Shell Oil Products US

RO 487

September 25, 2003

Alameda County
OCT 0 9 2003
Environmental Health

Barney Chan
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 Mr. Chan:

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

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

Sincerely,

Shell Oil Products US

Karen Petryna

Karen Petryna
Sr. Environmental Engineer

P.O. Box 7869 Burbank, CA 91510-7869 Phone (559) 645-9306 Facsimile (559) 645-5643

CAMBRIA

September 25, 2003

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

Re: **Third Quarter 2003 Monitoring Report**
Shell-branded Service Station
105 Fifth Street
Oakland, California
Incident #98995757
Cambria Project #245-0472-002

Dear Mr. Chan:

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 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 2003 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

Cambria Environmental Technology, Inc.

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

supporting field documents, is included as Attachment A. Well MW-3 was also sampled for oxygenates di-isopropyl ether, tert-amyl methyl ether, and tert-butanol, and for lead scavengers 1,2-dichloroethane and 1,2-dibromomethane. Results of this analysis are presented in Table 1.

GWE: Beginning in November 2001, Phillips Services Corporation of Benicia, California has 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 installation of a fixed GWE system. These events were resumed in May 2003. In June 2003, well MW-3 was added to the extraction program, and in July 2003 well MW-2 was added. 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. Mass removal data from the GWE events is presented in Table 2. Through September 4, 2003, a total of 143,719 gallons of water have been extracted, resulting in removal of 7.6 lbs. of TPHg and 70.0 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 two 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 2002 to 150 ppb this quarter. Concentrations in monitoring well MW-3 have stabilized and were 17,000 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 2003 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 wells MW-2 and MW-3 will continue. Well T-1 will be removed from the extraction program, due to minimal remaining MTBE concentrations in the well. Extraction from well MW-6 will continue until the next sampling event, scheduled for October 2003. We will evaluate continued extraction from this well after our review of these sampling results.

CLOSING

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

Sincerely,
Cambria Environmental Technology, Inc

Diane Lundquist, P.E.
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
DIANE M. LUNDQUIST
No. C46725
CIVIL
STATE OF CALIFORNIA

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

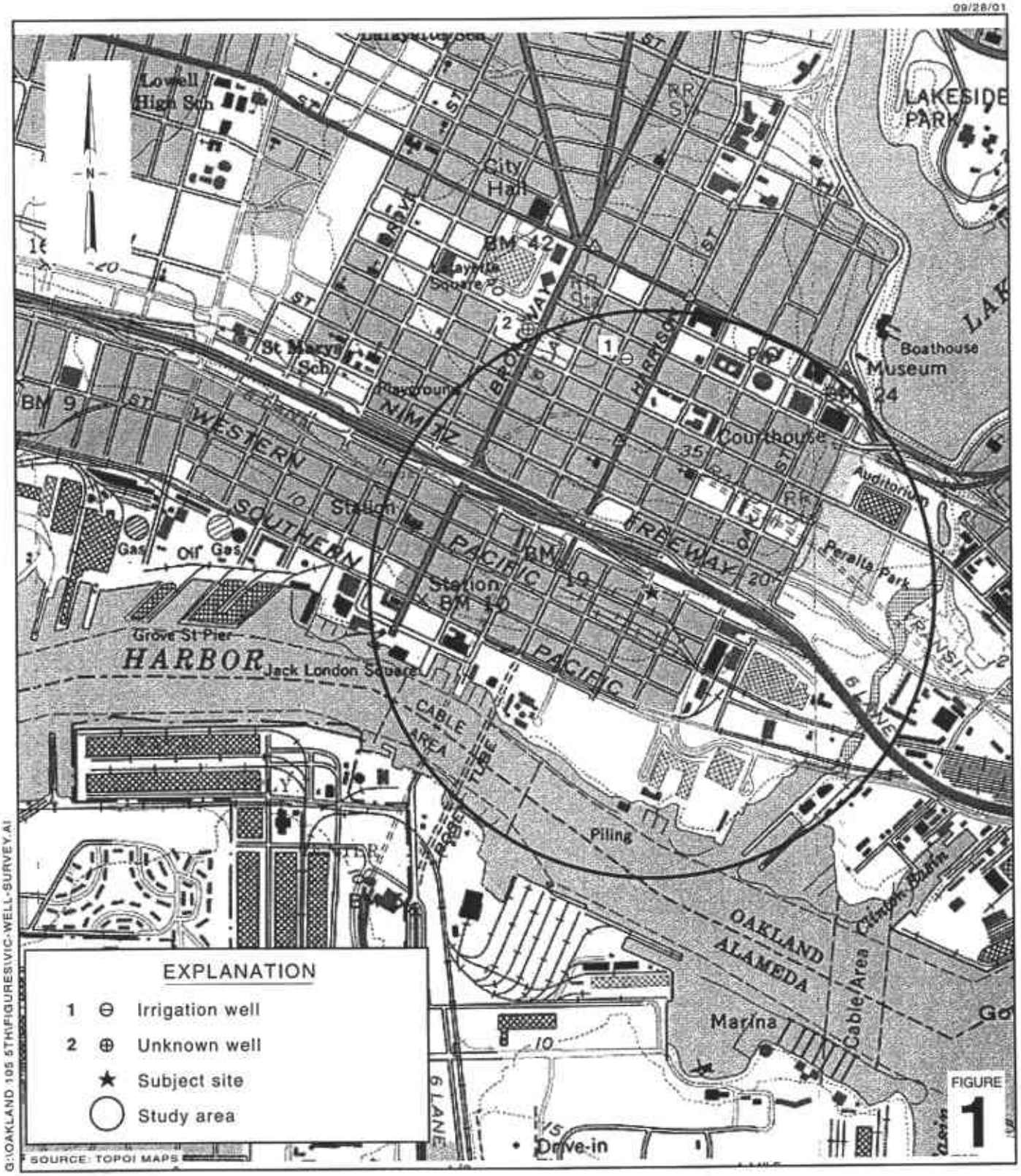
Tables: 1 - Groundwater Analytical Data - Oxygenates
2 - Groundwater Extraction – Mass Removal Data

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, Shell Oil Products US, P.O. Box 7869, Burbank, CA 91510-7869
Arthur R. and Mary A. Hansen, Trs., et al, 820 Loyola Drive, Los Altos, CA 94024

