

Recd 7/20/01

C A M B R I A

July 16, 2001

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

RO
223

Re: **First Quarter 2001 Monitoring Report**
Shell-branded Service Station
540 Hegenberger Road
Oakland, California
Incident #98995752
Cambria Project #243-0414-002



Dear Mr. Chan:

On behalf of Equiva Services LLC, Cambria Environmental Technology, Inc. (Cambria) is submitting this groundwater monitoring report in accordance with the reporting requirements of 23 CCR 2652d.

FIRST QUARTER 2001 ACTIVITIES

Groundwater Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California measured dissolved oxygen (DO), gauged water levels, sampled the monitoring wells using the non-purging method, calculated groundwater elevations, and compiled the analytical data. Cambria prepared a groundwater elevation contour map (Figure 1). Blaine's report, presenting the laboratory report and supporting field documents, is included as Attachment A.

Interim Remedial Action: From July 1999 through June 2000, groundwater extraction (GWE) was performed at the site to extract dissolved-phase hydrocarbons and methyl tert-butyl ether (MTBE) in groundwater. In June through December 2000, dual-vacuum extraction (DVE) was performed at the site to enhance GWE and to extract vapor-phase hydrocarbon and MTBE from the soil. Hydrocarbon mass removal data are presented in Tables 1 and 2.

The recent site investigation found that the MTBE plume in groundwater is defined and there are no observed sensitive receptors near the site. Based on these findings, [REDACTED]

Oakland, CA
San Ramon, CA
Sonoma, CA

**Cambria
Environmental
Technology, Inc.**

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

**RESPONSE TO ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
(ACHCSA) CORRESPONDENCE DATED MARCH 13, 2001**

ACHCSA correspondence dated March 13, 2001 raised several questions regarding the site characterization and remedial activities. These issues are addressed below.

Further Characterization of MTBE/Benzene, Toluene, Ethylbenzene and Xylenes (BTEX)

Plumes/Preferential Pathways: Grab groundwater samples collected from boring SB-G identified MTBE concentrations of 58,400 parts per billion (ppb), while well MW-4, located approximately 40 feet downgradient of this point, contained no detectable MTBE in previous sampling and contained only 3.16 ppb of MTBE during this quarterly sampling. As discussed in the ACHCSA letter and in the site conceptual model, utilities located within Edes Avenue may be acting as a preferential pathway to intercept contaminants and allow migration.

~~The 12" utility water line identified in the conduit survey is a possible pathway, based on its location and depth. The direction in which this line is graded suggests that preferential migration through its herdfill would expedite transport of contaminants to the nearest sensitive receptor, which is the canal located on the northwest corner of the intersection on the north side of Coliseum Way.~~

To evaluate this possibility of migration to this receptor, we propose to collect samples from this canal during the next quarterly monitoring event, and perform chemical analysis for total petroleum hydrocarbons as gasoline, BTEX, and MTBE. We will also collect samples from the storm drain which empties into the canal to evaluate whether storm water runoff discharge is a source of contamination which may be identified in the canal. These samples will be collected from the inlet located just north of the site, adjacent to boring SB-E, and from the inlet located within the Hegenberger right-of-way, adjacent to the ARCO station.

ANTICIPATED SECOND QUARTER 2001 ACTIVITIES

Groundwater Monitoring: Blaine will collect DO measurements, gauge water levels, sample the monitoring wells using the non-purging method, and tabulate the data. Cambria will prepare a report documenting those activities.

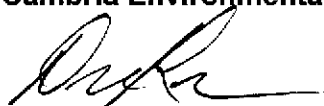
C A M B R I A

Barney Chan
July 16, 2001

CLOSING

We appreciate the opportunity to work with you on this project. Please call Diane Lundquist at (510) 420-3334 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc



Diane Lundquist, P.E.
Principal Engineer



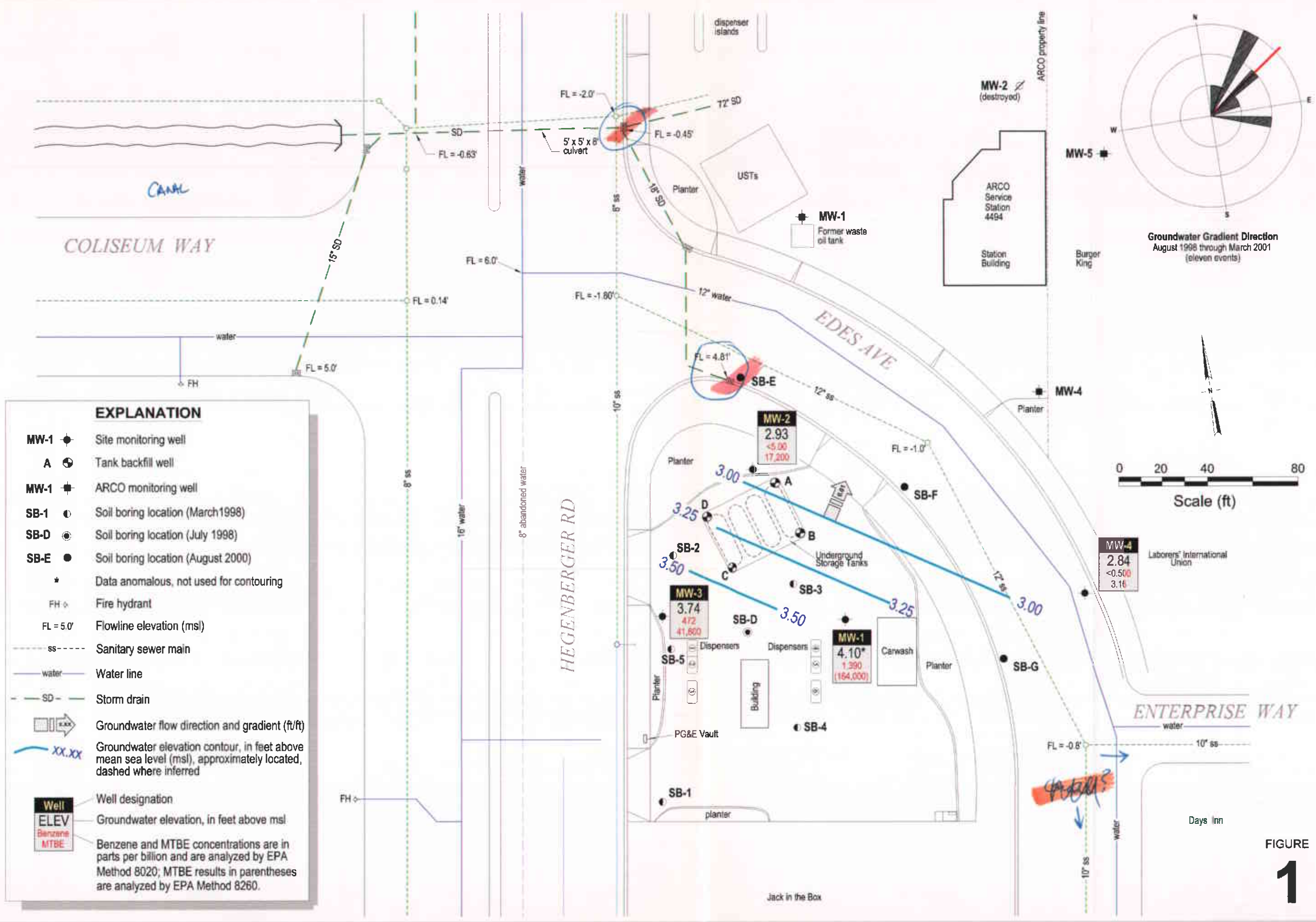
Figure: 1 - Groundwater Elevation Contour Map

