



July 15, 2004

Alameda County

OCT 21 2004

Environmental Health

Roseanna Garcia-La Grille  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**Subject: Shell-branded Service Station**  
105 Fifth Street  
Oakland, California

Dear Ms. Garcia-La Grille:

Attached for your review and comment is a copy of the *Third Quarter 2004 Monitoring Report* for the above referenced site. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

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

Sincerely,

**Shell Oil Products US**

A handwritten signature in cursive script that reads "Karen Petryna".

Karen Petryna  
Sr. Environmental Engineer

October 18, 2004

Roseanna Garcia-La Grille  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**Re: Third Quarter 2004 Monitoring Report**  
Shell-branded Service Station  
105 Fifth Street  
Oakland, California  
Incident #98995757  
Cambria Project #246-0472-002



Dear Ms. Garcia-La Grille:

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.


## **THIRD QUARTER 2004 ACTIVITIES**

**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 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.

**Cambria  
Environmental  
Technology, Inc.**

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

**Additional Oxygenate Analysis:** In addition to the regular quarterly analysis for TPHg, benzene, toluene, ethylbenzene, xylenes, and MTBE, groundwater samples from all monitoring wells except well MW-1 were analyzed for four additional oxygenates; di-isopropyl ether, ethyl tert-butyl ether, tert-amyl methyl ether, and tert-butyl alcohol. Samples from well MW-3 were also analyzed for lead scavengers 1,2-dichloroethane and 1,2-dibromomethane. Results of this analysis are presented in the Well Concentrations table included in Blaine's report.



**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 anticipation of installing a fixed GWE system, and then resumed in May 2003. In June 2003, well MW-3 was added to the extraction program, 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 September 16, 2004, a total of 160,071 gallons of water has been extracted, resulting in removal of 8.3 lbs. of TPHg and 71.8 lbs. of MTBE.

**GWE System Installation:** We have received all necessary permits for construction of a fixed GWE system. Consistent with the sampling results from the previous three quarters, groundwater monitoring results presented in this report display trends which show a continued substantial decrease in MTBE concentrations. The concentration in tank backfill well T-1 has decreased from 29,000 parts per billion (ppb) during the fourth quarter of 2002 to 28 ppb this quarter. The concentration in well MW-3 has decreased from 44,000 ppb during the fourth quarter of 2002 to 18,000 ppb this quarter.

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

#### **ANTICIPATED FOURTH QUARTER 2004 ACTIVITIES**

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

*GWE*: Semi-monthly extraction events from well MW-3 will continue. We will continue to evaluate 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 Diane Lundquist at (510) 420-3334 if you have any questions or comments.



Sincerely,  
**Cambria Environmental Technology, Inc**

A handwritten signature in black ink, appearing to read 'DL'.

Diane Lundquist, P.E.  
Principal Engineer



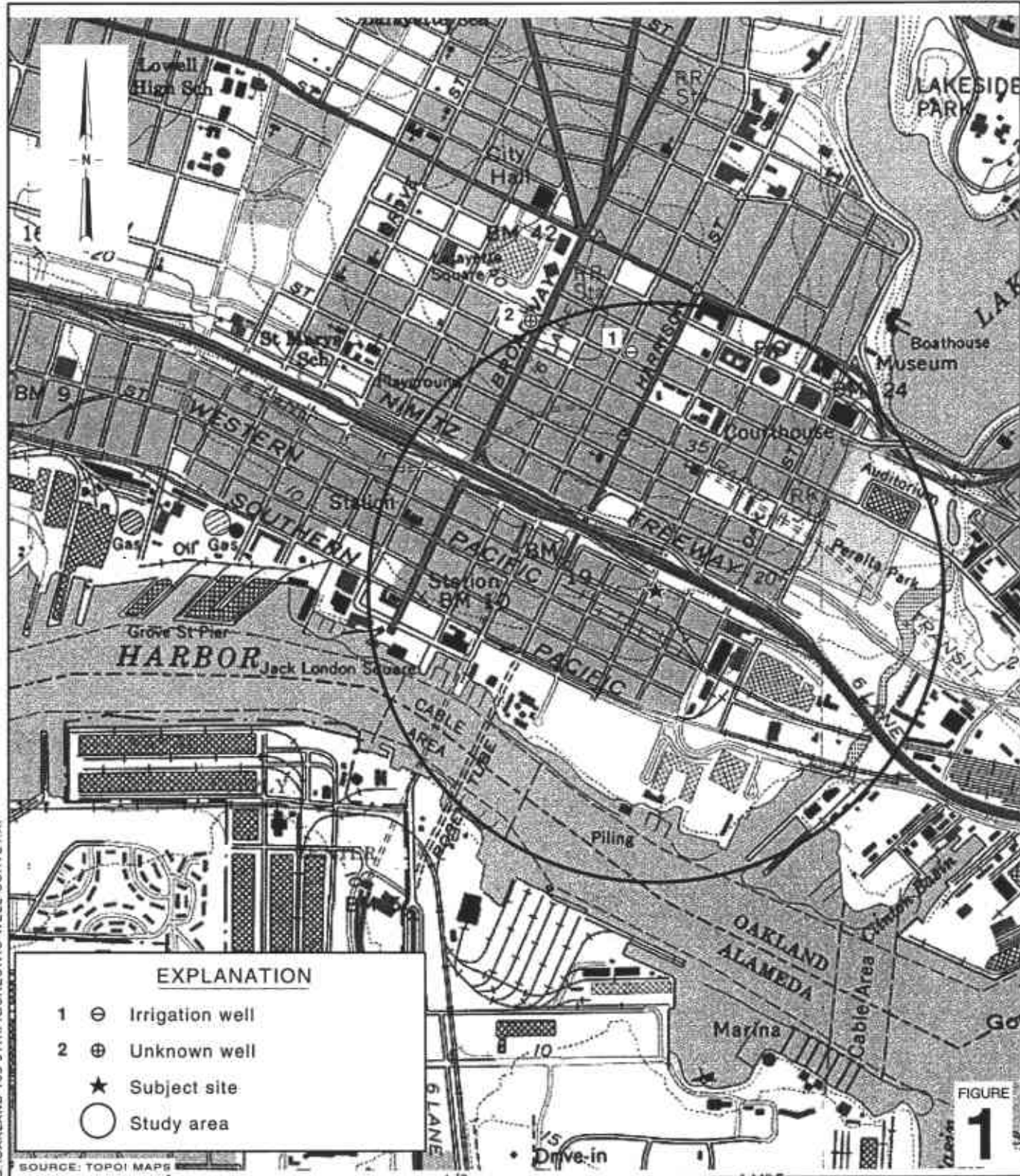
Figures: 1 - Vicinity/Well Survey Map  
2 - Groundwater Elevation Contour Map

