>Total Pounds Removed:</b>		<b>0.45780</b>
				<b>Total Gallons Removed:</b>			<b>1.48557</b>				<b>0.03613</b>			<b>0.07384</b>

**Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98996067, 1285 Bancroft Avenue, San Leandro, California**

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

**Abbreviations & Notes:**

TPPH = Total purgeable hydrocarbons as gasoline

MtBE = Methyl tert-butyl ether

ppb = Parts per billion

gal = Gallon

Mass removed based on the formula: volume extracted (gal) x Concentration (µg/L) x (g/10<sup>6</sup>µg) x (pound/453.6g) x (3.785 L/gal)

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

TPPH, benzene analyzed by EPA Method 8015/8020

MTBE analyzed by EPA Method 8260 in bold font, all other MTBE analyzed by EPA Method 8020

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

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

**Table 2: Vapor Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98996067, 1285 Bancroft Avenue, San Leandro, California**

Date	Well ID	Interval Hours of Operation (hours)	System Flow Rate (CFM)	Hydrocarbon Concentrations			TPHg		Benzene		MTBE	
				TPHg	Benzene	MTBE	TPHg Removal Rate	Cumulative TPHg Removed	Benzene Removal Rate	Cumulative Benzene Removed	MTBE Removal Rate	Cumulative MTBE Removed
				(Concentrations in ppmv)			(#/hour)	(#)	(#/hour)	(#)	(#/hour)	(#)
11/28/00	MW-5	4.00	6.8	2,060	57.4	38.0	0.187	0.749	0.005	0.019	0.004	0.014
12/19/00	MW-5	2.00	3.8	<2.84	<0.0314	<0.111	0.000	0.749	0.000	0.019	0.000	0.014
01/23/01	MW-5	4.00	9.5	6,060	11.3	118	0.770	3.828	0.001	0.024	0.015	0.075
02/16/01	MW-5	4.00	5.0	141	5.0	3.8	0.009	3.865	0.000	0.025	0.000	0.077
03/22/01	MW-5	4.00	20.7	292	9.1	18.1	0.081	4.189	0.002	0.035	0.005	0.097
04/23/01	MW-5	4.00	4.1	330	4.4	28.0	0.018	4.261	0.000	0.035	0.002	0.103
07/16/01	MW-5	4.00	10.8	2,400	3.4	14	0.346	5.647	0.000	0.037	0.002	0.112
08/23/01	MW-5	4.00	6.9	4,100	8.3	19	0.378	7.160	0.001	0.040	0.002	0.119
09/10/01	MW-5	4.00	7.2	3,000	5.7	9.4	0.289	8.315	0.000	0.042	0.001	0.122
10/30/01	MW-5	4.00	10.8	4,300	7.5	13	0.621	10.798	0.001	0.046	0.002	0.130
11/26/01	MW-5	3.67	9.4	6,800	11	22	0.854	13.934	0.001	0.050	0.003	0.141
12/17/01	MW-5	4.00	7.6	8,300	15	45	0.843	17.307	0.001	0.056	0.005	0.159
01/29/02	MW-5	3.00	5.0	710	6.2	41	0.047	17.450	0.000	0.057	0.003	0.168
02/19/02	MW-5	3.00	6.8	450	2.9	17	0.041	17.572	0.000	0.058	0.002	0.172
07/24/02	MW-5	3.00	8.2	3,200	5.4	11	0.351	18.625	0.001	0.059	0.001	0.176
08/30/02	MW-5	3.00	5.0	17	0.14	1.0	0.001	18.628	0.000	0.059	0.000	0.176
09/26/02	MW-5	3.00	17.7	NA	NA	NA	0.000	18.628	0.000	0.059	0.000	0.176
10/24/02	MW-5	3.00	9.9	13,000	9.1	26	1.720	23.789	0.001	0.063	0.004	0.187
11/19/02	MW-5	3.00	9.3	17,000	21	280	2.113	30.130	0.002	0.070	0.036	0.294
12/26/02	MW-5	3.00	5.4	1,300	3.3	15	0.094	30.411	0.000	0.070	0.001	0.297
01/15/03	MW-5	3.00	9.2	760	5.8	27	0.093	30.692	0.001	0.072	0.003	0.307
02/24/03	MW-5	4.00	7.5	1,100	4.9	27	0.110	31.133	0.000	0.074	0.003	0.318
11/28/00	MW-6	2.00	5.6	278	7.13	18.0	0.021	0.042	0.000	0.001	0.001	0.003
12/19/00	MW-6	4.00	5.1	2.84	0.0314	0.111	0.000	0.042	0.000	0.001	0.000	0.003
01/23/01	MW-6	4.00	7.1	581	13.1	19.0	0.055	0.263	0.001	0.005	0.002	0.010

**Table 2: Vapor Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98996067, 1285 Bancroft Avenue, San Leandro, California**

Date	Well ID	Interval Hours of Operation (hours)	System Flow Rate (CFM)	Hydrocarbon Concentrations			TPHg		Benzene		MTBE	
				TPHg	Benzene	MTBE	TPHg Removal Rate (#/hour)	Cumulative TPHg Removed (#)	Benzene Removal Rate (#/hour)	Cumulative Benzene Removed (#)	MTBE Removal Rate (#/hour)	Cumulative MTBE Removed (#)
02/16/01	MW-6	4.00	3.1	3.1	<0.031	<0.28	0.000	0.263	0.000	0.005	0.000	0.010
03/22/01	MW-6	4.00	13.8	647	47	17.8	0.120	0.742	0.008	0.037	0.003	0.024
04/23/01	MW-6	4.00	15.4	130	14	47	0.027	0.849	0.003	0.047	0.010	0.063
07/16/01	MW-6	4.00	12.3	310	8.1	16	0.051	1.053	0.001	0.052	0.003	0.074
08/23/01	MW-6	4.00	9.0	650	8.8	16	0.078	1.366	0.001	0.056	0.002	0.082
09/10/01	MW-6	4.00	8.3	320	3.8	9.8	0.036	1.508	0.000	0.058	0.001	0.086
10/30/01	MW-6	4.00	13.0	520	5.1	6.4	0.090	1.869	0.001	0.061	0.001	0.091
11/26/01	MW-6	4.00	4.1	690	4.8	5.5	0.038	2.020	0.000	0.062	0.000	0.092
12/17/01	MW-6	4.00	12.6	590	4.1	7.2	0.099	2.418	0.001	0.064	0.001	0.097
01/29/02	MW-6	3.00	5.4	51	0.082	0.88	0.004	2.429	0.000	0.064	0.000	0.097
02/19/02	MW-6	3.00	5.9	130	5.1	11	0.010	2.460	0.000	0.065	0.001	0.100
03/19/02	MW-6	6.00	6.3	5.6	<0.050	0.14	0.000	2.463	0.000	0.065	0.000	0.100
04/24/02	MW-6	6.00	7.3	76	3.9	9.3	0.007	2.507	0.000	0.068	0.001	0.106
05/29/02	MW-6	10.50	6.1	67	2.9	7.0	0.005	2.564	0.000	0.070	0.001	0.112
06/26/02	MW-6	7.00	9.8	190	4.4	10	0.025	2.739	0.001	0.073	0.001	0.121
07/24/02	MW-6	3.00	9.2	11	0.10	<0.10	0.001	2.743	0.000	0.073	0.000	0.121
08/30/02	MW-6	3.00	10.1	280	3.1	5.5	0.038	2.856	0.000	0.075	0.001	0.123
09/26/02	MW-6	3.00	17.7	NA	NA	NA	0.000	2.856	0.000	0.075	0.000	0.123
10/24/02	MW-6	5.00	12.9	1,000	3.3	4.7	0.172	3.718	0.001	0.077	0.001	0.128
11/19/02	MW-6	3.00	8.8	3,300	6.6	98	0.388	4.883	0.001	0.079	0.012	0.163
12/26/02	MW-6	3.00	6.8	160	5.0	10	0.015	4.927	0.000	0.081	0.001	0.166
01/15/03	MW-6	3.25	9.3	170	10	19	0.021	4.995	0.001	0.084	0.002	0.174
02/24/03	MW-6	3.50	15.8	210	8.1	20	0.044	5.151	0.002	0.090	0.004	0.189
<b>Total Pounds Removed:</b>							<b>TPHg =</b>	<b>36.283</b>	<b>Benzene =</b>	<b>0.164</b>	<b>MTBE =</b>	<b>0.507</b>

**Table 2: Vapor Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98996067, 1285 Bancroft Avenue, San Leandro, California**

Date	Well ID	Interval Hours of Operation (hours)	System Flow Rate (CFM)	Hydrocarbon Concentrations			TPHg		Benzene		MTBE	
				TPHg	Benzene	MTBE	TPHg Removal Rate (#/hour)	Cumulative TPHg Removed (#)	Benzene Removal Rate (#/hour)	Cumulative Benzene Removed (#)	MTBE Removal Rate (#/hour)	Cumulative MTBE Removed (#)

**Abbreviations and Notes:**

CFM = Cubic feet per minute

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

ppmv = Parts per million by volume

# = Pounds

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

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

$$\text{Rate} = \text{Concentration (ppmv)} \times \text{system flow rate (cfm)} \times (1\text{lb-mole}/386\text{ft}^3) \times \text{molecular weight (86 lb/lb-mole for TPHg, 78 lb/lb-mole for benzene, 88 lb/lb-mole for MTBE)} \times 60 \text{ min/hour} \times 1/1,000,000$$

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

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

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



**BLAINE**  
TECH SERVICES, INC.



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February 5, 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  
1285 Bancroft Avenue  
San Leandro, CA .