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

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

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

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Underground Utility Map with Monitoring Well and Soil Boring Locations and Groundwater Sampling Results for

Shell-branded Service Station
 540 Hegenberger Road
 Oakland, California
 Incident #98995752

FIGURE 1

March 9, 2001



C A M B R I A

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995752, 540 Hegenberger Road, Oakland, 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)
07/29/99	BW-A	400	400	06/22/99	318	0.00106	0.00106	<0.50	0.00000	0.00000	4,470	0.01492	0.01492
08/04/99	BW-A	2,000	2,400	06/22/99	318	0.00531	0.00637	<0.50	0.00000	0.00001	4,470	0.07460	0.08952
08/11/99	BW-A	2,437	4,837	06/22/99	318	0.00647	0.01284	<0.50	0.00001	0.00001	4,470	0.09090	0.18042
08/20/99	BW-A	1,213	6,050	06/22/99	318	0.00322	0.01605	<0.50	0.00000	0.00001	4,470	0.04524	0.22566
08/30/99	BW-A	2,673	8,723	06/22/99	318	0.00709	0.02315	<0.50	0.00001	0.00002	4,470	0.09970	0.32536
09/03/99*	BW-A	325	9,048	06/22/99	318	0.00086	0.02401	<0.50	0.00000	0.00002	4,470	0.01212	0.33748
09/10/99*	BW-A	425	9,148	06/22/99	318	0.00113	0.02514	<0.50	0.00000	0.00002	4,470	0.01585	0.35334
09/23/99	BW-A	615	9,763	06/22/99	318	0.00163	0.02677	<0.50	0.00000	0.00002	4,470	0.02294	0.37628
09/29/99	BW-A	800	10,563	06/22/99	318	0.00212	0.02889	<0.50	0.00000	0.00002	4,470	0.02984	0.40611
11/05/99	BW-A	675	11,238	06/22/99	318	0.00179	0.03068	<0.50	0.00000	0.00002	4,470	0.02518	0.43129
07/29/99	BW-B	1,000	1,000	06/22/99	<250	0.00104	0.00104	2.5	0.00002	0.00002	8,600	0.07176	0.07176
08/04/99	BW-B	800	1,800	06/22/99	<250	0.00083	0.00188	2.5	0.00002	0.00106	8,600	0.05741	0.12917
08/11/99	BW-B	2,213	4,013	06/22/99	<250	0.00231	0.00419	2.5	0.00005	0.00192	8,600	0.15881	0.28798
08/20/99	BW-B	1,213	5,226	06/22/99	<250	0.00127	0.00545	2.5	0.00003	0.00421	8,600	0.08705	0.37503
08/30/99	BW-B	877	6,103	06/22/99	<250	0.00091	0.00637	2.5	0.00002	0.00547	8,600	0.06293	0.43796
09/03/99*	BW-B	325	6,428	06/22/99	<250	0.00034	0.00670	2.5	0.00001	0.00637	8,600	0.02332	0.46128
09/10/99*	BW-B	425	6,853	06/22/99	<250	0.00044	0.00715	2.5	0.00001	0.00671	8,600	0.03050	0.49178
09/23/99	BW-B	750	7,603	06/22/99	<250	0.00078	0.00793	2.5	0.00002	0.00716	8,600	0.05382	0.54560
09/29/99	BW-B	600	8,203	06/22/99	<250	0.00063	0.00856	2.5	0.00001	0.00794	8,600	0.04306	0.58866
11/05/99	BW-B	650	8,853	06/22/99	<250	0.00068	0.00923	2.5	0.00001	0.00857	8,600	0.04664	0.63530
07/29/99	BW-C	300	300	06/22/99	<50	0.00006	0.00006	<0.50	0.00000	0.00000	11,000	0.02754	0.02754
08/04/99	BW-C	700	1,000	06/22/99	<50	0.00015	0.00021	<0.50	0.00000	0.00000	11,000	0.06425	0.09179
08/11/99	BW-C	0	1,000	06/22/99	<50	0.00000	0.00021	<0.50	0.00000	0.00000	11,000	0.00000	0.09179
08/20/99	BW-C	1,013	2,013	06/22/99	<50	0.00021	0.00042	<0.50	0.00000	0.00000	11,000	0.09298	0.18477
08/30/99	BW-C	375	2,388	06/22/99	<50	0.00008	0.00050	<0.50	0.00000	0.00000	11,000	0.03442	0.21919
09/03/99*	BW-C	325	2,713	06/22/99	<50	0.00007	0.00057	<0.50	0.00000	0.00001	11,000	0.02983	0.24902
09/10/99*	BW-C	425	3,138	06/22/99	<50	0.00009	0.00065	<0.50	0.00000	0.00001	11,000	0.03901	0.28803