Table: 1 - Groundwater Extraction – Mass Removal Data

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, 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

G:\Oakland 105 Fifth\Qm\3q04\3q04qm.doc



G:\OAKLAND 105 5TH\FIGURES\VIC-WELL-SURVEY.A1

SOURCE: TOPOI MAPS

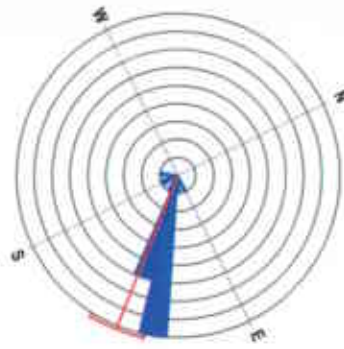
**Shell-branded Service Station**  
 105 Fifth Street  
 Oakland, California  
 Incident# 98995757



C A M B R I A

**Vicinity / Well Survey Map**

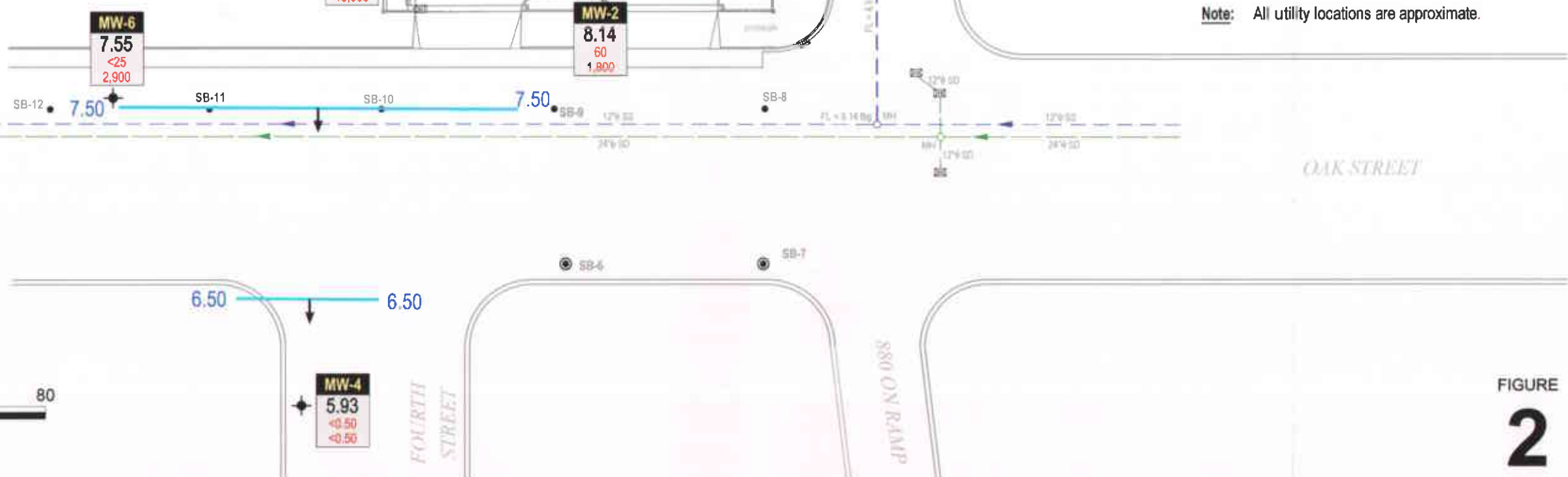
(1/2 Mile Radius)



Groundwater Flow Direction  
(07/23/99 to 07/02/04)

Oakland Inner Harbor  
(1,800 ft.)

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



**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 | 8.99 | <0.50   | <0.50  |
| MW-2 | 8.14 | 60      | 1,800  |
| MW-3 | 8.11 | <100    | 18,000 |
| MW-4 | 5.93 | <0.50   | <0.50  |
| MW-5 | 8.45 | 34      | 550    |
| MW-6 | 7.55 | <25     | 2,900  |
- Storm drain line (SD)
  - - - Sanitary sewer line (SS)
  - Flow direction
  - MH ○ Manhole
  - SDI Storm drain inlet
  - ftg Feet below grade

Note: All utility locations are approximate.

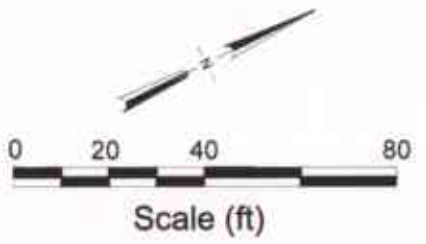


FIGURE  
**2**

Groundwater Elevation  
Contour Map



C A M B R I A

Shell-branded Service Station

105 Fifth Street  
Oakland, California  
Incident #9899577

July 2, 2004

**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	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)
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
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

**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	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)
07/09/03	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
09/02/04	MW-3	780	19,972	07/02/04	<10,000	0.03254	0.92926	<100	0.00033	0.01975	18,000	0.11715	8.73124
09/16/04	MW-3	635	20,607	07/02/04	<10,000	0.02649	0.95142	<100	0.00026	0.01997	18,000	0.09538	8.81099



