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Denis L. Brown

July 6, 2005

Jerry Wickham  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

**Shell Oil Products US**  
HSE – Environmental Services  
20945 S. Wilmington Ave.  
Carson, CA 90810-1039  
Tel (707) 865 0251  
Fax (707) 865 2542  
Email [denis.l.brown@shell.com](mailto:denis.l.brown@shell.com)

Re: Second Quarter 2005 Monitoring Report  
Shell-branded Service Station  
105 Fifth Street  
Oakland, California  
SAP Code 135700  
Incident No. 98995757

Alameda County  
JUL 11 2005  
Environmental Health

Dear Mr. Wickham:

Attached for your review and comment is a copy of the *Second Quarter 2005 Monitoring Report* for the above referenced site. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or concerns, please call me at (707) 865-0251.

Sincerely,

Denis L. Brown  
Sr. Environmental Engineer

July 6, 2005

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

**Re: Second Quarter 2005 Monitoring Report**  
Shell-branded Service Station  
105 Fifth Street  
Oakland, California  
Incident #98995757  
Cambria Project #247-0472-002  
ACHCSA Case # RO-0487



Dear Mr. Wickham:

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

## **HISTORICAL REMEDIATION SUMMARY**

Mobile dual-phase vacuum extraction (DVE) was performed at the site from April to November 2000 and once in March 2001. Mobile DVE is the process of applying a high vacuum through an airtight well seal to simultaneously extract soil vapors from the vadose zone and enhance groundwater extraction (GWE) from the saturated zone. Between April 2000 and March 2001, the DVE process removed an estimated 14.59 pounds (lbs) of total petroleum hydrocarbons as gasoline (TPHg) and 14.50 lbs of methyl tertiary butyl ether (MTBE) from monitoring wells MW-2 and MW-3. DVE was discontinued due to limited chemical recovery.


## **SECOND QUARTER 2005 ACTIVITIES**

**Cambria  
Environmental  
Technology, Inc.**

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

**Groundwater Monitoring:** Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged and sampled the site wells, calculated groundwater elevations, and compiled the analytical data. Cambria prepared a vicinity map showing previously submitted well survey data (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.

**Additional Oxygenate Analysis:** In addition to the regular quarterly analysis for total petroleum hydrocarbons as diesel, TPHg, benzene, toluene, ethylbenzene, xylenes, and MTBE, groundwater samples from monitoring well MW-3 were analyzed for three additional oxygenates: di-isopropyl ether, tert-amyl methyl ether, and tert-butyl alcohol (TBA), and for the lead scavengers 1,2-dichloroethane and 1,2-dibromomethane. Of these, only TBA, at a concentration of 1,600 parts per billion (ppb), was detected. Results of this analysis are presented in the Well Concentrations table included in Blaine's report.



**Periodic GWE:** Beginning in November 2001, Phillips Services Corporation of Benicia, California conducted semi-monthly mobile GWE events from tank backfill well T-1. Mobile GWE vacuum operations consist of lowering dedicated stingers into selected monitoring wells and extracting fluids using a vacuum truck. The volume of extracted fluid is recorded and used to calculate the quantity of aqueous-phase hydrocarbon removed from the subsurface. These events were temporarily discontinued in April 2002 in anticipation of installing a fixed GWE system, and then resumed in May 2002 using vacuum trucks provided by Onyx Industrial Services of Benicia, California. Well MW-3 was added to the extraction program in June 2003, and well MW-2 was added in July 2003. We obtained an encroachment permit from the City of Oakland and began including off-site well MW-6 in the extraction program on August 21, 2003. Extraction from well MW-6 was discontinued after the October 2, 2003 event due to low groundwater production. Due to minimal remaining MTBE concentrations, well T-1 was removed from the extraction program after the September 18, 2003 event and well MW-2 was removed after the November 20, 2003 event. Table 1 presents mass removal data from the GWE events. Through June 2, 2005, a total of 171,154 gallons of water has been extracted, resulting in removal of 8.6 lbs of TPHg and 73.4 lbs of MTBE. On account of reduced concentrations in well MW-3 and our mass removal calculation convention, these values are lower than mass removal totals reported in Cambria's *First Quarter 2005 Monitoring Report*. Mass removal calculations are based on the most recent groundwater monitoring concentrations, which means that the April 15, 2005 groundwater monitoring results are used to calculate mass removal from the April 21, 2005 and subsequent events. Because second quarter 2005 groundwater monitoring results were not yet available, first quarter 2005 groundwater monitoring results were used previously to calculate mass removal for the April 21, 2005 periodic GWE event.

**GWE System Installation:** We have received all necessary permits for constructing a fixed GWE system. Groundwater monitoring results presented in this report display trends which show a continued substantial decrease in MTBE concentrations. The MTBE concentration in tank backfill well T-1 has decreased from 29,000 ppb during the fourth quarter of 2002 to 26 ppb this quarter. The concentration in well MW-3 has decreased from 44,000 ppb during the fourth quarter of 2002 to 180 ppb this quarter.

Shell will continue to maintain the permits for installing the GWE system, but will not install it at this time, pending evaluation of additional quarterly groundwater monitoring data.

**ANTICIPATED THIRD QUARTER 2005 ACTIVITIES**

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

*Periodic GWE:* Semi-monthly extraction events from well MW-3 will continue. We will continue evaluating future groundwater sampling data and adjust the extraction program as warranted.



**CLOSING**

We appreciate the opportunity to work with you on this project. Please call Cynthia Vasko at (510) 420-3344 if you have any questions or comments.

Sincerely,  
**Cambria Environmental Technology, Inc**

Cynthia Vasko  
Project Engineer

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

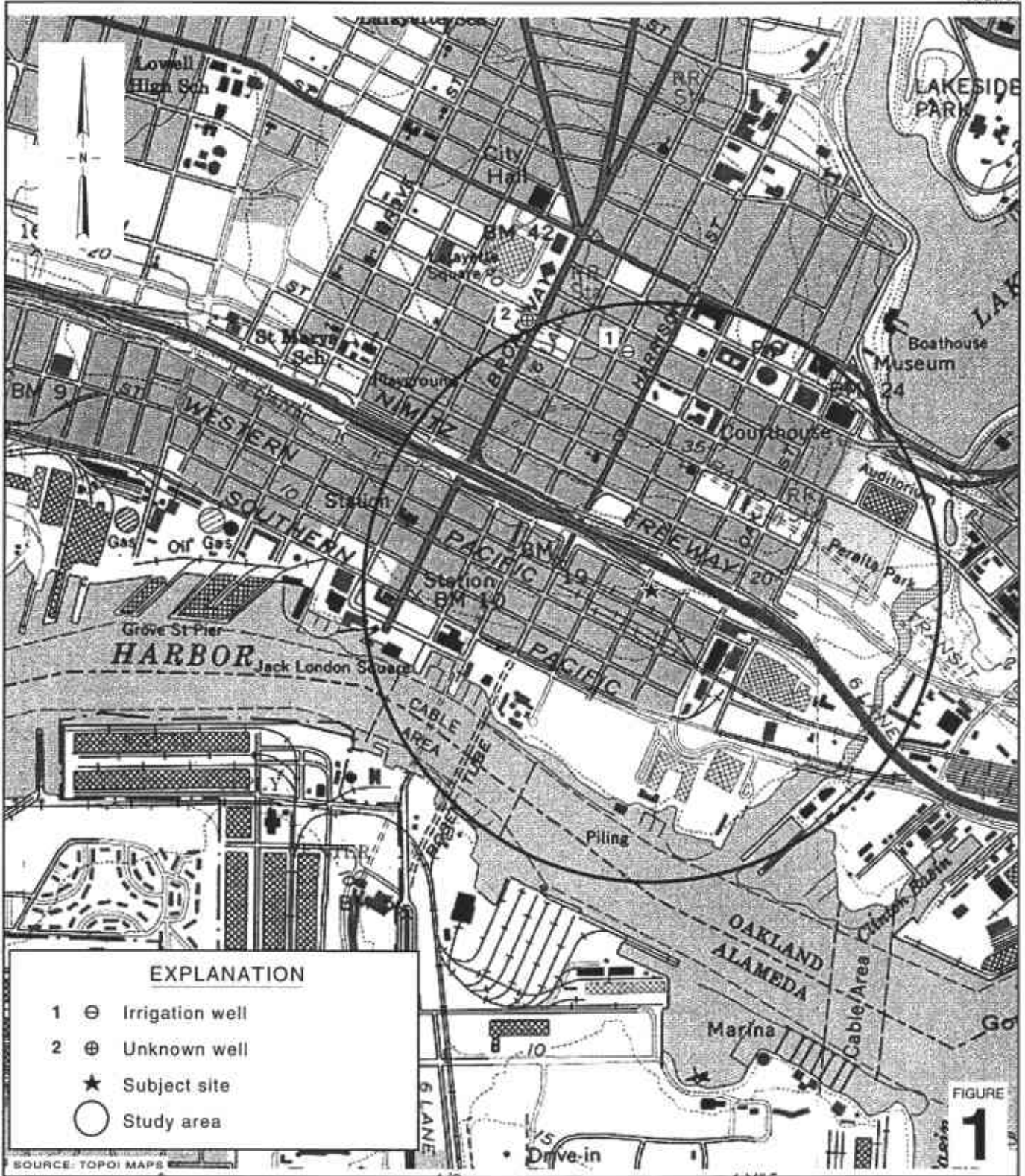


Figures: 1 - Vicinity/Well Survey Map  
2 - Groundwater Elevation Contour Map

Table: 1 - Groundwater Extraction -- Mass Removal Data

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Denis Brown, Shell Oil Products US, 20945 S. Wilmington Ave., Carson, CA 90810  
Arthur R. and Mary A. Hansen, Trs., et al, 820 Loyola Drive, Los Altos, CA 94024

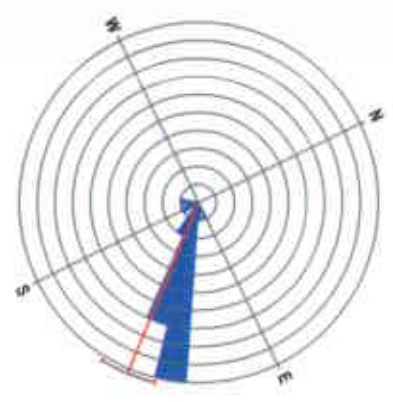


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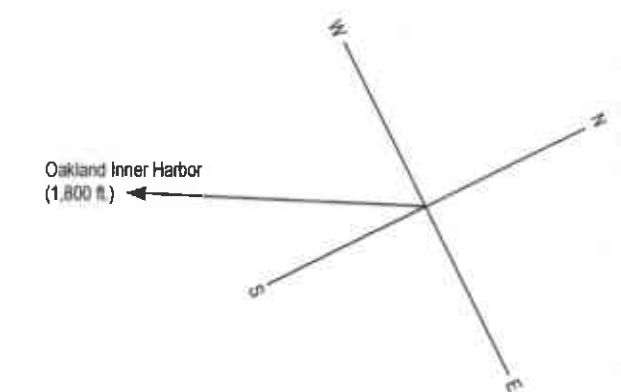
**Shell-branded Service Station**  
 105 Fifth Street  
 Oakland, California  
 Incident# 98995757