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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)
09/23/99	BW-C	750	3,888	06/22/99	<50	0.00016	0.00081	<0.50	0.00000	0.00001	11,000	0.06884	0.35687
09/29/99	BW-C	700	4,588	06/22/99	<50	0.00015	0.00096	<0.50	0.00000	0.00001	11,000	0.06425	0.42112
11/05/99	BW-C	550	5,138	06/22/99	<50	0.00011	0.00107	<0.50	0.00000	0.00001	11,000	0.05048	0.47161
06/06/00	BW-C	926	6,064	06/22/99	<50	0.00019	0.00127	<0.50	0.00000	0.00001	11,000	0.08500	0.55660
09/07/00	BW-C	1,000	7,064	06/22/99	<50	0.00021	0.00147	<0.50	0.00000	0.00001	11,000	0.09179	0.64839
07/29/99	BW-D	1,500	1,500	06/22/99	<50	0.00031	0.00031	<0.50	0.00000	0.00000	2,190	0.02741	0.02741
08/04/99	BW-D	250	1,750	06/22/99	<50	0.00005	0.00037	<0.50	0.00000	0.00000	2,190	0.00457	0.03198
08/11/99	BW-D	0	1,750	06/22/99	<50	0.00000	0.00037	<0.50	0.00000	0.00000	2,190	0.00000	0.03198
08/20/99	BW-D	1,213	2,963	06/22/99	<50	0.00025	0.00062	<0.50	0.00000	0.00001	2,190	0.02217	0.05415
08/30/99	BW-D	280	3,243	06/22/99	<50	0.00006	0.00068	<0.50	0.00000	0.00001	2,190	0.00512	0.05926
09/03/99*	BW-D	325	3,568	06/22/99	<50	0.00007	0.00074	<0.50	0.00000	0.00001	2,190	0.00594	0.06520
09/10/99*	BW-D	425	3,993	06/22/99	<50	0.00009	0.00083	<0.50	0.00000	0.00001	2,190	0.00777	0.07297
09/23/99	BW-D	750	4,743	06/22/99	<50	0.00016	0.00099	<0.50	0.00000	0.00001	2,190	0.01371	0.08667
09/29/99	BW-D	700	5,443	06/22/99	<50	0.00015	0.00114	<0.50	0.00000	0.00001	2,190	0.01279	0.09947
11/05/99	BW-D	625	6,068	06/22/99	<50	0.00013	0.00127	<0.50	0.00000	0.00001	2,190	0.01142	0.11089
07/29/99	MW-1	150	150	06/22/99	20,000	0.02503	0.02503	100	0.00013	0.00013	150,000	0.18775	0.18775
08/04/99	MW-1	150	300	06/22/99	20,000	0.02503	0.05007	100	0.00013	0.00025	150,000	0.18775	0.37550
08/11/99	MW-1	15	315	06/22/99	20,000	0.00250	0.05257	100	0.00001	0.00026	150,000	0.01877	0.39427
08/20/99	MW-1	44	359	06/22/99	20,000	0.00734	0.05991	100	0.00004	0.00030	150,000	0.05507	0.44934
08/30/99	MW-1	218	577	06/22/99	20,000	0.03638	0.09629	100	0.00018	0.00048	150,000	0.27286	0.72220
09/03/99*	MW-1	125	702	06/22/99	20,000	0.02086	0.11715	100	0.00010	0.00059	150,000	0.15646	0.87866
09/10/99*	MW-1	75	777	06/22/99	20,000	0.01252	0.12967	100	0.00006	0.00065	150,000	0.09387	0.97253
09/23/99	MW-1	175	952	06/22/99	20,000	0.02921	0.15888	100	0.00015	0.00079	150,000	0.21904	1.19157
09/29/99	MW-1	50	1,002	06/22/99	20,000	0.00834	0.16722	100	0.00004	0.00084	150,000	0.06258	1.25416
11/05/99	MW-1	50	1,052	09/30/99	<2,500	0.00052	0.16774	<25.0	0.00001	0.00084	30,900	0.01289	1.26705
11/19/99	MW-1	22.5	1,075	09/30/99	<2,500	0.00023	0.16798	<25.0	0.00000	0.00084	30,900	0.00580	1.27285
11/24/99	MW-1	25	1,100	09/30/99	<2,500	0.00026	0.16824	<25.0	0.00000	0.00085	30,900	0.00645	1.27930

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12/02/99	MW-1	25	1,125	09/30/99	<2,500	0.00026	0.16850	<25.0	0.00000	0.00085	30,900	0.00645	1.28574
12/17/99	MW-1	25	1,150	12/10/99	<50.0	0.00001	0.16850	29.7	0.00001	0.00086	76,300	0.01592	1.30166
01/03/00	MW-1	40	1,190	12/10/99	<50.0	0.00001	0.16851	29.7	0.00001	0.00086	76,300	0.02547	1.32713
01/07/00	MW-1	0	1,190	12/10/99	<50.0	0.00000	0.16851	29.7	0.00000	0.00086	76,300	0.00000	1.32713
01/13/00	MW-1	45	1,235	12/10/99	<50.0	0.00001	0.16852	29.7	0.00001	0.00088	76,300	0.02865	1.35578
01/12/00	MW-1	35	1,270	12/10/99	<50.0	0.00001	0.16853	29.7	0.00001	0.00088	76,300	0.02228	1.37806
01/25/00	MW-1	35	1,305	12/10/99	<50.0	0.00001	0.16854	29.7	0.00001	0.00089	76,300	0.02228	1.40034
02/01/00	MW-1	22	1,327	12/10/99	<50.0	0.00000	0.16854	29.7	0.00001	0.00090	76,300	0.01401	1.41435
02/11/00	MW-1	28	1,355	12/10/99	<50.0	0.00001	0.16855	29.7	0.00001	0.00091	76,300	0.01783	1.43218
02/15/00	MW-1	25	1,380	12/10/99	<50.0	0.00001	0.16855	29.7	0.00001	0.00091	76,300	0.01592	1.44809
02/23/00	MW-1	20	1,400	12/10/99	<50.0	0.00000	0.16856	29.7	0.00000	0.00092	76,300	0.01273	1.46083
03/02/00	MW-1	7.5	1,407	03/02/00	<2,500	0.00008	0.16863	<25.0	0.00000	0.00092	27,600	0.00173	1.46255
03/10/00	MW-1	40	1,447	03/02/00	<2,500	0.00042	0.16905	<25.0	0.00000	0.00092	27,600	0.00921	1.47177
03/15/00	MW-1	25	1,472	03/02/00	<2,500	0.00026	0.16931	<25.0	0.00000	0.00092	27,600	0.00576	1.47752
03/21/00	MW-1	25	1,497	03/02/00	<2,500	0.00026	0.16957	<25.0	0.00000	0.00093	27,600	0.00576	1.48328
03/27/00	MW-1	30	1,527	03/02/00	<2,500	0.00031	0.16989	<25.0	0.00000	0.00093	27,600	0.00691	1.49019
04/07/00	MW-1	45	1,572	03/02/00	<2,500	0.00047	0.17036	<25.0	0.00000	0.00094	27,600	0.01036	1.50056
04/13/00	MW-1	30	1,602	03/02/00	<2,500	0.00031	0.17067	<25.0	0.00000	0.00094	27,600	0.00691	1.50746
04/20/00	MW-1	25	1,627	03/02/00	<2,500	0.00026	0.17093	<25.0	0.00000	0.00094	27,600	0.00576	1.51322
04/26/00	MW-1	25	1,652	03/02/00	<2,500	0.00026	0.17119	<25.0	0.00000	0.00094	27,600	0.00576	1.51898
05/04/00	MW-1	28	1,680	03/02/00	<2,500	0.00029	0.17148	<25.0	0.00000	0.00095	27,600	0.00645	1.52543
05/09/00	MW-1	45	1,725	03/02/00	<2,500	0.00047	0.17195	<25.0	0.00000	0.00095	27,600	0.01036	1.53579
05/17/00	MW-1	27	1,752	03/02/00	<2,500	0.00028	0.17223	<25.0	0.00000	0.00095	27,600	0.00622	1.54201
05/22/00	MW-1	25	1,777	03/02/00	<2,500	0.00026	0.17249	<25.0	0.00000	0.00096	27,600	0.00576	1.54777
06/01/00	MW-1	25	1,802	03/02/00	<2,500	0.00026	0.17275	<25.0	0.00000	0.00096	27,600	0.00576	1.55353
06/06/00	MW-1	175	1,977	03/02/00	<2,500	0.00183	0.17458	<25.0	0.00002	0.00098	27,600	0.04030	1.59383
06/08/00	MW-1	43	2,020	03/02/00	<2,500	0.00045	0.17503	<25.0	0.00000	0.00098	27,600	0.00990	1.60373
06/15/00	MW-1	29	2,049	06/08/00	<2,000	0.00024	0.17527	<20.0	0.00000	0.00098	67,600	0.01636	1.62009
07/10/00	MW-1	169	2,218	06/08/00	<2,000	0.00141	0.17668	<20.0	0.00001	0.00100	67,600	0.09533	1.71542