G:\Oakland 105 Fifth\Qm\3q03\3q03qm.doc

09/28/01



0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

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

CAMBRIA

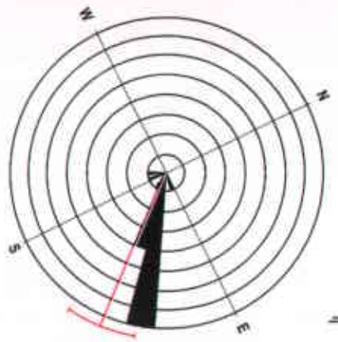
Vicinity / Well Survey Map

(1/2 Mile Radius)

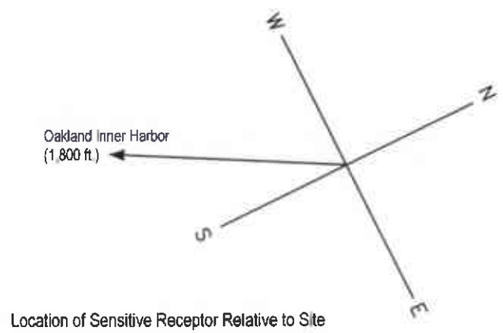
09/03/03

Groundwater Elevation Contour Map

July 22, 2003

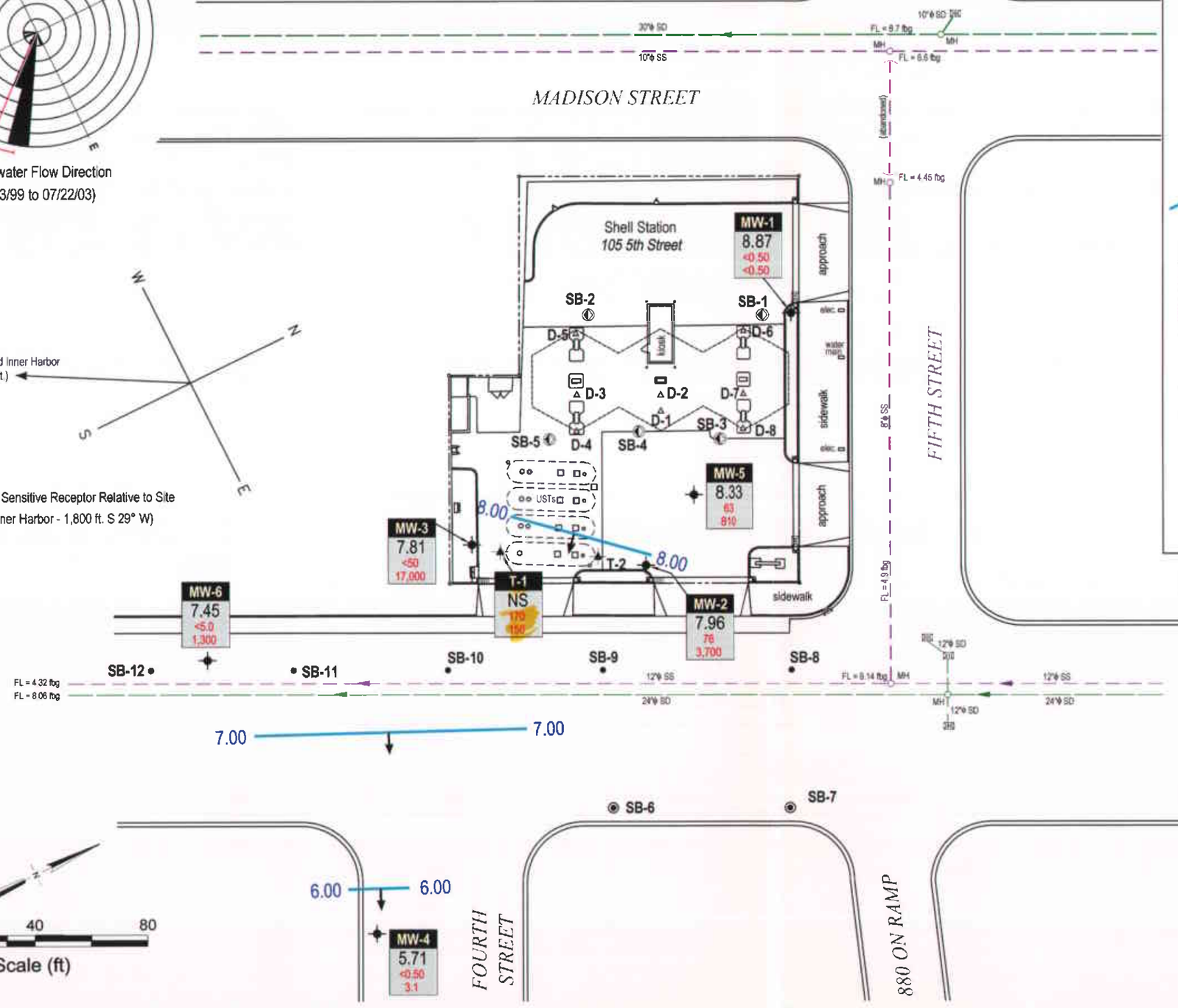


Groundwater Flow Direction
(07/23/99 to 07/22/03)



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

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

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

Note: All utility locations are approximate.

0 20 40 80
Scale (ft)

CAMBRIA

Shell-branded Service Station
105 Fifth Street
Oakland, California
Incident #9899577

FIGURE
2

G:\OAKLAND\105-5TH\FIGURES\QOM03-MP.DWG

Table 1. **Groundwater Analytical Data - Oxygenates** - Shell-branded Service Station, Incident #98995757, 105 5th Street, Oakland, California

Sample ID	Date Sampled	MTBE	DIPE	ETBE	TAME	TBA	Ethanol	1,2-DCA	EDB
		← (Concentrations in ppb) →							
MW-2	10/23/01	13,000	<25	<25	<25	820	<500	---	---
MW-3	10/23/01	180,000	<250	<250	<250	53,000	<5,000	---	---
	10/15/02	44,000	<100	---	<100	9,100	---	<100	<100
	01/29/03	19,000	<25	---	<25	14,000	---	<25	<25
	04/30/03	14,000	<1,000	---	<1,000	24,000	---	<250	<250
	07/22/03	**17,000**	**<200**	**---**	**<200**	**21,000**	**---**	**<50**	**<50**

Abbreviations & Notes:

MTBE = Methyl tert-butyl ether, analyzed by by EPA Method 8260
DIPE = Di-isopropyl ether, analyzed by EPA Method 8260
ETBE = Ethyl tert-butyl ether, analyzed by EPA Method 8260
TAME = Tert-amyl methyl ether, analyzed by EPA Method 8260
TBA = Tert-butyl alcohol, analyzed by EPA Method 8260
Ethanol analyzed by EPA Method 8260
1,2-DCA = 1,2-dichloroethane, analyzed by EPA Method 8260
EDB = 1,2-dibromomethane or ethlyene dibromide, analyzed by EPA Method 8260
ppb = Parts per billion
--- = Not analyzed

Table 2: 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 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)
					TPPH			**Benzene**			**MTBE**		
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
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
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

Table 2: 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 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)
					TPPH			**Benzene**			**MTBE**		
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
08/21/03	MW-6	50	6,061	07/22/03	<500	0.00010	0.34155	<5.0	0.00000	0.01387	**1,300**	0.00054	7.10029
09/04/03	MW-6	683	683	07/22/03	<500	0.00142	0.00142	<5.0	0.00001	0.00001	**1,300**	0.00741	0.00741
11/26/01	T-1[a]	2,700	2,700	10/23/01	**<50,000**	0.56324	0.56324	**<250**	0.00282	0.00282	**180,000**	4.05536	4.05536
12/10/01	T-1[a]	2,750	5,450	10/23/01	**<50,000**	0.57367	1.13692	**<250**	0.00287	0.00568	**180,000**	4.13046	8.18581
12/26/01	T-1[a]	2,800	8,250	10/23/01	**<50,000**	0.58410	1.72102	**<250**	0.00292	0.00861	**180,000**	4.20556	12.39137
01/09/01	T-1	5,184	13,434	01/07/02	**<20,000**	0.43257	2.15359	**310**	0.01341	0.02201	**92,000**	3.97966	16.37103
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

Table 2: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995757, 105 Fifth Street, Oakland, California

					TPPH			Benzene			MTBE		
Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	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)
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[b]	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[b]	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
Total Gallons Extracted:			**143,719**		**Total Pounds Removed:**		**7.62844**			**0.23389**			**70.04868**
					Total Gallons Removed:		**1.25056**			**0.03204**			**11.29817**

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.

Table 2: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995757, 105 Fifth Street, Oakland, California

					TPPH			Benzene			MTBE		
Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	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)

Mass removed based on the formula: volume extracted (gal) x Concentration (µg/L) x (g/10^6µg) 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
(408) 573-0555 PHONE
CONTRACTOR'S LICENSE #746684
www.blainetech.com

August 14, 2003

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

Third Quarter 2003 Groundwater Monitoring at
Shell-branded Service Station
105 5th Street
Oakland, CA

Monitoring performed on July 22, 2003

Groundwater Monitoring Report **030722-AC-2**

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

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

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

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

Please call if you have any questions.