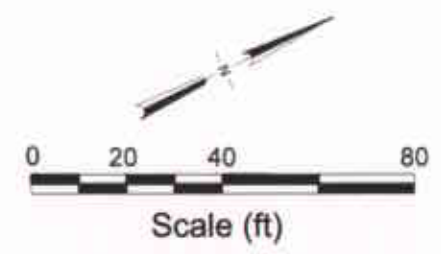
**Vicinity / Well Survey Map**  
 (1/2 Mile Radius)



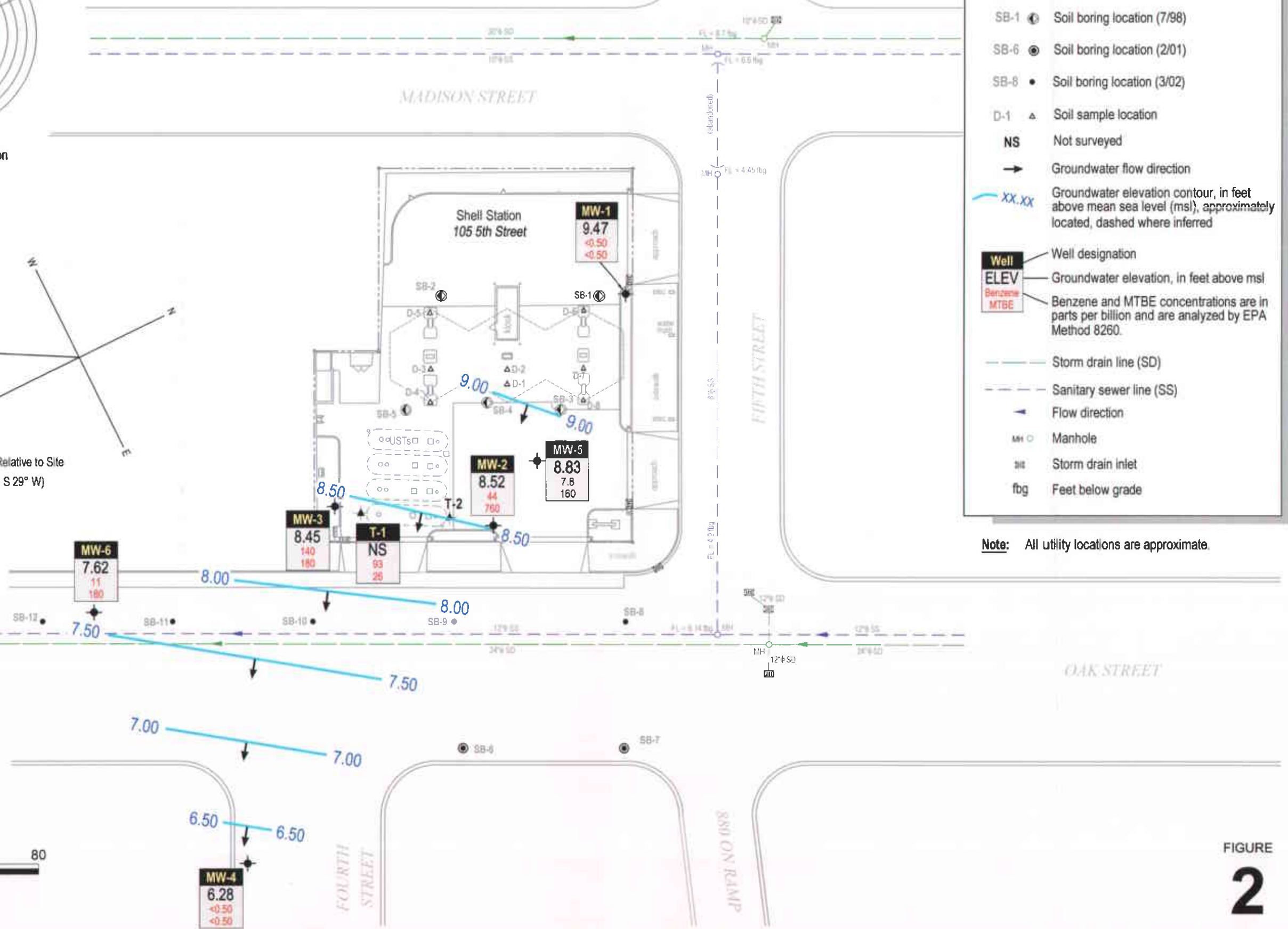
Groundwater Flow Direction  
(07/23/99 to 04/15/05)



Location of Sensitive Receptor Relative to Site  
(Oakland Inner Harbor - 1,800 ft. S 29° W)



G:\OAKLAND 105 5TH\FIGURES\20\MP05.DWG



### EXPLANATION

- MW-1 ● Monitoring well location
- T-1 ▲ Tank backfill well location
- SB-1 ● Soil boring location (7/98)
- SB-6 ● Soil boring location (2/01)
- SB-8 ● Soil boring location (3/02)
- D-1 ▲ Soil sample location
- NS Not surveyed
- Groundwater flow direction
- XX.XX Groundwater elevation contour, in feet above mean sea level (msl), approximately located, dashed where inferred

Well	ELEV	Benzene	MTBE
MW-1	9.47	<0.50	<0.50
MW-2	8.52	44	760
MW-3	8.45	140	180
MW-4	6.28	<0.50	<0.50
MW-5	8.83	7.8	160
MW-6	7.62	11	180

- Storm drain line (SD)
- - - Sanitary sewer line (SS)
- Flow direction
- MH ○ Manhole
- ⊕ Storm drain inlet
- ftg Feet below grade

Note: All utility locations are approximate.

FIGURE  
**2**

Groundwater Elevation  
Contour Map

April 15, 2005



C A M B R I A

Shell-branded Service Station

105 Fifth Street  
Oakland, California  
Incident No. 9899577



**Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995757, 105 Fifth Street, Oakland, California**

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPHg			Benzene			MTBE		
					TPHg Concentration (ppb)	TPHg Removed (pounds)	TPHg 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)
04/21/00	MW-2	150	150	04/07/00	4,940	0.00618	0.00618	659	0.00082	0.00082	41,800	0.05232	0.05232
04/28/00	MW-2	100	250	04/07/00	4,940	0.00412	0.01031	659	0.00055	0.00137	41,800	0.03488	0.08720
05/05/00	MW-2	310	560	04/07/00	4,940	0.01278	0.02308	659	0.00170	0.00308	41,800	0.10813	0.19532
05/12/00	MW-2	350	910	04/07/00	4,940	0.01443	0.03751	659	0.00192	0.00500	41,800	0.12208	0.31740
06/02/00	MW-2	257	1,167	04/07/00	4,940	0.01059	0.04811	659	0.00141	0.00642	41,800	0.08964	0.40704
07/06/00	MW-2	334	1,501	04/07/00	4,940	0.01377	0.06187	659	0.00184	0.00825	41,800	0.11650	0.52354
09/12/00	MW-2	312	1,813	07/26/00	5,010	0.01304	0.07492	409	0.00106	0.00932	54,300	0.14137	0.66491
10/26/00	MW-2	56	1,869	07/26/00	5,010	0.00234	0.07726	409	0.00019	0.00951	54,300	0.02537	0.69028
07/29/03	MW-2	500	2,369	07/22/03	2,300	0.00960	0.08685	76	0.00032	0.00983	3,700	0.01544	0.70572
08/09/03	MW-2	250	2,619	07/22/03	2,300	0.00480	0.09165	76	0.00016	0.00999	3,700	0.00772	0.71344
08/21/03	MW-2	150	2,769	07/22/03	2,300	0.00288	0.09453	76	0.00010	0.01008	3,700	0.00463	0.71807
09/04/03	MW-2	687	3,456	07/22/03	2,300	0.01318	0.10771	76	0.00044	0.01052	3,700	0.02121	0.73928
09/18/03	MW-2	200	3,656	07/22/03	2,300	0.00384	0.11155	76	0.00013	0.01064	3,700	0.00617	0.74545
10/02/03	MW-2	234	3,890	07/22/03	2,300	0.00449	0.11604	76	0.00015	0.01079	3,700	0.00722	0.75268
10/16/03	MW-2	250	4,140	10/09/03	150	0.00031	0.11636	3.9	0.00001	0.01080	210	0.00044	0.75311
11/06/03	MW-2	250	4,390	10/09/03	150	0.00031	0.11667	3.9	0.00001	0.01081	210	0.00044	0.75355
11/20/03	MW-2	275	4,665	10/09/03	150	0.00034	0.11701	3.9	0.00001	0.01082	210	0.00048	0.75403
04/21/00	MW-3	100	100	04/07/00	<1,000	0.00042	0.00042	853	0.00071	0.00071	283,000	0.23615	0.23615
04/28/00	MW-3	100	200	04/07/00	<1,000	0.00042	0.00083	853	0.00071	0.00142	283,000	0.23615	0.47229
05/05/00	MW-3	50	250	04/07/00	<1,000	0.00021	0.00104	853	0.00036	0.00178	283,000	0.11807	0.59036
05/12/00	MW-3	150	400	04/07/00	<1,000	0.00063	0.00167	853	0.00107	0.00285	283,000	0.35422	0.94458
06/02/00	MW-3	550	950	04/07/00	<1,000	0.00229	0.00396	853	0.00391	0.00676	283,000	1.29880	2.24338
07/06/00	MW-3	528	1,478	04/07/00	<1,000	0.00220	0.00617	853	0.00376	0.01052	283,000	1.24685	3.49023
08/16/00	MW-3	849	2,327	07/26/00	<20,000	0.07084	0.07701	<200	0.00071	0.01123	320,000	2.26699	5.75722
09/12/00	MW-3	188	2,515	07/26/00	<20,000	0.01569	0.09270	<200	0.00016	0.01139	320,000	0.50200	6.25922
10/26/00	MW-3	156	2,671	07/26/00	<20,000	0.01302	0.10571	<200	0.00013	0.01152	320,000	0.41655	6.67577
05/27/03	MW-3	0	2,671	04/30/03	<25,000	0.00000	0.10571	<250	0.00000	0.01152	14,000	0.00000	6.67577
06/10/03	MW-3	200	2,871	04/30/03	<25,000	0.02086	0.12658	<250	0.00021	0.01172	14,000	0.02336	6.69913

**Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995757, 105 Fifth Street, Oakland, California**

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPHg			Benzene			MTBE		
					TPHg Concentration (ppb)	TPHg Removed (pounds)	TPHg 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)
06/24/03	MW-3	800	3,671	04/30/03	<25,000	0.08344	0.21002	<250	0.00083	0.01256	14,000	0.09346	6.79259
07/09/03	MW-3	990	4,661	04/30/03	<25,000	0.10326	0.31328	<250	0.00103	0.01359	14,000	0.11565	6.90824
07/29/03	MW-3	600	5,261	07/22/03	<5,000	0.01252	0.32580	<50	0.00013	0.01372	17,000	0.08511	6.99335
08/09/03	MW-3	500	5,761	07/22/03	<5,000	0.01043	0.33623	<50	0.00010	0.01382	17,000	0.07093	7.06428
08/21/03	MW-3	250	6,011	07/22/03	<5,000	0.00522	0.34144	<50	0.00005	0.01387	17,000	0.03546	7.09975
09/04/03	MW-3	687	6,698	07/22/03	<5,000	0.01433	0.35577	<50	0.00014	0.01402	17,000	0.09745	7.19720
09/18/03	MW-3	600	7,298	07/22/03	<5,000	0.01252	0.36829	<50	0.00013	0.01414	17,000	0.08511	7.28231
10/02/03	MW-3	233	7,531	07/22/03	<5,000	0.00486	0.37315	<50	0.00005	0.01419	17,000	0.03305	7.31536
10/16/03	MW-3	604	8,135	10/09/03	<5,000	0.01260	0.38575	<50	0.00013	0.01432	14,000	0.07056	7.38592
11/06/03	MW-3	459	8,594	10/09/03	<5,000	0.00958	0.39533	<50	0.00010	0.01441	14,000	0.05362	7.43954
11/20/03	MW-3	322	8,916	10/09/03	<5,000	0.00672	0.40204	<50	0.00007	0.01448	14,000	0.03762	7.47716
12/04/03	MW-3	590	9,506	10/09/03	<5,000	0.01231	0.41435	<50	0.00012	0.01460	14,000	0.06892	7.54609
12/18/03	MW-3	561	10,067	10/09/03	<5,000	0.01170	0.42605	<50	0.00012	0.01472	14,000	0.06554	7.61162
01/02/04	MW-3	496	10,563	10/09/03	<5,000	0.01035	0.43640	<50	0.00010	0.01482	14,000	0.05794	7.66956
01/15/04	MW-3	578	11,141	01/05/04	<5,000	0.01206	0.44846	<50	0.00012	0.01494	4,700	0.02267	7.69223
02/05/04	MW-3	475	11,616	01/05/04	<5,000	0.00991	0.45837	<50	0.00010	0.01504	4,700	0.01863	7.71086
02/19/04	MW-3	650	12,266	01/05/04	<5,000	0.01356	0.47193	<50	0.00014	0.01518	4,700	0.02549	7.73635
03/04/04	MW-3	592	12,858	01/05/04	<5,000	0.01235	0.48428	<50	0.00012	0.01530	4,700	0.02322	7.75957
03/18/04	MW-3	631	13,489	01/05/04	<5,000	0.01316	0.49744	<50	0.00013	0.01543	4,700	0.02475	7.78432
04/01/04	MW-3	532	14,021	01/05/04	<5,000	0.01110	0.50854	<50	0.00011	0.01554	4,700	0.02086	7.80518
04/15/04	MW-3	592	14,613	04/12/04	<25,000	0.06175	0.57029	<250	0.00062	0.01616	23,000	0.11362	7.91880
05/06/04	MW-3	552	15,165	04/12/04	<25,000	0.05758	0.62786	<250	0.00058	0.01674	23,000	0.10594	8.02474
05/20/04	MW-3	432	15,597	04/12/04	<25,000	0.04506	0.67292	<250	0.00045	0.01719	23,000	0.08291	8.10765
06/04/04	MW-3	614	16,211	04/12/04	<25,000	0.06404	0.73697	<250	0.00064	0.01783	23,000	0.11784	8.22549
06/17/04	MW-3	447	16,658	04/12/04	<25,000	0.04662	0.78359	<250	0.00047	0.01829	23,000	0.08579	8.31128
07/01/04	MW-3	569	17,227	04/12/04	<25,000	0.05935	0.84294	<250	0.00059	0.01889	23,000	0.10920	8.42048
07/15/04	MW-3	664	17,891	07/02/04	<10,000	0.02770	0.87064	<100	0.00028	0.01916	18,000	0.09973	8.52021
08/05/04	MW-3	625	18,516	07/02/04	<10,000	0.02608	0.89672	<100	0.00026	0.01943	18,000	0.09387	8.61408
08/20/04	MW-3	676	19,192	07/02/04	<10,000	0.02820	0.92492	<100	0.00028	0.01971	18,000	0.10153	8.71562



**Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995757, 105 Fifth Street, Oakland, California**

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					TPHg Concentration (ppb)	TPHg Removed (pounds)	TPHg 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)
09/02/04	MW-3	780	19,972	07/02/04	<10,000	0.03254	0.95746	<100	0.00033	0.02003	<b>18,000</b>	0.11715	8.83277
09/16/04	MW-3	635	20,607	07/02/04	<10,000	0.02649	0.98396	<100	0.00026	0.02030	<b>18,000</b>	0.09538	8.92815
10/07/04	MW-3	519	21,126	07/02/04	<10,000	0.02165	1.00561	<100	0.00022	0.02051	<b>18,000</b>	0.07795	9.00610
10/21/04	MW-3	622	21,748	10/08/04	<10,000	0.02595	1.03156	<100	0.00026	0.02077	<b>29,000</b>	0.15052	9.15662
11/04/04	MW-3	681	22,429	10/08/04	<10,000	0.02841	1.05998	<100	0.00028	0.02106	<b>29,000</b>	0.16479	9.32141
11/18/04	MW-3	1,500	23,929	10/08/04	<10,000	0.06258	1.12256	<100	0.00063	0.02168	<b>29,000</b>	0.36298	9.68439
12/02/04	MW-3	718	24,647	10/08/04	<10,000	0.02996	1.15251	<100	0.00030	0.02198	<b>29,000</b>	0.17375	9.85814
12/16/04	MW-3	876	25,523	10/08/04	<10,000	0.03655	1.18906	<100	0.00037	0.02235	<b>29,000</b>	0.21198	10.07012
01/06/05	MW-3	696	26,219	10/08/04	<10,000	0.02904	1.21810	<100	0.00029	0.02264	<b>29,000</b>	0.16842	10.23854
01/20/05	MW-3	663	26,882	01/10/05	<10,000	0.02766	1.24576	<100	0.00028	0.02292	<b>13,000</b>	0.07192	10.31046
02/03/05	MW-3	288	27,170	01/10/05	<10,000	0.01202	1.25778	<100	0.00012	0.02304	<b>13,000</b>	0.03124	10.34170
02/20/05	MW-3	266	27,436	01/10/05	<10,000	0.01110	1.26888	<100	0.00011	0.02315	<b>13,000</b>	0.02885	10.37055
03/03/05	MW-3	614	28,050	01/10/05	<10,000	0.02562	1.29449	<100	0.00026	0.02340	<b>13,000</b>	0.06660	10.43716
03/17/05	MW-3	528	28,578	01/10/05	<10,000	0.02203	1.31652	<100	0.00022	0.02362	<b>13,000</b>	0.05728	10.49443
04/06/05	MW-3	651	29,229	01/10/05	<10,000	0.02716	1.34368	<100	0.00027	0.02390	<b>13,000</b>	0.07062	10.56505
04/21/05	MW-3	698	29,927	04/15/05	510	0.00297	1.34665	140	0.00082	0.02471	<b>180</b>	0.00105	10.56610
05/05/05	MW-3	435	30,362	04/15/05	510	0.00185	1.34850	140	0.00051	0.02522	<b>180</b>	0.00065	10.56675
05/19/05	MW-3	641	31,003	04/15/05	510	0.00273	1.35123	140	0.00075	0.02597	<b>180</b>	0.00096	10.56772
06/02/05	MW-3	687	31,690	04/15/05	510	0.00292	1.35416	140	0.00080	0.02677	<b>180</b>	0.00103	10.56875
08/21/03	MW-6	50	50	07/22/03	<500	0.00010	0.00010	<5.0	0.00000	0.00000	<b>1,300</b>	0.00054	0.00054
09/04/03	MW-6	683	733	07/22/03	<500	0.00142	0.00153	<5.0	0.00001	0.00002	<b>1,300</b>	0.00741	0.00795
10/02/03	MW-6	234	967	07/22/03	<500	0.00049	0.00202	<5.0	0.00000	0.00002	<b>1,300</b>	0.00254	0.01049
10/16/03	MW-6	0	967	10/09/03	<1,000	0.00000	0.00202	<10	0.00000	0.00002	<b>3,000</b>	0.00000	0.01049
11/26/01	T-1 <sup>a</sup>	2,700	2,700	10/23/01	<50,000	0.56324	0.56324	<250	0.00282	0.00282	<b>180,000</b>	4.05536	4.05536
12/10/01	T-1 <sup>a</sup>	2,750	5,450	10/23/01	<50,000	0.57367	1.13692	<250	0.00287	0.00568	<b>180,000</b>	4.13046	8.18581
12/26/01	T-1 <sup>a</sup>	2,800	8,250	10/23/01	<50,000	0.58410	1.72102	<250	0.00292	0.00861	<b>180,000</b>	4.20556	12.39137
01/09/02	T-1	5,184	13,434	01/07/02	<20,000	0.43257	2.15359	<b>310</b>	0.01341	0.02201	<b>92,000</b>	3.97966	16.37103

**Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995757, 105 Fifth Street, Oakland, California**

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPHg			Benzene			MTBE		
					TPHg Concentration (ppb)	TPHg Removed (pounds)	TPHg 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)
01/23/02	T-1	4,250	17,684	01/07/02	<20,000	0.35464	2.50823	310	0.01099	0.03301	92,000	3.26264	19.63367
02/06/02	T-1	4,000	21,684	01/07/02	<20,000	0.33377	2.84200	310	0.01035	0.04336	92,000	3.07072	22.70439
02/20/02	T-1	3,000	24,684	01/07/02	<20,000	0.25033	3.09233	310	0.00776	0.05112	92,000	2.30304	25.00743
03/06/02	T-1	4,500	29,184	01/07/02	<20,000	0.37550	3.46783	310	0.01164	0.06276	92,000	3.45456	28.46200
03/20/02	T-1	5,000	34,184	01/07/02	<20,000	0.41722	3.88505	310	0.01293	0.07569	92,000	3.83840	32.30040
04/03/02	T-1	5,200	39,384	01/07/02	<20,000	0.43391	4.31896	310	0.01345	0.08914	92,000	3.99194	36.29234
04/17/02	T-1	4,800	44,184	04/12/02	<5,000	0.10013	4.41909	230	0.00921	0.09835	57,000	2.28302	38.57536
06/03/02	T-1	3,539	47,723	04/12/02	<5,000	0.07383	4.49291	230	0.00679	0.10515	57,000	1.68325	40.25861
06/17/02	T-1	5,000	52,723	04/12/02	<5,000	0.10430	4.59722	230	0.00960	0.11474	57,000	2.37814	42.63675
07/01/02	T-1	2,873	55,596	04/12/02	<5,000	0.05993	4.65715	230	0.00551	0.12026	57,000	1.36648	44.00323
07/15/02	T-1	4,000	59,596	07/10/02	<20,000	0.33377	4.99093	260	0.00868	0.12893	69,000	2.30304	46.30627
08/12/02	T-1	3,900	63,496	07/10/02	<20,000	0.32543	5.31636	260	0.00846	0.13739	69,000	2.24547	48.55174
08/26/02	T-1	2,367	65,863	07/10/02	<20,000	0.19751	5.51387	260	0.00514	0.14253	69,000	1.36283	49.91456
09/09/02	T-1	1,959	67,822	07/10/02	<20,000	0.16347	5.67733	260	0.00425	0.14678	69,000	1.12791	51.04248
09/23/02	T-1	5,000	72,822	07/10/02	<20,000	0.41722	6.09455	260	0.01085	0.15763	69,000	2.87880	53.92128
10/09/02	T-1	4,500	77,322	07/10/02	<20,000	0.37550	6.47005	260	0.00976	0.16739	69,000	2.59092	56.51220
10/22/02	T-1	4,500	81,822	10/15/02	<5,000	0.09387	6.56392	150	0.00563	0.17302	29,000	1.08894	57.60114
11/05/02	T-1	2,384	84,206	10/15/02	<5,000	0.04973	6.61365	150	0.00298	0.17601	29,000	0.57690	58.17804
11/19/02	T-1	4,375	88,581	10/15/02	<5,000	0.09127	6.70492	150	0.00548	0.18148	29,000	1.05869	59.23673
12/09/02	T-1	2,341	90,922	10/15/02	<5,000	0.04884	6.75376	150	0.00293	0.18441	29,000	0.56649	59.80322
12/23/02	T-1	2,341	93,263	10/15/02	<5,000	0.04884	6.80259	150	0.00293	0.18734	29,000	0.56649	60.36971
01/06/03	T-1 <sup>b</sup>	2,341	95,604	10/15/02	<5,000	0.04884	6.85143	1.5	0.00003	0.18737	29,000	0.56649	60.93620
01/28/03	T-1 <sup>b</sup>	4,500	100,104	10/15/02	<5,000	0.09387	6.94530	1.5	0.00006	0.18743	29,000	1.08894	62.02514
02/10/03	T-1	4,500	104,604	01/29/03	1,300	0.04881	6.99411	67	0.00252	0.18994	820	0.03079	62.05593
03/10/03	T-1	3,539	108,143	01/29/03	1,300	0.03839	7.03250	67	0.00198	0.19192	820	0.02422	62.08014
04/08/03	T-1	300	108,443	01/29/03	1,300	0.00325	7.03576	67	0.00017	0.19209	820	0.00205	62.08219
05/05/03	T-1	3,500	111,943	04/30/03	360	0.01051	7.04627	45	0.00131	0.19340	89	0.00260	62.08479
05/27/03	T-1	4,500	116,443	04/30/03	360	0.01352	7.05979	45	0.00169	0.19509	89	0.00334	62.08814
06/10/03	T-1	4,600	121,043	04/30/03	360	0.01382	7.07361	45	0.00173	0.19682	89	0.00342	62.09155

**Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995757, 105 Fifth Street, Oakland, California**

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	<u>TPHg</u>			<u>Benzene</u>			<u>MTBE</u>		
					TPHg Concentration (ppb)	TPHg Removed (pounds)	TPHg 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)
06/24/03	T-1	1,428	122,471	04/30/03	<b>360</b>	0.00429	7.07790	<b>45</b>	0.00054	0.19736	<b>89</b>	0.00106	62.09261
07/09/03	T-1	2,600	125,071	04/30/03	<b>360</b>	0.00781	7.08571	<b>45</b>	0.00098	0.19833	<b>89</b>	0.00193	62.09454
07/29/03	T-1	2,492	127,563	07/22/03	<b>1,200</b>	0.02495	7.11066	<b>170</b>	0.00354	0.20187	<b>150</b>	0.00312	62.09766
08/09/03	T-1	2,082	129,645	07/22/03	<b>1,200</b>	0.02085	7.13151	<b>170</b>	0.00295	0.20482	<b>150</b>	0.00261	62.10027
08/21/03	T-1	2,500	132,145	07/22/03	<b>1,200</b>	0.02503	7.15654	<b>170</b>	0.00355	0.20837	<b>150</b>	0.00313	62.10340
09/04/03	T-1	687	132,832	07/22/03	<b>1,200</b>	0.00688	7.16342	<b>170</b>	0.00097	0.20934	<b>150</b>	0.00086	62.10426
09/18/03	T-1	1,000	133,832	07/22/03	<b>1,200</b>	0.01001	7.17343	<b>170</b>	0.00142	0.21076	<b>150</b>	0.00125	62.10551
<b>Total Gallons Extracted:</b>			<b>171,154</b>		<b>Total Pounds Removed:</b>		<b>8.64662</b>			<b>0.24837</b>	<b>Total Pounds Removed:</b>		<b>73.43878</b>
					<b>Total Gallons Removed:</b>		<b>1.41748</b>			<b>0.03402</b>			<b>11.84496</b>

**Abbreviations & Notes:**

TPHg = Total petroleum hydrocarbons as gasoline

MTBE = Methyl tertiary butyl ether

ppb = Parts per billion

gal = Gallon

a = Concentrations for tank backfill well T-1 estimated from nearest monitoring well MW-3.

b = Tank backfill well T-1 sampled for BTEX (including benzene) on 1/2/03.

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)

TPHg and benzene analyzed by EPA Method 8015/8020 or equivalent.

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

Concentrations based on most recent groundwater monitoring results

Groundwater extracted by vacuum trucks provided by Phillips Services Corporation and/or Onyx Industrial Services. Water disposed of at a Martinez Refinery.

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**

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**BLAINE**  
TECH SERVICES INC

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GROUNDWATER SAMPLING SPECIALISTS  
SINCE 1985

May 6, 2005

Denis Brown  
Shell Oil Products US  
20945 South Wilmington Avenue  
Carson, CA 90810

Second Quarter 2005 Groundwater Monitoring at  
Shell-branded Service Station  
105 5th Street  
Oakland, CA

Monitoring performed on April 15, 2005

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Groundwater Monitoring Report **050415-MT-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/cl

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

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

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**105 5th Street**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-1	7/20/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12.22	17.56	-5.34	NA
MW-1	7/23/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	<2.00	NA	NA	NA	NA	NA	NA	NA	12.22	6.45	5.77	NA
MW-1	11/1/1999	100	NA	15.6	3.12	4.04	12.6	6.69	NA	NA	NA	NA	NA	NA	NA	NA	12.22	6.59	5.63	0.5/0.7
MW-1	1/5/2000	<50.0	<20.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	12.22	6.38	5.84	1.2/1.4
MW-1	4/7/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	12.22	5.83	6.39	1.6/2.4
MW-1	7/26/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	12.22	6.10	6.12	1.1/1.4
MW-1	10/28/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	12.22	14.08	-1.86	2.2/2.7
MW-1	1/30/2001	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	12.22	10.71	1.51	1.2/1.6
MW-1	4/17/2001	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	12.22	6.61	5.61	2.4/4.4
MW-1	7/9/2001	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	12.22	6.31	5.91	1.4/3.4
MW-1	10/23/2001	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	12.22	6.24	5.98	2.6/4.1
MW-1	1/7/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	12.22	5.25	6.97	NA
MW-1	4/12/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	14.92	5.54	9.38	NA
MW-1	7/10/2002	<50	74	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	14.92	5.98	8.94	NA
MW-1	10/15/2002	<50	51	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	14.92	5.46	9.46	NA
MW-1	1/29/2003	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	14.92	5.03	9.89	NA
MW-1	4/30/2003	<50	110	<0.50	<0.50	<0.50	<1.0	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	14.92	4.70	10.22	NA
MW-1	7/22/2003	<50	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	14.92	6.05	8.87	NA
MW-1	10/9/2003	<50	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	14.92	6.13	8.79	NA
MW-1	1/5/2004	<50	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	14.92	5.44	9.48	NA
MW-1	4/12/2004	<50	1,000 c	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	14.92	5.75	9.17	NA
MW-1	7/2/2004	<50	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	14.92	5.93	8.99	NA
MW-1	10/8/2004	<50	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	14.92	5.94	8.98	NA
MW-1	1/10/2005	<50	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	14.92	5.17	9.75	NA
MW-1	4/15/2005	<50	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	14.92	5.45	9.47	NA

MW-2	7/20/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.87	18.24	-7.37	NA
MW-2	7/23/1999	13,800	NA	1,790	<100	<100	682	29,900	29,400	NA	NA	NA	NA	NA	NA	NA	10.87	5.98	4.89	NA
MW-2	11/1/1999	2,420	NA	316	10.8	119	44.2	17,000	NA	NA	NA	NA	NA	NA	NA	NA	10.87	6.03	4.84	0.5/0.3
MW-2	1/5/2000	2,120a	687	301a	<5.00a	116a	84.4a	14,700	NA	NA	NA	NA	NA	NA	NA	NA	10.87	5.90	4.97	2.1/2.6
MW-2	4/7/2000	4,940b	1,300	659b	<25.0b	214b	314b	41,800b	NA	NA	NA	NA	NA	NA	NA	NA	10.87	5.37	5.50	0.4/0.2
MW-2	7/26/2000	5,010	1,520	409	<50.0	302	307	54,300	NA	NA	NA	NA	NA	NA	NA	NA	10.87	5.81	5.06	2.1/2.2
MW-2	10/28/2000	1,720	412	82.2	<10.0	46.0	102	9,800	NA	NA	NA	NA	NA	NA	NA	NA	10.87	14.59	-3.72	0.7/0.7
MW-2	1/30/2001	1,640	574	14.7	<5.00	40.1	58.1	3,670	NA	NA	NA	NA	NA	NA	NA	NA	10.87	10.31	0.56	1.8/2.0