Monitoring performed on January 7 and 10, 2003

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Groundwater Monitoring Report 030107-AC-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**  
**1285 Bancroft Avenue**  
**San Leandro, 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	03/13/1990	NA	NA	NA	NA	NA	NA	NA	NA	66.29	42.65	23.64	NA
MW-1	06/12/1990	NA	NA	NA	NA	NA	NA	NA	NA	66.29	43.14	23.15	NA
MW-1	09/13/1990	NA	NA	NA	NA	NA	NA	NA	NA	66.29	44.71	21.58	NA
MW-1	12/18/1990	NA	NA	NA	NA	NA	NA	NA	NA	66.29	45.23	21.06	NA
MW-1	03/07/1991	NA	NA	NA	NA	NA	NA	NA	NA	66.29	43.32	22.97	NA
MW-1	06/07/1991	NA	NA	NA	NA	NA	NA	NA	NA	66.29	42.18	24.11	NA
MW-1	09/17/1991	50a	160a	<0.5	<0.5	<0.5	<0.5	NA	NA	66.29	44.85	21.44	NA
MW-1	03/01/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	66.29	41.56	24.73	NA
MW-1	06/03/1992	<50	NA	0.8	<0.5	0.9	<0.5	NA	NA	66.29	40.74	25.55	NA
MW-1	09/01/1992	<50	NA	<0.5	5.8	5.3	7.2	NA	NA	66.29	43.05	23.24	NA
MW-1	12/07/1992	68	NA	<0.5	0.8	<0.5	1.2	NA	NA	66.29	44.19	22.10	NA
MW-1	03/01/1993	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	66.29	34.96	31.33	NA
MW-1 (D)	03/01/1993	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	66.29	34.96	31.33	NA
MW-1	06/22/1993	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	66.29	36.75	29.54	NA
MW-1	09/09/1993	200a	NA	16	5.2	2	<0.5	NA	NA	66.29	39.36	26.93	NA
MW-1	12/13/1993	89a	NA	3.4	<0.5	<0.5	<0.5	NA	NA	66.29	40.74	25.55	NA
MW-1	03/03/1994	65a	NA	2.6	<0.5	<0.5	<0.5	NA	NA	66.29	38.40	27.89	NA
MW-1	07/27/1994	180	NA	30	1.8	2.6	5	NA	NA	66.90	40.49	26.41	NA
MW-1 (D)	07/27/1994	240	NA	25	2.2	2.2	4	NA	NA	66.90	40.49	26.41	NA
MW-1	08/09/1994	NA	NA	NA	NA	NA	NA	NA	NA	66.90	40.84	26.06	NA
MW-1	10/05/1994	<50	NA	<0.3	<0.3	<0.3	<0.6	NA	NA	66.90	41.98	24.92	NA
MW-1	11/11/1994	NA	NA	NA	NA	NA	NA	NA	NA	66.90	41.34	25.56	NA
MW-1	12/29/1994	NA	NA	NA	NA	NA	NA	NA	NA	66.90	42.06	24.84	NA
MW-1	01/04/1995	<50	NA	2.4	<0.5	<0.5	<0.5	NA	NA	66.90	39.90	27.00	NA
MW-1 (D)	01/04/1995	<50	NA	2.5	<0.5	<0.5	<0.5	NA	NA	66.90	39.90	27.00	NA
MW-1	04/14/1995	<50	NA	<0.5	0.5	<0.5	<0.5	NA	NA	66.90	31.02	35.88	NA
MW-1 (D)	04/14/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	66.90	31.02	35.88	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**1285 Bancroft Avenue**  
**San Leandro, 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	07/12/1995	<50	NA	1.2	0.8	<0.5	<0.5	NA	NA	66.90	34.61	32.29	NA
MW-1	12/14/1995	380	NA	230	9	1.1	49	NA	NA	66.90	39.24	27.66	NA
MW-1	01/10/1996	60	NA	3.5	<0.5	<0.5	0.5	NA	NA	66.90	38.34	28.56	NA
MW-1	04/25/1996	<50	NA	3.3	2.4	1.2	5.4	NA	NA	66.90	31.95	34.95	NA
MW-1	07/09/1996	810	NA	29	7.3	<5.0	11	1,800	NA	66.90	34.45	32.45	NA
MW-1	10/02/1996	<125	NA	3.1	<1.2	<1.2	<1.2	960	NA	66.90	37.72	29.18	NA
MW-1	01/09/1997	<250	NA	<2.5	<2.5	<2.5	<2.5	510	NA	66.90	32.25	34.65	NA
MW-1	04/09/1997	<50	NA	<0.5	<0.5	<0.5	<0.5	130	NA	66.90	32.90	34.00	NA
MW-1	07/02/1997	<250	NA	60	7.6	4.2	18	1,300	NA	66.90	36.65	30.25	NA
MW-1	10/24/1997	<500	NA	140	<5.0	12	40	2,600	NA	66.90	39.75	27.15	4.5
MW-1	01/08/1998	<50	NA	<0.50	<0.50	<0.50	<0.50	170	NA	66.90	36.31	30.59	4.0
MW-1	04/14/1998 b	72	NA	0.82	4.9	1.8	13	2.7	NA	66.90	26.37	40.53	2.2
MW-1	07/15/1998	<50	NA	2.5	1.5	<0.50	<0.50	12	NA	66.90	31.23	35.67	2.4
MW-1	10/13/1998	<50	NA	3.2	0.69	<0.50	1.1	29	NA	66.90	35.69	31.21	1.3
MW-1	01/22/1999	567	NA	79.7	120	21.4	99.9	193	190	66.90	35.32	31.58	1.2
MW-1	04/16/1999	<50	NA	0.69	1.1	1.2	<0.50	8.2	NA	66.90	31.76	35.14	1.0
MW-1	07/22/1999	<50	NA	<0.500	<0.500	<0.500	<0.500	<5.00	2.17	66.90	23.21	43.69	2.1/2.0
MW-1	12/08/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	66.90	33.27	33.63	2.2/2.1
MW-1	01/07/2000	<50.0	NA	0.631	0.577	<0.500	1.25	14.1	NA	66.90	38.17	28.73	d
MW-1	04/05/2000	153	NA	12.4	21.2	6.65	28.3	50.1	NA	66.90	30.45	36.45	2.0/2.3
MW-1	07/12/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	66.90	34.29	32.61	4.4/3.8
MW-1	10/19/2000	129	NA	7.76	19.6	7.84	33.3	31.3	NA	66.90	36.87	30.03	3.9/4.7
MW-1	01/15/2001	201	NA	7.58	29.9	9.64	42.9	24.9	NA	66.90	36.99	29.91	2.7/3.0
MW-1	04/30/2001	<50	NA	<0.50	<0.50	<0.50	0.54	NA	<5.0	66.90	34.62	32.28	3.1/2.4
MW-1	07/20/2001	180	NA	8.0	16	9.5	39	NA	140	66.90	37.25	29.65	3.9/3.8
MW-1	10/24/2001	94	NA	7.0	0.90	3.4	8.4	NA	34	66.90	38.82	28.08	3.6/3.9
MW-1	01/03/2002	<50	NA	<0.50	0.78	<0.50	1.5	NA	<5.0	66.90	34.97	31.93	3.1/3.3
MW-1	04/05/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	66.90	34.04	32.86	1.6/1.8

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**1285 Bancroft Avenue**  
**San Leandro, 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	07/11/2002	61	NA	2.2	2.6	3.9	14	NA	28	66.90	36.15	30.75	0.6/3.8
MW-1	10/28/2002	270	NA	7.9	3.6	17	51	NA	72	66.33	38.35	27.98	1.0/1.2
MW-1	01/07/2003	<50	NA	<0.50	<0.50	<0.50	0.53	NA	<5.0	66.33	34.13	32.20	3.8/3.9
MW-2	03/01/1992	910	<50	11	5.2	50	140	NA	NA	66.91	41.57	25.34	NA
MW-2	06/03/1992	1,400	NA	33	16	150	240	NA	NA	66.91	40.56	26.35	NA
MW-2	09/01/1992	230	NA	5.2	4.1	15	19	NA	NA	66.91	42.94	23.97	NA
MW-2 (D)	09/01/1992	320	NA	5.6	5	18	220	NA	NA	66.91	42.94	23.97	NA
MW-2	12/07/1992	240	NA	1.5	1.3	9.5	9.9	NA	NA	66.91	44.13	22.78	NA
MW-2 (D)	12/07/1992	<50	NA	1.7	1	13	12	NA	NA	66.91	44.13	22.78	NA
MW-2	03/01/1993	230	NA	260	310	27	66	NA	NA	66.91	34.82	32.09	NA
MW-2	06/22/1993	220	NA	18	3.4	3.6	5.2	NA	NA	66.91	36.64	30.27	NA
MW-2 (D)	06/22/1993	320	NA	29	4.8	4.2	6.1	NA	NA	66.91	36.64	30.27	NA
MW-2	09/09/1993	260	NA	18	4.6	16	12	NA	NA	66.91	39.24	27.67	NA
MW-2 (D)	09/09/1993	210	NA	16	3.9	14	9.1	NA	NA	66.91	39.24	27.67	NA
MW-2	12/13/1993	1,300a	NA	82	34	73	15	NA	NA	66.91	40.64	26.27	NA
MW-2 (D)	12/13/1993	1,400a	NA	110	45	72	19	NA	NA	66.91	40.64	26.27	NA
MW-2	03/03/1994	9,600	NA	1,200	600	390	710	NA	NA	66.91	38.98	27.93	NA
MW-2 (D)	03/03/1994	10,000	NA	930	500	330	590	NA	NA	66.91	38.98	27.93	NA
MW-2	07/27/1994	190	NA	<0.5	1	<0.5	<0.5	NA	NA	66.91	40.40	26.51	NA
MW-2	08/09/1994	1,500	NA	53.5	12.4	46.2	44	NA	NA	66.91	40.71	26.20	NA
MW-2	10/05/1994	<485	NA	<0.3	<0.3	<0.3	<0.6	NA	NA	66.91	41.89	25.02	NA
MW-2	11/11/1994	NA	NA	NA	NA	NA	NA	NA	NA	66.91	41.22	25.69	NA
MW-2	12/29/1994	NA	NA	NA	NA	NA	NA	NA	NA	66.91	41.99	24.92	NA
MW-2	01/04/1995	1,300	NA	150	35	23	51	NA	NA	66.91	39.81	27.10	NA
MW-2	04/14/1995	5,000	NA	1,000	340	400	810	NA	NA	66.91	30.83	36.08	NA
MW-2	07/12/1995	4,500	NA	440	170	170	290	NA	NA	66.91	34.50	32.41	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
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**San Leandro, 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 (D)	07/12/1995	4,300	NA	430	160	160	280	NA	NA	66.91	34.50	32.41	NA
MW-2	12/14/1995	37,000	NA	1,800	7,600	1,000	6,700	NA	NA	66.91	39.22	27.69	NA
MW-2 (D)	12/14/1995	34,000	NA	1,800	6,600	1,000	6,500	NA	NA	66.91	39.22	27.69	NA
MW-2	01/10/1996	69,000	NA	1,000	3,200	510	3,300	NA	NA	66.91	38.22	28.69	NA
MW-2 (D)	01/10/1996	78,000	NA	1,100	3,500	560	3,600	NA	NA	66.91	38.22	28.69	NA
MW-2	04/25/1996	11,000	NA	820	880	210	1,400	NA	NA	66.91	31.78	35.13	NA
MW-2 (D)	04/25/1996	9,300	NA	690	710	160	1,200	NA	NA	66.91	31.78	35.13	NA
MW-2	07/09/1996	100,000	NA	15,000	24,000	1,700	9,900	70,000	NA	66.91	34.35	32.56	NA
MW-2 (D)	07/09/1996	86,000	NA	12,000	19,000	1,400	7,500	32,000	NA	66.91	34.35	32.56	NA
MW-2	10/02/1996	82,000	NA	20,000	32,000	1,800	9,100	40,000	NA	66.91	37.56	29.35	NA
MW-2 (D)	10/02/1996	89,000	NA	19,000	31,000	1,700	8,900	42,000	NA	66.91	37.56	29.35	NA
MW-2	01/09/1997	17,000	NA	710	2,300	350	2,200	4,000	NA	66.91	32.07	34.84	NA
MW-2 (D)	01/09/1997	12,000	NA	490	1,300	260	1,800	2,800	NA	66.91	32.07	34.84	NA
MW-2	04/09/1997	20,000	NA	970	3,500	330	2,000	3,200	NA	66.91	32.78	34.13	NA
MW-2	07/02/1997	28,000	NA	1,700	8,700	550	3,000	5,500	NA	66.91	36.56	30.35	NA
MW-2 (D)	07/02/1997	32,000	NA	2,000	11,000	680	3,800	6,400	NA	66.91	36.56	30.35	NA
MW-2	10/24/1997	14,000	NA	460	1,000	300	2,000	3,000	NA	66.91	39.74	27.17	3.2
MW-2 (D)	10/24/1997	14,000	NA	420	980	270	2,000	2,800	NA	66.91	39.74	27.17	3.2
MW-2	01/08/1998	180	NA	2.8	1.6	<0.50	<0.50	7.6	NA	66.91	36.13	30.78	3.6
MW-2	04/14/1998 b	12,000	NA	92	1,500	260	1,900	110	NA	66.91	26.15	40.76	4.6
MW-2	07/15/1998	36,000	NA	250	5,600	830	6,000	6,800	NA	66.91	31.14	35.77	4.8
MW-2 (D)	07/15/1998	35,000	NA	230	5,600	860	600	570	NA	66.91	31.14	35.77	4.8
MW-2	10/13/1998	100	NA	7	12	3.7	10	5.8	NA	66.91	36.14	30.77	0.8
MW-2	01/22/1999	21,000	NA	701	3,330	960	5,420	772	620	66.91	35.97	30.94	1.0
MW-2	04/16/1999	14,000	NA	200	1,600	560	3,300	330	NA	66.91	31.52	35.39	1.0
MW-2	07/22/1999	1,410	NA	28.3	91.2	50.4	256	35.3	15.2	66.91	26.14	40.77	2.1/2.5
MW-2	12/08/1999	<50.0	NA	1.45	1.34	1.15	5.31	5.08	NA	66.91	37.72	29.19	2.1/2.5