Yours truly,

Leon Gearhart
Project Coordinator

LG/jt

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

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

WELL CONCENTRATIONS
Shell-branded Service Station
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)	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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**	**14.92**	**6.05**	**8.87**	**NA**
MW-2	07/20/1999	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	10.87	5.98	4.89	NA
MW-2	11/01/1999	2,420	NA	316	10.8	119	44.2	17,000	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	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	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	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	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	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)	TOC (MSL)	Depth to Water (ft)	GW Elevation (MSL)	DO Reading (ppm)
MW-2	04/17/2001	598	179	21.8	<2.00	16.9	10.8	5,630	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	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	10.87	5.72	5.15	2.0/3.2
MW-2	01/07/2002	<1,000	<200	<10	<10	<10	<10	NA	4,500	10.87	4.87	6.00	NA
MW-2	04/12/2002	<1,000	<100	14	<10	27	13	NA	6,200	13.57	5.14	8.43	NA
MW-2	07/10/2002	<1,000	290	<10	<10	14	<10	NA	6,100	13.57	5.45	8.12	NA
MW-2	10/15/2002	<100	85	1.2	<1.0	<1.0	<1.0	NA	640	13.57	5.38	8.19	NA
MW-2	01/29/2003	<500	<300	10	<5.0	16	6.3	NA	1,700	13.57	5.14	8.43	NA
MW-2	04/30/2003	<5,000	440	<50	<50	58	<100	NA	5,000	13.57	4.83	8.74	NA
MW-2	**07/22/2003**	**2,300**	**1,000 c**	**76**	**<10**	**140**	**<20**	**NA**	**3,700**	**13.57**	**5.61**	**7.96**	**NA**
MW-3	07/20/1999	NA	NA	NA	NA	NA	NA	NA	NA	11.27	19.07	-7.80	NA
MW-3	07/23/1999	128	NA	<0.500	<0.500	<0.500	<0.500	404,000	324,000	11.27	6.43	4.84	NA
MW-3	11/01/1999	<1,000	NA	<10.0	<10.0	<10.0	<10.0	169,000	224,000	11.27	6.48	4.79	0.5/0.3
MW-3	01/05/2000	137	322	<1.00	<1.00	<1.00	<1.00	165,000	219,000	11.27	6.35	4.92	2.4/2.2
MW-3	04/07/2000	<1,000	264	853	<10.0	<10.0	<10.0	283,000	196,000a	11.27	5.91	5.36	04/0.2
MW-3	07/26/2000	<20,000	585	<200	<200	<200	<200	437,000	320,000	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	11.27	17.51	-6.24	1.1/1.4
MW-3	01/30/2001	<5,000	555	<50.0	<50.0	<50.0	<50.0	248,000	167,000a	11.27	11.43	-0.16	2.0/2.2
MW-3	04/17/2001	<5,000	347	<50.0	<50.0	<50.0	<50.0	134,000	133,000	11.27	6.57	4.70	1.3/1.2
MW-3	07/09/2001	<20,000	250	<200	<200	<200	<200	NA	170,000	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	11.27	6.25	5.02	2.2/1.6
MW-3	01/07/2002	<10,000	160	<100	<100	<100	<100	NA	96,000	11.27	5.29	5.98	NA
MW-3	04/12/2002	<10,000	87	<100	<100	<100	<100	NA	78,000	13.96	5.43	8.53	NA
MW-3	07/10/2002	<20,000	150	<200	<200	<200	<200	NA	64,000	13.96	6.33	7.63	NA
MW-3	10/15/2002	<10,000	120	<100	<100	<100	<100	NA	44,000	13.96	5.96	8.00	NA
MW-3	01/02/2003	NA	NA	<5.0	<5.0	<5.0	<10	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)	TOC (MSL)	Depth to Water (ft)	GW Elevation (MSL)	DO Reading (ppm)
MW-3	01/29/2003	<2,500	96	<25	<25	<25	<25	NA	19,000	13.96	5.68	8.28	NA
MW-3	04/30/2003	<25,000	360	<250	<250	<250	<500	NA	14,000	13.96	5.34	8.62	NA
MW-3	**07/22/2003**	**<5,000**	**230 c**	**<50**	**<50**	**<50**	**<100**	**NA**	**17,000**	**13.96**	**6.15**	**7.81**	**NA**
MW-4	03/23/2001	NA	NA	NA	NA	NA	NA	NA	NA	9.50	8.21	1.29	NA
MW-4	04/17/2001	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	9.50	5.08	4.42	2.4/2.6
MW-4	07/09/2001	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	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	9.50	7.90	1.60	2.8/1.8
MW-4	01/07/2002	<50	64	<0.50	<0.50	<0.50	<0.50	NA	<5.0	9.50	5.00	4.50	NA
MW-4	04/12/2002	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	12.17	7.49	4.68	NA
MW-4	07/10/2002	<50	67	<0.50	<0.50	<0.50	<0.50	NA	<5.0	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	12.17	4.56	7.61	NA
MW-4	01/29/2003	<50	73	<0.50	<0.50	<0.50	<0.50	NA	<5.0	12.17	4.34	7.83	NA
MW-4	04/30/2003	<50	140	<0.50	<0.50	<0.50	<1.0	NA	<5.0	12.17	5.45	6.72	NA
MW-4	**07/22/2003**	**<50**	**63 c**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**NA**	**3.1**	**12.17**	**6.46**	**5.71**	**NA**
MW-5	03/29/2002	NA	NA	NA	NA	NA	NA	NA	NA	14.78	5.86	8.92	NA
MW-5	04/12/2002	1,600	<50	25	3.5	44	110	NA	570	14.78	5.96	8.82	NA
MW-5	07/10/2002	930	<400	36	<2.0	93	8.8	NA	630	14.78	6.57	8.21	NA
MW-5	10/15/2002	200	90	9.9	<0.50	19	5.5	NA	180	14.78	6.17	8.61	NA
MW-5	01/29/2003	120	85	6.0	<0.50	2.9	2.6	NA	220	14.78	5.85	8.93	NA
MW-5	04/30/2003	<250	160	5.5	<2.5	7.2	7.7	NA	250	14.78	5.53	9.25	NA
MW-5	**07/22/2003**	**520**	**190 c**	**63**	**<5.0**	**41**	**14**	**NA**	**810**	**14.78**	**6.45**	**8.33**	**NA**
MW-6	09/25/2002	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	12.91	5.45	7.46	NA
MW-6	01/29/2003	<250	350	<2.5	<2.5	<2.5	<2.5	NA	1,600	12.91	5.20	7.71	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)	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	12.91	5.11	7.80	NA
MW-6	**07/22/2003**	**<500**	**<50**	**<5.0**	**<5.0**	**<5.0**	**<10**	**NA**	**1,300**	**12.91**	**5.46**	**7.45**	**NA**
T-1	01/07/2002	<20,000	2,600	310	<200	<200	<200	NA	92,000	NA	4.86	NA	NA
T-1	04/12/2002	<5,000	1,000	230	<50	<50	<50	NA	57,000	NA	5.05	NA	NA
T-1	07/10/2002	<20,000	3,700	260	<200	<200	<200	NA	69,000	NA	5.84	NA	NA
T-1	10/15/2002	<5,000	2,100	150	62	<50	75	NA	29,000	NA	5.77	NA	NA
T-1	01/02/2003	NA	NA	1.5	<0.50	<0.50	<1.0	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	5.49	NA	NA
T-1	04/30/2003	360	1,000	45	0.60	<0.50	2.3	NA	89	NA	4.91	NA	NA
T-1	**07/22/2003**	**1,200**	**940 c**	**170**	**4.8**	**<2.5**	**18**	**NA**	**150**	**NA**	**5.70**	**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)	TOC (MSL)	Depth to Water (ft)	GW Elevation (MSL)	DO Reading (ppm)

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
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, California.
Site surveyed Spetember 26, 2002, by Virgil Chavez Land Surveying of Vallejo, California.

SEVERN TRENT STL

Submission#: 2003-07-0730

Blaine Tech Services, Inc.

August 08, 2003

1680 Rogers Avenue
San Jose, CA 95112-1105

Attn.: Leon Gearhart

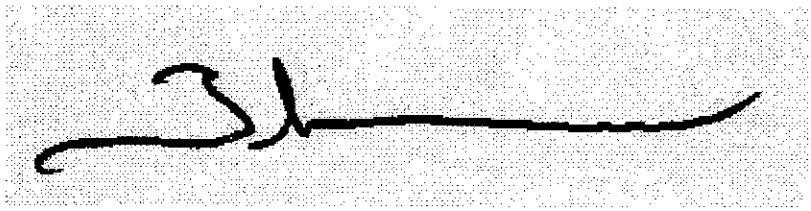
Project#: 03722-AC1
Project: 98995757
Site: 105 5th Street, Oakland

Dear Mr.Gearhart,

Attached is our report for your samples received on 07/23/2003 16:05
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 09/06/2003 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: tgranicher@stl-inc.com

Sincerely,



Tod Granicher
Project Manager

SEVERN TRENT STL

Submission #: 2003-07-0730

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: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-1	07/22/2003 08:05	Water	1
MW-2	07/22/2003 12:00	Water	2
MW-3	07/22/2003 12:20	Water	3
MW-4	07/22/2003 12:25	Water	4
MW-5	07/22/2003 08:30	Water	5
MW-6	07/22/2003 13:35	Water	6
T-1	07/22/2003 09:00	Water	7

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: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	**MW-1**	Lab ID:	2003-07-0730 - 1
Sampled:	07/22/2003 08:05	Extracted:	8/4/2003 15:30
Matrix:	Water	QC Batch#:	2003/08/04-1C.64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	08/04/2003 15:30	
Benzene	ND	0.50	ug/L	1.00	08/04/2003 15:30	
Toluene	ND	0.50	ug/L	1.00	08/04/2003 15:30	
Ethylbenzene	ND	0.50	ug/L	1.00	08/04/2003 15:30	
Total xylenes	ND	1.0	ug/L	1.00	08/04/2003 15:30	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	08/04/2003 15:30	
Surrogates(s)						
1,2-Dichloroethane-d4	109.4	76-130	%	1.00	08/04/2003 15:30	
Toluene-d8	92.5	78-115	%	1.00	08/04/2003 15:30	