**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**105 5th Street**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-2	4/17/2001	598	179	21.8	<2.00	16.9	10.8	5,630	NA	NA	NA	NA	NA	NA	NA	NA	10.87	6.08	4.79	1.5/2.6
MW-2	7/9/2001	<1,000	<500	19	<10	33	15	NA	6,200	NA	NA	NA	NA	NA	NA	NA	10.87	5.70	5.17	1.1/2.0
MW-2	10/23/2001	<5,000	<500	50	<25	92	<25	NA	13,000	<25	<25	<25	820	NA	NA	<500	10.87	5.72	5.15	2.0/3.2
MW-2	1/7/2002	<1,000	<200	<10	<10	<10	<10	NA	4,500	NA	NA	NA	NA	NA	NA	NA	10.87	4.87	6.00	NA
MW-2	4/12/2002	<1,000	<100	14	<10	27	13	NA	6,200	NA	NA	NA	NA	NA	NA	NA	13.57	5.14	8.43	NA
MW-2	7/10/2002	<1,000	290	<10	<10	14	<10	NA	6,100	NA	NA	NA	NA	NA	NA	NA	13.57	5.45	8.12	NA
MW-2	10/15/2002	<100	85	1.2	<1.0	<1.0	<1.0	NA	640	NA	NA	NA	NA	NA	NA	NA	13.57	5.38	8.19	NA
MW-2	1/29/2003	<500	<300	10	<5.0	16	6.3	NA	1,700	NA	NA	NA	NA	NA	NA	NA	13.57	5.14	8.43	NA
MW-2	4/30/2003	<5,000	440	<50	<50	58	<100	NA	5,000	NA	NA	NA	NA	NA	NA	NA	13.57	4.83	8.74	NA
MW-2	7/22/2003	2,300	1,000 c	76	<10	140	<20	NA	3,700	NA	NA	NA	NA	NA	NA	NA	13.57	5.61	7.96	NA
MW-2	10/9/2003	150	120 c	3.9	<1.0	6.4	<2.0	NA	210	NA	NA	NA	NA	NA	NA	NA	13.57	5.59	7.98	NA
MW-2	1/5/2004	1,300	450 c	34	<5.0	53	<10	NA	700	NA	NA	NA	NA	NA	NA	NA	13.57	5.04	8.53	NA
MW-2	4/12/2004	820	320 c	25	<5.0	33	<10	NA	560	NA	NA	NA	NA	NA	NA	NA	13.57	5.26	8.31	NA
MW-2	7/2/2004	2,000	850 c	60	<5.0	110	<10	NA	1,800	<20	<20	<20	6,200	NA	NA	NA	13.57	5.43	8.14	NA
MW-2	10/8/2004	540	210 d	5.2	<5.0	<5.0	<10	NA	90	NA	NA	NA	NA	NA	NA	NA	13.57	5.41	8.16	NA
MW-2	1/10/2005	990	400 d	19	<2.0	27	25	NA	<2.0	NA	NA	NA	NA	NA	NA	NA	13.57	4.74	8.83	NA
MW-2	4/15/2005	1,200	650 c	44	<10	45	<20	NA	760	NA	NA	NA	NA	NA	NA	NA	13.57	5.05	8.52	NA
MW-3	7/20/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11.27	19.07	-7.80	NA
MW-3	7/23/1999	128	NA	<0.500	<0.500	<0.500	<0.500	404,000	324,000	NA	NA	NA	NA	NA	NA	NA	11.27	6.43	4.84	NA
MW-3	11/1/1999	<1,000	NA	<10.0	<10.0	<10.0	<10.0	169,000	224,000	NA	NA	NA	NA	NA	NA	NA	11.27	6.48	4.79	0.5/0.3
MW-3	1/5/2000	137	322	<1.00	<1.00	<1.00	<1.00	165,000	219,000	NA	NA	NA	NA	NA	NA	NA	11.27	6.35	4.92	2.4/2.2
MW-3	4/7/2000	<1,000	264	853	<10.0	<10.0	<10.0	283,000	196,000a	NA	NA	NA	NA	NA	NA	NA	11.27	5.91	5.36	04/0.2
MW-3	7/26/2000	<20,000	585	<200	<200	<200	<200	437,000	320,000	NA	NA	NA	NA	NA	NA	NA	11.27	5.83	5.44	1.9/1.7
MW-3	10/28/2000	<12,500	441	<125	<125	<125	<125	266,000	308,000	NA	NA	NA	NA	NA	NA	NA	11.27	17.51	-6.24	1.1/1.4
MW-3	1/30/2001	<5,000	555	<50.0	<50.0	<50.0	<50.0	248,000	167,000a	NA	NA	NA	NA	NA	NA	NA	11.27	11.43	-0.16	2.0/2.2
MW-3	4/17/2001	<5,000	347	<50.0	<50.0	<50.0	<50.0	134,000	133,000	NA	NA	NA	NA	NA	NA	NA	11.27	6.57	4.70	1.3/1.2
MW-3	7/9/2001	<20,000	250	<200	<200	<200	<200	NA	170,000	NA	NA	NA	NA	NA	NA	NA	11.27	6.12	5.15	1.2/1.9
MW-3	10/23/2001	<50,000	260	<250	<250	<250	<250	NA	180,000	<250	<250	<250	53,000	NA	NA	<5,000	11.27	6.25	5.02	2.2/1.6
MW-3	1/7/2002	<10,000	160	<100	<100	<100	<100	NA	96,000	NA	NA	NA	NA	NA	NA	NA	11.27	5.29	5.98	NA
MW-3	4/12/2002	<10,000	87	<100	<100	<100	<100	NA	78,000	NA	NA	NA	NA	NA	NA	NA	13.96	5.43	8.53	NA
MW-3	7/10/2002	<20,000	150	<200	<200	<200	<200	NA	64,000	NA	NA	NA	NA	NA	NA	NA	13.96	6.33	7.63	NA
MW-3	10/15/2002	<10,000	120	<100	<100	<100	<100	NA	44,000	<100	NA	<100	9,100	<100	<100	NA	13.96	5.96	8.00	NA
MW-3	1/2/2003	NA	NA	<5.0	<5.0	<5.0	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	13.96	5.40	8.56	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**105 5th Street**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-3	1/29/2003	<2,500	96	<25	<25	<25	<25	NA	19,000	<25	NA	<25	14,000	<25	<25	NA	13.96	5.68	8.28	NA
MW-3	4/30/2003	<25,000	360	<250	<250	<250	<500	NA	14,000	<1,000	NA	<1,000	24,000	<250	<250	NA	13.96	5.34	8.62	NA
MW-3	7/22/2003	<5,000	230 c	<50	<50	<50	<100	NA	17,000	<200	NA	<200	21,000	<50	<50	NA	13.96	6.15	7.81	NA
MW-3	10/9/2003	<5,000	150 c	<50	<50	<50	<100	NA	14,000	<200	NA	<200	11,000	<50	<50	NA	13.96	5.98	7.98	NA
MW-3	1/5/2004	<5,000	790 c	<50	<50	<50	<100	NA	4,700	<200	NA	<200	11,000	<50	<50	NA	13.96	5.45	8.51	NA
MW-3	4/12/2004	<25,000	270 c	<250	<250	<250	<500	NA	23,000	<1,000	NA	<1,000	12,000	<250	<250	NA	13.96	5.66	8.30	NA
MW-3	7/2/2004	<10,000	280 c	<100	<100	<100	<200	NA	18,000	<400	NA	<400	4,500	120	<100	NA	13.96	5.85	8.11	NA
MW-3	10/8/2004	<10,000	250 c	<100	<100	<100	<200	NA	29,000	<400	NA	<400	14,000	<100	<100	NA	13.96	5.88	8.08	NA
MW-3	1/10/2005	<10,000	220 c	<100	<100	<100	<200	NA	13,000	<400	NA	<400	17,000	<100	<100	NA	13.96	5.20	8.76	NA
MW-3	4/15/2005	510	530 c	140	<5.0	<5.0	<10	NA	180	<20	NA	<20	1,600	<5.0	<5.0	NA	13.96	5.51	8.45	NA
MW-4	3/23/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.50	8.21	1.29	NA
MW-4	4/17/2001	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	9.50	5.08	4.42	2.4/2.6
MW-4	7/9/2001	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	9.50	4.64	4.86	2.0/1.5
MW-4	10/23/2001	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	9.50	7.90	1.60	2.8/1.8
MW-4	1/7/2002	<50	64	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	9.50	5.00	4.50	NA
MW-4	4/12/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	12.17	7.49	4.68	NA
MW-4	7/10/2002	<50	67	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	12.17	4.75	7.42	NA
MW-4	10/15/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	12.17	4.56	7.61	NA
MW-4	1/29/2003	<50	73	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	12.17	4.34	7.83	NA
MW-4	4/30/2003	<50	140	<0.50	<0.50	<0.50	<1.0	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	12.17	5.45	6.72	NA
MW-4	7/22/2003	<50	63 c	<0.50	<0.50	<0.50	<1.0	NA	3.1	NA	NA	NA	NA	NA	NA	NA	12.17	6.46	5.71	NA
MW-4	10/9/2003	<50	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	12.17	7.11	5.06	NA
MW-4	1/5/2004	<50	66 c	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	12.17	7.72	4.45	NA
MW-4	4/12/2004	<50	110 c	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	12.17	5.80	6.37	NA
MW-4	7/2/2004	<50	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	NA	NA	NA	12.17	6.24	5.93	NA
MW-4	10/8/2004	<50	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	12.17	7.17	5.00	NA
MW-4	1/10/2005	<50	55 c	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	12.17	5.55	6.62	NA
MW-4	4/15/2005	<50	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	12.17	5.89	6.28	NA
MW-5	3/29/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	14.78	5.86	8.92	NA
MW-5	4/12/2002	1,600	<50	25	3.5	44	110	NA	570	NA	NA	NA	NA	NA	NA	NA	14.78	5.96	8.82	NA
MW-5	7/10/2002	930	<400	36	<2.0	93	8.8	NA	630	NA	NA	NA	NA	NA	NA	NA	14.78	6.57	8.21	NA
MW-5	10/15/2002	200	90	9.9	<0.50	19	5.5	NA	180	NA	NA	NA	NA	NA	NA	NA	14.78	6.17	8.61	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**105 5th Street**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-5	1/29/2003	120	85	6.0	<0.50	2.9	2.6	NA	220	NA	NA	NA	NA	NA	NA	NA	14.78	5.85	8.93	NA
MW-5	4/30/2003	<250	160	5.5	<2.5	7.2	7.7	NA	250	NA	NA	NA	NA	NA	NA	NA	14.78	5.53	9.25	NA
MW-5	7/22/2003	520	190 c	63	<5.0	41	14	NA	810	NA	NA	NA	NA	NA	NA	NA	14.78	6.45	8.33	NA
MW-5	10/9/2003	160	86 c	3.2	<1.0	7.0	3.9	NA	250	NA	NA	NA	NA	NA	NA	NA	14.78	6.54	8.24	NA
MW-5	1/5/2004	290	95 c	11	<2.5	8.5	<5.0	NA	380	NA	NA	NA	NA	NA	NA	NA	14.78	5.90	8.88	NA
MW-5	4/12/2004	280	54 c	9.0	<2.5	12	<5.0	NA	400	NA	NA	NA	NA	NA	NA	NA	14.78	6.19	8.59	NA
MW-5	7/2/2004	660	280 c	34	3.6	42	17	NA	550	<10	<10	<10	400	NA	NA	NA	14.78	6.33	8.45	NA
MW-5	10/8/2004	<250	61 d	<2.5	<2.5	2.6	<5.0	NA	260	NA	NA	NA	NA	NA	NA	NA	14.78	6.32	8.46	NA
MW-5	1/10/2005	<100	110 d	2.7	<1.0	6.0	<2.0	NA	240	NA	NA	NA	NA	NA	NA	NA	14.78	5.65	9.13	NA
MW-5	4/15/2005	160	110 d	7.8	<0.50	15	2.5	NA	160	NA	NA	NA	NA	NA	NA	NA	14.78	5.95	8.83	NA

MW-6	9/25/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12.91	5.50	7.41	NA
MW-6	10/15/2002	<500	72	<5.0	<5.0	<5.0	<5.0	NA	2,600	NA	NA	NA	NA	NA	NA	NA	12.91	5.45	7.46	NA
MW-6	1/29/2003	<250	350	<2.5	<2.5	<2.5	<2.5	NA	1,600	NA	NA	NA	NA	NA	NA	NA	12.91	5.20	7.71	NA
MW-6	4/30/2003	<2,500	220	<25	<25	<25	<50	NA	5,900	NA	NA	NA	NA	NA	NA	NA	12.91	5.11	7.80	NA
MW-6	7/22/2003	<500	<50	<5.0	<5.0	<5.0	<10	NA	1,300	NA	NA	NA	NA	NA	NA	NA	12.91	5.46	7.45	NA
MW-6	10/9/2003	<1,000	<50	<10	<10	<10	<20	NA	3,000	NA	NA	NA	NA	NA	NA	NA	12.91	5.51	7.40	NA
MW-6	1/5/2004	<2,500	78 c	<25	<25	<25	<50	NA	3,600	NA	NA	NA	NA	NA	NA	NA	12.91	5.11	7.80	NA
MW-6	4/12/2004	<2,500	<50	<25	<25	<25	<50	NA	4,300	NA	NA	NA	NA	NA	NA	NA	12.91	5.30	7.61	NA
MW-6	7/2/2004	<2,500	<50	<25	<25	<25	<50	NA	2,900	<100	<100	<100	<250	NA	NA	NA	12.91	5.36	7.55	NA
MW-6	10/8/2004	<2,500	<50	<25	<25	<25	<50	NA	3,100	NA	NA	NA	NA	NA	NA	NA	12.91	5.43	7.48	NA
MW-6	1/10/2005	<1,000	<50	<10	<10	<10	<20	NA	2,600	NA	NA	NA	NA	NA	NA	NA	12.91	5.00	7.91	NA
MW-6	4/15/2005	210	100 d	11	<0.50	19	3.4	NA	180	NA	NA	NA	NA	NA	NA	NA	12.91	5.29	7.62	NA