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
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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-2	01/07/2000	743	NA	18.6	47.0	3.06	166	30.3	NA	66.91	38.14	28.77	1.4/1.8
MW-2	04/05/2000	2,320	NA	60.9	101	115	606	62.5	NA	66.91	30.46	36.45	1.7/1.9
MW-2	07/12/2000	12,100	NA	325	555	793	3,610	260	NA	66.91	34.13	32.78	4.1/4.6
MW-2	10/19/2000	4,840	NA	188	267	318	1,370	84.4	NA	66.91	36.50	30.41	4.8/2.6
MW-2	01/15/2001	654	NA	52.3	9.10	37.8	93.6	10.9	NA	66.91	36.73	30.18	4.2/3.5
MW-2	04/30/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	66.91	35.25	31.66	2.4/2.0
MW-2	07/20/2001	5,400	NA	320	110	340	1,100	NA	33	66.91	37.00	29.91	3.4/2.4
MW-2	10/24/2001 g	NA	NA	NA	NA	NA	NA	NA	NA	66.91	38.63	28.28	NA
MW-2	10/31/2001	1,400	NA	81	16	76	180	NA	29	66.91	38.71	28.20	3.8/2.9
MW-2	01/03/2002	1,800	NA	88	62	130	520	NA	17	66.91	34.71	32.20	3.0/2.1
MW-2	04/05/2002	9,400	NA	190	120	410	1,800	NA	<50	66.91	33.86	33.05	1.3/1.8
MW-2	07/11/2002	6,700	NA	220	73	360	1,100	NA	<20	66.91	35.99	30.92	3.4/2.1
MW-2	10/28/2002	4,600	NA	190	25	210	370	NA	21	66.33	38.05	28.28	0.7/0.9
<b>MW-2</b>	<b>01/07/2003</b>	<b>1,700</b>	<b>NA</b>	<b>9.3</b>	<b>14</b>	<b>83</b>	<b>380</b>	<b>NA</b>	<b>&lt;5.0</b>	<b>66.33</b>	<b>34.22</b>	<b>32.11</b>	<b>3.9/3.6</b>
MW-3	03/01/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	66.31	42.00	24.31	NA
MW-3	06/03/1992	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	66.31	44.30	22.01	NA
MW-3	09/01/1992	<50	NA	<0.5	<0.5	1.1	3.2	NA	NA	66.31	43.62	22.69	NA
MW-3	12/07/1992	52	NA	<0.5	<0.5	<0.5	0.5	NA	NA	66.31	44.77	21.54	NA
MW-3	03/01/1993	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	66.31	35.50	30.81	NA
MW-3	06/22/1993	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	66.31	37.30	29.01	NA
MW-3	09/09/1993	50a	NA	5	<0.5	<0.5	<0.5	NA	NA	66.31	39.90	26.41	NA
MW-3	12/13/1993	120a	NA	7.5	<0.5	1.6	6.3	NA	NA	66.31	41.30	25.01	NA
MW-3	03/03/1994	<50	NA	0.81	<0.5	<0.5	<0.5	NA	NA	66.31	38.32	27.99	NA
MW-3	07/27/1994	<50	NA	3.5	<0.5	<0.5	<0.5	NA	NA	67.52	41.07	26.45	NA
MW-3	08/09/1994	NA	NA	NA	NA	NA	NA	NA	NA	67.52	41.37	26.15	NA
MW-3	10/05/1994	<57	NA	<0.3	<0.3	<0.3	<0.6	NA	NA	67.52	42.55	24.97	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-3	11/11/1994	NA	NA	NA	NA	NA	NA	NA	NA	67.52	41.86	25.66	NA
MW-3	12/29/1994	NA	NA	NA	NA	NA	NA	NA	NA	67.52	42.59	24.93	NA
MW-3	01/04/1995	<50	NA	6	<0.5	<0.5	<0.5	NA	NA	67.52	40.54	26.98	NA
MW-3	04/14/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	67.52	31.50	36.02	NA
MW-3	07/12/1995	90	NA	16	<0.5	<0.5	<0.5	NA	NA	67.52	35.14	32.38	NA
MW-3	12/14/1995	4,600	NA	460	390	34	1,000	NA	NA	67.52	39.86	27.66	NA
MW-3	01/10/1996	11,000	NA	470	460	68	670	NA	NA	67.52	39.98	27.54	NA
MW-3	04/25/1996	5,500	NA	830	910	<50	460	NA	NA	67.52	32.38	35.14	NA
MW-3	07/09/1996	72,000	NA	7,600	14,000	970	5,900	59,000	NA	67.52	34.93	32.59	NA
MW-3	10/02/1996	77,000	NA	15,000	24,000	2,000	9,600	94,000	71,000	67.52	38.20	29.32	NA
MW-3	01/09/1997	130	NA	15	16	2	9.7	80	NA	67.52	32.81	34.71	NA
MW-3	04/09/1997	24,000	NA	2,900	5,300	420	2,200	4,100	NA	67.52	33.42	34.10	NA
MW-3 (D)	04/09/1997	24,000	NA	3,000	5,600	450	2,300	4,700	NA	67.52	33.42	34.10	NA
MW-3	07/02/1997	68,000	NA	7,400	18,000	1,600	8,700	16,000	NA	67.52	37.22	30.30	NA
MW-3	10/24/1997	93,000	NA	1,800	8,500	2,300	14,000	3,100	NA	67.52	40.75	26.77	1.8
MW-3	01/08/1998	16,000	NA	140	870	22	5,000	120	NA	67.52	36.90	30.62	2.1
MW-3 (D)	01/08/1998	24,000	NA	100	840	26	5,600	<100	NA	67.52	36.90	30.62	2.1
MW-3	04/14/1998 b	100,000	NA	270	5,000	2,100	17,000	890	NA	67.52	26.92	40.60	1.8
MW-3 (D)	04/14/1998 b	49,000	NA	230	3,200	1,200	8,900	790	NA	67.52	26.92	40.60	1.8
MW-3	07/15/1998	31,000	NA	1,100	3,300	300	2,800	3,700	NA	67.52	31.74	35.78	2
MW-3	10/13/1998	51,000	NA	3,100	12,000	7,630	6,800	6,200	NA	67.52	35.61	31.91	2.1
MW-3 (D)	10/13/1998	88,000	NA	5,800	21,000	1,400	12,000	9200	NA	67.52	35.61	31.91	2.1
MW-3	01/22/1999	25,100	NA	855	4,400	786	5,260	1,850	1,500	67.52	35.29	32.23	0.8
MW-3	04/16/1999	7,800	NA	150	550	160	1,100	370	NA	67.52	32.29	35.23	1.0
MW-3	07/22/1999	1,970	NA	51.2	160	43.1	286	179	109	67.52	26.67	40.85	3.1/3.0
MW-3	12/08/1999	12,500	NA	171	537	141	1,260	717	NA	67.52	38.34	29.18	3.1/2.9
MW-3	01/07/2000	6,020	NA	<10.0	929	177	1,170	217	NA	67.52	38.87	28.65	3.2/2.6