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: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	**MW-2**	Lab ID:	2003-07-0730 - 2
Sampled:	07/22/2003 12:00	Extracted:	8/4/2003 15:52
Matrix:	Water	QC Batch#:	2003/08/04-1C.64

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	2300	1000	ug/L	20.00	08/04/2003 15:52	
Benzene	76	10	ug/L	20.00	08/04/2003 15:52	
Toluene	ND	10	ug/L	20.00	08/04/2003 15:52	
Ethylbenzene	140	10	ug/L	20.00	08/04/2003 15:52	
Total xylenes	ND	20	ug/L	20.00	08/04/2003 15:52	
Methyl tert-butyl ether (MTBE)	3700	10	ug/L	20.00	08/04/2003 15:52	
Surrogates(s)						
1,2-Dichloroethane-d4	112.0	76-130	%	20.00	08/04/2003 15:52	
Toluene-d8	94.0	78-115	%	20.00	08/04/2003 15:52	

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: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	**MW-3**	Lab ID:	2003-07-0730 - 3
Sampled:	07/22/2003 12:20	Extracted:	8/4/2003 21:46
Matrix:	Water	QC Batch#:	2003/08/04-1B.65

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	5000	ug/L	100.00	08/04/2003 21:46	
Benzene	ND	50	ug/L	100.00	08/04/2003 21:46	
Toluene	ND	50	ug/L	100.00	08/04/2003 21:46	
Ethylbenzene	ND	50	ug/L	100.00	08/04/2003 21:46	
Total xylenes	ND	100	ug/L	100.00	08/04/2003 21:46	
tert-Butyl alcohol (TBA)	21000	500	ug/L	100.00	08/04/2003 21:46	
Methyl tert-butyl ether (MTBE)	17000	50	ug/L	100.00	08/04/2003 21:46	
Di-isopropyl Ether (DIPE)	ND	200	ug/L	100.00	08/04/2003 21:46	
tert-Amyl methyl ether (TAME)	ND	200	ug/L	100.00	08/04/2003 21:46	
1,2-DCA	ND	50	ug/L	100.00	08/04/2003 21:46	
EDB	ND	50	ug/L	100.00	08/04/2003 21:46	
Surrogates(s)						
1,2-Dichloroethane-d4	92.3	76-130	%	100.00	08/04/2003 21:46	
Toluene-d8	102.4	78-115	%	100.00	08/04/2003 21:46	

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: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	**MW-4**	Lab ID:	2003-07-0730 - 4
Sampled:	07/22/2003 12:25	Extracted:	8/5/2003 05:17
Matrix:	Water	QC Batch#:	2003/08/04-02.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	08/05/2003 05:17	
Benzene	ND	0.50	ug/L	1.00	08/05/2003 05:17	
Toluene	ND	0.50	ug/L	1.00	08/05/2003 05:17	
Ethylbenzene	ND	0.50	ug/L	1.00	08/05/2003 05:17	
Total xylenes	ND	1.0	ug/L	1.00	08/05/2003 05:17	
Methyl tert-butyl ether (MTBE)	3.1	0.50	ug/L	1.00	08/05/2003 05:17	
Surrogates(s)						
1,2-Dichloroethane-d4	95.5	76-130	%	1.00	08/05/2003 05:17	
Toluene-d8	104.9	78-115	%	1.00	08/05/2003 05:17	

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: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	**MW-5**	Lab ID:	2003-07-0730 - 5
Sampled:	07/22/2003 08:30	Extracted:	8/4/2003 18:46
Matrix:	Water	QC Batch#:	2003/08/04-1C.64

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	520	500	ug/L	10.00	08/04/2003 18:46	
Benzene	63	5.0	ug/L	10.00	08/04/2003 18:46	
Toluene	ND	5.0	ug/L	10.00	08/04/2003 18:46	
Ethylbenzene	41	5.0	ug/L	10.00	08/04/2003 18:46	
Total xylenes	14	10	ug/L	10.00	08/04/2003 18:46	
Methyl tert-butyl ether (MTBE)	810	5.0	ug/L	10.00	08/04/2003 18:46	
Surrogates(s)						
1,2-Dichloroethane-d4	121.8	76-130	%	10.00	08/04/2003 18:46	
Toluene-d8	95.4	78-115	%	10.00	08/04/2003 18:46	

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: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	**MW-6**	Lab ID:	2003-07-0730 - 6
Sampled:	07/22/2003 13:35	Extracted:	8/4/2003 19:08
Matrix:	Water	QC Batch#:	2003/08/04-1C.64

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	500	ug/L	10.00	08/04/2003 19:08	
Benzene	ND	5.0	ug/L	10.00	08/04/2003 19:08	
Toluene	ND	5.0	ug/L	10.00	08/04/2003 19:08	
Ethylbenzene	ND	5.0	ug/L	10.00	08/04/2003 19:08	
Total xylenes	ND	10	ug/L	10.00	08/04/2003 19:08	
Methyl tert-butyl ether (MTBE)	1300	5.0	ug/L	10.00	08/04/2003 19:08	
Surrogates(s)						
1,2-Dichloroethane-d4	111.5	76-130	%	10.00	08/04/2003 19:08	
Toluene-d8	98.5	78-115	%	10.00	08/04/2003 19:08	

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: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Prep(s): 5030B
Sample ID: T-1
Sampled: 07/22/2003 09:00
Matrix: Water
Analysis Flag: o (See Legend and Note Section)

Test(s): 8260FAB
Lab ID: 2003-07-0730 - 7
Extracted: 8/5/2003 10:17
QC Batch#: 2003/08/05-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	1200	250	ug/L	5.00	08/05/2003 10:17	
Benzene	170	2.5	ug/L	5.00	08/05/2003 10:17	
Toluene	4.8	2.5	ug/L	5.00	08/05/2003 10:17	
Ethylbenzene	ND	2.5	ug/L	5.00	08/05/2003 10:17	
Total xylenes	18	5.0	ug/L	5.00	08/05/2003 10:17	
Methyl tert-butyl ether (MTBE)	150	2.5	ug/L	5.00	08/05/2003 10:17	
Surrogates(s)						
1,2-Dichloroethane-d4	102.5	76-130	%	5.00	08/05/2003 10:17	
Toluene-d8	103.5	78-115	%	5.00	08/05/2003 10:17	

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: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260FAB

