New CW R0493

Shell Oil Products US

August 20, 2004

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

Subject: **Shell-branded Service Station**
610 Market Street
Oakland, California

Dear Mr. Chan:

Attached for your review and comment is a copy of the *Second 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

Karen Petryna

Karen Petryna
Sr. Environmental Engineer

20945 S. Wilmington Ave., Carson, CA 90810 Phone (559) 645-9306 Facsimile (559) 645-5643

CAMBRIA

August 20, 2004

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

Re: **Second Quarter 2004 Monitoring Report**
Shell-branded Service Station
610 Market Street
Oakland, California
Incident #99895750
Cambria Project #246-0594-002

Dear Mr. Chan:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US, Cambria Environmental Technology, Inc. (Cambria) is submitting this groundwater monitoring report in accordance with the reporting requirements of 23 CCR 2652d. The site is located on Market Street between Sixth and Seventh Streets in Oakland, California (Figures 1 and 2).

REMEDIATION SUMMARY

Mobile Dual-Phase Vacuum Extraction Treatment (DVE): From March to October 2000, Cambria coordinated mobile DVE from wells MW-2 and MW-3. Mobile DVE utilized a vacuum truck for extraction and off-hauling of groundwater. Carbon absorption vessels were used to abate extracted vapors. DVE was discontinued in October 2000 due to low groundwater-extraction volumes.

DVE and Soil Vapor Extraction (SVE) Pilot Test: On March 22, 2001, Cambria performed a short-term (1-day) DVE test on well MW-3 and a short-term (1-day) SVE test on tank backfill well T-1. The tests were conducted using an internal combustion engine as the extraction and abatement device.

SVE Pilot Test: Between October 8 and 12, 2001, Cambria conducted a long-term (5-day) SVE pilot test on tank backfill well T-1. The test was conducted using an internal combustion engine as the extraction and abatement device.

Cambria Environmental Technology, Inc.

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

Mobile Groundwater Extraction (GWE): As recommended in the August 29, 2001 *Site Conceptual Model and Pilot Test Report*, Cambria began coordinating weekly GWE from well MW-3 using a vacuum truck in August 2001. Beginning in January 2002, well MW-2 was added to the weekly GWE schedule at the site. Mobile GWE was discontinued on January 8, 2003 in anticipation of starting the GWE system.

GWE System: As recommended in the August 19, 2002 *Interim Remedial Action Plan*, a GWE system was installed to address the elevated methyl tertiary butyl ether (MTBE) concentrations detected in groundwater beneath the site. The GWE system was started on February 18, 2003.

The following table summarizes the estimated total petroleum hydrocarbon as gasoline (TPHg), benzene, and MTBE mass removed by application of the remedial methods discussed:

Table A - Mass Removal Summary

		TPHg (pounds)		Benzene (pounds)		MTBE (pounds)	
Method	Period	Vapor-phase	Dissolved-phase	Vapor-phase	Dissolved-phase	Vapor-phase	Dissolved-phase
Mobile DVE	03/15/00 – 10/27/00	35.1	0.537	1.49	0.024	5.03	10.6
DVE/SVE Test	03/22/01	1.96	0.032	0.009	0	2.08	1.25
SVE Test	10/08/01 – 10/12/01	15.8	NA	1.33	NA	35.9	NA
Mobile GWE	03/22/01 – 01/28/03	NA	2.84	NA	0.063	NA	60.0
GWE System	02/18/03 – 07/22/04	NA	46.6	NA	0.369	NA	137.7
Subtotal (per phase)		52.9	49.9	2.83	0.456	43.0	209.6
Total Mass Removed		**102.8 pounds**		**3.29 pounds**		**252.6 pounds**	

SECOND 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 which includes previously submitted well survey information (Figure 1) and a groundwater elevation contour map (Figure 2). Blaine's report, presenting the laboratory report and supporting field documents, is included as Attachment A.

Remedial Activities: Cambria started operating the fixed GWE system on February 18, 2003. Wells MW-2, MW-3, MW-6, MW-7, and MW-8 are used as extraction points. Currently, the system is only extracting from wells MW-3, MW-6, and MW-8. Table 1 summarizes system analytical data. Groundwater level measurements and flow meter readings have been recorded at various times of operation to assess system production. Table 2 summarizes the field data and system operation and calculates mass removal. Based on the field data, the GWE system operated at an average flow rate of approximately 2.25 gallons per minute.

As of August 8, 2004, a total of 1,458,893 gallons of groundwater has been extracted. A total of 46.6 pounds of TPHg, 0.369 pounds of benzene, and 137.7 pounds of MTBE has been recovered. Table 2 presents mass removal data.

ANTICIPATED THIRD QUARTER 2004 ACTIVITIES

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

Remedial Activities: Per Cambria's standard operating procedures and East Bay Municipal Utilities District (EBMUD) treatment-system monitoring requirements, Cambria will perform routine operation and maintenance of the GWE system. Cambria will monitor concentration trends and GWE system effectiveness. Cambria will prepare a quarterly discharge compliance report in accordance with the EBMUD wastewater discharge permit.

CLOSING

We appreciate the opportunity to work with you on this project. Please call Dan Lescure at (510) 420-3306 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc

Dan Lescure
Senior Project Engineer

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

REGISTERED PROFESSIONAL ENGINEER
MATTHEW W. DERBY
No. C055475
Exp. 12/31/04
CIVIL
STATE OF CALIFORNIA

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

Tables: 1 - Groundwater Extraction – System Analytical Data
2 - Groundwater Extraction – Operation and 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
Virginia R. Rawson, Tr., 1860 Tice Creek Drive #1353, Walnut Creek, CA 94595
Roger Schmidt, 1224 Contra Costa Dr., El Cerrito, CA 94530

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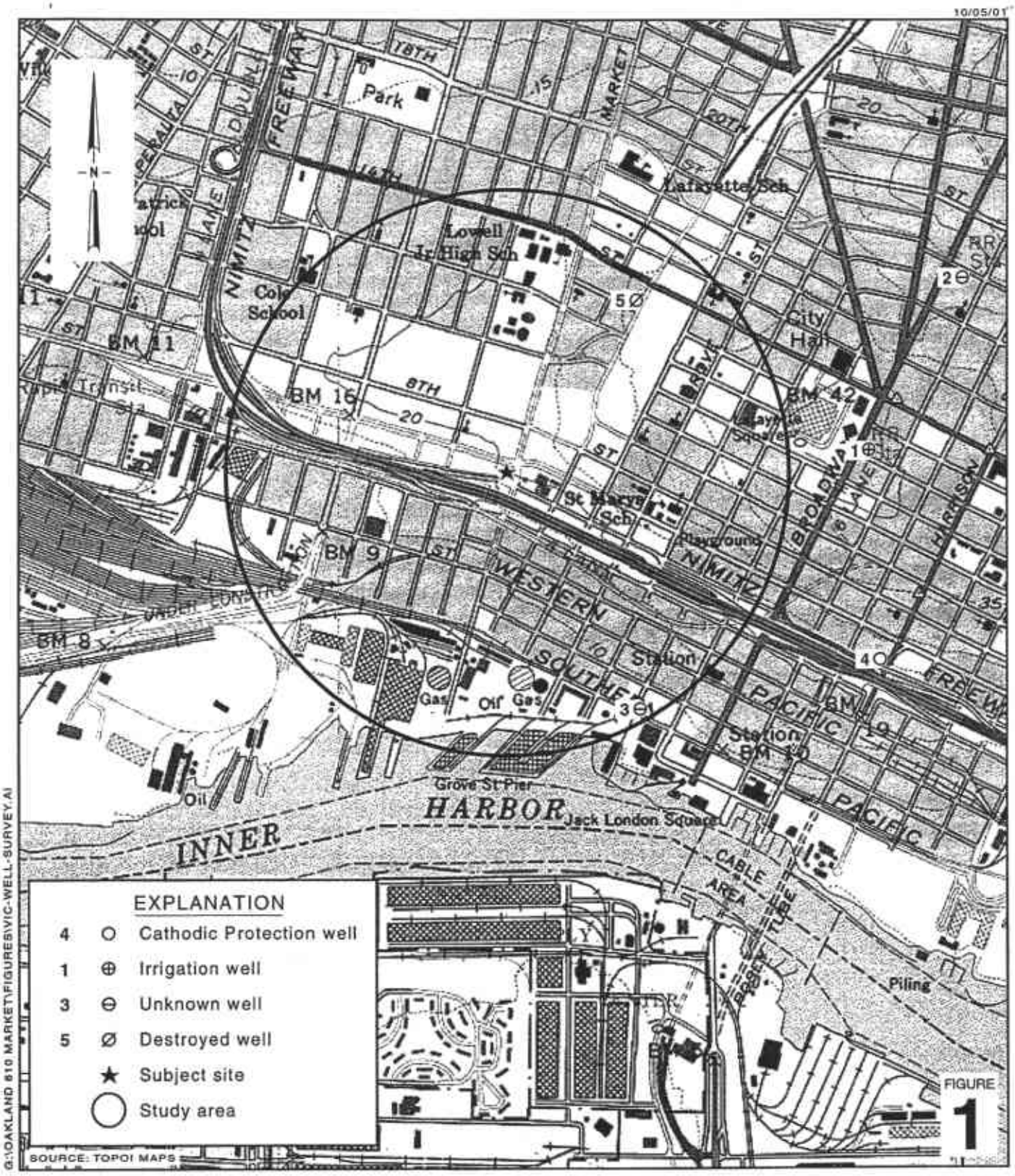