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
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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-3	04/05/2000	3,890	NA	120	351	67.8	576	231	NA	67.52	31.08	36.44	3.4/3.8
MW-3	07/12/2000	23,300	NA	592	4,690	672	4,620	1,340	NA	67.52	34.80	32.72	0.4/3.7
MW-3	10/19/2000	6,280	NA	124	1,280	229	1,510	311	NA	67.52	37.34	30.18	2.1/2.9
MW-3	01/15/2001	4,800	NA	7.04	70.0	70.9	380	54.7	NA	67.52	37.65	29.87	2.7/2.5
MW-3	04/30/2001	<50	NA	<0.50	<0.50	<0.50	1.8	NA	<5.0	67.52	35.25	32.27	1.8/1.6
MW-3	07/20/2001	2,900	NA	11	100	120	520	NA	48	67.52	37.71	29.81	1.2/3.4
MW-3	10/24/2001 g	NA	NA	NA	NA	NA	NA	NA	NA	67.52	39.35	28.17	0.5
MW-3	10/31/2001	1,700	NA	4.5	43	43	230	NA	17	67.52	39.30	28.22	0.8/3.0
MW-3	01/03/2002	12,000	NA	26	410	490	2,800	NA	99	67.52	35.51	32.01	1.4/1.2
MW-3	04/05/2002	22,000	NA	76	930	710	4,500	NA	390	67.52	34.56	32.96	1.7/1.9
MW-3	07/11/2002	13,000	NA	23	340	320	1,800	NA	120	67.52	36.65	30.87	1.0/2.2
MW-3	10/28/2002	1,500	NA	<0.50	2.6	13	83	NA	45	66.93	38.85	28.08	1.2/1.1
<b>MW-3</b>	<b>01/07/2003</b>	<b>5,500</b>	<b>NA</b>	<b>8.3</b>	<b>150</b>	<b>130</b>	<b>1,000</b>	<b>NA</b>	<b>130</b>	<b>66.93</b>	<b>34.64</b>	<b>32.29</b>	<b>3.2/3.1</b>

MW-4	07/27/1994	120	NA	3.4	3.9	0.6	4.9	NA	NA	68.08	41.78	26.30	NA
MW-4	08/09/1994	NA	NA	NA	NA	NA	NA	NA	NA	68.08	42.09	25.99	NA
MW-4	10/05/1994	<50	NA	<0.3	<0.3	<0.3	<0.6	NA	NA	68.08	43.25	24.83	NA
MW-4 (D)	10/05/1994	<50	NA	<0.3	<0.3	<0.3	<0.6	NA	NA	68.08	43.25	24.83	NA
MW-4	11/11/1994	NA	NA	NA	NA	NA	NA	NA	NA	68.08	42.54	25.54	NA
MW-4	12/29/1994	NA	NA	NA	NA	NA	NA	NA	NA	68.08	43.34	24.74	NA
MW-4	01/04/1995	<50	NA	1.4	<0.5	<0.5	<0.5	NA	NA	68.08	41.57	26.51	NA
MW-4	04/14/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	68.08	32.24	35.84	NA
MW-4	07/12/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	68.08	35.88	32.20	NA
MW-4	12/14/1995	70	NA	0.6	<0.5	<0.5	<0.5	NA	NA	68.08	40.54	27.54	NA
MW-4	01/10/1996	280	NA	3.7	1	<0.5	0.8	NA	NA	68.08	39.59	28.49	NA
MW-4	04/25/1996	<500	NA	63	<5.0	<5.0	<5.0	NA	NA	68.08	33.22	34.86	NA
MW-4	07/09/1996	<2,000	NA	160	<20	<20	<20	5,300	NA	68.08	35.70	32.38	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-4	10/02/1996	<5,000	NA	480	<50	<50	<50	19,000	NA	68.08	38.95	29.13	NA
MW-4	01/09/1997	<2,000	NA	43	<20	<20	<20	7,000	NA	68.08	33.04	35.04	NA
MW-4	04/09/1997	<2,500	NA	120	<25	<25	<25	8,100	NA	68.08	34.15	33.93	NA
MW-4	07/02/1997	<2,000	NA	81	<20	<20	<20	6,600	NA	68.08	37.92	30.16	NA
MW-4	10/24/1997	<500	NA	90	<5.0	11	6.3	3,200	NA	68.08	41.00	27.08	2.1
MW-4	01/08/1998	<50	NA	3.9	<0.50	<0.50	<0.50	1,800	NA	68.08	37.54	30.54	2.2
MW-4	04/14/1998 b	920	NA	<0.50	<0.50	<0.50	<0.50	27	NA	68.08	27.75	40.33	1.2
MW-4	07/15/1998	2,100	NA	160	76	120	190	2,600	NA	68.08	32.47	35.61	1.8
MW-4	10/13/1998	<50	NA	<0.50	<0.50	<0.50	<0.50	17	NA	68.08	36.75	31.33	1.1
MW-4	01/22/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	7	13	68.08	36.41	31.67	1.6
MW-4	04/16/1999	1,800	NA	92	35	110	200	1,800	2,750	68.08	33.00	35.08	1.2
MW-4	07/22/1999	Well Inaccessible		NA	NA	NA	NA	NA	NA	68.08	27.59	40.49	NA
MW-4	12/08/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	22.6	NA	68.08	39.04	29.04	2.5/2.6
MW-4	01/07/2000	871	NA	39.4	69.0	71.6	99.6	1,030	NA	68.08	39.35	28.73	1.2/1.2
MW-4	04/05/2000	475	NA	26.9	5.24	19.8	41.5	681	NA	68.08	31.28	36.80	1.6/1.8
MW-4	07/12/2000	1,040	NA	35.7	6.95	125	104	1,040	NA	68.08	35.52	32.56	0.5/4.9
MW-4	10/19/2000	944	NA	23.9	6.57	122	109	372	NA	68.08	38.08	30.00	2.3/1.4
MW-4	01/15/2001	1,170	NA	21.6	1.51	123	52.8	592	NA	68.08	38.31	29.77	1.7/1.9
MW-4	04/30/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	26	68.08	35.80	32.28	1.3/1.0
MW-4	07/20/2001	2,000	NA	16	5.8	230	270	NA	520	68.08	38.46	29.62	1.6/1.8
MW-4	10/24/2001	1,000	NA	6.9	<1.0	96	44	NA	270	68.08	40.02	28.06	0.7/0.9
MW-4	01/03/2002	390	NA	3.0	<0.50	19	5.9	NA	230	68.08	35.71	32.37	1.2/1.9
MW-4	04/05/2002	150	NA	0.57	<0.50	3.8	<0.50	NA	250	68.08	35.25	32.83	1.6/1.6
MW-4	07/11/2002	530	NA	2.6	<0.50	46	4.6	NA	280	68.08	37.39	30.69	0.8/1.9
MW-4	10/28/2002	110	NA	<0.50	<0.50	1.8	<0.50	NA	180	67.52	39.55	27.97	1.1/0.9
<b>MW-4</b>	<b>01/07/2003</b>	<b>210</b>	<b>NA</b>	<b>0.72</b>	<b>&lt;0.50</b>	<b>12</b>	<b>1.5</b>	<b>NA</b>	<b>140</b>	<b>67.52</b>	<b>35.24</b>	<b>32.28</b>	<b>2.1/2.2</b>

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**1285 Bancroft Avenue**  
**San Leandro, 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-5*	06/04/1999	159,000	NA	7,190	39,300	2,450	16,700	<5,000	NA	66.50	33.48	33.02	1.7
MW-5	06/04/1999	80,400	NA	4,400	26,000	1,480	11,000	3,660	NA	66.50	33.48	33.02	1.9
MW-5	07/22/1999	97,200	NA	4,580	25,600	1,580	10,100	<5,000	4,330	66.50	33.29	33.21	1.7/1.8
MW-5	12/08/1999	72,000	NA	3,360	16,600	1,560	8,320	3,460	NA	66.50	37.80	28.70	1.7/1.9
MW-5	01/07/2000	104,000	NA	5,370	30,400	2,500	13,900	3,330	NA	66.50	38.40	28.10	1.6/1.2
MW-5	04/05/2000	99,700	NA	5,710	37,000	2,410	14,200	10,800	NA	66.50	30.72	35.78	1.7/1.5
MW-5	07/12/2000	106,000	NA	3,840	38,200	2,980	18,100	3,280	NA	66.50	34.42	32.08	0.2/1.8
MW-5	10/19/2000	72,400	NA	3,010	32,200	2,440	15,400	2,840	NA	66.50	36.89	29.61	1.0/2.7
MW-5	01/15/2001	78,300	NA	2,220	21,400	1,960	12,200	3,420	1,370	66.50	37.10	29.40	1.2/1.0
MW-5	04/30/2001	83,000	NA	1,400	23,000	2,300	14,000	NA	3,400	66.50	34.75	31.75	0.6/0.8
MW-5	07/20/2001 f	NA	NA	NA	NA	NA	NA	NA	NA	66.50	37.40	29.10	0.5
MW-5	07/24/2001	160,000	NA	2,400	37,000	3,800	24,000	NA	1,400	66.50	37.30	29.20	0.7/0.8
MW-5	10/24/2001 g	NA	NA	NA	NA	NA	NA	NA	NA	66.50	39.00	27.50	NA
MW-5	10/31/2001	14,000	NA	150	2,700	450	2,300	NA	110	66.50	39.05	27.45	0.4/0.8
MW-5	01/03/2002	62,000	NA	660	12,000	1,700	11,000	NA	860	66.50	35.15	31.35	0.4/0.3
MW-5	04/05/2002	81,000	NA	1,500	19,000	2,400	13,000	NA	2,400	66.50	34.18	32.32	1.7/1.4
MW-5	07/11/2002	140,000	NA	1,900	26,000	3,400	20,000	NA	1,700	66.50	36.28	30.22	0.5/0.6
MW-5	10/28/2002	30,000	NA	340	4,900	830	5,200	NA	<200	66.50	38.44	28.06	0.6/0.9
<b>MW-5</b>	<b>01/07/2003</b>	<b>72,000</b>	<b>NA</b>	<b>720</b>	<b>13,000</b>	<b>1,900</b>	<b>10,000</b>	<b>NA</b>	<b>1,100</b>	<b>66.50</b>	<b>34.17</b>	<b>32.33</b>	<b>1.4/1.1</b>
MW-6*	06/04/1999	36,000	NA	4,240	1,680	1,100	4,160	11,300	17,500	64.98	32.13	32.85	1.3
MW-6	06/04/1999	56,900	NA	6,830	6,050	1,970	9,060	17,000	24,300	64.98	32.13	32.85	1.3
MW-6	07/22/1999	42,800	NA	4,660	740	1,210	4,980	15,600	20,100	64.98	32.09	32.89	2.9/2.1
MW-6	12/08/1999	9,520	NA	1,760	58.0	142	384	9,320	7,310c	64.98	36.62	28.36	2.9/2.2
MW-6	01/07/2000	20,000	NA	3,650	367	949	1,700	13,600	13,100	64.98	37.03	27.95	1.2/1.4
MW-6	04/05/2000	20,500e	NA	4,190e	1,250e	1,200e	2,750e	18,600e	12,700c	64.98	29.37	35.61	1.2/1.2
MW-6	07/12/2000	27,300	NA	4,000	3,170	1,470	4,570	12,900	10,800c	64.98	33.04	31.94	0.8/0.4