Method Blank — **Water** — **QC Batch # 2003/08/04-02.65**

MB: 2003/08/04-02.65-009 — Date Extracted: 08/05/2003 01:09

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	08/05/2003 01:09	
Benzene	ND	0.5	ug/L	08/05/2003 01:09	
Toluene	ND	0.5	ug/L	08/05/2003 01:09	
Ethylbenzene	ND	0.5	ug/L	08/05/2003 01:09	
Total xylenes	ND	1.0	ug/L	08/05/2003 01:09	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	08/05/2003 01:09	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	08/05/2003 01:09	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	08/05/2003 01:09	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	08/05/2003 01:09	
1,2-DCA	ND	0.5	ug/L	08/05/2003 01:09	
EDB	ND	0.5	ug/L	08/05/2003 01:09	
Surrogates(s)					
1,2-Dichloroethane-d4	95.0	76-130	%	08/05/2003 01:09	
Toluene-d8	104.1	78-115	%	08/05/2003 01:09	

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: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260FAB

Method Blank — **Water** — **QC Batch # 2003/08/04-1B.65**

MB: 2003/08/04-1B.65-047 — Date Extracted: 08/04/2003 12:47

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	08/04/2003 12:47	
Benzene	ND	0.5	ug/L	08/04/2003 12:47	
Toluene	ND	0.5	ug/L	08/04/2003 12:47	
Ethylbenzene	ND	0.5	ug/L	08/04/2003 12:47	
Total xylenes	ND	1.0	ug/L	08/04/2003 12:47	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	08/04/2003 12:47	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	08/04/2003 12:47	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	08/04/2003 12:47	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	08/04/2003 12:47	
1,2-DCA	ND	0.5	ug/L	08/04/2003 12:47	
EDB	ND	0.5	ug/L	08/04/2003 12:47	
Surrogates(s)					
1,2-Dichloroethane-d4	85.3	76-130	%	08/04/2003 12:47	
Toluene-d8	95.3	78-115	%	08/04/2003 12:47	

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: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260FAB

Method Blank — **Water** — **QC Batch # 2003/08/04-1C.64**

MB: 2003/08/04-1C.64-005 — Date Extracted: 08/04/2003 11:05

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	08/04/2003 11:05	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	08/04/2003 11:05	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	08/04/2003 11:05	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	08/04/2003 11:05	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	08/04/2003 11:05	
1,2-DCA	ND	0.5	ug/L	08/04/2003 11:05	
EDB	ND	0.5	ug/L	08/04/2003 11:05	
Benzene	ND	0.5	ug/L	08/04/2003 11:05	
Toluene	ND	0.5	ug/L	08/04/2003 11:05	
Ethylbenzene	ND	0.5	ug/L	08/04/2003 11:05	
Total xylenes	ND	1.0	ug/L	08/04/2003 11:05	
Surrogates(s)					
1,2-Dichloroethane-d4	103.0	76-130	%	08/04/2003 11:05	
Toluene-d8	92.1	78-115	%	08/04/2003 11:05	

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: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260FAB

Method Blank — **Water** — **QC Batch # 2003/08/05-01.65**

MB: 2003/08/05-01.65-032 — Date Extracted: 08/05/2003 09:32

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	08/05/2003 09:32	
Benzene	ND	0.5	ug/L	08/05/2003 09:32	
Toluene	ND	0.5	ug/L	08/05/2003 09:32	
Ethylbenzene	ND	0.5	ug/L	08/05/2003 09:32	
Total xylenes	ND	1.0	ug/L	08/05/2003 09:32	
tert-Butyl alcohol (TBA)	ND	100	ug/L	08/05/2003 09:32	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	08/05/2003 09:32	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	08/05/2003 09:32	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	08/05/2003 09:32	
1,2-DCA	ND	2.0	ug/L	08/05/2003 09:32	
EDB	ND	2.0	ug/L	08/05/2003 09:32	
Surrogates(s)					
1,2-Dichloroethane-d4	86.4	76-114	%	08/05/2003 09:32	
Toluene-d8	97.0	88-110	%	08/05/2003 09:32	

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: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike **Water** **QC Batch # 2003/08/04-02.65**

LCS 2003/08/04-02.65-024 Extracted: 08/05/2003 Analyzed: 08/05/2003 00:24

LCSD 2003/08/04-02.65-046 Extracted: 08/05/2003 Analyzed: 08/05/2003 00:46

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	27.9	28.9	25.0	111.6	115.6	3.5	69-129	20		
Toluene	28.6	29.1	25.0	114.4	116.4	1.7	70-130	20		
Methyl tert-butyl ether (MTBE)	24.2	24.4	25.0	96.8	97.6	0.8	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	476	460	500	95.2	92.0		76-130			
Toluene-d8	542	519	500	108.4	103.8		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: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260FAB

Laboratory Control Spike — **Water** — **QC Batch # 2003/08/04-1B.65**

LCS 2003/08/04-1B.65-002 — Extracted: 08/04/2003 — Analyzed: 08/04/2003 12:02

LCSD 2003/08/04-1B.65-024 — Extracted: 08/04/2003 — Analyzed: 08/04/2003 12:24

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	21.7	21.4	25	86.8	85.6	1.4	69-129	20		
Toluene	22.8	22.4	25	91.2	89.6	1.8	70-130	20		
Methyl tert-butyl ether (MTBE)	19.2	17.3	25	76.8	69.2	10.4	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	460	418	500	92.0	83.6		76-130			
Toluene-d8	496	487	500	99.2	97.4		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: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike **Water** **QC Batch # 2003/08/04-1C.64**

LCS 2003/08/04-1C.64-021 Extracted: 08/04/2003 Analyzed: 08/04/2003 10:21

LCSD 2003/08/04-1C.64-043 Extracted: 08/04/2003 Analyzed: 08/04/2003 10:43

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	21.3	20.6	25	85.2	82.4	3.3	65-165	20		
Benzene	21.3	22.4	25	85.2	89.6	5.0	69-129	20		
Toluene	22.4	23.6	25	89.6	94.4	5.2	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	514	497	500	102.8	99.4		76-130			
Toluene-d8	456	473	500	91.2	94.6		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: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike **Water** **QC Batch # 2003/08/05-01.65**

LCS 2003/08/05-01.65-048 Extracted: 08/05/2003 Analyzed: 08/05/2003 08:48

LCSD 2003/08/05-01.65-010 Extracted: 08/05/2003 Analyzed: 08/05/2003 09:10

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	25.7	25.5	25.0	102.8	102.0	0.8	69-129	20		
Toluene	25.7	25.0	25.0	102.8	100.0	2.8	70-130	20		
Methyl tert-butyl ether (MTBE)	20.9	20.2	25.0	83.6	80.8	3.4	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	436	433	500	87.2	86.6		76-114			
Toluene-d8	508	491	500	101.6	98.2		88-110			