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09/07/00	MW-1	100	2,318	09/05/00	<10,000	0.00417	0.18085	411	0.00034	0.00134	115,000	0.09596	1.81138
10/23/00*	MW-1	100	2,418	09/05/00	<10,000	0.00417	0.18502	411	0.00034	0.00168	71,100	0.05933	1.87071
11/30/00	MW-1	160	2,578	09/05/00	<10,000	0.00668	0.19170	411	0.00055	0.00223	71,100	0.09493	1.96563
12/21/00	MW-1	125	2,703	12/15/00	35,600	0.03713	0.22883	1,310	0.00137	0.00360	136,000	0.14185	2.10749
05/16/01	MW-1	150	2,853	03/09/01	<10,000	0.00626	0.23509	1,390	0.00174	0.00534	164,000	0.20527	2.31276
06/19/01	MW-1	100	2,953	03/09/01	<10,000	0.00417	0.23926	1,390	0.00116	0.00650	164,000	0.13685	2.44961
07/29/99	MW-3	100	100	06/22/99	58,000	0.04840	0.04840	6,600	0.00551	0.00551	653,000	0.54489	0.54489
08/04/99	MW-3	100	200	06/22/99	58,000	0.04840	0.09679	6,600	0.00551	0.01101	653,000	0.54489	1.08977
08/11/99	MW-3	45	245	06/22/99	58,000	0.02178	0.11857	6,600	0.00248	0.01349	653,000	0.24520	1.33497
08/20/99	MW-3	55	300	06/22/99	58,000	0.02662	0.14519	6,600	0.00303	0.01652	653,000	0.29969	1.63466
08/30/99	MW-3	77	377	06/22/99	58,000	0.03727	0.18246	6,600	0.00424	0.02076	653,000	0.41956	2.05422
09/03/99*	MW-3	50	427	06/22/99	58,000	0.02420	0.20666	6,600	0.00275	0.02352	653,000	0.27244	2.32667
09/10/99*	MW-3	40	467	06/22/99	58,000	0.01936	0.22602	6,600	0.00220	0.02572	653,000	0.21795	2.54462
09/23/99	MW-3	10	477	06/22/99	58,000	0.00484	0.23085	6,600	0.00055	0.02627	653,000	0.05449	2.59911
09/29/99	MW-3	50	527	06/22/99	58,000	0.02420	0.25505	6,600	0.00275	0.02902	653,000	0.27244	2.87155
11/05/99	MW-3	50	577	09/30/99	4,360	0.00182	0.25687	121	0.00005	0.02907	35,600	0.01485	2.88640
11/19/99	MW-3	22.5	600	09/30/99	4,360	0.00082	0.25769	121	0.00002	0.02910	35,600	0.00668	2.89309
11/24/99	MW-3	28	628	09/30/99	4,360	0.00102	0.25871	121	0.00003	0.02912	35,600	0.00832	2.90141
12/02/99	MW-3	25	653	09/30/99	4,360	0.00091	0.25962	121	0.00003	0.02915	35,600	0.00743	2.90883
12/17/99	MW-3	35	688	12/10/99	4,220	0.00123	0.26085	973	0.00028	0.02943	88,200	0.02576	2.93459
01/03/00	MW-3	40	728	12/10/99	4,220	0.00141	0.26226	973	0.00032	0.02976	88,200	0.02944	2.96403
01/07/00	MW-3	0	728	12/10/99	4,220	0.00000	0.26226	973	0.00000	0.02976	88,200	0.00000	2.96403
01/13/00	MW-3	45	773	12/10/99	4,220	0.00158	0.26385	973	0.00037	0.03012	88,200	0.03312	2.99715
01/21/00	MW-3	35	808	12/10/99	4,220	0.00123	0.26508	973	0.00028	0.03041	88,200	0.02576	3.02291
01/25/00	MW-3	38	846	12/10/99	4,220	0.00134	0.26642	973	0.00031	0.03072	88,200	0.02797	3.05088
02/01/00	MW-3	23	869	12/10/99	4,220	0.00081	0.26723	973	0.00019	0.03090	88,200	0.01693	3.06780
02/11/00	MW-3	22	891	12/10/99	4,220	0.00077	0.26800	973	0.00018	0.03108	88,200	0.01619	3.08399
02/15/00	MW-3	22	913	12/10/99	4,220	0.00077	0.26877	973	0.00018	0.03126	88,200	0.01619	3.10019