Shell-branded Service Station
610 Market Street
Oakland, California
Incident #98995750

CAMBRIA

Vicinity / Area Well Survey Map
1/2 Mile Radius

01/15/04

EXPLANATION

- MW-6 — Extraction well location
- MW-1 — Monitoring well location
- SB-A — Geoprobe boring (3/31/96)
- SB-D — Soil boring location (4/17/02)
- T1 — Tank backfill well (dry)
- → Groundwater flow direction
- XX.XX — Groundwater elevation contour, in feet above 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)
- Water Main (W)
- Gas line (G)
- Electrical line (E)
- Flow direction
- FL = 5.0 — Flowline elevation, in feet above mean sea level (msl)
- MH — Manhole
- Groundwater extraction system piping

MW-2
5.35
<0.50
110

MW-8
4.83
170
440

MW-6
3.23
<10
2,800

MW-5
6.50
<20
2,100

MW-7
5.86
<0.50
89

MW-3
3.03
<100
6,900

MW-4
6.65
<5.0
630

MW-1
7.43
1.8
15

MW-9
6.90
<0.50
8.3

SB-A, SB-B, SB-C, SB-D, SB-E, SB-F, T1, T2

6.00, 5.00, 4.00, 7.00

MARKET STREET

INTERSTATE 880 OVERPASS

INTERSTATE 880 OFFRAMP

6th STREET

7th STREET

5 dispensers

3 dispensers

carwash

EBMUD

PG&E

City of Oakland electrical

drain

USTs

Remediation Compound

FL = 5.8 · FL = 8.9 · FL = 8.0 · FL = 2.8 · FL = 3.3 · FL = 6.5 · FL = 8.20 · FL = 10.0 · FL = 5.6 · FL = 10.0

30" SD · 15" SD · 8" SS · 10" SS

0 20 40 80
SCALE 1:40 FEET

G:\OAKLAND\610MARKET\FIGURES\2QM04.AI

Groundwater Elevation Contour Map

June 15, 2004

CAMBRIA

Shell-branded Service Station
610 Market Street
Oakland, California
Incident #98995750

FIGURE
2

Table 1: Groundwater Extraction - System Analytical Data - Shell-branded Service Station, Incident #98995750, 610 Market St, Oakland, California

	Influent			Midfluent 1			Midfluent 2			Effluent		
Sample Date (mm/dd/yy)	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc (ppb)	TPHg Conc. (ppb)	Benzene Conc (ppb)	MTBE Conc. (ppb)	TPHg Conc. (ppb)	Benzene Conc (ppb)	MTBE Conc. (ppb)	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc (ppb)
02/18/2003	<20,000	270	93,000	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
02/25/2003	<20,000	<200	74,000	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
03/11/2003	<10,000	<100	47,000	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
03/25/2003	<10,000	<100	38,000	<250	<2.5	<25	<50	<0.50	<5.0	<50	<0.50	<5.0
04/07/2003	30,000	<250	33,000	<50	<0.50	<5.0	<50	<0.50	<5.0	<50	<0.50	<5.0
04/22/2003	<25,000	<250	26,000	<50	<0.50	2.6	<50	<0.50	<0.50	<50	<0.50	<0.50
05/01/2003	<10,000	<100	25,000	<50	<0.50	<5.0	<50	<0.50	<5.0	<50	<0.50	<5.0
05/20/2003	<10,000	<100	17,000	<500	<5.0	610	640	<0.50	<0.5	<50	<0.50	<0.5
06/03/2003	<10,000	<100	15,000	<5,000	<50	4000	<50	<0.50	<0.5	<50	<0.50	<0.5
06/17/2003	<10,000	<100	17,000	<25,000	<250	16,000	<50	<0.50	<5.0	<50	<0.50	<5.0
07/28/2003	<5,000	<50	7,100	<250	<2.5	420	<50	<0.50	<0.50	<50	<0.50	<0.50
08/11/2003	<2,500	<25	4,900	<250	<2.5	280	<50	<0.50	<0.50	<50	<0.50	<0.50
08/28/2003	<2,500	<25	7,700	<100	<1.0	260	<50	<0.50	<0.50	<50	<0.50	<0.50
09/08/2003	<2,500	<25	6,600	<50	<0.50	140	<50	<0.50	<0.50	<50	<0.50	<0.50
09/22/2003	<5,000	<50	5,700	<250	<2.5	230	<50	<0.50	<0.50	<50	<0.50	<0.50
10/08/2003	<2,500	<25	3,100	<50	<0.50	140	<50	<0.50	<0.50	<50	<0.50	<0.50
10/21/2003	<5,000	<50	3,800	<250	<2.5	180	<50	<0.50	<0.50	<50	<0.50	<0.50
11/06/2003	<1,000	<10	3,500	<50	<0.50	150	<50	<0.50	<0.50	<50	<0.50	<0.50
12/05/2003	<2,000	<20	3,400	<50	<0.50	130	<50	<0.50	<0.50	<50	<0.50	<0.50
01/09/2004	<2,000	<20	2,700	<50	<0.50	210	<50	<0.50	<0.50	<50	<0.50	<0.50
02/09/2004	<250	7.8	250	<50	<0.50	180	<50	<0.50	<0.50	<50	<0.50	<0.50
03/09/2004	<250	8.6	700	<100	<1.0	270	<50	<0.50	<0.50	<50	<0.50	<0.50
04/13/2004	<1,000	<10	1,900	<250	<2.5	570	<50	<0.50	<0.50	<50	<0.50	<0.50
05/10/2004	<1,000	<10	1,600	<250	<2.5	660	<50	<0.50	<0.50	<50	<0.50	<0.50

Table 1: Groundwater Extraction - System Analytical Data - Shell-branded Service Station, Incident #98995750, 610 Market St, Oakland, California

Sample Date (mm/dd/yy)	Influent			Midfluent 1			Midfluent 2			Effluent		
	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc (ppb)	TPHg Conc. (ppb)	Benzene Conc (ppb)	MTBE Conc. (ppb)	TPHg Conc. (ppb)	Benzene Conc (ppb)	MTBE Conc. (ppb)	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc (ppb)
06/08/2004	<5,000	50.0	1,100	<250	<2.5	920	<50	<0.50	<0.50	<50	<0.50	<0.50
07/07/2004	<1,000	<10	1,100	<500	<5.0	1,100	<50	<0.50	<0.50	<50	<0.50	<0.50

Abbreviations & Notes:

TPHg = Total purgeable hydrocarbons as gasoline
MTBE = Methyl tert-butyl ether
Conc. = Concentration
ppb = parts per billion, equivalent to µg/l
TPHg, benzene, and MTBE analyzed by EPA Method 8260B

Table 2: Groundwater Extraction - Operation and Mass Removal Data, Shell-branded Service Station, Incidcnt #98995750, 610 Market Street, Oakland, California