**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	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)
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
01/09/01	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
01/23/02	T-1	4,250	17,684	01/07/02	<20,000	0.35464	2.50823	<b>310</b>	0.01099	0.03301	<b>92,000</b>	3.26264	19.63367
02/06/02	T-1	4,000	21,684	01/07/02	<20,000	0.33377	2.84200	<b>310</b>	0.01035	0.04336	<b>92,000</b>	3.07072	22.70439
02/20/02	T-1	3,000	24,684	01/07/02	<20,000	0.25033	3.09233	<b>310</b>	0.00776	0.05112	<b>92,000</b>	2.30304	25.00743
03/06/02	T-1	4,500	29,184	01/07/02	<20,000	0.37550	3.46783	<b>310</b>	0.01164	0.06276	<b>92,000</b>	3.45456	28.46200
03/20/02	T-1	5,000	34,184	01/07/02	<20,000	0.41722	3.88505	<b>310</b>	0.01293	0.07569	<b>92,000</b>	3.83840	32.30040
04/03/02	T-1	5,200	39,384	01/07/02	<20,000	0.43391	4.31896	<b>310</b>	0.01345	0.08914	<b>92,000</b>	3.99194	36.29234
04/17/02	T-1	4,800	44,184	04/12/02	<5,000	0.10013	4.41909	<b>230</b>	0.00921	0.09835	<b>57,000</b>	2.28302	38.57536
06/03/02	T-1	3,539	47,723	04/12/02	<5,000	0.07383	4.49291	<b>230</b>	0.00679	0.10515	<b>57,000</b>	1.68325	40.25861
06/17/02	T-1	5,000	52,723	04/12/02	<5,000	0.10430	4.59722	<b>230</b>	0.00960	0.11474	<b>57,000</b>	2.37814	42.63675
07/01/02	T-1	2,873	55,596	04/12/02	<5,000	0.05993	4.65715	<b>230</b>	0.00551	0.12026	<b>57,000</b>	1.36648	44.00323
07/15/02	T-1	4,000	59,596	07/10/02	<20,000	0.33377	4.99093	<b>260</b>	0.00868	0.12893	<b>69,000</b>	2.30304	46.30627
08/12/02	T-1	3,900	63,496	07/10/02	<20,000	0.32543	5.31636	<b>260</b>	0.00846	0.13739	<b>69,000</b>	2.24547	48.55174
08/26/02	T-1	2,367	65,863	07/10/02	<20,000	0.19751	5.51387	<b>260</b>	0.00514	0.14253	<b>69,000</b>	1.36283	49.91456
09/09/02	T-1	1,959	67,822	07/10/02	<20,000	0.16347	5.67733	<b>260</b>	0.00425	0.14678	<b>69,000</b>	1.12791	51.04248
09/23/02	T-1	5,000	72,822	07/10/02	<20,000	0.41722	6.09455	<b>260</b>	0.01085	0.15763	<b>69,000</b>	2.87880	53.92128
10/09/02	T-1	4,500	77,322	07/10/02	<20,000	0.37550	6.47005	<b>260</b>	0.00976	0.16739	<b>69,000</b>	2.59092	56.51220
10/22/02	T-1	4,500	81,822	10/15/02	<5,000	0.09387	6.56392	<b>150</b>	0.00563	0.17302	<b>29,000</b>	1.08894	57.60114
11/05/02	T-1	2,384	84,206	10/15/02	<5,000	0.04973	6.61365	<b>150</b>	0.00298	0.17601	<b>29,000</b>	0.57690	58.17804
11/19/02	T-1	4,375	88,581	10/15/02	<5,000	0.09127	6.70492	<b>150</b>	0.00548	0.18148	<b>29,000</b>	1.05869	59.23673
12/09/02	T-1	2,341	90,922	10/15/02	<5,000	0.04884	6.75376	<b>150</b>	0.00293	0.18441	<b>29,000</b>	0.56649	59.80322

**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	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)	
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	
06/24/03	T-1	1,428	122,471	04/30/03	360	0.00429	7.07790	45	0.00054	0.19736	89	0.00106	62.09261	
07/09/03	T-1	2,600	125,071	04/30/03	360	0.00781	7.08571	45	0.00098	0.19833	89	0.00193	62.09454	
07/29/03	T-1	2,492	127,563	07/22/03	1,200	0.02495	7.11066	170	0.00354	0.20187	150	0.00312	62.09766	
08/09/03	T-1	2,082	129,645	07/22/03	1,200	0.02085	7.13151	170	0.00295	0.20482	150	0.00261	62.10027	
08/21/03	T-1	2,500	132,145	07/22/03	1,200	0.02503	7.15654	170	0.00355	0.20837	150	0.00313	62.10340	
09/04/03	T-1	687	132,832	07/22/03	1,200	0.00688	7.16342	170	0.00097	0.20934	150	0.00086	62.10426	
09/18/03	T-1	1,000	133,832	07/22/03	1,200	0.01001	7.17343	170	0.00142	0.21076	150	0.00125	62.10551	
<b>Total Gallons Extracted:</b>			<b>160,071</b>	<b>Total Pounds Removed:</b>			<b>8.27642</b>	<b>Total Pounds Removed:</b>			<b>0.24190</b>	<b>Total Pounds Removed:</b>		<b>71.79818</b>
				<b>Total Gallons Removed:</b>			<b>1.35679</b>				<b>0.03314</b>			<b>11.58035</b>

**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	TPPH			Benzene			MTBE		
					TPPH Concentration (ppb)	TPPH Removed (pounds)	TPPH Removed To Date (pounds)	Benzene Concentration (ppb)	Benzene Removed (pounds)	Benzene Removed To Date (pounds)	MTBE Concentration (ppb)	MTBE Removed (pounds)	MTBE Removed To Date (pounds)

**Abbreviations & Notes:**

TPPH = Total purgeable hydrocarbons as gasoline

MtBE = Methyl tert-butyl ether

ppb = Parts per billion

gal = Gallon

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)

TPPH, benzene analyzed by EPA Method 8015/8020

TPPH, benzene MTBE analyzed by EPA Method 8260 are 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. 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**

**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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July 27, 2004

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

Third Quarter 2004 Groundwater Monitoring at  
Shell-branded Service Station  
105 5th Street  
Oakland, CA

Monitoring performed on July 2, 2004

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Groundwater Monitoring Report 040702-DW-4

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/ks

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)	Ethanol (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-1	07/20/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12.22	17.56	-5.34	NA
MW-1	07/23/1999	<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	11/01/1999	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	01/05/2000	<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	04/07/2000	<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	07/26/2000	<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	01/30/2001	<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	04/17/2001	<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	07/09/2001	<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	01/07/2002	<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	04/12/2002	<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	07/10/2002	<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	01/29/2003	<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	04/30/2003	<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	07/22/2003	<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	10/09/2003	<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	01/05/2004	<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	04/12/2004	<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	07/02/2004	<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-2	07/20/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.87	18.24	-7.37	NA
MW-2	07/23/1999	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	11/01/1999	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	01/05/2000	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	04/07/2000	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	07/26/2000	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	01/30/2001	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
MW-2	04/17/2001	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	07/09/2001	<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	<500	NA	NA	10.87	5.72	5.15	2.0/3.2







**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)	Ethanol (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-6	04/30/2003	<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	07/22/2003	<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	10/09/2003	<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	01/05/2004	<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	04/12/2004	<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	07/02/2004	<2,500	<50	<25	<25	<25	<50	NA	2,900	<100	<100	<100	<250	NA	NA	NA	12.91	5.36	7.55	NA

T-1	01/07/2002	<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	04/12/2002	<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	07/10/2002	<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	01/02/2003	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	01/29/2003	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	04/30/2003	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	07/22/2003	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	10/09/2003	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	01/05/2004	450	790 c	24	2.1	<1.0	3.2	NA	29	NA	NA	NA	NA	NA	NA	NA	NA	5.16	NA	NA
T-1	04/12/2004	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	07/02/2004	1,400	2,800 c	160	300	6.7	180	NA	28	NA	NA	NA	NA	NA	NA	NA	NA	5.62	NA	NA

**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)	Ethanol (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	TOC (MSL)	Depth to Water (ft)	GW Elevation (MSL)	DO Reading (ppm)
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Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to 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 8260

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

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

TBA = Tertiary butyl alcohol, analyzed by EPA Method 8260

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

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

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

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.