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995752, 540 Hegenberger Road, Oakland, 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)		
02/23/00	MW-3	30	943	12/10/99	4,220	0.00106	0.26983	973	0.00024	0.03150	88,200	0.02208	3.12226		
03/02/00	MW-3	7	950	03/02/00	65,300	0.00381	0.27365	5,210	0.00030	0.03181	59,800	0.00349	3.12576		
03/10/00	MW-3	42	992	03/02/00	65,300	0.02289	0.29653	5,210	0.00183	0.03363	59,800	0.02096	3.14672		
03/15/00	MW-3	20	1,012	03/02/00	65,300	0.01090	0.30743	5,210	0.00087	0.03450	59,800	0.00998	3.15670		
03/21/00	MW-3	25	1,037	03/02/00	65,300	0.01362	0.32105	5,210	0.00109	0.03559	59,800	0.01247	3.16917		
03/27/00	MW-3	40	1,077	03/02/00	65,300	0.02180	0.34285	5,210	0.00174	0.03733	59,800	0.01996	3.18913		
04/07/00	MW-3	45	1,122	03/02/00	65,300	0.02452	0.36737	5,210	0.00196	0.03929	59,800	0.02245	3.21158		
04/13/00	MW-3	30	1,152	03/02/00	65,300	0.01635	0.38371	5,210	0.00130	0.04059	59,800	0.01497	3.22655		
04/20/00	MW-3	25	1,177	03/02/00	65,300	0.01362	0.39733	5,210	0.00109	0.04168	59,800	0.01247	3.23903		
04/26/00	MW-3	30	1,207	03/02/00	65,300	0.01635	0.41368	5,210	0.00130	0.04298	59,800	0.01497	3.25400		
05/04/00	MW-3	26	1,233	03/02/00	65,300	0.01417	0.42785	5,210	0.00113	0.04411	59,800	0.01297	3.26697		
05/09/00	MW-3	45	1,278	03/02/00	65,300	0.02452	0.45237	5,210	0.00196	0.04607	59,800	0.02245	3.28943		
05/17/00	MW-3	27	1,305	03/02/00	65,300	0.01471	0.46708	5,210	0.00117	0.04724	59,800	0.01347	3.30290		
05/22/00	MW-3	25	1,330	03/02/00	65,300	0.01362	0.48070	5,210	0.00109	0.04833	59,800	0.01247	3.31537		
06/01/00	MW-3	25	1,355	03/02/00	65,300	0.01362	0.49432	5,210	0.00109	0.04942	59,800	0.01247	3.32785		
06/06/00	MW-3	240	1,595	03/02/00	65,300	0.13077	0.62510	5,210	0.01043	0.05985	59,800	0.11976	3.44761		
06/08/00	MW-3	42	1,637	03/02/00	65,300	0.02289	0.64798	5,210	0.00183	0.06168	59,800	0.02096	3.46857		
06/15/00	MW-3	29	1,666	06/08/00	72,700	0.01759	0.66557	3,570	0.00086	0.06254	44,400	0.01074	3.47931		
07/10/00	MW-3	101	1,767	06/08/00	72,700	0.06127	0.72684	3,570	0.00301	0.06555	44,400	0.03742	3.51673		
09/07/00	MW-3	265	2,032	09/05/00	26,100	0.05771	0.78456	959	0.00212	0.06767	24,000	0.05307	3.56980		
10/23/00*	MW-3	250	2,282	09/05/00	26,100	0.05445	0.83901	959	0.00200	0.06967	24,000	0.05007	3.61987		
11/30/00	MW-3	210	2,492	09/05/00	26,100	0.04574	0.88474	959	0.00168	0.07135	24,000	0.04206	3.66192		
12/21/00	MW-3	150	2,642	12/15/00	5,190	0.00650	0.89124	438	0.00055	0.07190	11,800	0.01477	3.67669		
05/16/01	MW-3	500	3,142	03/09/01	5,880	0.02453	0.91577	472	0.00197	0.07387	41,800	0.17440	3.85109		
06/19/01	MW-3	100	3,242	03/09/01	5,880	0.00491	0.92068	472	0.00039	0.07426	41,800	0.03488	3.88597		
Total Gallons Extracted:		39,743		Total Pounds Removed:		1.20259		Total Pounds Removed:		0.08100		Total Pounds Removed:		8.16145	
				Total Gallons Removed:		0.19715				Total Gallons Removed:		0.01110		1.31636	

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995752, 540 Hegenberger Road, Oakland, California

Date	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)
Purged													

Abbreviations & Notes:

TPPH = Total purgeable hydrocarbons as gasoline

MtBE = Methyl tert-butyl ether

µg/L = Micrograms per liter

ppb = Parts per billion, equivalent to µg/L

L = Liter

gal = Gallon

g = Gram

* = Groundwater extracted per well estimated; subcontractor did not report individual well volumes

Mass removed based on the formula: volume extracted (gal) x Concentration (µg/L) x (g/10⁶µg) 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

Concentrations based on most recent groundwater monitoring results

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

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

Table 2: Vapor Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995752, 540 Hegenberger Road, Oakland, 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 (#)
06/06/00	MW-1	3.00	12.76	4.4	0.192	20.7	0.001	0.002	0.000	0.000	0.004	0.011
07/10/00	MW-1	3.00	11	<28	<0.31	30	0.002	0.008	0.000	0.000	0.005	0.024
09/07/00	MW-1	2.00	2.4	25.4	2.51	138	0.001	0.010	0.000	0.000	0.005	0.033
10/23/00	MW-1	4.00	0.7	1,650	61.6	392	0.015	0.072	0.001	0.002	0.004	0.048
11/30/00	MW-1	4.00	7.0	561	<1.57	62.8	0.052	0.282	0.000	0.003	0.006	0.073
12/21/00	MW-1	3.60	2.1	<2.838	<0.031	<0.277	0.000	0.282	0.000	0.003	0.000	0.073
05/16/01	MW-1	4.00	28.4	400	0.26	44	0.152	0.889	0.000	0.003	0.017	0.141
06/06/00	MW-3	3.50	9.35	1,371	27.6	32	0.171	0.600	0.003	0.011	0.004	0.014
07/10/00	MW-3	2.00	11	564	8.9	76	0.083	0.766	0.001	0.013	0.011	0.037
09/07/00	MW-3	4.00	4.7	2,832	109	244	0.178	1.477	0.006	0.038	0.016	0.100
10/23/00	MW-3	4.00	1.4	3,040	45.6	323	0.057	1.705	0.001	0.041	0.006	0.125
11/30/00	MW-3	2.00	2.5	23,800	59.9	974	0.795	3.296	0.002	0.045	0.033	0.191
12/21/00	MW-3	4.50	3.0	<2.838	<0.031	<0.277	0.000	3.296	0.000	0.045	0.000	0.191
05/16/01	MW-3	4.25	0.9	21,000	64	270	0.253	4.370	0.001	0.048	0.003	0.205
Total Pounds Removed:							TPHg =	5.259	Benzene =	0.051	MTBE =	0.346

Table 2: Vapor Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995752, 540 Hegenberger Road, Oakland, California

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.

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

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

ATTACHMENT A
Blaine Groundwater Monitoring Report
and Field Notes

BLAINE
TECH SERVICES INC



1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
(408) 573-7771 FAX
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CONTRACTOR'S LICENSE #746684
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April 3, 2001

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

First Quarter 2001 Groundwater Monitoring at
Shell-branded Service Station
540 Hegenberger Road
Oakland, CA

Monitoring performed on March 9, 2001

Groundwater Monitoring Report **010309-F-3**

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.