Site Visit (mm/dd/yy)	Hour Meter (hours	Uptime	Flow Meter Reading (gal)	Period Volume (gal)	Period Operational Flow Rate (gpm)	Cumulative Volume (gal)	TPHg Conc. (ppb)	TPHg Period Removal (pounds)	TPHg Cumulative Removal (pounds)	Benzene Conc. (ppb)	Benzene Period Removal (pounds)	Benzene Cumulative Removal (pounds)	MTBE Conc. (ppb)	MTBE Period Removal (pounds)	MTBE Cumulative Removal (pounds)
								TPHg			Benzene			MTBE	
02/18/03	0.0		100	0	0.00	0	<20,000	0.00000	0.00000	270	0.00000	0.00000	93,000	0.00000	0.00000
02/18/03	3.5		1,024	924	4.40	924		0.07710	0.07710		0.00208	0.00208		0.71705	0.71705
02/25/03	140.2	0.83	30,312	29,288	3.57	30,212	<20,000	2.44390	2.52100	<200	0.02444	0.02652	74,000	18.08482	18.80187
03/11/03	475.8	1.00	84,666	54,354	2.70	84,566	<10,000	2.26775	4.78874	<100	0.02268	0.04920	47,000	21.31681	40.11868
03/13/03	524.0	1.00	92,030	7,364	2.55	91,930		0.30724	5.09598		0.00307	0.05227		2.88805	43.00673
03/25/03	527.0	0.01	92,840	810	4.50	92,740	<10,000	0.03379	5.12978	<100	0.00034	0.05261	38,000	0.25684	43.26357
04/07/03	838.6	1.00	142,754	49,914	2.67	142,654	30,000	12.49501	17.62478	<250	0.05206	0.10467	33,000	13.74451	57.00807
04/14/03	985.4	0.87	165,205	22,451	2.55	165,105		5.62017	23.24496		0.02342	0.12809		6.18219	63.19027
04/22/03	1,184.1	1.03	197,360	32,155	2.70	197,260	<25,000	3.35391	26.59887	<250	0.03354	0.16163	26,000	6.97613	70.16640
04/29/03	1,305.4	0.72	216,450	19,090	2.62	216,350		1.99117	28.59004		0.01991	0.18154		4.14164	74.30804
05/01/03	1,351.3	0.96	223,850	7,400	2.69	223,750	<10,000	0.30874	28.89878	<100	0.00309	0.18463	25,000	1.54371	75.85174
05/20/03	1,783.0	0.95	291,620	67,770	2.62	291,520	<10,000	2.82749	31.72626	<100	0.02827	0.21290	17,000	9.61345	85.46519
06/03/03	2,122.1	1.01	341,643	50,023	2.46	341,543	<10,000	2.08705	33.81331	<100	0.02087	0.23377	15,000	6.26115	91.72634
06/17/03	2,456.1	0.99	388,001	46,358	2.31	387,901	<10,000	1.93414	35.74745	<100	0.01934	0.25311	17,000	6.57607	98.30241
06/30/03	2,766.0	0.99	429,880	41,879	2.25	429,780		1.74727	37.49472		0.01747	0.27059		5.94071	104.24311
07/14/03	3,095.9	0.98	473,549	43,669	2.21	473,449		1.82195	39.31667		0.01822	0.28881		6.19462	110.43774
07/28/03	3,423.7	0.98	514,826	41,277	2.10	514,726	<5,000	0.86107	40.17774	<50	0.00861	0.29742	7,100	2.44545	112.88319
08/11/03	3,761.9	1.01	545,750	30,924	1.52	545,650	<2,500	0.32255	40.50029	<25	0.00323	0.30064	4,900	1.26440	114.14759
08/28/03	4,171.0	1.00	595,525	49,775	2.03	595,425	<2,500	0.51918	41.01947	<25	0.00519	0.30583	7,700	3.19812	117.34571
09/08/03	4,435.4	1.00	626,720	31,195	1.97	626,620	<2,500	0.32538	41.34485	<25	0.00325	0.30909	6,600	1.71799	119.06371
09/22/03	4,769.9	1.00	665,449	38,729	1.93	665,349	<5,000	0.80792	42.15277	<50	0.00808	0.31717	5,700	1.84206	120.90577
10/08/03	5,084.6	0.82	701,104	35,655	1.89	701,004	<2,500	0.37190	42.52466	<25	0.00372	0.32089	3,100	0.92231	121.82807
10/21/03	5,396.7	1.00	735,644	34,540	1.84	735,544	<5,000	0.72054	43.24520	<50	0.00721	0.32809	3,800	1.09521	122.92329
11/06/03	5,785.7	1.01	778,218	42,574	1.82	778,118	<1,000	0.17763	43.42283	<10	0.00178	0.32987	3,500	1.24338	124.16667
11/19/03	6,097.1	1.00	810,223	32,005	1.71	810,123		0.13353	43.55636		0.00134	0.33120		0.93471	125.10139
12/05/03	6,481.6	1.00	849,610	39,387	1.71	849,510	<2,000	0.32866	43.88502	<20	0.00329	0.33449	3,400	1.11744	126.21883
12/23/03	6,909.0	0.99	898,595	48,985	1.91	898,495		0.40875	44.29376		0.00409	0.33858		1.38974	127.60857
01/02/04	7,057.2	0.62	917,835	19,240	2.16	917,735		0.16055	44.45431		0.00161	0.34018		0.54585	128.15443
01/09/04	7,170.7	0.68	941,766	23,931	3.51	941,666	<2,000	0.19969	44.65400	<20	0.00200	0.34218	2,700	0.53916	128.69358
01/21/04	7,461.1	1.01	986,590	44,824	2.57	986,490		0.37403	45.02803		0.00374	0.34592		1.00987	129.70346
02/09/04	7,492.3	0.07	991,309	4,719	2.52	991,209	<250	0.00492	45.03295	7.8	0.00031	0.34623	250	0.00984	129.71330
02/25/04	7,872.5	0.99	1,048,823	57,514	2.52	1,048,723		0.05999	45.09294		0.00374	0.34997		0.11998	129.83328
03/09/04	7,952.6	0.26	1,062,912	14,089	2.93	1,062,812	<250	0.01470	45.10763	8.6	0.00101	0.35098	700	0.08229	129.91558
03/23/04	8,285.6	0.99	1,117,340	54,428	2.72	1,117,240		0.05677	45.16440		0.00391	0.35489		0.31792	130.23349
04/13/04	8,792.3	1.01	1,191,229	73,889	2.43	1,191,129	<1,000	0.30828	45.47268	<10	0.00308	0.35797	1,900	1.17146	131.40495

Table 2: Groundwater Extraction - Operation and Mass Removal Data, Shell-branded Service Station, Incident #98995750, 610 Market Street, Oakland, California

Site Visit (mm/dd/yy)	Hour Meter (hours	Uptime	Flow Meter Reading (gal)	Period Volume (gal)	Period Operational Flow Rate (gpm)	Cumulative Volume (gal)	TPHg Conc. (ppb)	TPHg Period Removal (pounds)	TPHg Cumulative Removal (pounds)	Benzene Conc. (ppb)	Benzene Period Removal (pounds)	Benzene Cumulative Removal (pounds)	MTBE Conc. (ppb)	MTBE Period Removal (pounds)	MTBE Cumulative Removal (pounds)
04/29/04	9,010.2	0.57	1,221,189	29,960	2.29	1,221,089		0.12500	45.59768		0.00125	0.35922		0.47499	131.87994
05/10/04	9,273.9	1.00	1,256,838	35,649	2.25	1,256,738	<1,000	0.14873	45.74641	<10	0.00149	0.36071	1,600	0.47595	132.35589
05/29/04	9,633.5	0.79	1,299,232	42,394	1.96	1,299,132		0.17688	45.92329		0.00177	0.36248		0.56600	132.92189
06/09/04	9,784.0	1.00	1,317,792	18,560	2.06	1,317,692	<1,000	0.07744	46.00073	<10	0.00077	0.36325	8,400	1.30092	134.22281
06/22/04	10,092.7	0.80	1,353,124	35,332	1.28	1,334,464		0.14741	46.14814		0.00147	0.36472		2.47651	136.69932
07/07/04	10,452.9	1.00	1,392,516	39,392	0.98	1,357,084	<1,000	0.16435	46.31249	<10	0.00164	0.36637	1,100	0.36157	137.06090
07/22/04	10,815.9	1.00	1,431,329	38,813	0.89	1,373,277		0.16193	46.47442		0.00162	0.36799		0.35626	137.41715
08/03/04	11,101.8	1.00	1,458,993	27,664	0.71	1,384,748		0.11542	46.58984		0.00115	0.36914		0.25392	137.67107
				Total Extracted Volume:		**1,458,893**	**Total Pounds Removed:**		**46.58984**	**Total Pounds Removed:**		**0.36914**	**Total Pounds Removed:**		**137.67107**
				Average Operational Flow Rate:		**2.25**	**Total Gallons Removed:**		**7.64849**	**Total Gallons Removed:**		**0.05085**	**Total Gallons Removed:**		**22.29555**

Abbreviations & Notes:

TPHg = Total purgeable hydrocarbons as gasoline
MTBE = Methyl tert-butyl ether
Conc. = Concentration
ppb = Parts per billion, equivalent to µg/L
µg/L = Micrograms per liter
L = Liter
gal = Gallon
g = Gram
Mass removed based on the formula: volume extracted (gal) x Concentration (µg/L) x ($g/10^6 \mu g$) x (pound/453.6g) x (3.785 L/gal)
When constituents are not detected, the concentration is assumed to be equal to half the detection limit in subsequent calculations.
Volume removal data based on the formula: mass (pounds) x $(density)^{-1}$ (cc/g) x 453.6 (g/pound) x (L/1000 cc) * (gal/3.785 L)
Density inputs: TPHg = 0.73 g/cc, TPHd = 0.87 g/cc, MTBE = 0.74 g/cc
TPHg, BTEX, and MTBE analyzed by EPA Method 8260B

ATTACHMENT A

Blaine Groundwater Monitoring Report and Field Notes

BLAINE
TECH SERVICES INC.