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
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**San Leandro, 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-6	10/19/2000	39,600	NA	4,050	6,250	1,920	7,800	14,200	14,600c	64.98	35.62	29.36	1.4/1.7
MW-6	01/15/2001	64,800	NA	2,090	20,400	1,860	11,100	<1,250	NA	64.98	35.91	29.07	1.2/1.5
MW-6	04/30/2001	27,000	NA	2,300	3,200	1,100	4,600	NA	6,800	64.98	33.70	31.28	1.6/1.2
MW-6	07/20/2001	29,000	NA	2,100	1,900	1,100	5,600	NA	7,100	64.98	35.98	29.00	1.0/0.7
MW-6	10/24/2001	38,000	NA	1,400	690	1,400	5,700	NA	4,800	64.98	37.55	27.43	1.0/0.6
MW-6	01/03/2002	10,000	NA	810	120	260	1,100	NA	4,100	64.98	33.34	31.64	0.8/0.6
MW-6	04/05/2002	19,000	NA	1,100	1,100	510	3,000	NA	4,300	64.98	34.60	30.38	1.1/1.5
MW-6	07/11/2002	26,000	NA	1,100	550	1,200	4,400	NA	5,400	64.98	35.02	29.96	0.1/0.7
MW-6	10/28/2002	11,000	NA	230	56	140	540	NA	2,500	65.10	37.78	27.32	0.7/1.1
<b>MW-6</b>	<b>01/07/2003</b>	<b>Unable to sample</b>		<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>65.10</b>	<b>32.95</b>	<b>32.15</b>	<b>NA</b>
<b>MW-6</b>	<b>01/10/2003</b>	<b>17,000</b>	<b>NA</b>	<b>840</b>	<b>1,200</b>	<b>1,100</b>	<b>2,700</b>	<b>NA</b>	<b>3,400</b>	<b>65.10</b>	<b>32.75</b>	<b>32.35</b>	<b>0.4/0.3</b>
MW-7*	06/04/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	65.83	33.03	32.80	1.4
MW-7	06/04/1999	<50.0	NA	0.663	<0.500	0.677	<0.500	11.7	NA	65.83	33.03	32.80	1.4
MW-7	07/22/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	65.83	33.09	32.74	2.7/2.4
MW-7	12/08/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	65.83	37.68	28.15	2.7/2.4
MW-7	01/07/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	65.83	37.87	27.96	2.8/2.6
MW-7	04/05/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	65.83	30.30	35.53	2.8/3.1
MW-7	07/12/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	65.83	33.92	31.91	0.9/0.7
MW-7	10/19/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	65.83	36.51	29.32	1.5/1.8
MW-7	01/15/2001	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	65.83	36.73	29.10	4.7/4.3
MW-7	04/30/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	65.83	34.25	31.58	4.2/2.2
MW-7	07/20/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	65.83	36.88	28.95	1.8/1.7
MW-7	10/24/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	65.83	38.45	27.38	1.4/1.5
MW-7	01/03/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	65.83	34.52	31.31	1.2/1.8
MW-7	04/05/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	65.83	34.51	31.32	1.7/1.4
MW-7	07/11/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	65.83	35.77	30.06	4.5/2.5

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**1285 Bancroft Avenue**  
**San Leandro, 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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MW-7	10/28/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	65.84	37.70	28.14	0.4/0.8
<b>MW-7</b>	<b>01/07/2003</b>	<b>&lt;50</b>	<b>NA</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>&lt;5.0</b>	<b>65.84</b>	<b>33.76</b>	<b>32.08</b>	<b>2.24/1.9</b>

MW-8*	06/04/1999	<50	NA	<0.500	<0.500	<0.500	<0.500	452	NA	65.07	32.19	32.88	2.1
MW-8	06/04/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	186	NA	65.07	32.19	32.88	1.8
MW-8	07/22/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	286	443	65.07	32.14	32.93	2.9/2.7
MW-8	12/08/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	65.07	36.75	28.32	2.9/2.7
MW-8	01/07/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	255	NA	65.07	37.15	27.92	1.8/2.0
MW-8	04/05/2000	<50.0e	NA	<0.500e	<0.500e	<0.500e	<0.500e	247e	NA	65.07	29.45	35.62	2.1/2.5
MW-8	07/12/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	123	NA	65.07	33.13	31.94	0.5/0.5
MW-8	10/19/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	123	NA	65.07	35.72	29.35	1.2/1.8
MW-8	01/15/2001	<50.0	NA	<0.500	<0.500	<0.500	<0.500	173	NA	65.07	36.00	29.07	0.5/1.0
MW-8	04/30/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	120	65.07	33.48	31.59	1.4/1.0
MW-8	07/20/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	210	65.07	36.12	28.95	1.0/1.2
MW-8	10/24/2001	<100	NA	<1.0	<1.0	<1.0	<1.0	NA	360	65.07	37.73	27.34	1.4/0.5
MW-8	01/03/2002	290	NA	<0.50	<0.50	<0.50	<0.50	NA	18	65.07	35.37	29.70	1.2/1.1
MW-8	04/05/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	100	65.07	35.40	29.67	1.2/1.3
MW-8	07/11/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	230	65.07	35.05	30.02	0.3/0.4
MW-8	10/28/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	210	65.08	37.25	27.83	1.1/1.2
<b>MW-8</b>	<b>01/07/2003</b>	<b>&lt;50</b>	<b>NA</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>97</b>	<b>65.08</b>	<b>33.01</b>	<b>32.07</b>	<b>1.4/1.7</b>

Irrigation Well	06/04/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	NA	NA	NA	NA
Irrigation Well	07/22/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	NA	NA	NA	NA
Irrigation Well	12/08/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	NA	NA	NA	NA
Irrigation Well	01/07/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA
Irrigation Well	04/05/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	27.85	NA	NA
Irrigation Well	07/12/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**1285 Bancroft Avenue**  
**San Leandro, 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)
Irrigation Well	10/19/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	1.7/1.8
Irrigation Well	01/15/2001	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	34.35	NA	1.0/1.2
Irrigation Well	04/30/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	31.74	NA	1.4/3.8
Irrigation Well	07/20/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	34.38	NA	3.0/4.0
Irrigation Well	10/24/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	36.28	NA	5.8/7.0
Irrigation Well	01/03/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	31.96	NA	3.1/3.1
Irrigation Well	04/05/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	32.00	NA	2.8/2.9
Irrigation Well	07/11/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	33.22	NA	4.6/4.6
Irrigation Well	10/28/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	35.55	NA	1.7/1.9
Irrigation Well	01/07/2003	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	31.20 h	NA	1.4/1.0



**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**1285 Bancroft Avenue**  
**San Leandro, 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 April 30, 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 April 30, 2001, analyzed by EPA Method 8020.

MTBE = Methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

SPH = Separate-Phase Hydrocarbons

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 = Pre-purge/post-purge DO reading.

NA = Not applicable

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**1285 Bancroft Avenue**  
**San Leandro, 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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Notes:

a = Chromatogram pattern indicated an unidentified hydrocarbon.

b = Equipment blank contained 80 ug/L TPH-G, 1.2 ug/L benzene, 17 ug/L toluene, 3.2 ug/L ethylbenzene, 16 ug/L xylenes, and 15 ug/L MTBE

c = Sample was analyzed outside the EPA recommended holding time.

d = DO Reading not taken.

e = Result was generated out of hold time.

f = Stinger broke off in well; removed on subsequent return trip.

g = Unable to complete sample due to equipment failure.

h = Depth to water at five minutes purge time.

\* Pre-purge samples

TOC elevation of wells MW-1, MW-2, and MW-3 resurveyed March 29, 1994

Site surveyed on June 21, 1999 by Virgil Chavez land surveying, Vallejo, CA.

Site surveyed on March 14, 2002 by Virgil Chavez land surveying, Vallejo, CA.



Report Number : 30898

Date : 1/17/2003

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

Subject : 1 Water Sample  
Project Name : 1285 Bancroft Avenue, San Leandro  
Project Number : 030110-MG4  
P.O. Number : 98996067

Dear Mr. Gearhart,

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

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

Sincerely,

A handwritten signature in black ink that reads "Joel Kiff". The signature is written in a cursive style with a large, looped "J" and "K".