T-1	1/7/2002	<20,000	2,600	310	<200	<200	<200	NA	92,000	NA	NA	NA	NA	NA	NA	NA	NA	4.86	NA	NA
T-1	4/12/2002	<5,000	1,000	230	<50	<50	<50	NA	57,000	NA	NA	NA	NA	NA	NA	NA	NA	5.05	NA	NA
T-1	7/10/2002	<20,000	3,700	260	<200	<200	<200	NA	69,000	NA	NA	NA	NA	NA	NA	NA	NA	5.84	NA	NA
T-1	10/15/2002	<5,000	2,100	150	62	<50	75	NA	29,000	NA	NA	NA	NA	NA	NA	NA	NA	5.77	NA	NA
T-1	1/2/2003	NA	NA	1.5	<0.50	<0.50	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.10	NA	NA
T-1	1/29/2003	1,300	1,200	67	6.5	<2.0	5.2	NA	820	NA	NA	NA	NA	NA	NA	NA	NA	5.49	NA	NA
T-1	4/30/2003	360	1,000	45	0.60	<0.50	2.3	NA	89	NA	NA	NA	NA	NA	NA	NA	NA	4.91	NA	NA
T-1	7/22/2003	1,200	940 c	170	4.8	<2.5	18	NA	150	NA	NA	NA	NA	NA	NA	NA	NA	5.70	NA	NA
T-1	10/9/2003	700	880 c	32	2.0	<1.0	9.8	NA	140	NA	NA	NA	NA	NA	NA	NA	NA	5.79	NA	NA
T-1	1/5/2004	450	790 c	24	2.1	<1.0	3.2	NA	29	NA	NA	NA	NA	NA	NA	NA	NA	5.16	NA	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**105 5th Street**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
T-1	4/12/2004	210	530 c	6.4	<1.0	<1.0	<2.0	NA	9.0	NA	NA	NA	NA	NA	NA	NA	NA	5.40	NA	NA
T-1	7/2/2004	1,400	2,800 c	160	300	6.7	180	NA	28	NA	NA	NA	NA	NA	NA	NA	NA	5.62	NA	NA
T-1	10/8/2004	1,800	1,100 c	390	68	5.6	330	NA	59	NA	NA	NA	NA	NA	NA	NA	NA	5.67	NA	NA
T-1	1/10/2005	3,000	1,300 c	480	150	30	270	NA	52	NA	NA	NA	NA	NA	NA	NA	NA	4.92	NA	NA
T-1	4/15/2005	1,100	1,100 c	93	2.9	3.3	8.3	NA	26	NA	NA	NA	NA	NA	NA	NA	NA	5.22	NA	NA

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to July 9, 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 July 9, 2001, analyzed by EPA Method 8020.

MTBE = Methyl tertiary butyl ether

DIPE = Di-isopropyl ether, analyzed by EPA Method 8260B

ETBE = Ethyl tertiary butyl ether, analyzed by EPA Method 8260B

TAME = Tertiary amyl methyl ether, analyzed by EPA Method 8260B

TBA = Tertiary butyl alcohol, analyzed by EPA Method 8260B

1,2-DCA = 1,2-dichloroethane, analyzed by EPA Method 8260B

EDB = 1,2-dibromomethane or ethylene dibromide, analyzed by EPA Method 8260B

TOC = Top of Casing Elevation

GW = Groundwater

DO = Dissolved Oxygen

ug/L = Parts per billion

ppm = Parts per million

MSL = Mean sea level

ft. = Feet

<n = Below detection limit

NA = Not applicable

n/n = Pre-purge/Post-purge

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**105 5th Street**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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Notes:

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

b = Result was generated out of hold time.

c = Hydrocarbon does not match pattern of laboratory's standard.

d = Hydrocarbon reported is in the early Diesel range and does not match the laboratory's Diesel standard.

Ethanol analyzed by EPA Method 8260B.

Top of casing for well MW-4 provided by Cambria Environmental Technology, Inc.

Wells MW-1 through MW-5 surveyed April 12, 2002 by Virgil Chavez Land Surveying of Vallejo, CA.

Site surveyed September 26, 2002 by Virgil Chavez Land Surveying of Vallejo, CA.

**Blaine Tech Services, Inc.**

May 03, 2005

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Attn.: Leon Gearhart  
Project#: 050415-MT1  
Project: 98995757  
Site: 105 5th Street, Oakland

Dear Mr. Gearhart,

Attached is our report for your samples received on 04/15/2005 15:53  
This report has been reviewed and approved for release. Reproduction of this report  
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after  
05/30/2005 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: [mbrewer@stl-inc.com](mailto:mbrewer@stl-inc.com)

Sincerely,



Melissa Brewer  
Project Manager

**Diesel (C9-C24)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
MW-1	04/15/2005 08:00	Water	1
MW-2	04/15/2005 08:50	Water	2
MW-3	04/15/2005 10:15	Water	3
MW-4	04/15/2005 08:25	Water	4
MW-5	04/15/2005 09:15	Water	5
MW-6	04/15/2005 09:35	Water	6
T-1	04/15/2005 10:00	Water	7

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

04/29/2005 18:37



**Diesel (C9-C24)**

Blaine Tech Services, Inc.  
Attn.: Leon Gearhart

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050415-MT1  
98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

Prep(s): 3511	Test(s): 8015M
Sample ID: <b>MW-1</b>	Lab ID: 2005-04-0536 - 1
Sampled: 04/15/2005 08:00	Extracted: 4/26/2005 10:53
Matrix: Water	QC Batch#: 2005/04/26-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	04/28/2005 07:44	
<b>Surrogate(s)</b> o-Terphenyl	93.0	64-127	%	1.00	04/28/2005 07:44	

**Diesel (C9-C24)**

Blaine Tech Services, Inc.

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

Prep(s): 3511	Test(s): 8015M
Sample ID: MW-2	Lab ID: 2005-04-0536 - 2
Sampled: 04/15/2005 08:50	Extracted: 4/26/2005 10:53
Matrix: Water	QC Batch#: 2005/04/26-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	650	50	ug/L	1.00	04/28/2005 09:56	ndp
<b>Surrogate(s)</b>						
o-Terphenyl	96.3	64-127	%	1.00	04/28/2005 09:56	

**Diesel (C9-C24)**

Blaine Tech Services, Inc.

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Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

Prep(s): 3511	Test(s): 8015M
Sample ID: <b>MW-3</b>	Lab ID: 2005-04-0536 - 3
Sampled: 04/15/2005 10:15	Extracted: 4/26/2005 10:53
Matrix: Water	QC Batch#: 2005/04/26-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	530	50	ug/L	1.00	04/28/2005 09:56	ndp
<i>Surrogate(s)</i>						
o-Terphenyl	104.3	64-127	%	1.00	04/28/2005 09:56	

**Diesel (C9-C24)**

Blaine Tech Services, Inc.

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Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

Prep(s): 3511	Test(s): 8015M
Sample ID: <b>MW-4</b>	Lab ID: 2005-04-0536 - 4
Sampled: 04/15/2005 08:25	Extracted: 4/26/2005 10:53
Matrix: Water	QC Batch#: 2005/04/26-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	04/28/2005 04:35	
<b>Surrogate(s)</b> o-Terphenyl	89.9	64-127	%	1.00	04/28/2005 04:35	

**Diesel (C9-C24)**

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Project: 050415-MT1  
98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

Prep(s): 3511	Test(s): 8015M
Sample ID: <b>MW-5</b>	Lab ID: 2005-04-0536 - 5
Sampled: 04/15/2005 09:15	Extracted: 4/26/2005 10:53
Matrix: Water	QC Batch#: 2005/04/26-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	110	50	ug/L	1.00	04/28/2005 09:56	edr
<b>Surrogate(s)</b> o-Terphenyl	101.6	64-127	%	1.00	04/28/2005 09:56	

**Diesel (C9-C24)**

Blaine Tech Services, Inc.

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

Prep(s): 3511	Test(s): 8015M
Sample ID: <b>MW-6</b>	Lab ID: 2005-04-0536 - 6
Sampled: 04/15/2005 09:35	Extracted: 4/26/2005 10:53
Matrix: Water	QC Batch#: 2005/04/26-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	100	50	ug/L	1.00	04/28/2005 10:23	edr
<b>Surrogate(s)</b> o-Terphenyl	97.8	64-127	%	1.00	04/28/2005 10:23	

**Diesel (C9-C24)**

Blaine Tech Services, Inc.

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

Prep(s): 3511	Test(s): 8015M
Sample ID: T-1	Lab ID: 2005-04-0536 - 7
Sampled: 04/15/2005 10:00	Extracted: 4/26/2005 10:53
Matrix: Water	QC Batch#: 2005/04/26-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1100	50	ug/L	1.00	04/28/2005 14:50	ndp
<b>Surrogate(s)</b> o-Terphenyl	103.3	64-127	%	1.00	04/28/2005 14:50	



**Diesel (C9-C24)**

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Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

**Batch QC Report**

Prep(s): 3511

Method Blank

MB: 2005/04/26-03.10-001

Water

Test(s): 8015M

QC Batch # 2005/04/26-03.10

Date Extracted: 04/26/2005 10:53

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	04/27/2005 17:36	
<b>Surrogates(s)</b> o-Terphenyl	100.0	64-127	%	04/27/2005 17:36	

**Diesel (C9-C24)**

Blaine Tech Services, Inc.

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

**Batch QC Report**

Prep(s): 3511

Test(s): 8015M

**Laboratory Control Spike**

**Water**

**QC Batch # 2005/04/26-03.10**

LCS 2005/04/26-03.10-002

Extracted: 04/26/2005

Analyzed: 04/28/2005 04:08

LCSD 2005/04/26-03.10-003

Extracted: 04/26/2005

Analyzed: 04/28/2005 03:41

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	485	510	680	71.3	75.0	5.1	60-150	25		
<b>Surrogates(s)</b> o-Terphenyl	1.33	1.42	1.25	106.3	113.8		64-127	0		

**Diesel (C9-C24)**

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

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**Legend and Notes**

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**Result Flag**

edr

Hydrocarbon reported is in the early Diesel range, and does not match our Diesel standard

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771Project: 050415-MT1  
98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
MW-1	04/15/2005 08:00	Water	1
MW-2	04/15/2005 08:50	Water	2
MW-3	04/15/2005 10:15	Water	3
MW-4	04/15/2005 08:25	Water	4
MW-5	04/15/2005 09:15	Water	5
MW-6	04/15/2005 09:35	Water	6
T-1	04/15/2005 10:00	Water	7

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

05/03/2005 12:54

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>MW-1</b>	Lab ID: 2005-04-0536 - 1
Sampled: 04/15/2005 08:00	Extracted: 4/29/2005 12:41
Matrix: Water	QC Batch#: 2005/04/29-1A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	04/29/2005 12:41	
Benzene	ND	0.50	ug/L	1.00	04/29/2005 12:41	
Toluene	ND	0.50	ug/L	1.00	04/29/2005 12:41	
Ethylbenzene	ND	0.50	ug/L	1.00	04/29/2005 12:41	
Total xylenes	ND	1.0	ug/L	1.00	04/29/2005 12:41	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	04/29/2005 12:41	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	113.5	73-130	%	1.00	04/29/2005 12:41	
Toluene-d8	103.5	81-114	%	1.00	04/29/2005 12:41	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