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July 8, 2004

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

Second Quarter 2004 Groundwater Monitoring at
Shell-branded Service Station
610 Market Street
Oakland, CA

Monitoring performed on June 15, 2004

Groundwater Monitoring Report **040615-DW-1**

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

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 Sheet

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

WELL CONCENTRATIONS
Shell-branded Service Station
610 Market Street
Oakland, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-1	12/17/1998	2,200	20	<10	110	420	<50	NA	21.70	13.71	7.99
MW-1	03/09/1999	4,320	25.8	<10.0	338	474	<100	NA	21.70	13.03	8.67
MW-1	06/16/1999	6,150	107	84.0	615	1,050	<250	NA	21.70	13.82	7.88
MW-1	09/29/1999	3,440	97.3	58.7	433	578	89.1	NA	21.70	14.45	7.25
MW-1	12/22/1999	1,370	34.5	4.38	196	49.1	29.3	NA	21.70	15.39	6.31
MW-1	03/21/2000	2,550	10.3	3.36	164	312	65.6	NA	21.70	11.94	9.76
MW-1	06/20/2000	4,770	64.3	18.6	387	732	51.3	NA	21.70	13.15	8.55
MW-1	09/21/2000	7,490	350	229	690	1,490	160	NA	21.70	13.65	8.05
MW-1	11/30/2000	5,410	420	168	494	1,170	167	NA	21.70	14.20	7.50
MW-1	03/06/2001	965	25.7	9.14	13.3	9.12	<25.0	NA	21.70	12.99	8.71
MW-1	06/28/2001	5,900	190	71	360	910	NA	110	21.70	13.98	7.72
MW-1	09/12/2001	7,400	240	110	460	1,300	NA	130	21.70	14.15	7.55
MW-1	12/12/2001	1,700	100	30	120	300	NA	98	21.70	13.75	7.95
MW-1	03/08/2002	1,100	63	12	74	83	NA	50	21.70	13.22	8.48
MW-1	06/06/2002	2,300	95	31	130	290	NA	49	21.70	13.57	8.13
MW-1	09/09/2002	3,600	150	44	200	590	NA	54	21.70	14.05	7.65
MW-1	12/12/2002	2,200	130	14	120	310	NA	46	21.70	14.20	7.50
MW-1	02/26/2003	580	30	2.9	25	48	NA	27	21.70	13.57	8.13
MW-1	04/15/2003	NA	NA	NA	NA	NA	NA	NA	21.70	13.67	8.03
MW-1	06/13/2003	440	18	6.1	33	88	NA	24	21.70	13.85	7.85
MW-1	09/26/2003	54	3.8	0.51	4.7	7.5	NA	11	21.70	14.63	7.07
MW-1	11/24/2003	120	5.6	0.87	8.4	20	NA	17	21.70	14.86	6.84
MW-1	03/01/2004	350	20	3.8	38	100	NA	18	21.70	12.85	8.85
MW-1	**06/15/2004**	**100**	**1.8**	**<0.50**	**2.6**	**6.1**	**NA**	**15**	**21.70**	**14.27**	**7.43**
MW-2	12/17/1998	<5,000	<50	<50	<50	<50	11,000	NA	19.61	12.07	7.54

WELL CONCENTRATIONS
Shell-branded Service Station
610 Market Street
Oakland, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-2	03/09/1999	<250	5.20	<2.50	<2.50	<2.50	9,870	NA	19.61	11.46	8.15
MW-2	06/16/1999	<50.0	0.569	<0.500	<0.500	<0.500	3,440	NA	19.61	12.26	7.35
MW-2	09/29/1999	58.6	2.51	0.978	<0.500	<0.500	3,930	NA	19.61	12.51	7.10
MW-2	12/22/1999	<2,000	50.4	<20.0	<20.0	<20.0	15,000	NA	19.61	13.40	6.21
MW-2	03/21/2000	<5,000	94.7	<50.0	<50.0	<50.0	13,900	NA	19.61	10.36	9.25
MW-2	06/20/2000	101	5.95	<0.500	<0.500	0.552	7,670	NA	19.61	11.12	8.49
MW-2	09/21/2000	<2,000	<20.0	<20.0	<20.0	<20.0	4,460	NA	19.61	11.95	7.66
MW-2	11/30/2000	81.1	4.46	0.924	0.841	3.23	3,450	NA	19.61	12.48	7.13
MW-2	03/06/2001	<500	183	<5.00	<5.00	<5.00	14,000	NA	19.61	11.10	8.51
MW-2	06/28/2001	<1,000	<10	<10	<10	<10	NA	4,200	19.61	12.40	7.21
MW-2	09/12/2001	<2,000	120	<20	<20	<20	NA	17,000	19.61	12.45	7.16
MW-2	12/12/2001	<1,000	<10	<10	<10	<10	NA	3,000	19.61	12.14	7.47
MW-2	03/08/2002	<250	<2.5	<2.5	<2.5	<2.5	NA	1,100	19.61	11.68	7.93
MW-2	06/06/2002	<500	<5.0	<5.0	<5.0	<5.0	NA	2,000	19.61	11.95	7.66
MW-2	09/09/2002	<200	<2.0	<2.0	<2.0	<2.0	NA	740	19.62	12.38	7.24
MW-2	12/12/2002	<200	<2.0	<2.0	<2.0	<2.0	NA	1,000	19.62	12.40	7.22
MW-2	02/26/2003	<500	<5.0	<5.0	<5.0	<5.0	NA	1,600	19.62	12.69	6.93
MW-2	04/15/2003	NA	NA	NA	NA	NA	NA	NA	19.62	12.81	6.81
MW-2	06/13/2003	<500	<5.0	<5.0	<5.0	<10	NA	790	19.62	12.65	6.97
MW-2	09/26/2003	<250	<2.5	<2.5	<2.5	<5.0	NA	250	18.20	12.95	5.25
MW-2	11/24/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	87	18.20	12.89	5.31
MW-2	03/01/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	35	18.20	10.08	8.12
MW-2	**06/15/2004**	**66 b**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**NA**	**110**	**18.20**	**12.85**	**5.35**
MW-3	12/17/1998	30,000	890	110	2,100	4,300	42,000	43,000	19.05	11.65	7.40
MW-3	03/09/1999	22,700	536	<200	1,030	1,510	35,400	38,500	19.05	11.03	8.02