Joel Kiff



Report Number : 30898

Date : 1/17/2003

Project Name : 1285 Bancroft Avenue, San Leandro

Project Number : 030110-MG4

Sample : MW-6

Matrix : Water

Lab Number : 30898-01

Sample Date :1/10/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>840</b>	5.0	ug/L	EPA 8260B	1/16/2003
<b>Toluene</b>	<b>1200</b>	5.0	ug/L	EPA 8260B	1/16/2003
<b>Ethylbenzene</b>	<b>1100</b>	5.0	ug/L	EPA 8260B	1/16/2003
<b>Total Xylenes</b>	<b>2700</b>	5.0	ug/L	EPA 8260B	1/16/2003
<b>Methyl-t-butyl ether (MTBE)</b>	<b>3400</b>	50	ug/L	EPA 8260B	1/16/2003
<b>TPH as Gasoline</b>	<b>17000</b>	500	ug/L	EPA 8260B	1/16/2003
Toluene - d8 (Surr)	99.1		% Recovery	EPA 8260B	1/16/2003
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	1/16/2003

Approved By:  Joel Kiff

Report Number : 30898

Date : 1/17/2003

**QC Report : Method Blank Data**

Project Name : **1285 Bancroft Avenue, San Leandro**

Project Number : **030110-MG4**

<u>Parameter</u>	<u>Measured Value</u>	<u>Method Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Date Analyzed</u>
Benzene	< 0.50	0.50	ug/L	EPA 8260B	1/15/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	1/15/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	1/15/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	1/15/2003
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	1/15/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	1/15/2003
Toluene - d8 (Surr)	94.2		%	EPA 8260B	1/15/2003
4-Bromofluorobenzene (Surr)	102		%	EPA 8260B	1/15/2003

<u>Parameter</u>	<u>Measured Value</u>	<u>Method Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Date Analyzed</u>
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KIFF ANALYTICAL, LLC

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

Approved By:  Joel Kiff

## QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : 1285 Bancroft Avenue,

Project Number : 030110-MG4

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	30899-01	<0.50	39.8	39.9	42.1	42.3	ug/L	EPA 8260B	1/15/03	106	106	0.402	70-130	25
Toluene	30899-01	<0.50	39.8	39.9	37.4	37.2	ug/L	EPA 8260B	1/15/03	93.8	93.3	0.588	70-130	25
Tert-Butanol	30899-01	<5.0	199	200	198	190	ug/L	EPA 8260B	1/15/03	99.2	95.3	4.04	70-130	25
Methyl-t-Butyl Ether	30899-01	22	39.8	39.9	63.3	63.2	ug/L	EPA 8260B	1/15/03	104	103	0.593	70-130	25

KIFF ANALYTICAL, LLC

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

Approved By: Joel Kiff



Report Number : 30898

Date : 1/17/2003

**QC Report : Laboratory Control Sample (LCS)**

Project Name : **1285 Bancroft Avenue,**

Project Number : **030110-MG4**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	1/15/03	106	70-130
Toluene	40.0	ug/L	EPA 8260B	1/15/03	94.8	70-130
Tert-Butanol	200	ug/L	EPA 8260B	1/15/03	102	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	1/15/03	104	70-130

KIFF ANALYTICAL, LLC

Approved By:

  
Joel Kiff







Report Number : 30810

Date : 1/13/03

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

Subject : 8 Water Samples  
Project Name : 1285 Bancroft Avenue, San Leandro  
Project Number : 030107-AC1  
P.O. Number : 98996067

Dear Mr. Gearhart,

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

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

Sincerely,

A handwritten signature in black ink that reads "Joel Kiff". The signature is written in a cursive style with a large, looping initial "J".

Joel Kiff




Report Number : 30810

Date : 1/13/03

Subject : 8 Water Samples  
Project Name : 1285 Bancroft Avenue, San Leandro  
Project Number : 030107-AC1  
P.O. Number : 98996067

## Case Narrative

Matrix Spike/Matrix Spike Duplicate Results associated with sample MW-5 for the analyte Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.

Approved By:   
\_\_\_\_\_



Report Number : 30810

Date : 1/13/03

Project Name : 1285 Bancroft Avenue, San Leandro

Project Number : 030107-AC1

Sample : MW-1

Matrix : Water

Lab Number : 30810-01

Sample Date :1/7/03

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	1/11/03
<b>Toluene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	1/11/03
<b>Ethylbenzene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	1/11/03
<b>Total Xylenes</b>	<b>0.53</b>	0.50	ug/L	EPA 8260B	1/11/03
<b>Methyl-t-butyl ether (MTBE)</b>	<b>&lt; 5.0</b>	5.0	ug/L	EPA 8260B	1/11/03
<b>TPH as Gasoline</b>	<b>&lt; 50</b>	50	ug/L	EPA 8260B	1/11/03
Toluene - d8 (Surr)	95.7		% Recovery	EPA 8260B	1/11/03
4-Bromofluorobenzene (Surr)	99.1		% Recovery	EPA 8260B	1/11/03

Sample : MW-2

Matrix : Water

Lab Number : 30810-02

Sample Date :1/7/03

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>9.3</b>	0.50	ug/L	EPA 8260B	1/11/03
<b>Toluene</b>	<b>14</b>	0.50	ug/L	EPA 8260B	1/11/03
<b>Ethylbenzene</b>	<b>83</b>	0.50	ug/L	EPA 8260B	1/11/03
<b>Total Xylenes</b>	<b>380</b>	0.50	ug/L	EPA 8260B	1/11/03
<b>Methyl-t-butyl ether (MTBE)</b>	<b>&lt; 5.0</b>	5.0	ug/L	EPA 8260B	1/11/03
<b>TPH as Gasoline</b>	<b>1700</b>	50	ug/L	EPA 8260B	1/11/03
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	1/11/03
4-Bromofluorobenzene (Surr)	98.8		% Recovery	EPA 8260B	1/11/03

Approved By:  Joel Kiff



Report Number : 30810

Date : 1/13/03

Project Name : 1285 Bancroft Avenue, San Leandro

Project Number : 030107-AC1

Sample : MW-3

Matrix : Water

Lab Number : 30810-03

Sample Date :1/7/03

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>8.3</b>	0.50	ug/L	EPA 8260B	1/11/03
<b>Toluene</b>	<b>150</b>	0.50	ug/L	EPA 8260B	1/11/03
<b>Ethylbenzene</b>	<b>130</b>	0.50	ug/L	EPA 8260B	1/11/03
<b>Total Xylenes</b>	<b>1000</b>	2.0	ug/L	EPA 8260B	1/11/03
<b>Methyl-t-butyl ether (MTBE)</b>	<b>130</b>	5.0	ug/L	EPA 8260B	1/11/03
<b>TPH as Gasoline</b>	<b>5500</b>	200	ug/L	EPA 8260B	1/11/03
Toluene - d8 (Surr)	104		% Recovery	EPA 8260B	1/11/03
4-Bromofluorobenzene (Surr)	97.1		% Recovery	EPA 8260B	1/11/03

Sample : MW-4

Matrix : Water

Lab Number : 30810-04

Sample Date :1/7/03

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>0.72</b>	0.50	ug/L	EPA 8260B	1/11/03
<b>Toluene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	1/11/03
<b>Ethylbenzene</b>	<b>12</b>	0.50	ug/L	EPA 8260B	1/11/03
<b>Total Xylenes</b>	<b>1.5</b>	0.50	ug/L	EPA 8260B	1/11/03
<b>Methyl-t-butyl ether (MTBE)</b>	<b>140</b>	5.0	ug/L	EPA 8260B	1/11/03
<b>TPH as Gasoline</b>	<b>210</b>	50	ug/L	EPA 8260B	1/11/03
Toluene - d8 (Surr)	94.9		% Recovery	EPA 8260B	1/11/03
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	1/11/03

Approved By:  Joel Kiff



Report Number : 30810

Date : 1/13/03

Project Name : 1285 Bancroft Avenue, San Leandro

Project Number : 030107-AC1

Sample : MW-5

Matrix : Water

Lab Number : 30810-05

Sample Date :1/7/03

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	720	100	ug/L	EPA 8260B	1/13/03
Toluene	13000	100	ug/L	EPA 8260B	1/13/03
Ethylbenzene	1900	100	ug/L	EPA 8260B	1/13/03
Total Xylenes	10000	100	ug/L	EPA 8260B	1/13/03
Methyl-t-butyl ether (MTBE)	1100	1000	ug/L	EPA 8260B	1/13/03
TPH as Gasoline	72000	10000	ug/L	EPA 8260B	1/13/03
Toluene - d8 (Surr)	95.2		% Recovery	EPA 8260B	1/13/03
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	1/13/03

Sample : MW-7

Matrix : Water

Lab Number : 30810-06

Sample Date :1/7/03

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	1/11/03
Toluene	< 0.50	0.50	ug/L	EPA 8260B	1/11/03
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	1/11/03
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	1/11/03
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	1/11/03
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	1/11/03
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	1/11/03
4-Bromofluorobenzene (Surr)	97.6		% Recovery	EPA 8260B	1/11/03

Approved By:  Joel Kiff



Report Number : 30810

Date : 1/13/03

Project Name : 1285 Bancroft Avenue, San Leandro

Project Number : 030107-AC1

Sample : MW-8

Matrix : Water

Lab Number : 30810-07

Sample Date :1/7/03

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	< 0.50	0.50	ug/L	EPA 8260B	1/11/03
<b>Toluene</b>	< 0.50	0.50	ug/L	EPA 8260B	1/11/03
<b>Ethylbenzene</b>	< 0.50	0.50	ug/L	EPA 8260B	1/11/03
<b>Total Xylenes</b>	< 0.50	0.50	ug/L	EPA 8260B	1/11/03
<b>Methyl-t-butyl ether (MTBE)</b>	97	5.0	ug/L	EPA 8260B	1/11/03
<b>TPH as Gasoline</b>	< 50	50	ug/L	EPA 8260B	1/11/03
Toluene - d8 (Surr)	103		% Recovery	EPA 8260B	1/11/03
4-Bromofluorobenzene (Surr)	98.3		% Recovery	EPA 8260B	1/11/03

Sample : IW-1

Matrix : Water

Lab Number : 30810-08

Sample Date :1/7/03

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	< 0.50	0.50	ug/L	EPA 8260B	1/11/03
<b>Toluene</b>	< 0.50	0.50	ug/L	EPA 8260B	1/11/03
<b>Ethylbenzene</b>	< 0.50	0.50	ug/L	EPA 8260B	1/11/03
<b>Total Xylenes</b>	< 0.50	0.50	ug/L	EPA 8260B	1/11/03
<b>Methyl-t-butyl ether (MTBE)</b>	< 5.0	5.0	ug/L	EPA 8260B	1/11/03
<b>TPH as Gasoline</b>	< 50	50	ug/L	EPA 8260B	1/11/03
Toluene - d8 (Surr)	92.9		% Recovery	EPA 8260B	1/11/03
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	1/11/03