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.**

July 19, 2004

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Attn.: Leon Gearhart  
Project#: 040702-DW4  
Project: 98995757  
Site: 105 5th Street, Oakland

Dear Mr. Gearhart,

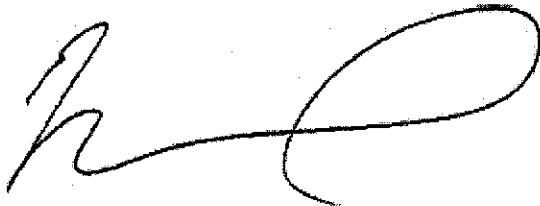
Attached is our report for your samples received on 07/02/2004 16:46  
This report has been reviewed and approved for release. Reproduction of this report  
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after  
08/16/2004 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,  
please call me at (925) 484-1919.

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

Sincerely,



Vincent Vancil  
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: 040702-DW4  
98995757

Received: 07/02/2004 16:46

Site: 105 5th Street, Oakland

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
MW-1	07/02/2004 13:26	Water	1
MW-2	07/02/2004 15:18	Water	2
MW-3	07/02/2004 15:45	Water	3
MW-4	07/02/2004 13:48	Water	4
MW-5	07/02/2004 14:56	Water	5
MW-6	07/02/2004 15:40	Water	6
T-1	07/02/2004 14:30	Water	7

**Diesel (C9-C24)**

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Project: 040702-DW4  
98995757

Received: 07/02/2004 16:46

Site: 105 5th Street, Oakland

Prep(s): 3511	Test(s): 8015M
Sample ID: MW-1	Lab ID: 2004-07-0102 - 1
Sampled: 07/02/2004 13:26	Extracted: 7/6/2004 12:45
Matrix: Water	QC Batch#: 2004/07/06-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	07/07/2004 17:02	
<b>Surrogate(s)</b> o-Terphenyl	124.1	78-177	%	1.00	07/07/2004 17:02	

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Site: 105 5th Street, Oakland

Prep(s): 3511	Test(s): 8015M
Sample ID: MW-2	Lab ID: 2004-07-0102 - 2
Sampled: 07/02/2004 15:18	Extracted: 7/6/2004 12:45
Matrix: Water	QC Batch#: 2004/07/06-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	850	50	ug/L	1.00	07/07/2004 17:29	edr
<i>Surrogate(s)</i> o-Terphenyl	123.8	78-177	%	1.00	07/07/2004 17:29	

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Site: 105 5th Street, Oakland

Prep(s): 3511	Test(s): 8015M
Sample ID: MW-3	Lab ID: 2004-07-0102 - 3
Sampled: 07/02/2004 15:45	Extracted: 7/6/2004 12:45
Matrix: Water	QC Batch#: 2004/07/06-03:10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	280	50	ug/L	1.00	07/07/2004 17:57	ndp
<b>Surrogate(s)</b>						
o-Terphenyl	137.5	78-177	%	1.00	07/07/2004 17:57	



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Site: 105 5th Street, Oakland

Prep(s): 3511	Test(s): 8015M
Sample ID: MW-4	Lab ID: 2004-07-0102 - 4
Sampled: 07/02/2004 13:48	Extracted: 7/6/2004 12:45
Matrix: Water	QC Batch#: 2004/07/06-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	07/07/2004 18:24	
<i>Surrogate(s)</i> o-Terphenyl	125.2	78-177	%	1.00	07/07/2004 18:24	

**Diesel (C9-C24)**

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Site: 105 5th Street, Oakland

Prep(s): 3511	Test(s): 8015M
Sample ID: MW-5	Lab ID: 2004-07-0102 - 5
Sampled: 07/02/2004 14:56	Extracted: 7/6/2004 12:45
Matrix: Water	QC Batch#: 2004/07/06-03-10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	280	50	ug/L	1.00	07/07/2004 18:51	edr
<b>Surrogate(s)</b> o-Terphenyl	129.6	78-177	%	1.00	07/07/2004 18:51	

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Received: 07/02/2004 16:46

Site: 105 5th Street, Oakland

Prep(s): 3511	Test(s): 8015M
Sample ID: MW-6	Lab ID: 2004-07-0102 - 6
Sampled: 07/02/2004 15:40	Extracted: 7/7/2004 12:19
Matrix: Water	QC Batch#: 2004/07/07-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	07/09/2004 11:39	
<b>Surrogate(s)</b>						
o-Terphenyl	145.9	78-177	%	1.00	07/09/2004 11:39	

**Diesel (C9-C24)**

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Site: 105 5th Street, Oakland

Prep(s): 3511	Test(s): 8015M
Sample ID: T-1	Lab ID: 2004-07-0102 - 7
Sampled: 07/02/2004 14:30	Extracted: 7/7/2004 12:19
Matrix: Water	QC Batch#: 2004/07/07-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	2800	50	ug/L	1.00	07/09/2004 12:08	ndp
<b>Surrogate(s)</b> o-Terphenyl	149.0	78-177	%	1.00	07/09/2004 12:08	

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Project: 040702-DW4  
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Site: 105 5th Street, Oakland

Batch QC Report					
Prep(s): 3511				Test(s): 8015M	
Method Blank		Water		QC Batch # 2004/07/06-03.10	
MB: 2004/07/06-03.10-001				Date Extracted: 07/06/2004 12:45	

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	07/07/2004 10:42	
<b>Surrogates(s)</b> o-Terphenyl	140.6	78-177	%	07/07/2004 10:42	

**Diesel (C9-C24)**

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Received: 07/02/2004 16:46

Site: 105 5th Street, Oakland

Batch QC Report					
Prep(s): 3511				Test(s): 8015M	
Method Blank		Water		QC Batch # 2004/07/07-04.10	
MB: 2004/07/07-04.10-001				Date Extracted: 07/07/2004 12:19	

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	07/08/2004 17:54	
<b>Surrogates(s)</b> o-Terphenyl	139.8	78-177	%	07/08/2004 17:54	

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Site: 105 5th Street, Oakland

Batch QC Report										
Prep(s): 3511						Test(s): 8015M				
<b>Laboratory Control Spike</b>				<b>Water</b>			<b>QC Batch # 2004/07/06-03.10</b>			
LCS	2004/07/06-03.10-002			Extracted: 07/06/2004			Analyzed: 07/07/2004 11:09			
LCSD	2004/07/06-03.10-003			Extracted: 07/06/2004			Analyzed: 07/07/2004 11:36			
Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	576	590	680	84.7	78.4	7.7	60-150	25		
<b>Surrogates(s)</b> o-Terphenyl	1.64	1.67	1.25	130.9	133.6		78-177	0		

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Site: 105 5th Street, Oakland