WELL CONCENTRATIONS
Shell-branded Service Station
610 Market Street
Oakland, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-3	06/16/1999	19,300	625	129	805	1,210	42,400	51,600	19.05	11.89	7.16
MW-3	09/29/1999	20,200	727	155	1,000	1,180	84,100	136,000a	19.05	12.35	6.70
MW-3	12/22/1999	44,500	767	64.4	1,810	2,090	191,000	186,000a	19.05	13.45	5.60
MW-3	03/21/2000	<25,000	466	<250	727	2,280	126,000	155,000	19.05	10.00	9.05
MW-3	06/20/2000	16,200	1,140	98.8	1,140	1,410	579,000	376,000a	19.05	11.15	7.90
MW-3	09/21/2000	<50,000	712	<500	520	795	293,000	298,000	19.05	11.58	7.47
MW-3	11/30/2000	18,000	1,050	124	1,120	2,010	543,000a	403,000a	19.05	12.10	6.95
MW-3	03/06/2001	19,900	1,290	115	1,450	1,760	706,000	149,000	19.05	11.00	8.05
MW-3	06/28/2001	<50,000	1,200	<250	1,100	1,300	NA	610,000	19.05	11.96	7.09
MW-3	09/12/2001	<20,000	430	<200	230	480	NA	390,000	19.05	12.05	7.00
MW-3	10/23/2001	11,000	350	<100	210	440	NA	290,000	19.05	12.62	6.43
MW-3	12/12/2001	<20,000	280	<200	<200	<200	NA	160,000	19.05	11.83	7.22
MW-3	03/08/2002	<20,000	270	<200	<200	<200	NA	340,000	19.05	11.26	7.79
MW-3	06/06/2002	<50,000	290	<250	<250	<250	NA	290,000	19.05	11.50	7.55
MW-3	09/09/2002	<20,000	<200	<200	<200	<200	NA	230,000	19.06	11.92	7.14
MW-3	12/12/2002	<50,000	<200	<200	<200	<500	NA	190,000	19.06	10.95	8.11
MW-3	02/26/2003	<25,000	<250	<250	<250	<250	NA	210,000	19.06	15.01	4.05
MW-3	04/15/2003	NA	NA	NA	NA	NA	NA	NA	19.06	15.12	3.94
MW-3	06/13/2003	<25,000	<250	<250	<250	<500	NA	27,000	19.06	15.25	3.81
MW-3	09/26/2003	<10,000	<100	<100	<100	<200	NA	15,000	18.08	16.65 c	NA
MW-3	11/24/2003	<10,000	<100	<100	<100	<200	NA	9,900	18.08	15.13	2.95
MW-3	03/01/2004	<10,000	<100	<100	<100	<200	NA	8,000	18.08	9.97	8.11
MW-3	**06/15/2004**	**<10,000**	**<100**	**<100**	**<100**	**<200**	**NA**	**6,900**	**18.08**	**15.05**	**3.03**
MW-4	05/13/2002	NA	NA	NA	NA	NA	NA	NA	NA	10.64	NA
MW-4	05/20/2002	<1,000	<10	<10	<10	<10	NA	4,600	NA	10.64	NA

WELL CONCENTRATIONS
Shell-branded Service Station
610 Market Street
Oakland, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft)	GW Elevation (MSL)
MW-4	06/06/2002	<1,000	<10	<10	<10	<10	NA	4,800	NA	10.61	NA
MW-4	09/09/2002	Unable to sample		NA	NA	NA	NA	NA	18.03	11.07	6.96
MW-4	09/18/2002	<250	<2.5	<2.5	<2.5	<2.5	NA	1,000	18.03	11.15	6.88
MW-4	12/12/2002	<100	<1.0	<1.0	<1.0	<1.0	NA	370	18.03	11.13	6.90
MW-4	02/26/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	18.03	10.61	7.42
MW-4	04/15/2003	NA	NA	NA	NA	NA	NA	NA	18.03	10.73	7.30
MW-4	06/13/2003	180 b	<0.50	110	<0.50	<1.0	NA	2.3	18.03	10.88	7.15
MW-4	09/26/2003	<5,000	<50	<50	<50	<100	NA	13,000	18.03	11.58	6.45
MW-4	11/24/2003	<13,000	<130	<130	<130	<250	NA	11,000	18.03	11.78	6.25
MW-4	03/01/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	18.03	9.47	8.56
MW-4	**06/15/2004**	**<500**	**<5.0**	**<5.0**	**<5.0**	**<10**	**NA**	**630**	**18.03**	**11.38**	**6.65**
MW-5	05/13/2002	NA	NA	NA	NA	NA	NA	NA	NA	10.40	NA
MW-5	05/20/2002	<2,500	<25	<25	<25	<25	NA	17,000	NA	10.41	NA
MW-5	06/06/2002	<5,000	<50	<50	<50	<50	NA	15,000	NA	10.36	NA
MW-5	09/09/2002	Unable to sample		NA	NA	NA	NA	NA	17.78	10.82	6.96
MW-5	09/18/2002	<2,500	<25	<25	<25	<25	NA	16,000	17.78	10.81	6.97
MW-5	12/12/2002	<2,500	<25	<25	<25	<25	NA	13,000	17.78	10.83	6.95
MW-5	02/26/2003	<2,000	<20	<20	<20	<20	NA	7,500	17.78	10.57	7.21
MW-5	04/15/2003	NA	NA	NA	NA	NA	NA	NA	17.78	10.69	7.09
MW-5	06/13/2003	<2,500	<25	<25	<25	<50	NA	4,400	17.78	10.82	6.96
MW-5	09/26/2003	<2,500	<25	<25	<25	<50	NA	4,700	17.78	11.49	6.29
MW-5	11/24/2003	<10,000	<100	<100	<100	<200	NA	7,100	17.78	11.70	6.08
MW-5	03/01/2004	<2,000	<20	<20	<20	<40	NA	2,800	17.78	9.68	8.10
MW-5	**06/15/2004**	**<2,000**	**<20**	**<20**	**<20**	**<40**	**NA**	**2,100**	**17.78**	**11.28**	**6.50**

WELL CONCENTRATIONS
Shell-branded Service Station
610 Market Street
Oakland, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-6	03/28/2003	Well inaccessible		NA	NA	NA	NA	NA	18.10	NA	NA
MW-6	04/07/2003	NA	NA	NA	NA	NA	NA	NA	18.10	13.80	4.30
MW-6	04/15/2003	14,000	<250	<250	<250	<500	NA	41,000	18.10	15.05	3.05
MW-6	06/13/2003	<10,000	<100	<100	<100	<200	NA	27,000	18.10	14.42	3.68
MW-6	09/26/2003	<5,000	<50	<50	<50	<100	NA	11,000	18.05	18.35 c	NA
MW-6	11/24/2003	<10,000	<100	<100	<100	<200	NA	5,000	18.05	14.68	3.37
MW-6	03/01/2004	<1,000	<10	<10	<10	<20	NA	2,500	18.05	9.84	8.21
MW-6	**06/15/2004**	**<1,000**	**<10**	**<10**	**<10**	**<20**	**NA**	**2,800**	**18.05**	**14.82**	**3.23**
MW-7	03/28/2003	Well inaccessible		NA	NA	NA	NA	NA	19.16	NA	NA
MW-7	04/07/2003	NA	NA	NA	NA	NA	NA	NA	19.16	13.85	5.31
MW-7	04/15/2003	6,000	<100	<100	<100	<200	NA	19,000	19.16	13.95	5.21
MW-7	06/13/2003	<5,000	<50	<50	<50	<100	NA	5,700	19.16	13.92	5.24
MW-7	09/26/2003	<250	<2.5	<2.5	<2.5	<5.0	NA	110	19.13	13.85	5.28
MW-7	11/24/2003	<50	<0.50	0.59	<0.50	1.7	NA	7.6	19.13	13.99	5.14
MW-7	03/01/2004	67 b	<0.50	<0.50	<0.50	<1.0	NA	120	19.13	10.85	8.28
MW-7	**06/15/2004**	**120 b**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**NA**	**89**	**19.13**	**13.27**	**5.86**
MW-8	03/28/2003	Well inaccessible		NA	NA	NA	NA	NA	18.72	NA	NA
MW-8	04/07/2003	NA	NA	NA	NA	NA	NA	NA	18.72	14.13	4.59
MW-8	04/15/2003	890	29	22	15	71	NA	430	18.72	14.10	4.62
MW-8	06/13/2003	NA	NA	NA	NA	NA	NA	NA	18.72	13.94	4.78
MW-8	09/26/2003	<250	55	51	33	140	NA	330	18.71	14.21	4.50
MW-8	11/24/2003	<5,000	<50	<50	<50	<100	NA	5,600	18.71	14.16	4.55
MW-8	03/01/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	12	18.71	10.34	8.37
MW-8	**06/15/2004**	**2,800**	**170**	**240**	**140**	**560**	**NA**	**440**	**18.71**	**13.88**	**4.83**

WELL CONCENTRATIONS
Shell-branded Service Station
610 Market Street
Oakland, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-9	03/28/2003	NA	NA	NA	NA	NA	NA	NA	18.78	11.19	7.59
MW-9	04/15/2003	420	<2.5	<2.5	<2.5	6.3	NA	37	18.78	11.24	7.54
MW-9	06/13/2003	290 b	<0.50	<0.50	<0.50	2.6	NA	34	18.78	11.39	7.39
MW-9	09/26/2003	540 b	<0.50	<0.50	<0.50	9.2	NA	21	18.78	12.12	6.66
MW-9	11/24/2003	650 d	<0.50	<0.50	<0.50	6.3	NA	14	18.78	12.30	6.48
MW-9	03/01/2004	230 d	<0.50	<0.50	<0.50	1.7	NA	7.7	18.78	10.45	8.33
MW-9	**06/15/2004**	**280**	**<0.50**	**<0.50**	**<0.50**	**1.9**	**NA**	**8.3**	**18.78**	**11.88**	**6.90**

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to June 28, 2001, analyzed by EPA Method 8015.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to June 28, 2001, analyzed by EPA Method 8020.