Approved By:  Joel Kiff

Report Number : 30810

Date : 1/13/03

**QC Report : Method Blank Data**

Project Name : **1285 Bancroft Avenue, San Leandro**

Project Number : **030107-AC1**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	1/11/03
Toluene	< 0.50	0.50	ug/L	EPA 8260B	1/11/03
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	1/11/03
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	1/11/03
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	1/11/03
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	1/11/03
Toluene - d8 (Surr)	108		%	EPA 8260B	1/11/03
4-Bromofluorobenzene (Surr)	98.2		%	EPA 8260B	1/11/03
Benzene	< 0.50	0.50	ug/L	EPA 8260B	1/10/03
Toluene	< 0.50	0.50	ug/L	EPA 8260B	1/10/03
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	1/10/03
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	1/10/03
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	1/10/03
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	1/10/03
Toluene - d8 (Surr)	96.0		%	EPA 8260B	1/10/03
4-Bromofluorobenzene (Surr)	98.8		%	EPA 8260B	1/10/03
Benzene	< 0.50	0.50	ug/L	EPA 8260B	1/13/03
Toluene	< 0.50	0.50	ug/L	EPA 8260B	1/13/03
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	1/13/03
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	1/13/03
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	1/13/03
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	1/13/03
Toluene - d8 (Surr)	98.6		%	EPA 8260B	1/13/03
4-Bromofluorobenzene (Surr)	101		%	EPA 8260B	1/13/03

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
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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 : 1285 Bancroft Avenue,

Project Number : 030107-AC1

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	30822-19	<0.50	40.0	40.0	39.1	38.9	ug/L	EPA 8260B	1/11/03	97.8	97.3	0.487	70-130	25
Toluene	30822-19	<0.50	40.0	40.0	38.2	38.3	ug/L	EPA 8260B	1/11/03	95.6	95.6	0.0523	70-130	25
Tert-Butanol	30822-19	<5.0	200	200	175	192	ug/L	EPA 8260B	1/11/03	87.7	96.3	9.35	70-130	25
Methyl-t-Butyl Ether	30822-19	<0.50	40.0	40.0	39.8	39.3	ug/L	EPA 8260B	1/11/03	99.6	98.2	1.44	70-130	25
Benzene	30822-14	<0.50	40.0	40.0	35.5	35.5	ug/L	EPA 8260B	1/10/03	88.8	88.7	0.113	70-130	25
Toluene	30822-14	<0.50	40.0	40.0	37.0	36.3	ug/L	EPA 8260B	1/10/03	92.5	90.6	2.05	70-130	25
Tert-Butanol	30822-14	<5.0	200	200	188	186	ug/L	EPA 8260B	1/10/03	94.1	93.0	1.21	70-130	25
Methyl-t-Butyl Ether	30822-14	7.6	40.0	40.0	44.5	44.4	ug/L	EPA 8260B	1/10/03	92.2	92.0	0.244	70-130	25
Benzene	30830-02	<0.50	40.0	40.0	40.6	40.0	ug/L	EPA 8260B	1/13/03	102	100	1.44	70-130	25
Toluene	30830-02	<0.50	40.0	40.0	40.0	38.5	ug/L	EPA 8260B	1/13/03	100	96.3	3.92	70-130	25
Tert-Butanol	30830-02	29	200	200	223	222	ug/L	EPA 8260B	1/13/03	96.9	96.6	0.294	70-130	25
Methyl-t-Butyl Ether	30830-02	230	40.0	40.0	298	297	ug/L	EPA 8260B	1/13/03	163	159	2.51	70-130	25

KIFF ANALYTICAL, LLC

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

Approved By:  Joel Kiff

## QC Report : Laboratory Control Sample (LCS)

Project Name : 1285 Bancroft Avenue,

Project Number : 030107-AC1

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	1/11/03	97.4	70-130
Toluene	40.0	ug/L	EPA 8260B	1/11/03	109	70-130
Tert-Butanol	200	ug/L	EPA 8260B	1/11/03	99.5	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	1/11/03	98.7	70-130
Benzene	40.0	ug/L	EPA 8260B	1/10/03	89.2	70-130
Toluene	40.0	ug/L	EPA 8260B	1/10/03	93.6	70-130
Tert-Butanol	200	ug/L	EPA 8260B	1/10/03	91.3	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	1/10/03	92.6	70-130
Benzene	40.0	ug/L	EPA 8260B	1/13/03	100	70-130
Toluene	40.0	ug/L	EPA 8260B	1/13/03	97.6	70-130
Tert-Butanol	200	ug/L	EPA 8260B	1/13/03	97.3	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	1/13/03	107	70-130

KIFF ANALYTICAL, LLC

Approved By:  Joel Kiff





**SHELL WELL MONITORING DATA SHEET**

BTS #: <u>030110-M64</u>	Site: <u>1285 Bancroft Ave.</u>
Sampler: <u>M/S</u>	Date: <u>1/10/03</u>
Well I.D.: <u>MW-6</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>49.94</u>	Depth to Water (DTW): <u>32.75</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(AVC)</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>36.19</u>	

Purge Method: <u>Bailer</u>	Water: <u>Peristaltic</u>	Sampling Method: <u>Bailer</u>
<input checked="" type="checkbox"/> Disposable Bailer	<input type="checkbox"/> Extraction Pump	<input checked="" type="checkbox"/> Disposable Bailer
<input type="checkbox"/> Middleburg	<input type="checkbox"/> Other _____	<input type="checkbox"/> Extraction Port
<input type="checkbox"/> Electric Submersible		<input type="checkbox"/> 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 $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
1229	64.5	6.4	906	>1,000	3	Cloudy, Odor
1235	64.5	6.5	905	891	6	Very light screen
1241	64.4	6.5	903	458	9	

Did well dewater? Yes  No  Gallons actually evacuated: 9

Sampling Date: 1/10/03 Sampling Time: 1244 Depth to Water: 32.82

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

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

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

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

D.O. (if req'd): (Pre-purge) 0.4 <sup>mg/L</sup> (Post-purge) 0.3 <sup>mg/L</sup>

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

# WELL GAUGING DATA

Project # 030107-Ac1 Date 1-7-03 Client Shell

Site 1285 Bancroft Ave San Leandro

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					34.13	59.19	↓
MW-2	4					34.22	59.04	
MW-3	4					34.64	57.65	
MW-4	4					35.24	54.73	
MW-5	4					34.17	49.95	
MW-6	2					32.95	49.94	
MW-7	2					33.76	50.10	
MW-8	2					33.01	50.09	
IW-1	8					See below	-	↓
* gauged w/ stinger in well								
IW-1			DTW @ 5 min = 31.20					
			DTW @ 10 min = 31.62					
			DTW @ 15 min = 31.94					



## SHELL WELL MONITORING DATA SHEET

BTS #: <u>030107-Ac1</u>	Site: <u>1285 Bancroft Ave San Leandro</u>
Sampler: <u>Aaron C</u>	Date: <u>1-7-03</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): <u>59.04</u>	Depth to Water (DTW): <u>34.22</u>
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>39.18</u>	

Purge Method: Bailer Disposable Bailer Middleburg <input checked="" type="checkbox"/> Electric Submersible	Water: Peristaltic Extraction Pump Other: _____	Sampling Method: <input checked="" type="checkbox"/> Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____
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$\frac{16}{\text{Case Volume}} \text{ (Gals.)} \times \frac{3}{\text{Specified Volumes}} = \frac{48}{\text{Calculated Volume}} \text{ Gals.}$	<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 <del>µS</del> )	Turbidity (NTUs)	Gals. Removed	Observations
1510	65.4	7.1	572	<del>TURBIDIMETER</del>	16	clear, odor
1513	65.2	7.1	573	<del>FUNCTIONING</del>	32	clear, odor
1516	65.2	7.0	546	/	48	clear, odor

Did well dewater? Yes  No  Gallons actually evacuated: 48

Sampling Date: 1-7-03 Sampling Time: 1520 Depth to Water: 38.41

Sample I.D.: MW-2 Laboratory: (Kitt) SPL Other: \_\_\_\_\_

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

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

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

D.O. (if req'd):	Pre-purge: <u>3.9</u> <sup>mg/l</sup>	Post-purge: <u>3.6</u> <sup>mg/l</sup>
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV



## SHELL WELL MONITORING DATA SHEET

BTS #: <u>D30107-Ac1</u>	Site: <u>1285 Bancroft Ave San Leandro</u>
Sampler: <u>Aaron C</u>	Date: <u>1-7-03</u>
Well I.D.: <u>mw-3</u>	Well Diameter: 2 3 <u>4</u> 6 8 <u>    </u>
Total Well Depth (TD): <u>57.65</u>	Depth to Water (DTW): <u>34.64</u>
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>39.24</u>	

Purge Method: <input type="checkbox"/> Bailor	Water: <input type="checkbox"/> Peristaltic	Sampling Method: <input checked="" type="checkbox"/> Bailor
<input type="checkbox"/> Disposable Bailor	<input type="checkbox"/> Extraction Pump	<input type="checkbox"/> Disposable Bailor
<input type="checkbox"/> Middleburg	<input type="checkbox"/> Other _____	<input type="checkbox"/> Extraction Port
<input checked="" type="checkbox"/> Electric Submersible		<input type="checkbox"/> Dedicated Tubing
Other: _____		

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

15 (Gals.) X 3 Specified Volumes = 45 Gals. Calculated Volume

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
<u>1445</u>	<u>70.7</u>	<u>7.0</u>	<u>557</u>	<u>TURBIDIMETER</u>	<u>15</u>	<u>clear</u>
<u>1450</u>	<u>67.9</u>	<u>7.0</u>	<u>563</u>	<u>MAJUNCTION</u>	<u>30</u>	<u>clear</u>
<u>1453</u>	<u>67.5</u>	<u>7.0</u>	<u>558</u>	<u>/</u>	<u>45</u>	<u>clear</u>