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Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	<b>MW-2</b>	Lab ID:	2005-04-0536 - 2
Sampled:	04/15/2005 08:50	Extracted:	4/29/2005 16:37
Matrix:	Water	QC Batch#:	2005/04/29-1A.62
Analysis Flag: L2 ( See Legend and Note Section )			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	1200	1000	ug/L	20.00	04/29/2005 16:37	
Benzene	44	10	ug/L	20.00	04/29/2005 16:37	
Toluene	ND	10	ug/L	20.00	04/29/2005 16:37	
Ethylbenzene	45	10	ug/L	20.00	04/29/2005 16:37	
Total xylenes	ND	20	ug/L	20.00	04/29/2005 16:37	
Methyl tert-butyl ether (MTBE)	760	10	ug/L	20.00	04/29/2005 16:37	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	111.7	73-130	%	20.00	04/29/2005 16:37	
Toluene-d8	102.6	81-114	%	20.00	04/29/2005 16:37	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-3	Lab ID: 2005-04-0536 - 3
Sampled: 04/15/2005 10:15	Extracted: 4/29/2005 17:03
Matrix: Water	QC Batch#: 2005/04/29-1A.62
Analysis Flag: L2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	510	500	ug/L	10.00	04/29/2005 17:03	
Benzene	140	5.0	ug/L	10.00	04/29/2005 17:03	
Toluene	ND	5.0	ug/L	10.00	04/29/2005 17:03	
Ethylbenzene	ND	5.0	ug/L	10.00	04/29/2005 17:03	
Total xylenes	ND	10	ug/L	10.00	04/29/2005 17:03	
tert-Butyl alcohol (TBA)	1600	50	ug/L	10.00	04/29/2005 17:03	
Methyl tert-butyl ether (MTBE)	180	5.0	ug/L	10.00	04/29/2005 17:03	
Di-isopropyl Ether (DIPE)	ND	20	ug/L	10.00	04/29/2005 17:03	
tert-Amyl methyl ether (TAME)	ND	20	ug/L	10.00	04/29/2005 17:03	
1,2-DCA	ND	5.0	ug/L	10.00	04/29/2005 17:03	
EDB	ND	5.0	ug/L	10.00	04/29/2005 17:03	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	113.2	73-130	%	10.00	04/29/2005 17:03	
Toluene-d8	104.7	81-114	%	10.00	04/29/2005 17:03	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

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Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

Prep(s): 5030B

Test(s): 8260B

Sample ID: MW-4

Lab ID: 2005-04-0536 - 4

Sampled: 04/15/2005 08:25

Extracted: 4/29/2005 14:00

Matrix: Water

QC Batch#: 2005/04/29-1A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	04/29/2005 14:00	
Benzene	ND	0.50	ug/L	1.00	04/29/2005 14:00	
Toluene	ND	0.50	ug/L	1.00	04/29/2005 14:00	
Ethylbenzene	ND	0.50	ug/L	1.00	04/29/2005 14:00	
Total xylenes	ND	1.0	ug/L	1.00	04/29/2005 14:00	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	04/29/2005 14:00	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	113.1	73-130	%	1.00	04/29/2005 14:00	
Toluene-d8	102.9	81-114	%	1.00	04/29/2005 14:00	



**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>MW-5</b>	Lab ID: 2005-04-0536 - 5
Sampled: 04/15/2005 09:15	Extracted: 4/29/2005 14:26
Matrix: Water	QC Batch#: 2005/04/29-1A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	160	50	ug/L	1.00	04/29/2005 14:26	
Benzene	7.8	0.50	ug/L	1.00	04/29/2005 14:26	
Toluene	ND	0.50	ug/L	1.00	04/29/2005 14:26	
Ethylbenzene	15	0.50	ug/L	1.00	04/29/2005 14:26	
Total xylenes	2.5	1.0	ug/L	1.00	04/29/2005 14:26	
Methyl tert-butyl ether (MTBE)	160	0.50	ug/L	1.00	04/29/2005 14:26	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	107.1	73-130	%	1.00	04/29/2005 14:26	
Toluene-d8	102.6	81-114	%	1.00	04/29/2005 14:26	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

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Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-6	Lab ID: 2005-04-0536 - 6
Sampled: 04/15/2005 09:35	Extracted: 4/29/2005 14:52
Matrix: Water	QC Batch#: 2005/04/29-1A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	210	50	ug/L	1.00	04/29/2005 14:52	
Benzene	11	0.50	ug/L	1.00	04/29/2005 14:52	
Toluene	ND	0.50	ug/L	1.00	04/29/2005 14:52	
Ethylbenzene	19	0.50	ug/L	1.00	04/29/2005 14:52	
Total xylenes	3.4	1.0	ug/L	1.00	04/29/2005 14:52	
Methyl tert-butyl ether (MTBE)	180	0.50	ug/L	1.00	04/29/2005 14:52	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	107.9	73-130	%	1.00	04/29/2005 14:52	
Toluene-d8	103.5	81-114	%	1.00	04/29/2005 14:52	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

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Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

Prep(s): 5030B	Test(s): 8260B
Sample ID: T-1	Lab ID: 2005-04-0536 - 7
Sampled: 04/15/2005 10:00	Extracted: 4/29/2005 23:15
Matrix: Water	QC Batch#: 2005/04/29-2C.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	1100	50	ug/L	1.00	04/29/2005 23:15	
Benzene	93	0.50	ug/L	1.00	04/29/2005 23:15	
Toluene	2.9	0.50	ug/L	1.00	04/29/2005 23:15	
Ethylbenzene	3.3	0.50	ug/L	1.00	04/29/2005 23:15	
Total xylenes	8.3	1.0	ug/L	1.00	04/29/2005 23:15	
Methyl tert-butyl ether (MTBE)	26	0.50	ug/L	1.00	04/29/2005 23:15	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	116.1	73-130	%	1.00	04/29/2005 23:15	
Toluene-d8	103.9	81-114	%	1.00	04/29/2005 23:15	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

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Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2005/04/29-1A.62-009

Water

Test(s): 8260B

QC Batch # 2005/04/29-1A.62

Date Extracted: 04/29/2005 08:09

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	04/29/2005 08:09	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	04/29/2005 08:09	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	04/29/2005 08:09	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	04/29/2005 08:09	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	04/29/2005 08:09	
1,2-DCA	ND	0.5	ug/L	04/29/2005 08:09	
EDB	ND	0.5	ug/L	04/29/2005 08:09	
Benzene	ND	0.5	ug/L	04/29/2005 08:09	
Toluene	ND	0.5	ug/L	04/29/2005 08:09	
Ethylbenzene	ND	0.5	ug/L	04/29/2005 08:09	
Total xylenes	ND	1.0	ug/L	04/29/2005 08:09	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	117.6	73-130	%	04/29/2005 08:09	
Toluene-d8	103.8	81-114	%	04/29/2005 08:09	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2005/04/29-2C.62-005

Water

Test(s): 8260B

QC Batch # 2005/04/29-2C.62

Date Extracted: 04/29/2005 20:05

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	04/29/2005 20:05	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	04/29/2005 20:05	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	04/29/2005 20:05	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	04/29/2005 20:05	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	04/29/2005 20:05	
1,2-DCA	ND	0.5	ug/L	04/29/2005 20:05	
EDB	ND	0.5	ug/L	04/29/2005 20:05	
Benzene	ND	0.5	ug/L	04/29/2005 20:05	
Toluene	ND	0.5	ug/L	04/29/2005 20:05	
Ethylbenzene	ND	0.5	ug/L	04/29/2005 20:05	
Total xylenes	ND	1.0	ug/L	04/29/2005 20:05	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	110.2	73-130	%	04/29/2005 20:05	
Toluene-d8	100.0	81-114	%	04/29/2005 20:05	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Water**

**QC Batch # 2005/04/29-1A.62**

LCS 2005/04/29-1A.62-017

Extracted: 04/29/2005

Analyzed: 04/29/2005 07:17

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	22.0		25	88.0			65-165	20		
Benzene	31.3		25	125.2			69-129	20		
Toluene	32.1		25	128.4			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	485		500	97.0			73-130			
Toluene-d8	525		500	105.0			81-114			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Water**

**QC Batch # 2005/04/29-2C.62**

LCS 2005/04/29-2C.62-039

Extracted: 04/29/2005

Analyzed: 04/29/2005 19:39

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	23.7		25	94.8			65-165	20		
Benzene	30.1		25	120.4			69-129	20		
Toluene	30.7		25	122.8			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	523		500	104.6			73-130			
Toluene-d8	511		500	102.2			81-114			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050415-MT1  
98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2005/04/29-1A.62**

MS/MSD

Lab ID: 2005-04-0609 - 003

MS: 2005/04/29-1A.62-011

Extracted: 04/29/2005

Analyzed: 04/29/2005 09:11

Dilution: 1.00

MSD: 2005/04/29-1A.62-037

Extracted: 04/29/2005

Analyzed: 04/29/2005 09:37

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	24.6	23.0	ND	25	98.4	92.0	6.7	65-165	20		
Benzene	31.6	30.4	ND	25	126.4	121.6	3.9	69-129	20		
Toluene	32.9	30.6	1.06	25	127.4	118.2	7.5	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	503	509		500	100.6	101.8		73-130			
Toluene-d8	529	520		500	105.8	104.0		81-114			



**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050415-MT1  
98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2005/04/29-2C.62**

MS/MSD

Lab ID: 2005-04-0528 - 003

MS: 2005/04/29-2C.62-056

Extracted: 04/29/2005

Analyzed: 04/29/2005 21:56

Dilution: 1.00

MSD: 2005/04/29-2C.62-022

Extracted: 04/29/2005

Analyzed: 04/29/2005 22:22

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	28.4	28.5	ND	25	113.6	114.0	0.4	65-165	20		
Benzene	33.6	32.8	ND	25	134.4	131.2	2.4	69-129	20	M4	M4
Toluene	34.8	32.5	ND	25	139.2	130.0	6.8	70-130	20	M4	
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	518	547		500	103.6	109.4		73-130			
Toluene-d8	525	527		500	105.0	105.4		81-114			

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

05/03/2005 12:54

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050415-MT1

98995757

Received: 04/15/2005 15:53

Site: 105 5th Street, Oakland

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**Legend and Notes**

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**Analysis Flag**

L2

Reporting limits were raised due to high level of analyte present in the sample.

**Result Flag**

M4

MS/MSD spike recoveries were above acceptance limits. See blank spike (LCS).