MTBE = Methyl tertiary butyl ether

TOC = Top of Casing Elevation

GW = Groundwater

ug/L = Parts per billion

MSL = Mean sea level

ft = Feet

<n = Below detection limit

NA = Not applicable

WELL CONCENTRATIONS
Shell-branded Service Station
610 Market Street
Oakland, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft)	GW Elevation (MSL)

Notes:

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

b = Hydrocarbon reported does not match the labaratory standard.

c = Measurement is depth to top of pump; unable to reach water with sounder.

d = Sample contains discrete peaks in addition to gasoline.

Wells MW-1, MW-2, and MW-3 surveyed December 9, 1998 by Virgil Chavez Land Surveying of Vallejo, CA.

Wells MW-6 through MW-9 surveyed April 10, 2003 by Virgil Chavez Land Surveying of Vallejo, CA.

Wells MW-2, MW-3, MW-6, MW-7, and MW-8 surveyed September 23, 2003 by Virgil Chavez Land Surveying of Vallejo, CA.

SEVERN TRENT STL

Submission#: 2004-06-0559

Blaine Tech Services, Inc.

June 29, 2004

1680 Rogers Avenue
San Jose, CA 95112-1105

Attn.: Leon Gearhart

Project#: 040615-DW1
Project: 98995750
Site: 610 Market Street, Oakland

Dear Mr.Gearhart,

Attached is our report for your samples received on 06/15/2004 18:27
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 07/30/2004 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

Sincerely,

Vincent Vancil
Project Manager

SEVERN TRENT STL

Submission: 2004-06-0559

Gas/BTEX/MTBE 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: 040615-DW1
98995750

Received: 06/15/2004 18:27

Site: 610 Market Street, Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-1	06/15/2004 12:43	Water	1
MW-2	06/15/2004 10:48	Water	2
MW-3	06/15/2004 11:25	Water	3
MW-4	06/15/2004 11:57	Water	4
MW-5	06/15/2004 13:03	Water	5
MW-6	06/15/2004 11:20	Water	6
MW-7	06/15/2004 11:08	Water	7
MW-8	06/15/2004 10:20	Water	8
MW-9	06/15/2004 12:20	Water	9

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 040615-DW1
98995750

Received: 06/15/2004 18:27

Site: 610 Market Street, Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**MW-1**	Lab ID:	2004-06-0559 - 1
Sampled:	06/15/2004 12:43	Extracted:	6/22/2004 20:08
Matrix:	Water	QC Batch#:	2004/06/22-2A.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	100	50	ug/L	1.00	06/22/2004 20:08	
Benzene	1.8	0.50	ug/L	1.00	06/22/2004 20:08	
Toluene	ND	0.50	ug/L	1.00	06/22/2004 20:08	
Ethylbenzene	2.6	0.50	ug/L	1.00	06/22/2004 20:08	
Total xylenes	6.1	1.0	ug/L	1.00	06/22/2004 20:08	
Methyl tert-butyl ether (MTBE)	15	0.50	ug/L	1.00	06/22/2004 20:08	
Surrogate(s)						
1,2-Dichloroethane-d4	98.0	76-130	%	1.00	06/22/2004 20:08	
Toluene-d8	95.0	78-115	%	1.00	06/22/2004 20:08	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

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Project: 040615-DW1
98995750

Received: 06/15/2004 18:27

Site: 610 Market Street, Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**MW-2**	Lab ID:	2004-06-0559 - 2
Sampled:	06/15/2004 10:48	Extracted:	6/22/2004 20:32
Matrix:	Water	QC Batch#:	2004/06/22-2A.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	66	50	ug/L	1.00	06/22/2004 20:32	g
Benzene	ND	0.50	ug/L	1.00	06/22/2004 20:32	
Toluene	ND	0.50	ug/L	1.00	06/22/2004 20:32	
Ethylbenzene	ND	0.50	ug/L	1.00	06/22/2004 20:32	
Total xylenes	ND	1.0	ug/L	1.00	06/22/2004 20:32	
Methyl tert-butyl ether (MTBE)	110	0.50	ug/L	1.00	06/22/2004 20:32	
Surrogate(s)						
1,2-Dichloroethane-d4	100.4	76-130	%	1.00	06/22/2004 20:32	
Toluene-d8	97.9	78-115	%	1.00	06/22/2004 20:32	

Gas/BTEX/MTBE by 8260B (C6-C12)

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Project: 040615-DW1
98995750

Received: 06/15/2004 18:27

Site: 610 Market Street, Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**MW-3**	Lab ID:	2004-06-0559 - 3
Sampled:	06/15/2004 11:25	Extracted:	6/22/2004 20:56
Matrix:	Water	QC Batch#:	2004/06/22-2A.66

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	10000	ug/L	200.00	06/22/2004 20:56	
Benzene	ND	100	ug/L	200.00	06/22/2004 20:56	
Toluene	ND	100	ug/L	200.00	06/22/2004 20:56	
Ethylbenzene	ND	100	ug/L	200.00	06/22/2004 20:56	
Total xylenes	ND	200	ug/L	200.00	06/22/2004 20:56	
Methyl tert-butyl ether (MTBE)	6900	100	ug/L	200.00	06/22/2004 20:56	
Surrogate(s)						
1,2-Dichloroethane-d4	99.5	76-130	%	200.00	06/22/2004 20:56	
Toluene-d8	97.5	78-115	%	200.00	06/22/2004 20:56	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

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

Project: 040615-DW1
98995750

Received: 06/15/2004 18:27

Site: 610 Market Street, Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**MW-4**	Lab ID:	2004-06-0559 - 4
Sampled:	06/15/2004 11:57	Extracted:	6/24/2004 15:39
Matrix:	Water	QC Batch#:	2004/06/24-1C.68

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	500	ug/L	10.00	06/24/2004 15:39	
Benzene	ND	5.0	ug/L	10.00	06/24/2004 15:39	
Toluene	ND	5.0	ug/L	10.00	06/24/2004 15:39	
Ethylbenzene	ND	5.0	ug/L	10.00	06/24/2004 15:39	
Total xylenes	ND	10	ug/L	10.00	06/24/2004 15:39	
Methyl tert-butyl ether (MTBE)	630	5.0	ug/L	10.00	06/24/2004 15:39	
Surrogate(s)						
1,2-Dichloroethane-d4	94.7	76-130	%	10.00	06/24/2004 15:39	
Toluene-d8	94.0	78-115	%	10.00	06/24/2004 15:39	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 040615-DW1
98995750

Received: 06/15/2004 18:27

Site: 610 Market Street, Oakland

Prep(s): 5030B
Test(s): 8260B

Sample ID: **MW-5**
Lab ID: 2004-06-0559 - 5

Sampled: 06/15/2004 13:03
Extracted: 6/23/2004 13:03

Matrix: Water
QC Batch#: 2004/06/23-1D.62

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	2000	ug/L	40.00	06/23/2004 13:03	
Benzene	ND	20	ug/L	40.00	06/23/2004 13:03	
Toluene	ND	20	ug/L	40.00	06/23/2004 13:03	
Ethylbenzene	ND	20	ug/L	40.00	06/23/2004 13:03	
Total xylenes	ND	40	ug/L	40.00	06/23/2004 13:03	
Methyl tert-butyl ether (MTBE)	2100	20	ug/L	40.00	06/23/2004 13:03	
Surrogate(s)						
1,2-Dichloroethane-d4	105.7	76-130	%	40.00	06/23/2004 13:03	
Toluene-d8	100.1	78-115	%	40.00	06/23/2004 13:03	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

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Project: 040615-DW1
98995750

Received: 06/15/2004 18:27

Site: 610 Market Street, Oakland

Prep(s): 5030B
Test(s): 8260B
Sample ID: **MW-6**
Lab ID: 2004-06-0559 - 6
Sampled: 06/15/2004 11:20
Extracted: 6/22/2004 22:08
Matrix: Water
QC Batch#: 2004/06/22-2A.66
Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/L	20.00	06/22/2004 22:08	
Benzene	ND	10	ug/L	20.00	06/22/2004 22:08	
Toluene	ND	10	ug/L	20.00	06/22/2004 22:08	
Ethylbenzene	ND	10	ug/L	20.00	06/22/2004 22:08	
Total xylenes	ND	20	ug/L	20.00	06/22/2004 22:08	
Methyl tert-butyl ether (MTBE)	2800	10	ug/L	20.00	06/22/2004 22:08	
Surrogate(s)						
1,2-Dichloroethane-d4	125.3	76-130	%	20.00	06/22/2004 22:08	
Toluene-d8	103.2	78-115	%	20.00	06/22/2004 22:08	