Batch QC Report										
Prep(s): 3511						Test(s): 8015M				
Laboratory Control Spike				Water			QC Batch # 2004/07/07-04.10			
LCS	2004/07/07-04.10-002			Extracted: 07/07/2004			Analyzed: 07/08/2004 18:21			
LCSD	2004/07/07-04.10-003			Extracted: 07/07/2004			Analyzed: 07/08/2004 18:48			
Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	603	605	680	88.7	89.0	0.3	60-150	25		
<b>Surrogates(s)</b> o-Terphenyl	1.86	1.90	1.25	148.7	152.2		78-177	0		

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

07/16/2004 10:56



**Diesel (C9-C24)**

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Project: 040702-DW4  
98995757

Received: 07/02/2004 16:46

Site: 105 5th Street, Oakland

**Legend and Notes**

**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.

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

Project: 040702-DW4

98995757

Received: 07/02/2004 16:46

Site: 105 5th Street, Oakland

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
MW-1	07/02/2004 13:26	Water	1
MW-2	07/02/2004 15:18	Water	2
MW-3	07/02/2004 15:45	Water	3
MW-4	07/02/2004 13:48	Water	4
MW-5	07/02/2004 14:56	Water	5
MW-6	07/02/2004 15:40	Water	6
T-1	07/02/2004 14:30	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

07/21/2004 16:08

Page 1 of 13

**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: 040702-DW4

98995757

Received: 07/02/2004 16:46

Site: 105 5th Street, Oakland

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-1	Lab ID: 2004-07-0102 - 1
Sampled: 07/02/2004 13:26	Extracted: 7/12/2004 16:29
Matrix: Water	QC Batch#: 2004/07/12-1B-68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/12/2004 16:29	
Benzene	ND	0.50	ug/L	1.00	07/12/2004 16:29	
Toluene	ND	0.50	ug/L	1.00	07/12/2004 16:29	
Ethylbenzene	ND	0.50	ug/L	1.00	07/12/2004 16:29	
Total xylenes	ND	1.0	ug/L	1.00	07/12/2004 16:29	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	07/12/2004 16:29	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	84.4	76-130	%	1.00	07/12/2004 16:29	
Toluene-d8	93.6	78-115	%	1.00	07/12/2004 16:29	

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

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Project: 040702-DW4  
98995757

Received: 07/02/2004 16:46

Site: 105 5th Street, Oakland

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-2	Lab ID: 2004-07-0102 - 2
Sampled: 07/02/2004 15:18	Extracted: 7/12/2004 16:48
Matrix: Water	QC Batch#: 2004/07/12-1B.68
Analysis Flag: o ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	2000	500	ug/L	10.00	07/12/2004 16:48	
Benzene	60	5.0	ug/L	10.00	07/12/2004 16:48	
Toluene	ND	5.0	ug/L	10.00	07/12/2004 16:48	
Ethylbenzene	110	5.0	ug/L	10.00	07/12/2004 16:48	
Total xylenes	ND	10	ug/L	10.00	07/12/2004 16:48	
tert-Butyl alcohol (TBA)	6200	50	ug/L	10.00	07/12/2004 16:48	
Methyl tert-butyl ether (MTBE)	1800	5.0	ug/L	10.00	07/12/2004 16:48	
Di-isopropyl Ether (DIPE)	ND	20	ug/L	10.00	07/12/2004 16:48	
Ethyl tert-butyl ether (ETBE)	ND	20	ug/L	10.00	07/12/2004 16:48	
tert-Amyl methyl ether (TAME)	ND	20	ug/L	10.00	07/12/2004 16:48	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	86.9	76-130	%	10.00	07/12/2004 16:48	
Toluene-d8	89.9	78-115	%	10.00	07/12/2004 16:48	

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

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Site: 105 5th Street, Oakland

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-3	Lab ID: 2004-07-0102 -3
Sampled: 07/02/2004 15:45	Extracted: 7/15/2004 01:08
Matrix: Water	QC Batch#: 2004/07/14.2A.64
Analysis Flag: o ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	10000	ug/L	200.00	07/15/2004 01:08	
Benzene	ND	100	ug/L	200.00	07/15/2004 01:08	
Toluene	ND	100	ug/L	200.00	07/15/2004 01:08	
Ethylbenzene	ND	100	ug/L	200.00	07/15/2004 01:08	
Total xylenes	ND	200	ug/L	200.00	07/15/2004 01:08	
tert-Butyl alcohol (TBA)	4500	1000	ug/L	200.00	07/15/2004 01:08	
Methyl tert-butyl ether (MTBE)	18000	100	ug/L	200.00	07/15/2004 01:08	
Di-isopropyl Ether (DIPE)	ND	400	ug/L	200.00	07/15/2004 01:08	
tert-Amyl methyl ether (TAME)	ND	400	ug/L	200.00	07/15/2004 01:08	
1,2-DCA	120	100	ug/L	200.00	07/15/2004 01:08	
EDB	ND	100	ug/L	200.00	07/15/2004 01:08	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	129.3	76-130	%	200.00	07/15/2004 01:08	
Toluene-d8	102.2	78-115	%	200.00	07/15/2004 01:08	

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

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Prep(s):	5030B	Test(s):	8260B
Sample ID:	MW-4	Lab ID:	2004-07-0102--4
Sampled:	07/02/2004 13:48	Extracted:	7/12/2004 17:26
Matrix:	Water	QC Batch#:	2004/07/12-1B.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/12/2004 17:26	
Benzene	ND	0.50	ug/L	1.00	07/12/2004 17:26	
Toluene	ND	0.50	ug/L	1.00	07/12/2004 17:26	
Ethylbenzene	ND	0.50	ug/L	1.00	07/12/2004 17:26	
Total xylenes	ND	1.0	ug/L	1.00	07/12/2004 17:26	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	07/12/2004 17:26	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	07/12/2004 17:26	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	07/12/2004 17:26	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	07/12/2004 17:26	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	07/12/2004 17:26	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	94.0	76-130	%	1.00	07/12/2004 17:26	
Toluene-d8	92.4	78-115	%	1.00	07/12/2004 17:26	

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

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Site: 105 5th Street, Oakland

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-5	Lab ID: 2004-07-0102 - 5
Sampled: 07/02/2004 14:56	Extracted: 7/12/2004 17:45
Matrix: Water	QC Batch#: 2004/07/12-1B.68
Analysis Flag: 0 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	660	250	ug/L	5.00	07/12/2004 17:45	
Benzene	34	2.5	ug/L	5.00	07/12/2004 17:45	
Toluene	3.6	2.5	ug/L	5.00	07/12/2004 17:45	
Ethylbenzene	42	2.5	ug/L	5.00	07/12/2004 17:45	
Total xylenes	17	5.0	ug/L	5.00	07/12/2004 17:45	
tert-Butyl alcohol (TBA)	400	25	ug/L	5.00	07/12/2004 17:45	
Methyl tert-butyl ether (MTBE)	550	2.5	ug/L	5.00	07/12/2004 17:45	
Di-isopropyl Ether (DIPE)	ND	10	ug/L	5.00	07/12/2004 17:45	
Ethyl tert-butyl ether (ETBE)	ND	10	ug/L	5.00	07/12/2004 17:45	
tert-Amyl methyl ether (TAME)	ND	10	ug/L	5.00	07/12/2004 17:45	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	89.9	76-130	%	5.00	07/12/2004 17:45	
Toluene-d8	93.5	78-115	%	5.00	07/12/2004 17:45	