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: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Legend and Notes

Analysis Flag

o

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

SEVERN TRENT STL

Submission #: 2003-07-0730

Diesel (C10-C24) by 8015m

Blaine Tech Services, Inc.
Attn.: Leon Gearhart

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

Project: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-1	07/22/2003 08:05	Water	1
MW-2	07/22/2003 12:00	Water	2
MW-3	07/22/2003 12:20	Water	3
MW-4	07/22/2003 12:25	Water	4
MW-5	07/22/2003 08:30	Water	5
MW-6	07/22/2003 13:35	Water	6
T-1	07/22/2003 09:00	Water	7

Diesel (C10-C24) by 8015m

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	**MW-1**	Lab ID:	2003-07-0730 - 1
Sampled:	07/22/2003 08:05	Extracted:	7/31/2003 05:53
Matrix:	Water	QC Batch#:	2003/07/31-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	08/01/2003 10:46	
Surrogates(s)						
o-Terphenyl	74.6	60-130	%	1.00	08/01/2003 10:46	

Diesel (C10-C24) by 8015m

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	**MW-2**	Lab ID:	2003-07-0730 - 2
Sampled:	07/22/2003 12:00	Extracted:	7/31/2003 05:53
Matrix:	Water	QC Batch#:	2003/07/31-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1000	50	ug/L	1.00	08/01/2003 11:27	ndp
Surrogates(s)						
o-Terphenyl	86.3	60-130	%	1.00	08/01/2003 11:27	

Diesel (C10-C24) by 8015m

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	**MW-3**	Lab ID:	2003-07-0730 - 3
Sampled:	07/22/2003 12:20	Extracted:	7/31/2003 05:53
Matrix:	Water	QC Batch#:	2003/07/31-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	230	50	ug/L	1.00	08/01/2003 18:08	ndp
Surrogates(s)						
o-Terphenyl	100.2	60-130	%	1.00	08/01/2003 18:08	

Diesel (C10-C24) by 8015m

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	**MW-4**	Lab ID:	2003-07-0730 - 4
Sampled:	07/22/2003 12:25	Extracted:	7/31/2003 05:53
Matrix:	Water	QC Batch#:	2003/07/31-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	63	50	ug/L	1.00	08/01/2003 18:08	ndp
Surrogates(s)						
o-Terphenyl	89.6	60-130	%	1.00	08/01/2003 18:08	

Diesel (C10-C24) by 8015m

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	**MW-5**	Lab ID:	2003-07-0730 - 5
Sampled:	07/22/2003 08:30	Extracted:	7/31/2003 05:53
Matrix:	Water	QC Batch#:	2003/07/31-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	190	50	ug/L	1.00	08/01/2003 23:12	ndp
Surrogates(s)						
o-Terphenyl	88.6	60-130	%	1.00	08/01/2003 23:12	

Diesel (C10-C24) by 8015m

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	**MW-6**	Lab ID:	2003-07-0730 - 6
Sampled:	07/22/2003 13:35	Extracted:	7/31/2003 05:53
Matrix:	Water	QC Batch#:	2003/07/31-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	08/01/2003 22:42	
Surrogates(s)						
o-Terphenyl	84.3	60-130	%	1.00	08/01/2003 22:42	

Diesel (C10-C24) by 8015m

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	**T-1**	Lab ID:	2003-07-0730 - 7
Sampled:	07/22/2003 09:00	Extracted:	7/31/2003 05:53
Matrix:	Water	QC Batch#:	2003/07/31-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	940	50	ug/L	1.00	08/01/2003 22:11	ndp
Surrogates(s)						
o-Terphenyl	90.8	60-130	%	1.00	08/01/2003 22:11	

Diesel (C10-C24) by 8015m

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Batch QC Report

Prep(s): 3510/8015M
Method Blank
MB: 2003/07/31-02.10-001

Water

Test(s): 8015M
QC Batch # 2003/07/31-02.10
Date Extracted: 07/31/2003 05:53

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	07/31/2003 18:28	
Surrogates(s)					
o-Terphenyl	92.3	60-130	%	07/31/2003 18:28	

Diesel (C10-C24) by 8015m

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Batch QC Report

Prep(s): 3510/8015M

Test(s): 8015M

Laboratory Control Spike **Water** **QC Batch # 2003/07/31-02.10**

LCS 2003/07/31-02.10-002 Extracted: 07/31/2003 Analyzed: 07/31/2003 17:07

LCSD 2003/07/31-02.10-003 Extracted: 07/31/2003 Analyzed: 07/31/2003 17:48

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	898	939	1000	89.8	93.9	4.5	60-130	25		
Surrogates(s)										
o-Terphenyl	20.9	21.1	20.0	104.6	105.7		60-130	0		

Diesel (C10-C24) by 8015m

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 03722-AC1
98995757

Received: 07/23/2003 16:05

Site: 105 5th Street, Oakland

Legend and Notes

Result Flag

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

76324

SHELL Chain Of Custody Record

Lab Identification (if necessary):
Address:
City, State, Zip:

Shell Project Manager to be Invoiced:
☑ SCIENCE & ENGINEERING
☐ TECHNICAL SERVICES
☐ CRMT HOUSTON

Karen Petryna

2003-07-0730

INCIDENT NUMBER (S&E ONLY): 9 8 9 9 5 7 5 7
SAP or CRMT NUMBER (TS/CRMT): [redacted]

DATE: 7/22/03
PAGE: 1 of 1

SAMPLING COMPANY	Blaine Tech Services
LOG CODE	BTSS
SITE ADDRESS (Street and City)	105 5th Street, Oakland
GLOBAL ID NO.	T0600102116
ADDRESS	1680 Rogers Avenue, San Jose, CA 95112
EDF DELIVERABLE TO (Responsible Party or Designee)	Anni Kreml
PHONE NO.	(510) 420-3335
E-MAIL	ShellOaklandEDF@cambria-env.com
CONSULTANT PROJECT NO.	BTS # 030722-AC1
PROJECT CONTACT (Hardcopy or PDF Report to)	Leon Gearhart
SAMPLER NAME(S) (Print)	Aaron Costa
TELEPHONE	408-573-0555
FAX	408-573-7771
E-MAIL	lgearhart@blainetech.com
LAB USE ONLY	