Gas/BTEX/MTBE 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: 040615-DW1
98995750

Received: 06/15/2004 18:27

Site: 610 Market Street, Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**MW-7**	Lab ID:	2004-06-0559 - 7
Sampled:	06/15/2004 11:08	Extracted:	6/22/2004 22:32
Matrix:	Water	QC Batch#:	2004/06/22-2A.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	120	50	ug/L	1.00	06/22/2004 22:32	g
Benzene	ND	0.50	ug/L	1.00	06/22/2004 22:32	
Toluene	ND	0.50	ug/L	1.00	06/22/2004 22:32	
Ethylbenzene	ND	0.50	ug/L	1.00	06/22/2004 22:32	
Total xylenes	ND	1.0	ug/L	1.00	06/22/2004 22:32	
Methyl tert-butyl ether (MTBE)	89	0.50	ug/L	1.00	06/22/2004 22:32	
Surrogate(s)						
1,2-Dichloroethane-d4	98.5	76-130	%	1.00	06/22/2004 22:32	
Toluene-d8	99.7	78-115	%	1.00	06/22/2004 22:32	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

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Project: 040615-DW1
98995750

Received: 06/15/2004 18:27

Site: 610 Market Street, Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**MW-8**	Lab ID:	2004-06-0559 - 8
Sampled:	06/15/2004 10:20	Extracted:	6/23/2004 13:25
Matrix:	Water	QC Batch#:	2004/06/23-1D.62

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	2800	250	ug/L	5.00	06/23/2004 13:25	
Benzene	170	2.5	ug/L	5.00	06/23/2004 13:25	
Toluene	240	2.5	ug/L	5.00	06/23/2004 13:25	
Ethylbenzene	140	2.5	ug/L	5.00	06/23/2004 13:25	
Total xylenes	560	5.0	ug/L	5.00	06/23/2004 13:25	
Methyl tert-butyl ether (MTBE)	440	2.5	ug/L	5.00	06/23/2004 13:25	
Surrogate(s)						
1,2-Dichloroethane-d4	105.3	76-130	%	5.00	06/23/2004 13:25	
Toluene-d8	99.8	78-115	%	5.00	06/23/2004 13:25	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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Project: 040615-DW1
98995750

Received: 06/15/2004 18:27

Site: 610 Market Street, Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**MW-9**	Lab ID:	2004-06-0559 - 9
Sampled:	06/15/2004 12:20	Extracted:	6/23/2004 13:48
Matrix:	Water	QC Batch#:	2004/06/23-1D.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	280	50	ug/L	1.00	06/23/2004 13:48	
Benzene	ND	0.50	ug/L	1.00	06/23/2004 13:48	
Toluene	ND	0.50	ug/L	1.00	06/23/2004 13:48	
Ethylbenzene	ND	0.50	ug/L	1.00	06/23/2004 13:48	
Total xylenes	1.9	1.0	ug/L	1.00	06/23/2004 13:48	
Methyl tert-butyl ether (MTBE)	8.3	0.50	ug/L	1.00	06/23/2004 13:48	
Surrogate(s)						
1,2-Dichloroethane-d4	95.0	76-130	%	1.00	06/23/2004 13:48	
Toluene-d8	84.0	78-115	%	1.00	06/23/2004 13:48	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 040615-DW1
98995750

Received: 06/15/2004 18:27

Site: 610 Market Street, Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Method Blank — **Water** — **QC Batch # 2004/06/22-2A.66**

MB: 2004/06/22-2A.66-015 — Date Extracted: 06/22/2004 19:15

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/22/2004 19:15	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/22/2004 19:15	
Benzene	ND	0.5	ug/L	06/22/2004 19:15	
Toluene	ND	0.5	ug/L	06/22/2004 19:15	
Ethylbenzene	ND	0.5	ug/L	06/22/2004 19:15	
Total xylenes	ND	1.0	ug/L	06/22/2004 19:15	
Surrogates(s)					
1,2-Dichloroethane-d4	97.0	76-130	%	06/22/2004 19:15	
Toluene-d8	96.8	78-115	%	06/22/2004 19:15	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

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Project: 040615-DW1
98995750

Received: 06/15/2004 18:27

Site: 610 Market Street, Oakland

Batch QC Report

Prep(s): 5030B — Water — Test(s): 8260B

Method Blank — **QC Batch # 2004/06/23-1D.62**

MB: 2004/06/23-1D.62-001 — Date Extracted: 06/23/2004 08:01

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/23/2004 08:01	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/23/2004 08:01	
Benzene	ND	0.5	ug/L	06/23/2004 08:01	
Toluene	ND	0.5	ug/L	06/23/2004 08:01	
Ethylbenzene	ND	0.5	ug/L	06/23/2004 08:01	
Total xylenes	ND	1.0	ug/L	06/23/2004 08:01	
Surrogates(s)					
1,2-Dichloroethane-d4	92.4	76-130	%	06/23/2004 08:01	
Toluene-d8	97.2	78-115	%	06/23/2004 08:01	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

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Received: 06/15/2004 18:27

Site: 610 Market Street, Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Method Blank — **Water** — **QC Batch # 2004/06/24-1C.68**

MB: 2004/06/24-1C.68-024 — Date Extracted: 06/24/2004 08:24

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/24/2004 08:24	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/24/2004 08:24	
Benzene	ND	0.5	ug/L	06/24/2004 08:24	
Toluene	ND	0.5	ug/L	06/24/2004 08:24	
Ethylbenzene	ND	0.5	ug/L	06/24/2004 08:24	
Total xylenes	ND	1.0	ug/L	06/24/2004 08:24	
Surrogates(s)					
1,2-Dichloroethane-d4	87.8	76-130	%	06/24/2004 08:24	
Toluene-d8	95.4	78-115	%	06/24/2004 08:24	

Gas/BTEX/MTBE by 8260B (C6-C12)

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Project: 040615-DW1
98995750

Received: 06/15/2004 18:27

Site: 610 Market Street, Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Laboratory Control Spike — **Water** — **QC Batch # 2004/06/22-2A.66**

LCS 2004/06/22-2A.66-027 — Extracted: 06/22/2004 — Analyzed: 06/22/2004 18:27

LCSD 2004/06/22-2A.66-051 — Extracted: 06/22/2004 — Analyzed: 06/22/2004 18:51

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	28.5	28.7	25	114.0	114.8	0.7	65-165	20		
Benzene	29.1	28.7	25	116.4	114.8	1.4	69-129	20		
Toluene	27.5	26.3	25	110.0	105.2	4.5	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	457	463	500	91.4	92.6		76-130			
Toluene-d8	494	476	500	98.8	95.2		78-115			

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

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Project: 040615-DW1
98995750

Received: 06/15/2004 18:27

Site: 610 Market Street, Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2004/06/23-1D.62**

LCS 2004/06/23-1D.62-017 Extracted: 06/23/2004 Analyzed: 06/23/2004 07:17

LCSD 2004/06/23-1D.62-039 Extracted: 06/23/2004 Analyzed: 06/23/2004 07:39

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	21.8	22.7	25	87.2	90.8	4.0	65-165	20		
Benzene	25.2	25.9	25	100.8	103.6	2.7	69-129	20		
Toluene	27.4	26.9	25	109.6	107.6	1.8	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	410	421	500	82.0	84.2		76-130			
Toluene-d8	509	506	500	101.8	101.2		78-115			

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.
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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 040615-DW1
98995750

Received: 06/15/2004 18:27

Site: 610 Market Street, Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2004/06/24-1C.68**

LCS 2004/06/24-1C.68-046 Extracted: 06/24/2004 Analyzed: 06/24/2004 07:46

LCSD 2004/06/24-1C.68-005 Extracted: 06/24/2004 Analyzed: 06/24/2004 08:05

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	20.6	21.1	25	82.4	84.4	2.4	65-165	20		
Benzene	24.1	21.5	25	96.4	86.0	11.4	69-129	20		
Toluene	26.5	23.7	25	106.0	94.8	11.2	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	390	387	500	78.0	77.4		76-130			
Toluene-d8	474	467	500	94.8	93.4		78-115			