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98995757

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Site: 105 5th Street, Oakland

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-6	Lab ID: 2004-07-0102 - 6
Sampled: 07/02/2004 15:40	Extracted: 7/12/2004 18:04
Matrix: Water	QC Batch#: 2004/07/12-1B.68
Analysis Flag: o ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	2500	ug/L	50.00	07/12/2004 18:04	
Benzene	ND	25	ug/L	50.00	07/12/2004 18:04	
Toluene	ND	25	ug/L	50.00	07/12/2004 18:04	
Ethylbenzene	ND	25	ug/L	50.00	07/12/2004 18:04	
Total xylenes	ND	50	ug/L	50.00	07/12/2004 18:04	
tert-Butyl alcohol (TBA)	ND	250	ug/L	50.00	07/12/2004 18:04	
Methyl tert-butyl ether (MTBE)	2900	25	ug/L	50.00	07/12/2004 18:04	
Di-isopropyl Ether (DIPE)	ND	100	ug/L	50.00	07/12/2004 18:04	
Ethyl tert-butyl ether (ETBE)	ND	100	ug/L	50.00	07/12/2004 18:04	
tert-Amyl methyl ether (TAME)	ND	100	ug/L	50.00	07/12/2004 18:04	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	88.5	76-130	%	50.00	07/12/2004 18:04	
Toluene-d8	91.3	78-115	%	50.00	07/12/2004 18:04	

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07/21/2004 16:08



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

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98995757

Received: 07/02/2004 16:46

Site: 105 5th Street, Oakland

Prep(s): 5030B	Test(s): 8260B
Sample ID: T-1	Lab ID: 2004-07-0102 - 7
Sampled: 07/02/2004 14:30	Extracted: 7/12/2004 18:23
Matrix: Water	QC Batch#: 2004/07/12-1B.68
Analysis Flag: o ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	1400	100	ug/L	2.00	07/12/2004 18:23	
Benzene	160	1.0	ug/L	2.00	07/12/2004 18:23	
Toluene	300	1.0	ug/L	2.00	07/12/2004 18:23	
Ethylbenzene	6.7	1.0	ug/L	2.00	07/12/2004 18:23	
Total xylenes	180	2.0	ug/L	2.00	07/12/2004 18:23	
Methyl tert-butyl ether (MTBE)	28	1.0	ug/L	2.00	07/12/2004 18:23	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	84.7	76-130	%	2.00	07/12/2004 18:23	
Toluene-d8	93.3	78-115	%	2.00	07/12/2004 18:23	

**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: 040702-DW4  
98995757

Received: 07/02/2004 16:46

Site: 105 5th Street, Oakland

Batch QC Report			
Prep(s): 5030B			Test(s): 8260B
Method Blank	Water		QC Batch # 2004/07/12-1B.68
MB: 2004/07/12-1B.68-054			Date Extracted: 07/12/2004 11:54

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/12/2004 11:54	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	07/12/2004 11:54	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/12/2004 11:54	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	07/12/2004 11:54	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	07/12/2004 11:54	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	07/12/2004 11:54	
1,2-DCA	ND	0.5	ug/L	07/12/2004 11:54	
EDB	ND	0.5	ug/L	07/12/2004 11:54	
Benzene	ND	0.5	ug/L	07/12/2004 11:54	
Toluene	ND	0.5	ug/L	07/12/2004 11:54	
Ethylbenzene	ND	0.5	ug/L	07/12/2004 11:54	
Total xylenes	ND	1.0	ug/L	07/12/2004 11:54	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	83.2	76-130	%	07/12/2004 11:54	
Toluene-d8	94.0	78-115	%	07/12/2004 11:54	

**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: 040702-DW4  
98995757

Received: 07/02/2004 16:46

Site: 105 5th Street, Oakland

Batch QC Report		
Prep(s): 5030B		Test(s): 8260B
Method Blank	Water	QC Batch # 2004/07/14-2A.64
MB: 2004/07/14-2A.64-001		Date Extracted: 07/14/2004 19:01

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/14/2004 19:01	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	07/14/2004 19:01	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/14/2004 19:01	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	07/14/2004 19:01	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	07/14/2004 19:01	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	07/14/2004 19:01	
1,2-DCA	ND	0.5	ug/L	07/14/2004 19:01	
EDB	ND	0.5	ug/L	07/14/2004 19:01	
Benzene	ND	0.5	ug/L	07/14/2004 19:01	
Toluene	ND	0.5	ug/L	07/14/2004 19:01	
Ethylbenzene	ND	0.5	ug/L	07/14/2004 19:01	
Total xylenes	ND	1.0	ug/L	07/14/2004 19:01	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	105.4	76-130	%	07/14/2004 19:01	
Toluene-d8	101.4	78-115	%	07/14/2004 19:01	

**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: 040702-DW4  
98995757

Received: 07/02/2004 16:46

Site: 105 5th Street, Oakland

Batch QC Report			
Prep(s): 5030B		Test(s): 8260B	
Laboratory Control Spike		Water	QC Batch # 2004/07/12-1B.68
LCS	2004/07/12-1B.68-016	Extracted: 07/12/2004	Analyzed: 07/12/2004 11:16
LCSD	2004/07/12-1B.68-035	Extracted: 07/12/2004	Analyzed: 07/12/2004 11:35

Compound	Conc. ug/L		Exp. Conc.	Recovery %		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	17.8	20.4	25	71.2	81.6	13.6	65-165	20		
Benzene	18.7	22.5	25	74.8	90.0	18.4	69-129	20		
Toluene	20.7	24.8	25	82.8	99.2	18.0	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	401	389	500	80.2	77.8		76-130			
Toluene-d8	476	476	500	95.2	95.2		78-115			

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

07/21/2004 16:08

**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: 040702-DW4  
98995757

Received: 07/02/2004 16:46

Site: 105 5th Street, Oakland

Batch QC Report			
Prep(s): 5030B		Test(s): 8260B	
<b>Laboratory Control Spike</b>		<b>Water</b>	<b>QC Batch # 2004/07/14-2A.64</b>
LCS	2004/07/14-2A.64-016	Extracted: 07/14/2004	Analyzed: 07/14/2004 18:16
LCSD	2004/07/14-2A.64-038	Extracted: 07/14/2004	Analyzed: 07/14/2004 18:38