# SHELL Chain of Custody Record

117297

Lab Identification (if necessary):

Address:

City, State, Zip:

Shell Project Manager to be invoiced:

- SCIENCE & ENGINEERING
- TECHNICAL SERVICES
- CRMT HOUSTON

Denis Brown

## 2005-04-0536

INCIDENT NUMBER (S&E ONLY)

9 8 9 9 5 7 5 7

SAP or CRMT NUMBER (TS/CRMT)

DATE: 4/15/05

PAGE: 1 of 1

SAMPLING COMPANY: <b>Blaine Tech Services</b>		LAB CODE: <b>BTSS</b>	SITE ADDRESS (Street and City): <b>105 5th Street, Oakland</b>		GLOBAL ID#: <b>T0600102116</b>
ADDRESS: <b>1660 Rogers Avenue, San Jose, CA 95112</b>		COP DELIVERABLE TO (Responsible Party or Program): <b>Annj Kraml</b>		PHONE NO.: <b>(510) 420-3335</b>	EQUIPMENT PROJECT NO. <b>050415-MTI</b>
PROJECT CONTACT (Name, Title, or PDF Record ID): <b>Leon Gearhart</b>		SAMPLER NAME(S) (P#): <b>Michael Toll</b>		EMAIL: <b>ShellOaklandEDF@cambrisa-env.com</b>	
TELEPHONE: <b>408-573-0555</b>	FAX: <b>408-573-7771</b>	EMAIL: <b>lgearhart@blainetech.com</b>		DTS #	

TURNAROUND TIME (BUSINESS DAYS):  
 10 DAYS  5 DAYS  72 HOURS  48 HOURS  24 HOURS  LESS THAN 24 HOURS

LA - RWQCE REPORT FORMAT  UST AGENCY: \_\_\_\_\_

COMS MTEE CONFIRMATION: HIGHEST \_\_\_\_\_ HIGHEST per BORING \_\_\_\_\_ ALL \_\_\_\_\_

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

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTX	MTBE (8021B - 6ppb RL)	MTBE (8250B - 0.5ppb RL)	Oxyaromatics (9) By (8260B)	Ethanol (8260B)	Methanol	1,2-DCA (8260B)	EDS (8260B)	TPH - Diesel, Extractable (8015m)	REQUESTED ANALYSIS			FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
		DATE	TIME													TBA	DYPE	TAUPE	
	MW-1	4/15/05	0800	W	6	X	X	X							X				3
	MW-2		0850		6	X	X	X							X				
	MW-3		1015		6	X	X	Y					X	X	X	X	X		
	MW-4		0825		10	X	X	X							X				
	MW-5		0915		10	X	X	X							X				
	MW-6		0935		10	X	X	X							X				
	T-1		1000		10	X	X	X							X				

TEMPERATURE ON RECEIPT: \_\_\_\_\_

Requested by (Signature)	Received by (Signature)	Date	Time
<i>[Signature]</i>	<i>[Signature]</i>	4/15/05	1835
<i>[Signature]</i>	<i>[Signature]</i>	4/15/05	1835
Requested by (Signature)	Received by (Signature)	Date	Time

DOCUMENT # 117297-0536

WELL GAUGING DATA

Project # 050415-M01 Date 4/15/05 Client Shell

Site 105 5th Oakland, CA

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or <u>TOC</u>
MW-1	4					5.45	23.60	↓
MW-2	4					5.05	23.60	
MW-3	4					5.51	25.00	
MW-4	2					5.39	20.00	
MW-5	4					5.95	24.20	
MW-6	2					5.29	24.15	
T-1	12					5.22	11.50	

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>050415-MT1</u>	Site: <u>98995757</u>
Sampler: <u>MT</u>	Date: <u>4/15/05</u>
Well I.D.: <u>MW-1</u>	Well Diameter: 2 3 <input checked="" type="radio"/> 6 8 _____
Total Well Depth (TD): <u>23.60</u>	Depth to Water (DTW): <u>5.45</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="radio"/> PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>9.08</u>	

Purge Method: Bailer Disposable Bailer Positive Air Displacement <input checked="" type="checkbox"/> Electric Submersible	Waterra Peristaltic Extraction Pump Other _____	Sampling Method: <input checked="" type="checkbox"/> Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____
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$11.8$ (Gals.) X $3$ = $35.4$ Gals. I Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or <input checked="" type="radio"/> μS)	Turbidity (NTUs)	Gals. Removed	Observations
<u>0745</u>	<u>63.6</u>	<u>6.5</u>	<u>705</u>	<u>&gt;1000</u>	<u>11.8</u>	
<u>0748</u>	<u>64.1</u>	<u>7.0</u>	<u>395</u>	<u>100</u>	<u>23.6</u>	
<u>0752</u>	<u>64.3</u>	<u>7.0</u>	<u>400</u>	<u>90</u>	<u>35.4</u>	

Did well dewater? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>35.4</u>
Sampling Date: <u>4/15/05</u>	Sampling Time: <u>0800</u> Depth to Water: <u>9.08</u>
Sample I.D.: <u>MW-1</u>	Laboratory: <input checked="" type="checkbox"/> STL      Other _____
Analyzed for: <input checked="" type="checkbox"/> TPH-G <input checked="" type="checkbox"/> BTEX <input checked="" type="checkbox"/> MTBE <input checked="" type="checkbox"/> TPH-D	Other: <u>Refer to CAC</u>
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



## SHELL WELL MONITORING DATA SHEET

BTS #: <u>050415-MT</u>	Site: <u>98995757</u>
Sampler: <u>MT</u>	Date: <u>4/15/05</u>
Well I.D.: <u>MW-3</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth (TD): <u>25.00</u>	Depth to Water (DTW): <u>5.51</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>9.41</u>	

Purge Method: Bailer      Water      Sampling Method: Bailer  
 Disposable Bailer      Peristaltic      Disposable Bailer  
 Positive Air Displacement      Extraction Pump      Extraction Port  
 Electric Submersible      Other \_\_\_\_\_      Dedicated Tubing

<u>12.7</u> (Gals.) X <u>3</u> = <u>38.1</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 <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
<u>1005</u>	<u>105.4</u>	<u>7.0</u>	<u>790</u>	<u>11</u>	<u>12.7</u>	
<u>1007</u>	<u>105.1</u>	<u>6.9</u>	<u>770</u>	<u>7</u>	<u>25.4</u>	
<u>1010</u>	<u>105.0</u>	<u>6.9</u>	<u>755</u>	<u>5</u>	<u>38.1</u>	

Did well dewater? Yes  No  Gallons actually evacuated: 38.1

Sampling Date: 4/15/05 Sampling Time: 1015 Depth to Water: 9.21

Sample I.D.: MW-3 Laboratory: STL Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: Refer to CAC

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

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>050415-MT</u>	Site: <u>98995757</u>
Sampler: <u>MT</u>	Date: <u>4/15/05</u>
Well I.D.: <u>MW-4</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): <u>20.00</u>	Depth to Water (DTW): <u>5.89</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>8.71</u>	

Purge Method: Bailer      Watera      Sampling Method: Bailer  
 Disposable Bailer      Peristaltic      Disposable Bailer  
 Positive Air Displacement      Extraction Pump      Extraction Port  
 Electric Submersible      Other \_\_\_\_\_      Dedicated Tubing

<u>2.3</u> (Gals.) X	<u>3</u>	=	<u>6.9</u> Gals.	
I Case Volume	Specified Volumes		Calculated Volume	

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

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
<u>0817</u>	<u>10.6</u>	<u>7.0</u>	<u>1200</u>	<u>110</u>	<u>2.3</u>	
<u>0814</u>	<u>10.5</u>	<u>7.0</u>	<u>891</u>	<u>70</u>	<u>4.6</u>	
<u>0813</u>	<u>10.4</u>	<u>7.0</u>	<u>812</u>	<u>51</u>	<u>6.9</u>	

Did well dewater? Yes  No  Gallons actually evacuated: 6.9

Sampling Date: 4/15/05 Sampling Time: 0815 Depth to Water: 8.52

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other: Refer to CAC

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

**Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (800) 545-7558**





## SHELL WELL MONITORING DATA SHEET

BTS #: <u>050415-MT</u>	Site: <u>98995757</u>
Sampler: <u>MT</u>	Date: <u>4/15/05</u>
Well I.D.: <u>MW-5</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): <u>24.20</u>	Depth to Water (DTW): <u>5.95</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>9.60</u>	

Purge Method: Bailer      Water      Sampling Method: Bailer  
 Disposable Bailer      Peristaltic      Disposable Bailer  
 Positive Air Displacement      Extraction Pump      Extraction Port  
 Electric Submersible      Other \_\_\_\_\_      Dedicated Tubing

$\frac{11}{1} \text{ (Gals.)} \times \frac{3}{1} = 33 \text{ Gals.}$ I Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	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
<u>0900</u>	<u>66.0</u>	<u>6.3</u>	<u>652</u>	<u>10</u>	<u>11</u>	<u>Reddy</u>
<u>0904</u>	<u>67.2</u>	<u>6.6</u>	<u>696</u>	<u>7</u>	<u>22</u>	<u>"</u>
<u>0908</u>	<u>67.0</u>	<u>6.6</u>	<u>690</u>	<u>7</u>	<u>33</u>	<u>"</u>

Did well dewater? Yes  No  Gallons actually evacuated: 33

Sampling Date: 4/15/05 Sampling Time: 0915 Depth to Water: 9.57

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other: Refer to CAC

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

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>050415-MT</u>	Site: <u>98995757</u>
Sampler: <u>MT</u>	Date: <u>4/15/05</u>
Well I.D.: <u>WW-6</u>	Well Diameter: <input checked="" type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8
Total Well Depth (TD): <u>21.15</u>	Depth to Water (DTW): <u>5.29</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 type="radio"/> YSI <input type="radio"/> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>9.00</u>	

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

$3 \text{ (Gals.)} \times 3 = 9 \text{ Gals.}$	I Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier															
1"	0.04	4"	0.65															
2"	0.16	6"	1.47															
3"	0.37	Other	radius <sup>2</sup> * 0.163															

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
<u>0925</u>	<u>68.0</u>	<u>7.0</u>	<u>791</u>	<u>&gt;1000</u>	<u>3</u>	
<u>0928</u>	<u>68.4</u>	<u>6.9</u>	<u>882</u>	<u>740</u>	<u>6</u>	
<u>0931</u>	<u>68.4</u>	<u>6.9</u>	<u>905</u>	<u>92</u>	<u>9</u>	

Did well dewater?    Yes <input checked="" type="radio"/> No	Gallons actually evacuated: <u>9</u>
Sampling Date: <u>4/15/05</u>	Sampling Time: <u>0935</u> Depth to Water: <u>7.20</u>
Sample I.D.: <u>WW-6</u>	Laboratory: <input checked="" type="radio"/> STL    Other _____
Analyzed for: <input checked="" type="radio"/> TPH-G <input checked="" type="radio"/> BTEX <input checked="" type="radio"/> MTBE <input checked="" type="radio"/> TPH-D	Other: <u>Refer to CAC</u>
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

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>050415-MT</u>	Site: <u>98995757</u>
Sampler: <u>MT</u>	Date: <u>4/15/05</u>
Well I.D.: <u>T-1</u>	Well Diameter: 2 3 4 6 8 <u>12"</u>
Total Well Depth (TD): <u>11.50</u>	Depth to Water (DTW): <u>5.22</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>6.43</u>	

Purge Method:  Bailer       Waterra      Sampling Method:  Bailer  
 Disposable Bailer       Peristaltic       Disposable Bailer  
 Positive Air Displacement       Extraction Pump       Extraction Port  
 Electric Submersible      Other \_\_\_\_\_       Dedicated Tubing

$\frac{36.9 \text{ (Gals.)} \times 3}{1 \text{ Case Volume}} = 110.7 \text{ Gals.}$ <p style="text-align: center;">Specified Volumes      Calculated Volume</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
<u>0944</u>	<u>65.5</u>	<u>6.9</u>	<u>997</u>	<u>11</u>	<u>37</u>	
<u>0951</u>	<u>65.9</u>	<u>6.8</u>	<u>999</u>	<u>13</u>	<u>74</u>	
<u>0958</u>	<u>65.8</u>	<u>6.8</u>	<u>1000</u>	<u>10</u>	<u>111</u>	

Did well dewater? Yes  No  Gallons actually evacuated: 111

Sampling Date: 4/15/05      Sampling Time: 1000      Depth to Water: 6.00

Sample I.D.: T-1      Laboratory: STL Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: Refer to CAC

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