Did well dewater? Yes  No  Gallons actually evacuated: 45

Sampling Date: 1-7-03 Sampling Time: 1455 Depth to Water: 37.91

Sample I.D.: mw-3 Laboratory: (Kitt) SPL Other \_\_\_\_\_

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

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

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

D.O. (if req'd): Pre-purge: 3.2 <sup>mg/L</sup> Post-purge: 3.1 <sup>mg/L</sup>

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

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>030107-Ac1</u>	Site: <u>1285 Bancroft Ave San Leandro</u>
Sampler: <u>Aaron C</u>	Date: <u>1-7-03</u>
Well I.D.: <u>mw-4</u>	Well Diameter: 2 3 <u>4</u> 6 8 <u>    </u>
Total Well Depth (TD): <u>54.73</u>	Depth to Water (DTW): <u>35.24</u>
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>39.13</u>	

Purge Method: <input type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Middleburg <input checked="" type="checkbox"/> Electric Submersible	Water: <input type="checkbox"/> Peristaltic <input type="checkbox"/> Extraction Pump <input type="checkbox"/> Other _____	Sampling Method: <input checked="" type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Extraction Port <input type="checkbox"/> Dedicated Tubing Other: _____
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$\frac{13 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = \frac{39}{\text{Calculated Volume}} \text{ Gals.}$	<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
1330	64.4	7.4	603	TURBIDIMETER	13	Clear, odor
1333	64.5	6.8	625	MAFUNCTION	26	clear, odor
1336	64.6	6.8	684	/	39	Clear, odor

Did well dewater? Yes  No  Gallons actually evacuated: 39

Sampling Date: 1-7-03 Sampling Time: 1345 Depth to Water: 37.64

Sample I.D.: MW-4 Laboratory: Kifi SPL Other \_\_\_\_\_

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

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

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

D.O. (if req'd):	Pre-purge: <u>2.1</u> mg/L	Post-purge: <u>2.2</u> mg/L	
D.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV	

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>030107-Ac1</u>	Site: <u>1285 Bancroft Ave San Leandro</u>
Sampler: <u>Aaron C</u>	Date: <u>1-7-03</u>
Well I.D.: <u>mw-5</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): <u>49.75</u>	Depth to Water (DTW): <u>34.17</u>
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>37.32</u>	

Purge Method: <input type="checkbox"/> Bailor <input type="checkbox"/> Disposable Bailor <input type="checkbox"/> Middleburg <input checked="" type="checkbox"/> Electric Submersible	Water: <input type="checkbox"/> Peristaltic <input type="checkbox"/> Extraction Pump Other: _____	Sampling Method: <input checked="" type="checkbox"/> Bailor <input type="checkbox"/> Disposable Bailor <input type="checkbox"/> Extraction Port <input type="checkbox"/> Dedicated Tubing Other: _____
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$\underline{10.5} \text{ (Gals.)} \times \underline{3} = \underline{31.5} \text{ Gals.}$	<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														
Case Volume	Specified Volumes	Calculated Volume															

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
1535	66.6	6.7	547	TURBIDIMETER	10.5	clear, odor
1537	66.8	6.6	559	MACROFACTAN	21	clear, odor
1539	66.8	6.6	596	/	31.5	clear, odor
<del>1545</del>						

Did well dewater? Yes  No  Gallons actually evacuated: 31.5

Sampling Date: 1-7-03 Sampling Time: 1545 Depth to Water: 35.74

Sample I.D.: mw-5 Laboratory: Kitt SPL Other: \_\_\_\_\_

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

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

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

D.O. (if req'd):	Pre-purge:	<u>1.4</u> mg/L	Post-purge:	<u>1.1</u> mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## SHELL WELL MONITORING DATA SHEET

3TS #: <u>030107-Ac1</u>	Site: <u>1285 Bancroft Ave San Leandro</u>
Sampler: <u>Aaron C</u>	Date: <u>1-7-03</u>
Well I.D.: <u>mw-6</u>	Well Diameter: <input checked="" type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8 <input type="radio"/> _____
Total Well Depth (TD): <u>49.94</u>	Depth to Water (DTW): <u>32.95</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="radio"/> PVC <input type="radio"/> Grade	D.O. Meter (if req'd): <input checked="" type="radio"/> YSI <input type="radio"/> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>36.34</u>	

Purge Method: <input checked="" type="checkbox"/> Bailor <input type="checkbox"/> Disposable Bailor <input checked="" type="checkbox"/> Middleburg <input type="checkbox"/> Electric Submersible	Water: <input type="checkbox"/> Peristaltic <input type="checkbox"/> Extraction Pump <input type="checkbox"/> Other _____	Sampling Method: <input checked="" type="checkbox"/> Bailor <input type="checkbox"/> Disposable Bailor <input type="checkbox"/> Extraction Port <input type="checkbox"/> Dedicated Tubing Other: _____
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$\frac{3 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = \frac{9}{\text{Calculated Volume}} \text{ Gals.}$	<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
						<u>did not purge or sample b/c stinger broke and fell back into well above the water line</u>

Did well dewater?    Yes    No	Gallons actually evacuated:
Sampling Date: <u>1-7-03</u>	Sampling Time: _____
Sample I.D.: <u>mw-6</u>	Depth to Water: _____
Laboratory: <input checked="" type="radio"/> Kiff <input type="radio"/> SPL    Other _____	
Analyzed for: <input checked="" type="checkbox"/> TPH-G <input checked="" type="checkbox"/> BTEX <input checked="" type="checkbox"/> MTBE <input type="checkbox"/> TPH-D    Other: _____	
EB I.D. (if applicable): _____ @ _____ Time	Duplicate I.D. (if applicable): _____
Analyzed for: <input type="checkbox"/> TPH-G <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> TPH-D    Other: _____	
D.O. (if req'd):    Pre-purge: _____ $\frac{mg}{l}$	Post-purge: _____ $\frac{mg}{l}$
D.R.P. (if req'd):    Pre-purge: _____ mV	Post-purge: _____ mV

## SHELL WELL MONITORING DATA SHEET

3TS #: <u>030107-Ac1</u>	Site: <u>1285 Bancroft Ave San Leandro</u>
Sampler: <u>Aaron C</u>	Date: <u>1-7-03</u>
Well I.D.: <u>mw-7</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): <u>50.10</u>	Depth to Water (DTW): <u>33.76</u>
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>37.02</u>	

Purge Method: <input checked="" type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input checked="" type="checkbox"/> Middleburg <input type="checkbox"/> Electric Submersible	Water: <input type="checkbox"/> Peristaltic <input type="checkbox"/> Extraction Pump <input type="checkbox"/> Other: _____	Sampling Method: <input checked="" type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Extraction Port <input type="checkbox"/> Dedicated Tubing Other: _____
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2.5 (Gals.) X 3 = 7.5 Gals.  
 Case Volume      Specified Volumes      Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.091	4"	0.65
2"	0.16	6"	1.17
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
1230	66.0	7.7	557	TURBIDIMETER	2.5	clear
1235	64.2	6.9	559	MALFUNCTION	5	clear
1240	64.4	6.9	564	/	7.5	clear

Did well dewater?    Yes     No    Gallons actually evacuated: 7.5

Sampling Date: 1-7-03    Sampling Time: 1245    Depth to Water: 35.17

Sample I.D.: MW-7    Laboratory: Kill    SPL    Other: \_\_\_\_\_

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

SB 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>2.24</u> <sup>mg/L</sup>	<u>Post-purge:</u>	<u>1.9</u> <sup>mg/L</sup>
D.R.P. (if req'd):	<u>Pre-purge:</u>	mV	<u>Post-purge:</u>	mV

11.24

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>030107-Ac1</u>	Site: <u>1285 Bancroft Ave San Leandro</u>
Sampler: <u>Aaron C</u>	Date: <u>1-7-03</u>
Well I.D.: <u>mw-8</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): <u>50.09</u>	Depth to Water (DTW): <u>33.01</u>
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>36.42</u>	

Purge Method: <input checked="" type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input checked="" type="checkbox"/> Middleburg <input type="checkbox"/> Electric Submersible	Water: <input type="checkbox"/> Peristaltic <input type="checkbox"/> Extraction Pump <input type="checkbox"/> Other _____	Sampling Method: <input checked="" type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Extraction Port <input type="checkbox"/> Dedicated Tubing Other: _____
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$\underline{3} \text{ (Gals.)} \times \underline{3} = \underline{9} \text{ Gals.}$ Cuse 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>US</u> )	Turbidity (NTUs)	Gals. Removed	Observations
1130	64.9	6.6	637	TURBIDIMETER	3	clear
1135	63.7	6.6	624	MAGFUNCTION	6	clear
1140	64.6	6.5	635	/	9	clear

Did well dewater? Yes  No  Gallons actually evacuated: 9

Sampling Date: 1-7-03      Sampling Time: 1150      Depth to Water: 33.12

Sample I.D.: mw-8      Laboratory: Kill      SPL      Other \_\_\_\_\_

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

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

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

D.O. (if req'd):	Pre-purge: <u>1.4</u> mg/L	Post-purge: <u>1.7</u> mg/L	
D.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV	

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>630107-Act</u>	Site: <u>1285 Bancroft Ave San Leandro</u>
Sampler: <u>Aaron C</u>	Date: <u>1-7-03</u>
Well I.D.: <u>Iw-1</u>	Well Diameter: 2 3 4 6 <u>8</u>
Total Well Depth (TD): <u>—</u>	Depth to Water (DTW): <u>—</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC      Grade	D.O. Meter (if req'd): <u>(YST)</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

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

Purged for 15 min @ extraction port

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

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.09	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
1025	62.1	7.0	554	<u>TURBIDIMETER</u>	—	<u>clear</u>
				<u>MAJUNCTION</u>		<u>DTW @ 5 min = 31.20</u>
						<u>DTW @ 10 min = 31.62</u>
						<u>DTW @ 15 min = 31.94</u>

Did well dewater?    Yes    No    Gallons actually evacuated: —

Sampling Date: 1-7-03    Sampling Time: 1025    Depth to Water: after 15 min = 31.94

Sample I.D.: Iw-1    Laboratory: KIT    SPL    Other: —

Analyzed for: (PILG) (BTEX) (MTBE)    TPH-D    Other: —

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

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

D.O. (if req'd): Pre-purge: 1.4 mg/L    Post-purge: 1.0 mg/L

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