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

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

Project: 040615-DW1
98995750

Received: 06/15/2004 18:27

Site: 610 Market Street, Oakland

Legend and Notes

Analysis Flag

o

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

Result Flag

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

STRUCTURE Chain of Custody Record

8642

Lab Identification (if necessary):

Address:

City, State, Zip:

Shell Project Manager to be invoiced: Karen Petryna

- [x] SCIENCE & ENGINEERING
- [ ] TECHNICAL SERVICES
- [ ] CRMT HOUSTON

2004-06-0559

INCIDENT NUMBER (S&E ONLY): 9 8 9 9 5 7 5 0

SAP or CRMT NUMBER (TS/CRMT):

DATE: 6-15-04

PAGE: 1 of 1

SAMPLING COMPANY:	LOG CODE:	SITE ADDRESS (Street and City):	GLOBAL ID NO.:
Blaine Tech Services	BTSS	610 Market Street, Oakland	T0600102121

ADDRESS:	EDF DELIVERABLE TO (Responsible Party or Designee):	PHONE NO:	E-MAIL:	CONSULTANT PROJECT NO:
1680 Rogers Avenue, San Jose, CA 95112	Anni Kreml	510-420-3335	ShellOaklandEDF@cambria-env.com	040615-DM-1

PROJECT CONTACT (Hardcopy or PDF Report to):	TELEPHONE:	FAX:	E-MAIL:	BTS #:
Leon Gearhart	408-573-0555	408-573-7771	lgearhart@blainetech.com	

SAMPLER NAME(S) (Print): Dave Walter

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:

GEOTRACKER EDF REQUIRED? YES / NO

GEOTRACKER 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 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)	FIELD NOTES: Contained/Preservative or PID Readings or Laboratory Notes
	MW-1	6-15	1243	W	3	X	X		X							TEMPERATURE ON RECEIPT C° 5°
	MW-2		1048			X	X		X							
	MW-3		1125			X	X		X							
	MW-4		1151			X	X		X							
	MW-5		1303			X	X		X							
	MW-6		1120			X	X		X							
	MW-7		1108			X	X		X							Non-preserved VOA's
	MW-8		1020			X	X		X							
	MW-9		1220			X	X		X							

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
David C. Clark		6/15/04	1638
		6/15/04	1827

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

10/1600 Revision

CRO Graphics (714) 996-0502

WELL GAUGING DATA

Project # 040615-OW-1 Date 6-15-04 Client Shell

Site 610 Market 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					14.27	24.60		
mw-2	4	ext. sys.				12.85	—		
mw-3	4	ext. sys				15.05			
mw-4	4					11.38	19.70		
mw-5	4					11.28	19.95		
mw-6	4	ext. sys				14.82	—		
mw-7	4	ext. sys.				13.27	—		
mw-8	4	ext. sys.				13.88	—		
mw-9	4					11.88	19.75	✓	

SHELL WELL MONITORING DATA SHEET

BTS #: 040615-DW-1	Site: 610 Market
Sampler: DW	Date: 6-15-04
Well I.D.: MW-1	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): 24.60	Depth to Water (DTW): 14.27
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]: 16.33	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; X Electric Submersible 39pm; Waterra; Peristaltic; Extraction Pump; Other ___

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

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

6.7 (Gals.) X 3 = 20.1 Gals.
1 Case Volume; Specified Volumes; Calculated Volume

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
12:34	72.3	6.5	1025	29	6.7	clear
12:36	71.5	6.5	898	17	13.4	"
12:38	71.4	6.5	857	9	20.1	"

Did well dewater? Yes (No) Gallons actually evacuated: 20.1

Sampling Date: 6-15-04 Sampling Time: 12:43 Depth to Water: 16.30

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 #: 040615-DW-1	Site: 610 Market
Sampler: DW	Date: 6-15-04
Well I.D.: MW-2	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): —	Depth to Water (DTW): 12.85
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]:	

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

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

___ (Gals.) X	—	= ___ 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 (uS))	Turbidity (NTUs)	Gals. Removed	Observations
10:48	72.3	6.7	943	9	—	clear

Did well dewater? Yes No Gallons actually evacuated: —

Sampling Date: 6-15-04 Sampling Time: 10:48 Depth to Water: —

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 #: 040615-DW-1	Site: 610 Market
Sampler: DW	Date: 6-15-04
Well I.D.: MW-3	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): –	Depth to Water (DTW): 15.05
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]:	

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

Sampling Method: Bailer, Disposable Bailer, (X) Extraction Port, Dedicated Tubing, Other:_____

_____(Gals.) X _____ = _____ 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
1125	72.6	6.8	1212	4	–	Clear

Did well dewater? Yes No Gallons actually evacuated: –

Sampling Date: 6-15-04 Sampling Time: 11:25 Depth to Water:

Sample I.D.: MW-3 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#: 040615-DW-1	Site: 610 Market
Sampler: DW	Date: 6-15-04
Well I.D.: MW-4	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): 19.70	Depth to Water (DTW): 11.38
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]: 13.04	

Purge Method:
- Bailer
- Disposable Bailer
- Positive Air Displacement
- X Electric Submersible 3gpm
- Waterra
- Peristaltic
- Extraction Pump
- Other ____

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

5.4 (Gals.) X 3 = 16.2 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
1150	74.0	7.0	770	37	5.5	
1152	72.8	6.9	661	29	11	
1154	71.3	6.8	654	47	16.5	

Did well dewater? Yes (No) Gallons actually evacuated: 16.5

Sampling Date: 6-15-04 Sampling Time: 1157 Depth to Water: 13.80 (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

SHELL WELL MONITORING DATA SHEET

BTS #: 040615-DW-1	Site: 610 Market
Sampler: DW	Date: 6-15-04
Well I.D.: MW-5	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): 19.95	Depth to Water (DTW): 11.28
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]: 13.01	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; X Electric Submersible 3gpm; Waterra; Peristaltic; Extraction Pump; Other_____

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

5.6 (Gals.) X	3	= 16.8 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
12:54	72.8	6.8	1057	97	5.6	cloudy
12:56	71.7	6.9	1139	189	11.2	"
12:58	71.3	6.9	1178	>200	16.8	"

Did well dewater? Yes (No) Gallons actually evacuated: 16.8

Sampling Date: 6-15-04 Sampling Time: 13:03 Depth to Water: 15.02 (Street)

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 #: 040645-DW-1	Site: 610 Market
Sampler: DW	Date: 6-15-04
Well I.D.: MW-6	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): ~	Depth to Water (DTW): 14.82
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]:	

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

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

_____ (Gals.) X	~	= _____ 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
11:20	72.4	6.9	1117	2	~	clear

Did well dewater? Yes No Gallons actually evacuated: ~

Sampling Date: 6-15-04 Sampling Time: 11:20 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 #: 040615-ow-1	Site: 610 Market
Sampler: DW	Date: 6-15-04
Well I.D.: mw-7	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): –	Depth to Water (DTW): 13.27
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]:	

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

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: _____

_____(Gals.) X _____ = _____ 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
11:08	75.1	7.1	1571	45	–	
	reached w/ HCL. ~~Bleed out preservative~~					
				used NP VOAs		

Did well dewater? Yes No Gallons actually evacuated: –

Sampling Date: 6-15-04 Sampling Time: 11:08 Depth to Water:

Sample I.D.: mw-7 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 #: 040615-DW-1	Site: 610 Market
Sampler: DW	Date: 6-15-04
Well I.D.: MW-8	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): -	Depth to Water (DTW): 13.88
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]:	

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

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

_____(Gals.) X _____ = _____ 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
10:20	69.2	6.7	1056	174	-	reddish
Had to remove pump to take grab sample						

Did well dewater? Yes No Gallons actually evacuated: -

Sampling Date: 6-15-04 Sampling Time: 10:20 Depth to Water: -

Sample I.D.: MW-8 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 #: 040615-DW-1	Site: 610 Market
Sampler: DW	Date: 6-15-04
Well I.D.: MW-9	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): 19.75	Depth to Water (DTW): 11.88
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]: 13.45	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; X Electric Submersible 3 gpm; Waterra; Peristaltic; Extraction Pump; Other ____

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

5.1 (Gals.) X	3	= 15.3 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
12:14	71.1	6.4	1230	61	5.1	yellow
12:16	70.7	6.4	1326	128	10.2	"
12:18	67.8	6.4	1435	178	15.3	"

Did well dewater? Yes (No) Gallons actually evacuated: 15.3

Sampling Date: 6-15-04 Sampling Time: 12:20 Depth to Water: 13.40

Sample I.D.: MW-9 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