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	25.2	23.0	25	100.8	92.0	9.1	65-165	20		
Benzene	26.4	24.5	25	105.6	98.0	7.5	69-129	20		
Toluene	27.0	24.4	25	108.0	97.6	10.1	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	484	488	500	96.8	97.6		76-130			
Toluene-d8	500	509	500	100.0	101.8		78-115			

**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: 040702-DW4

98995757

Received: 07/02/2004 16:46

Site: 105 5th Street, Oakland

**Legend and Notes**

**Analysis Flag**

0

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

# SHELL Chain of Custody Record

2004-07-01

Lab Identification (if necessary):

Address:

City, State, Zip:

Shell Project Manager to be invoiced:

SCIENCE & ENGINEERING  
 TECHNICAL SERVICES  
 GAIT-HOUSTON

Karen Patryna

2004-07-0102

INCIDENT NUMBER (S&E ONLY)

9 8 9 9 5 7 5 7

SAP OR CRMT NUMBER (TS/CRMT)

DATE: 7-2-04

PAGE: 1 of 1

SERVICE COMPANY: <b>Blaine Tech Services</b>	LAGO CODE: <b>BTSS</b>	SITE ADDRESS (Street and City): <b>105 5th Street, Oakland</b>	GLOBAL ID NO: <b>T0600102116</b>
ADDRESS: <b>1680 Rogers Avenue, San Jose, CA 95112</b>	EDP DELIVERABLE To (Responsible Party or Designer): <b>Anni Krenl</b>		PHONE NO: <b>(510) 420-3335</b>
PROJECT CONTACT (Name and Title): <b>Leon Gearhart</b>	E-MAIL: <b>lgearhart@blainetech.com</b>		E-MAIL: <b>ShellOaklandEDF@cambric-env.com</b>
TELEPHONE: <b>408-573-0555</b>	FAX: <b>408-573-7771</b>	CONSULTANT PROJECT NO: <b>040702-00-4</b>	
TURNAROUND TIME (BUSINESS DAYS): <input checked="" type="checkbox"/> 10 DAYS <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 22 HOURS <input type="checkbox"/> 48 HOURS <input type="checkbox"/> 24 HOURS <input type="checkbox"/> LESS THAN 24 HOURS		LAB USE ONLY	

LA - RWQCE REPORT FORMAT  UST AGENCY: \_\_\_\_\_  
 GC/MS MTBE CONFIRMATION: HIGHEST \_\_\_\_\_ HIGHEST per BORING \_\_\_\_\_ ALL \_\_\_\_\_  
 SPECIAL INSTRUCTIONS OR NOTES: \_\_\_\_\_ CHECK BOX IF EDO IS NOT NEEDED

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (E150B - 5ppm RL)	MTBE (E150B - 0.5ppm RL)	Oxygenates (S) by (E260B)	Ethanol (E260B)	Methanol	1,2-DCA (E260B)	EDB (E260B)	TPH - Diesel, Extractable (E015m)	TBA, PINE, TAME	TEMPERATURE ON RECEIPT °C
		DATE	TIME														
	MW-1	7-2	13:26	W	6	X	X	X							X		6
	MW-2		15:18			X	X	X							X		
	MW-3		15:45			X	X	X					X	X	X	X	
	MW-4		13:48			X	X	X							X		
	MW-5		14:56			X	X	X							X		
	MW-6		15:40			X	X	X							X		
	T-1		14:30			X	X	X							X		

Requested by (Signature): <i>David C. Nault</i>	Received By (Signature): <i>[Signature]</i>	Date: 7/2/04	Time: 16:44
Requested by (Signature): <i>[Signature]</i>	Received By (Signature): <i>[Signature]</i>	Date: 7/2/04	Time: 18:12

Lab Identification (if necessary):

Address:

City, State, Zip:

Shell Project Manager to be invoiced:

- SCIENCE-ENGINEERING
- TECHNICAL SERVICES
- OILFIELD SERVICES

Karen Petryna

07-102

INCIDENT NUMBER (S&E ONLY)

9 8 9 9 5 7 5 7

SAP or CRMT NUMBER (TS/CRMT)

DATE: 7-2-04

PAGE: 1 of 1

LAB COMPANY:  
**Alaine Tech Services**  
 ADDRESS:  
 180 Rogers Avenue, San Jose, CA 95112  
 CONTACT:  
 Jon Geathart  
 TELEPHONE:  
 408-573-0555  
 FAX:  
 408-573-7771  
 EMAIL:  
 jgeathart@alainetech.com

LAB CODE:  
**BTSS**

SITE ADDRESS (Street and City):  
**105 5th Street, Oakland**

EDF DELIVERABLE TO (Responsible Party or Design):  
**Anni Krenl**

PHONE NO.:  
**(510) 420-3335**

SAMPLER NAME(S) (P/N):  
**Dave Walker**

GLOBAL ID NO.:  
**T0600102116**

CONSULTANT PROJECT NO.:  
**040703-06-4**

EMAIL:  
**ShellOaklandEDF@cambria-env.com**

BTS#

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

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

SC-145 MTBE CONFIRMATION: HIGHEST \_\_\_\_\_ HIGHEST per BORING \_\_\_\_\_ ALL \_\_\_\_\_

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

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.	TPH - Gas, Purgable	BTEX	MTBE (1000B - 5ppb RL)	MTBE (1000B - 0.5ppb RL)	Oxygenates (5) by (8200B)	Ethanol (8200B)	Methanol	1,2-DCA (8200B)	EDB (8200B)	TPH - Diesel, Extractable (4015m)	TBA, PIPE, TANK	TEMPERATURE ON RECEIPT °C	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
		DATE	TIME															
	MW-1	7-2	13:26	W	6	X	X	X							X			
	MW-2		15:18			X	X	X	X	X					X			
	MW-3		15:45			X	X	X					X	X	X	X		
	MW-4		13:48			X	X	X	X	X					X			
	MW-5		14:56			X	X	X	X	X					X			
	MW-6		15:40			X	X	X	X	X					X			
	T-1		14:30	U	U	X	X	X							X			

Requisitioned by (Signature):  
*David C. Hall*

Requisitioned by (Signature):

Requisitioned by (Signature):

Received by (Signature):  
*[Signature]*

Received by (Signature):

Received by (Signature):

Date: 7/2/04 Time: 16:44

Date: Time:

Date: Time:



WELL GAUGING DATA

Project # 040702-DW-4 Date 7-2-04 Client Shell

Site 105 5<sup>th</sup> St. Oakland

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC
mw-1	4					5.93	23.55	↓
mw-2	4	*				5.43	22.47	
mw-3	4	*				5.85	25.00	
mw-4	2					6.24	19.95	
mw-5	4					6.33	24.14	
mw-6	2					5.36	24.12	
T-1	12	*				5.62	11.47	

\* gauged w/ stinger in well

## SHELL WELL MONITORING DATA SHEET

BTS #: 040702-DW-4	Site: 105 5 <sup>th</sup> St
Sampler: DW	Date: 7-2-04
Well I.D.: MW-1	Well Diameter: 2 3 (4) 6 8 _____
Total Well Depth (TD): 23.55	Depth to Water (DTW): 5.93
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.45	

Purge Method: Bailer          Water: \_\_\_\_\_          Sampling Method:  Bailer  
                   Disposable Bailer      Peristaltic          Disposable Bailer  
                   Positive Air Displacement    Extraction Pump      Extraction Port  
                    Electric Submersible 39pm      Other: \_\_\_\_\_      Dedicated Tubing

$11.5 \text{ (Gals.)} \times 3 = 34.5 \text{ Gals.}$		<table border="1" style="font-size: small;"> <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															
Case Volume	Specified Volumes	Calculated Volume																

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
13:13	71.3	7.1	498	34	11.5	clear
13:17	70.7	7.1	449	25	23.0	"
13:21	70.3	7.0	426	22	34.5	"

Did well dewater? Yes  No       Gallons actually evacuated: 34.5  
 Sampling Date: 7-2-04      Sampling Time: 13:26      Depth to Water: 8.75  
 Sample I.D.: MW-1      Laboratory: (STD) 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

## SHELL WELL MONITORING DATA SHEET

BTS#: 040702-DW-4	Site: 105 5th St
Sampler: DW	Date: 7-2-04
Well I.D.: MW-2	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 22.47	Depth to Water (DTW): 5.43
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]: 8.83	

Purge Method: Bailer      Waterra      Sampling Method:  Bailer  
 Disposable Bailer      Peristaltic      Disposable Bailer  
 Positive Air Displacement      Extraction Pump      Extraction Port  
 Electric Submersible 3 gpm      Other \_\_\_\_\_      Dedicated Tubing

$\frac{11.1 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = \frac{33.3}{\text{Calculated Volume}} \text{ Gals.}$	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplie.</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	Multiplie.	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	Multiplie.														
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
15:05	72.8	6.7	466	7	11.1	0 der
15:09	72.6	6.6	431	6	22.2	"
15:13	72.0	6.6	420	5	33.3	"

Did well dewater? Yes  No  Gallons actually evacuated: 33.3

Sampling Date: 7-2-04      Sampling Time: 15:18      Depth to Water: 8.69

Sample I.D.: MW-2      Laboratory: STL 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



## SHELL WELL MONITORING DATA SHEET

BTS #: 040702-0w-4	Site: 105 5 <sup>th</sup> St
Sampler: DW	Date: 7-2-04
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8
Total Well Depth (TD): 19.95	Depth to Water (DTW): 6.24
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.98	

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

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

$\frac{2.2 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = \frac{6.6 \text{ Gals.}}{\text{Calculated Volume}}$	<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 (µS))	Turbidity (NTUs)	Gals. Removed	Observations
13:39	68.9	6.7	1460	>200	2.2	Brown
13:41	67.2	6.7	1624	>200	4.4	"
13:43	66.8	6.7	1654	>200	6.6	"

Did well dewater? Yes  No  Gallons actually evacuated: 6.6

Sampling Date: 7-2-04      Sampling Time: 13:48      Depth to Water: 12.45 (street)

Sample I.D.: MW-4      Laboratory: (STL) 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

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

### SHELL WELL MONITORING DATA SHEET

BTS #: 040702-DW-4	Site: 105 5 <sup>th</sup> St
Sampler: DW	Date: 7-2-04
Well I.D.: MW-5	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 24.14	Depth to Water (DTW): 6.33
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>9.89</u>	

Purge Method: Bailer      Waterria      Sampling Method: XBailer  
 Disposable Bailer      Peristaltic      Disposable Bailer  
 Positive Air Displacement      Extraction Pump      Extraction Port  
XElectric Submersible 3 gpm      Other \_\_\_\_\_      Dedicated Tubing  
 Other: \_\_\_\_\_

11.6 (Gals.) X	3	=	34.8	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
14:43	71.8	6.7	712	5	11.6	clear
14:47	73.9	6.7	659	7	23.2	l.
14:51	72.9	6.7	632	4	34.8	

Did well dewater? Yes No Gallons actually evacuated: 34.8

Sampling Date: 7-2-04 Sampling Time: 14:56 Depth to Water: 9.70

Sample I.D.: MW-5 Laboratory: STL 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

## SHELL WELL MONITORING DATA SHEET

BTS #: 040700-DW-4	Site: 105 5th St
Sampler: DW <u>Brian Alcon</u>	Date: 7-2-04
Well I.D.: MW-6	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): 24.12	Depth to Water (DTW): 5.36
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]:	

Purge Method: ~~Bailer~~  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible

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

Sampling Method: ~~Bailer~~  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

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

$\underline{3.0} \text{ (Gals.)} \times \underline{3} = \underline{9.0} \text{ Gals.}$	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														
I Case Volume      Specified Volumes      Calculated Volume																	

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
1524	72.8	7.7	355	465	3.0	gray
1530	73.8	6.9	310	741	6.0	"
1536	74.1	7.0	295	795	9.0	"

Did well dewater? Yes  No  Gallons actually evacuated: 9.0

Sampling Date: 7-2-04      Sampling Time: 1540      Depth to Water:

Sample I.D.: MW-6      Laboratory: STL 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

## SHELL WELL MONITORING DATA SHEET

BTS#: 040702-0w-4	Site: 105 5th St
Sampler: DW	Date: 7-2-04
Well I.D.: T-1	Well Diameter: 2 3 4 6 8 <u>12</u>
Total Well Depth (TD): 11.47	Depth to Water (DTW): 5.62
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]: 6.79	

Purge Method:  Bailer  Disposable Bailer  Positive Air Displacement  Electric Submersible

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

Sampling Method:  Bailer  Disposable Bailer  Extraction Port  Dedicated Tubing

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

$34.3 \text{ (Gals.)} \times 3 = 102.9 \text{ Gals.}$ <p>1 Case Volume      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 $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
14:11	74.9	6.7	1064	6	34.3	odor
14:18	75.3	6.6	1013	4	68.6	"
14:25	75.8	6.6	997	3	102.9	"

Did well dewater? Yes  No  Gallons actually evacuated: 102.9

Sampling Date: 7-2-04      Sampling Time: 14:30      Depth to Water: 5.65

Sample I.D.: T-1      Laboratory: (STL) 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