WELL CONCENTRATIONS
Shell-branded Service Station
540 Hegenberger Road
Oakland, CA
WIC #204-5508-5900

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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MW-2	12/15/2000	<200	<2.00	<2.00	<2.00	<2.00	6,320	NA	9.21	6.76	2.45	NA
MW-2	03/09/2001	<500	<5.00	<5.00	<5.00	<5.00	17,200	NA	9.21	6.28	2.93	NA

MW-3 (a)	08/26/1998	2,300	180	330	<0.50	420	44,000	NA	9.45	6.52	2.93	1.8
MW-3 (b)	08/26/1998	<50	<0.50	<0.50	<0.50	<0.50	52,000	75,000	9.45	6.52	2.93	2.3
MW-3	12/28/1998	<5,00	139	<50.0	<50.0	<50.0	15,100	NA	9.45	6.73	2.72	1.7
MW-3	03/29/1999	52,500	5,500	6,900	1,360	6,250	508,000	630,000 (c)	9.45	6.21	3.24	2.1
MW-3	06/22/1999	58,000	6,600	9,850	1,640	6,950	677,000	653,000	9.45	7.00	2.45	1.3
MW-3	09/30/1999	4,360	121	122	36.1	647	33,700	35,600	9.45	6.84	2.61	0.6
MW-3	11/19/1999	NA	NA	NA	NA	NA	NA	NA	9.45	7.93	1.52	NA
MW-3	11/24/1999	NA	NA	NA	NA	NA	NA	NA	9.45	8.25	1.20	NA
MW-3	12/02/1999	NA	NA	NA	NA	NA	NA	NA	9.45	7.55	1.90	NA
MW-3	12/10/1999	4,220	973	26.3	273	584	88,200	NA	9.45	7.28	2.17	2.5
MW-3	03/02/2000	65,300	5,210	10,300	2,650	15,100	56,800	59,800e	9.45	5.87	3.58	d
MW-3	06/08/2000	72,700	3,570	10,200	2,100	13,400	44,400	NA	9.45	5.32	4.13	1.1
MW-3	09/05/2000	26,100	959	2,910	1,090	5,640	24,000	NA	9.45	5.60	3.85	NA
MW-3	12/15/2000	5,190	438	8.39	483	530	19,100	11,800f	9.45	6.27	3.18	NA
MW-3	03/09/2001	5,880	472	42.2	392	1,290	41,800	NA	9.45	5.71	3.74	NA

MW-4	09/25/2000	NA	NA	NA	NA	NA	NA	NA	9.88	7.64	2.24	NA
MW-4	12/15/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	9.88	7.55	2.33	NA
MW-4	03/09/2001	<50.0	<0.500	0.730	<0.500	0.529	3.16	NA	9.88	7.04	2.84	NA

A	06/22/1999	318	<0.50	<0.50	0.590	1.48	4,470	NA	NA	4.71	NA	1.1
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B	06/22/1999	<250	<2.5	<2.5	<2.5	<2.5	8,600	NA	NA	5.90	NA	1.2
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WELL CONCENTRATIONS
Shell-branded Service Station
540 Hegenberger Road
Oakland, CA
WIC #204-5508-5900

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
C	06/22/1999	<50	<0.50	<0.50	<0.50	0.98	11,000	NA	NA	5.91	NA	1.6
D	06/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	2,190	NA	NA	4.78	NA	1.4

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015

BTEX = benzene, toluene, ethylbenzene, xylenes by EPA Method 8020

MTBE = methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

GW = Groundwater

DO = Dissolved Oxygen

ppm = parts per million

ug/L = parts per billion

msl = Mean sea level

ft = Feet

<n = Below detection limit

D = Duplicate sample

NA = Not applicable

Notes:

a = pre-purge

b = post purge

c = Lab confirmed MTBE by mistake. MTBE value at MW-1 should have been confirmed instead.

d = DO reading not taken.

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

f = The second highest MTBE hit was mistakenly confirmed. MTBE for MW-1 should have been confirmed.

Site surveyed September 21, 2000 by Virgil Chavez Land Surveying of Vallejo, California.



Sequoia Analytical

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26 March, 2001

Nick Sudano
Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose, CA 95112

RE: 540 Hegenberger Rd.
Sequoia Report: MKC0288

Enclosed are the results of analyses for samples received by the laboratory on 03/12/01 12:02. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeff Smyly
Project Manager

CA ELAP Certificate #1210





Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose CA, 95112

Project: 540 Hegenberger Rd.
Project Number: 540 Hegenberger Rd.
Project Manager: Nick Sudano

Reported:
03/26/01 16:54

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MKC0288-01	Water	03/09/01 14:44	03/12/01 12:02
MW-2	MKC0288-02	Water	03/09/01 13:57	03/12/01 12:02
MW-3	MKC0288-03	Water	03/09/01 14:20	03/12/01 12:02
MW-4	MKC0288-04	Water	03/09/01 13:26	03/12/01 12:02

Sequoia Analytical - Morgan Hill

Jeff Smyly, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.





Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose CA, 95112

Project: 540 Hegenberger Rd.
Project Number: 540 Hegenberger Rd.
Project Manager: Nick Sudano

Reported:
03/26/01 16:54

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MKC0288-01) Water Sampled: 03/09/01 14:44 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	ND	10000	ug/l	200	1C16001	03/16/01	03/16/01	DHS LUFT	
Benzene	1390	100	"	"	"	"	"	"	
Toluene	ND	100	"	"	"	"	"	"	
Ethylbenzene	ND	100	"	"	"	"	"	"	
Xylenes (total)	ND	100	"	"	"	"	"	"	
Methyl tert-butyl ether	89600	2500	"	1000	"	"	03/14/01	"	A-01,M-03
<i>Surrogate: a,a,a-Trifluorotoluene</i>		107 %		70-130	"	"	03/16/01	"	
MW-2 (MKC0288-02) Water Sampled: 03/09/01 13:57 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	ND	500	ug/l	10	1C14004	03/14/01	03/14/01	DHS LUFT	R-05
Benzene	ND	5.00	"	"	"	"	"	"	R-05
Toluene	ND	5.00	"	"	"	"	"	"	R-05
Ethylbenzene	ND	5.00	"	"	"	"	"	"	R-05
Xylenes (total)	ND	5.00	"	"	"	"	"	"	R-05
Methyl tert-butyl ether	17200	250	"	100	"	"	03/16/01	"	M-03
<i>Surrogate: a,a,a-Trifluorotoluene</i>		86.9 %		70-130	"	"	03/14/01	"	
MW-3 (MKC0288-03) Water Sampled: 03/09/01 14:20 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	5880	500	ug/l	10	1C14004	03/14/01	03/14/01	DHS LUFT	R-05
Benzene	472	5.00	"	"	"	"	"	"	R-05
Toluene	42.2	5.00	"	"	"	"	"	"	R-05
Ethylbenzene	392	5.00	"	"	"	"	"	"	R-05
Xylenes (total)	1290	5.00	"	"	"	"	"	"	R-05
Methyl tert-butyl ether	41800	500	"	200	"	"	03/16/01	"	M-03
<i>Surrogate: a,a,a-Trifluorotoluene</i>		142 %		70-130	"	"	03/14/01	"	S-02





Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose CA, 95112

Project: 540 Hegenberger Rd.
Project Number: 540 Hegenberger Rd.
Project Manager: Nick Sudano

Reported:
03/26/01 16:54

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-4 (MKC0288-04) Water Sampled: 03/09/01 13:26 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C14004	03/14/01	03/14/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	0.730	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	0.529	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	3.16	2.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		93.0 %		70-130	"	"	"	"	





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San Jose CA, 95112

Project: 540 Hegenberger Rd.
Project Number: 540 Hegenberger Rd.
Project Manager: Nick Sudano

Reported:
03/26/01 16:54

**MTBE by EPA Method 8260A
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MKC0288-01) Water Sampled: 03/09/01 14:44 Received: 03/12/01 12:02									
Methyl tert-butyl ether	164000	10000	ug/l	10000	1C22012	03/20/01	03/20/01	EPA 8260A	
Surrogate: 1,2-Dichloroethane-d4		102 %	70-130		"	"	"	"	





Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose CA, 95112

Project: 540 Hegenberger Rd.
Project Number: 540 Hegenberger Rd.
Project Manager: Nick Sudano

Reported:
03/26/01 16:54

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1C14004 - EPA 5030B [P/T]

Blank (1C14004-BLK1)

Prepared & Analyzed: 03/14/01

Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.73		"	10.0		97.3	70-130			

LCS (1C14004-BS1)

Prepared & Analyzed: 03/14/01

Purgeable Hydrocarbons	197	50.0	ug/l	250		78.8	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	14.6		"	10.0		146	70-130			S-02

Matrix Spike (1C14004-MS1)

Source: MKC0288-04

Prepared & Analyzed: 03/14/01

Purgeable Hydrocarbons	210	50.0	ug/l	250	ND	84.0	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	18.6		"	10.0		186	70-130			S-02

Matrix Spike Dup (1C14004-MSD1)

Source: MKC0288-04

Prepared & Analyzed: 03/14/01

Purgeable Hydrocarbons	194	50.0	ug/l	250	ND	77.6	60-140	7.92	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	19.5		"	10.0		195	70-130			S-02

Batch 1C16001 - EPA 5030B [P/T]

Blank (1C16001-BLK1)

Prepared & Analyzed: 03/16/01

Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.3		"	10.0		103	70-130			





Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose CA, 95112

Project: 540 Hegenberger Rd.
Project Number: 540 Hegenberger Rd.
Project Manager: Nick Sudano

Reported:
03/26/01 16:54

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1C16001 - EPA 5030B [P/T]

LCS (1C16001-BS1)

Prepared & Analyzed: 03/16/01

Benzene	10.1	0.500	ug/l	10.0		101	70-130			
Toluene	10.1	0.500	"	10.0		101	70-130			
Ethylbenzene	9.84	0.500	"	10.0		98.4	70-130			
Xylenes (total)	29.9	0.500	"	30.0		99.7	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>10.3</i>		"	<i>10.0</i>		<i>103</i>	<i>70-130</i>			

Matrix Spike (1C16001-MS1)

Source: MKC0304-12

Prepared & Analyzed: 03/16/01

Benzene	10.6	0.500	ug/l	10.0	ND	106	60-140			
Toluene	10.4	0.500	"	10.0	ND	104	60-140			
Ethylbenzene	10.4	0.500	"	10.0	ND	104	60-140			
Xylenes (total)	31.1	0.500	"	30.0	ND	104	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>10.8</i>		"	<i>10.0</i>		<i>108</i>	<i>70-130</i>			

Matrix Spike Dup (1C16001-MSD1)

Source: MKC0304-12

Prepared & Analyzed: 03/16/01

Benzene	10.6	0.500	ug/l	10.0	ND	106	60-140	0	25	
Toluene	10.4	0.500	"	10.0	ND	104	60-140	0	25	
Ethylbenzene	10.3	0.500	"	10.0	ND	103	60-140	0.966	25	
Xylenes (total)	31.0	0.500	"	30.0	ND	103	60-140	0.322	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>10.3</i>		"	<i>10.0</i>		<i>103</i>	<i>70-130</i>			





Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose CA, 95112

Project: 540 Hegenberger Rd.
Project Number: 540 Hegenberger Rd.
Project Manager: Nick Sudano

Reported:
03/26/01 16:54

MTBE by EPA Method 8260A - Quality Control Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1C22012 - EPA 5030B P/T										
Blank (1C22012-BLK1)										
Prepared & Analyzed: 03/20/01										
Methyl tert-butyl ether	ND	1.00	ug/l							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	9.85		"	10.0		98.5	70-130			
LCS (1C22012-BS1)										
Prepared & Analyzed: 03/20/01										
Methyl tert-butyl ether	8.84	1.00	ug/l	10.0		88.4	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	11.0		"	10.0		110	70-130			
Matrix Spike (1C22012-MS1)										
Source: MKC0374-01 Prepared & Analyzed: 03/20/01										
Methyl tert-butyl ether	47.7	1.00	ug/l	10.0	37.5	102	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	8.17		"	10.0		81.7	70-130			
Matrix Spike Dup (1C22012-MSD1)										
Source: MKC0374-01 Prepared & Analyzed: 03/20/01										
Methyl tert-butyl ether	48.2	1.00	ug/l	10.0	37.5	107	70-130	1.04	25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	8.09		"	10.0		80.9	70-130			





Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose CA, 95112

Project: 540 Hegenberger Rd.
Project Number: 540 Hegenberger Rd.
Project Manager: Nick Sudano

Reported:
03/26/01 16:54

Notes and Definitions

- A-01 MTBE was prepared on 3/14/01.
- M-03 Sample was analyzed at a second dilution.
- R-05 The reporting limit(s) for this sample have been raised due to high levels of non-target interferents.
- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference



EQUIVA Services LLC Chain Of Custody Record

Lab ID: SEQUA

Lab Identification (if necessary):

Address:

City, State, Zip:

Equiva Project Manager to be invoiced:

Karen Petryna

SCIENCE & ENGINEERING

TECHNICAL SERVICES

CRMT HOUSTON

INCIDENT NUMBER (S&E ONLY)