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

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

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

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

REQUESTED ANALYSIS

FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes

TEMPERATURE ON RECEIPT C°: 2.0 °C

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	1,2-DCA (8260B)	EDB (8260B)		TPH - Diesel, Extractable (8015m)	TBA	DIPE	TAME							FIELD NOTES
	MW-1	7/22	0805	W	5	X	X		X							X										
	MW-2	7/22	1200		5	X	X		X							X										
	MW-3	7/22	1220		5	X	X		X				X	X		X	X	X	X							
	MW-4	7/22	1225		5	X	X		X							X										
	MW-5	7/22	0830		5	X	X		X							X										
	MW-6	7/22	1335		5	X	X		X							X										
	T-1	7/22	0900		5	X	X		X							X										

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Aaron Costa	[signature]	7/23/03	1605
[signature] 1747 7/23/03			
	Nouna K	7-23-03	1727

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

10/16/00 Revision

WELL GAUGING DATA

Project # 030722-AC2 Date 7/22/03 Client 98995757

Site 105 5th 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					6.05	23.57	TOC	
MW-2	4					5.61	23.51		
MW-3	4					6.15	24.99		
MW-4	2					6.46	19.98		
MW-5	4					6.45	24.22		
MW-6	2					5.46	24.10		
T-1	12					5.70	11.57		
* gauged		w/ stinger							

SHELL WELL MONITORING DATA SHEET

BTS #: 030722-AC2	Site: 98995757
Sampler: AC	Date: 7/22/05
Well I.D.: MW-1	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): 23.57	Depth to Water (DTW): 6.05
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]: 9.55	

Purge Method:
- Bailer
- Disposable Bailer
- Positive Air Displacement
- X Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other_____

Sampling Method:
- X Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- Other: _____

1 Case Volume	Specified Volumes	Calculated Volume
11.3 (Gals.) X	3	= 33.9 Gals.

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
0755	70.4	7.1	482	55	11.5	clear, slight odor
0757	71.0	7.2	472	41	23	" "
0759	70.1	7.1	462	36	34.5	" "

Did well dewater? Yes (No) Gallons actually evacuated: 34.5

Sampling Date: 7/22/05 Sampling Time: 0805 Depth to Water: 8.79

Sample I.D.: MW-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

SHELL WELL MONITORING DATA SHEET

BTS #: 030722-AC2	Site: 98995757
Sampler: AC	Date: 7/22/03
Well I.D.: MW-2	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): 23.51	Depth to Water (DTW): 5.61
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]: 9.19	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; X Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: X Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

11.6 (Gals.) X	3	= 34.8 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1147	76.8	6.9	557	28	12	clear, odor
1150	76.8	6.8	434	19	24	" "
1153	76.0	6.8	460	16	36	" "

Did well dewater? Yes (No) Gallons actually evacuated: 36

Sampling Date: 7/22/03 Sampling Time: 1200 Depth to Water: 8.25

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 #: 030722-AC2	Site: 98995757
Sampler: AC	Date: 7/22/03
Well I.D.: MW-3	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): 24.99	Depth to Water (DTW): 6.15
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]: 9.91	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; X Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: X Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

12.24 (Gals.) X 3 = 36.6 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1207	74.7	6.8	1341	12	12.5	clear, odor
1210	71.8	6.9	1344	26	25	" "
1213	72.1	6.9	1182	15	37.5	" "

Did well dewater? Yes (No) Gallons actually evacuated: 37.5

Sampling Date: 7/22/03 Sampling Time: 1220 Depth to Water: 9.09

Sample I.D.: MW-3 Laboratory: (STL) Other_____

Analyzed for: (TPH-G) (BTEX) (MTBE) (TPH-D) Other: TBA, DIPE, TAME, EDB, 1,2DCA by 8260

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 #: 030722-AC2	Site: 98995757
Sampler: AC	Date: 7/22/03
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 19.98	Depth to Water (DTW): 6.46
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]: 9.16	

Purge Method: Bailer; Disposable Bailer; X Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: X Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

7.1 (Gals.) X	3	=	6.3 Gals.
1 Case Volume	Specified Volumes		Calculated Volume

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

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1243	74.0	6.7	1691	76	2.5	clear
1246	71.5	6.8	1747	48	5	"
1249	71.8	6.7	1758	22	7.5	"

Did well dewater? Yes (No) Gallons actually evacuated: 7.5

Sampling Date: 7/22/03 Sampling Time: 1255 Depth to Water: 7.44

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

SHELL WELL MONITORING DATA SHEET

BTS #: 030722-AC2	Site: 98995757
Sampler: AC	Date: 7/22/05
Well I.D.: MW-5	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): 24.22	Depth to Water (DTW): 6.45
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]: 10.00	

Purge Method:
- Bailer
- Disposable Bailer
- Positive Air Displacement
- X Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other_____

Sampling Method:
- X Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- Other: _____

11.5 (Gals.) X 3 = 34.5 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
0816	71.2	6.8	447	27	11.5	clear, odor
0819	72.3	6.8	459	29	23	" "
0822	71.1	6.8	472	25	34.5	" "

Did well dewater? Yes (No) Gallons actually evacuated: 34.5

Sampling Date: 7/22/05 Sampling Time: 0830 Depth to Water: 8.84

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 #: 030722-AC2	Site: 98995757
Sampler: AC	Date: 7/22/03
Well I.D.: MW-6	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 24.10	Depth to Water (DTW): 5.46
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]: 9.18	

Purge Method:
- Bailer
- Disposable Bailer
- X Positive Air Displacement
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other_____

Sampling Method:
- X Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- Other: _____

3 (Gals.) X 3 = 9 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1322	76.1	7.3	322	906	3	brown, cloudy
1326	76.0	7.2	345	658	6	" "
1329	76.3	7.2	348	601	9	" "

Did well dewater? Yes (No) Gallons actually evacuated: 9

Sampling Date: 7/22/03 Sampling Time: 1335 Depth to Water: 9.64 traffic

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 #: 030722-AC2	Site: 98995757
Sampler: AC	Date: 7/22/05
Well I.D.: T-1	Well Diameter: 2 3 4 6 8 (12)
Total Well Depth (TD): 16.57	Depth to Water (DTW): 5.70
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]: 6.87	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; X Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: X Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other:_____

34.4 (Gals.) X 3 = 103.2 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
0842	74.9	6.8	1077	5	35	clear, odor
0849	76.4	6.8	1098	3	70	" "
0856	77.2	6.8	1099	9	105	" "

Did well dewater? Yes (No) Gallons actually evacuated: 105

Sampling Date: 7/22/05 Sampling Time: 0900 Depth to Water: 6.40

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