9 8 9 9 5 7 5 2

SAP BY CRMT NUMBER (TS/CRMT)

DATE: 3/9/01

PAGE: 1 of 1

CONSULTANT COMPANY:

Blaine Tech Services

ADDRESS:

1680 Rogers Avenue

CITY:

San Jose, CA 95112

TELEPHONE:

408-573-0555

FAX:

408-573-7771

E-MAIL:

nsudano@blainetech.com

SITE ADDRESS (Street and City):

540 Hegenberger Road, Oakland

PROJECT CONTACT (Report to):

Nick Sudano

CONSULTANT PROJECT NO.:

BTS # 010309-F3

SAMPLER NAME(S) (Print):

Jeremy P... [Signature]

LAB USE ONLY

MK40288

TURNAROUND TIME (BUSINESS DAYS):

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

LA - RWQCB REPORT FORMAT UST AGENCY:

GC/MS MTBE CONFIRMATION: HIGHEST X HIGHEST per BORING ALL

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT C

REQUESTED ANALYSIS

TPH - Gas, Purgeable (8015m)	BTX (8021B)	MTBE (8021B)	MTBE (8260B)	TPH - Diesel, Extractable (8015m)	Oxygenates (E) by (8260B)	Ethanol (8260B)	Methanol	MTBE (8260B) Confirmation, See Note
X	X	X	X					X
X	X	X	X					X
X	X	X	X					X
X	X	X	X					X

FIELD NOTES:

Container/Preservative
or PID Readings
or Laboratory Notes

LAB USE ONLY

Field Sample Identification

SAMPLING DATE TIME MATRIX NO. OF CONT.

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.
✓	MW-1	3/9/01	1444	W	3
✓	MW-2	↓	1357	↓	↓
✓	MW-3	↓	1420	↓	↓
✓	MW-4	↓	1326	↓	↓

Relinquished by: (Signature)

Received by: (Signature)

Date:

Time:

Relinquished by: (Signature)

Received by: (Signature)

Date:

Time:

Relinquished by: (Signature)

Received by: (Signature)

Date:

Time:

EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>010309-F3</u>	Site: <u>98995722</u>
Sampler: <u>Jenny</u>	Date: <u>3/9/01</u>
Well I.D.: <u>MW-1</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth: <u>23.60</u>	Depth to Water: <u>6.44</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HAC

Purge Method:

Bailer
 Disposable Bailer
 Middleburg
 Electric Submersible
 Waterra
 Peristaltic
 Extraction Pump
 Other _____

Sampling Method:

Bailer
 Disposable Bailer
 Extraction Port
 Dedicated Tubing
 Other: _____

<u>2.75</u> (Gals.) X	<u>3</u>	<u>=</u>	<u>8.25</u> Gals.
1 Case Volume	Specified Volumes		Calculated Volume

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1433	66.9	7.4	2055	>200	2.75	BLACK
1436	65.2	7.5	5639	63	5.50	FAIRLY CLEAR
1439	65.2	7.5	5989	52	8.25	

Did well dewater? Yes No Gallons actually evacuated: 8.25

Sampling Time: 1444 Sampling Date: 3/9/01

Sample I.D.: MW-1 Laboratory: Sequoia Columbia Other _____

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

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

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

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

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

EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>010309-F3</u>	Site: <u>98995752</u>
Sampler: <u>Jenny</u>	Date: <u>3/9/01</u>
Well I.D.: <u>MW-2</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth: <u>19.56</u>	Depth to Water: <u>6.28</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HAC

Purge Method:

- | | |
|----------------------|-----------------|
| Bailer | Waterra |
| Disposable Bailer | Peristaltic |
| <u>Middleburg</u> | Extraction Pump |
| Electric Submersible | Other _____ |

Sampling Method:

- | |
|-------------------|
| <u>Bailer</u> |
| Disposable Bailer |
| Extraction Port |
| 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 ² * 0.163

$$2.1 \text{ (Gals.)} \times 3 = 6.3 \text{ Gals.}$$
 1 Case Volume Specified Volumes Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1348	61.6	6.7	841	36	2.25	
1350	61.8	6.8	878	29	4.50	
1352	62.3	6.9	925	21	6.50	

Did well dewater? Yes No Gallons actually evacuated: 6.5

Sampling Time: 1357 Sampling Date: 3/9/01

Sample I.D.: MW-2 Laboratory: Sequoia Columbia Other _____

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

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

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

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

EQUIVA WELL MONITORING DATA SHEET

BTS #: 010304-F3	Site: 98995752
Sampler: JENNY	Date: 3/9/01
Well I.D.: MW-3	Well Diameter: ② 3 4 6 8
Total Well Depth: 19.46	Depth to Water: 5.71
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACI

Purge Method:

- Bailer
 Disposable Bailer
 Middleburg
 Electric Submersible
- Waterra
 Peristaltic
 Extraction Pump
 Other _____

Sampling Method:

- Bailer
 Disposable Bailer
 Extraction Port
 Dedicated Tubing

Other: _____

2.2	(Gals.) X	3	=	6.6	Gals.
1 Case Volume		Specified Volumes		Calculated Volume	

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1410	65.1	6.9	4657	>200	2.25	BLACK/OOZE
1413	65.2	7.1	3919	>200	4.50	CLOUDY/OOZE
1415	65.2	7.1	4135	163	6.75	LESS CLOUDY

Did well dewater? Yes No

Gallons actually evacuated: 6.75

Sampling Time: 1420

Sampling Date: 3/9/01

Sample I.D.: MW-3

Laboratory: Sequoia Columbia Other _____

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

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

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

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

EQUIVA WELL MONITORING DATA SHEET

BTS #: 010309-F3	Site: 98995752
Sampler: Jeremy	Date: 3/9/01
Well I.D.: MW-4	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 18.36	Depth to Water: 7.04
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Purge Method:

- | | |
|-----------------------------|-----------------|
| Bailer | Waterra |
| Disposable Bailer | Peristaltic |
| Middleburg | Extraction Pump |
| <u>Electric Submersible</u> | Other _____ |

Sampling Method:

- Bailer
- Disposable Bailer
 - Extraction Port
 - Dedicated Tubing

Other: _____

7.4 (Gals.) X 3 = 22.2 Gals.
 1 Case Volume Specified Volumes Calculated Volume

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1319	64.3	6.9	4182	11	8	
1320	64.4	6.9	4223	9	16	
1321	64.4	7.0	4409	9	23	

Did well dewater? Yes No Gallons actually evacuated: 23

Sampling Time: 1326 Sampling Date: 3/9/01

Sample I.D.: MW-4 Laboratory: Sequoia Columbia Other _____

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

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

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

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