R 428

Shell Oil Products US

July 3, 2003

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

Subject: **Shell-branded Service Station**
350 Grand Avenue
Oakland, California

Dear Mr. Hwang:

Attached for your review and comment is a copy of the *Second Quarter 2003 Groundwater 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

July 3, 2003

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

Re: **Groundwater Monitoring Report - Second Quarter 2003**
Shell-branded Service Station
350 Grand Avenue
Oakland, California
SAP Code 129453
Incident #98995755

Dear Mr. Hwang:

Cambria Environmental Technology, Inc. (Cambria) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) in accordance with the quarterly reporting requirements of 23 CCR 2652d.

SECOND QUARTER 2003 ACTIVITIES

Groundwater Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged all site wells, sampled selected wells and prepared a summary table of field data and petroleum hydrocarbon and methyl tertiary butyl ether (MTBE) concentrations. Cambria prepared a vicinity/area well survey map (Figure 1) and a groundwater contour/chemical concentration map (Figure 2). Blaine's report, presenting the laboratory report, is included as Appendix A.

Remediation: As recommended in our October 7, 2002 *Third Quarter 2002 Monitoring Report*, Cambria initiated twice-monthly mobile groundwater extraction (GWE) using a vacuum truck at the site beginning in October 2002. Extraction is currently performed using tank backfill wells T-1 and T-2. Groundwater purge volume and estimated mass removal data are presented in Table 1. Figures 3 and 4 show MTBE concentrations and mass removal estimates over time for wells T-1 and T-2, respectively. MTBE concentrations in wells T-1 and T-2 have shown a decreasing concentration trend indicative of mass removal within the source area since GWE was initiated in October 2002. MTBE concentrations have decreased by an order of magnitude in each well. The cumulative estimated volume of water removed from the site through GWE is 38,723 gallons. This volume of water corresponds to the removal of approximately 0.37 and 2.3 pounds of total petroleum hydrocarbons as gasoline and MTBE, respectively.

Oakland, CA
Sonoma, CA
Portland, OR
Seattle, WA

Cambria Environmental Technology, Inc.

270 Perkins Street
P.O. Box 259
Sonoma, CA 95476
Tel (707)935-4850
Fax (707)935-6649

ANTICIPATED THIRD QUARTER 2003 ACTIVITIES

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

Subsurface Investigation: Cambria submitted a *Tank Backfill Well Installation Report and Investigation Work Plan Addendum* on September 26, 2002. Upon receiving written Alameda County Health Care Services Agency approval of our work plan addendum, Cambria will obtain the required permits and schedule the field activities for installation of the four proposed borings, shown on Figure 2.

Mobile GWE: Mobile GWE is anticipated to continue through the third quarter 2003. Estimated mass removal data will be presented in forthcoming quarterly monitoring reports. The future GWE schedule will be determined based on extracted groundwater volumes and groundwater concentration trends.

HISTORICAL REMEDIATION SUMMARY

2001 Dual-Phase Vapor Extraction (DVE) Pilot Test: In June 2001, Cambria conducted an 8-hour DVE pilot test on groundwater monitoring well S-2. DVE is the process of applying high vacuum through an airtight well seal to simultaneously extract soil vapors from the vadose zone and enhance groundwater extraction from the saturated zone. Approximately 50 gallons of groundwater were extracted during the 8-hour test. This data is consistent with the low permeability soil (sandy silt and silt) encountered at this site. Estimated mass removal through groundwater extraction of total petroleum hydrocarbons as gasoline (TPHg), benzene and methyl tertiary butyl ether (MTBE) was 0.008 pounds, 0.0004 pounds and 0.009 pounds, respectively. Estimated mass removal through vapor extraction of TPHg, benzene and MTBE was 2.44 pounds, 0.002 pounds and 0.005 pounds, respectively.

CLOSING

If you have any questions regarding this document, please call Ana Friel at (707) 442-2700.

Sincerely,
Cambria Environmental Technology, Inc

Scott Lewis for

Cynthia Vasko
Senior Staff Engineer

Joseph Neely for

Ana Friel, RG
Senior Project Geologist
RG 6452

REGISTERED GEOLOGIST
JOSEPH W. NEELY
No. 6927
STATE OF CALIFORNIA

Attachments:

Table 1.	Mass Removal Data
Figure 1.	Vicinity/Area Well Survey Map
Figure 2.	Groundwater Contour/Chemical Concentration Map
Figure 3.	MTBE Concentrations and Mass Removed-Well T-1
Figure 4.	MTBE Concentrations and Mass Removed-Well T-2
Appendix A.	Blaine Tech Services, Inc. - Groundwater Monitoring Report

cc: Karen Petryna, Shell Oil Products US
Gursharnjeet Cheema, 1060 St. Raphael Drive, Bay Point, CA 94565

Table 1. Mass Removal Data, Shell-branded Service Station, 350 Grand Avenue, Oakland, California

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPHg Concentration (ppb)	TPHg Removed (pounds)	Cumulative TPHg Removed (pounds)	Benzene Concentration (ppb)	Benzene Removed (pounds)	Cumulative Benzene Removed (pounds)	MTBE Concentration (ppb)	MTBE Removed (pounds)	Cumulative MTBE Removed (pounds)
06/27/01	S-2	50	50	02/16/01	20,000	0.008	0.008	990	0.000	0.000	21,000	0.009	0.009
10/08/02	T-1	750	750	07/16/02	<5,000	0.016	0.016	<50	0.000	0.000	14,000	0.088	0.088
10/21/02	T-1	0	750	10/10/02	<5,000	0.000	0.016	<50	0.000	0.000	17,000	0.000	0.088
11/09/02	T-1	771	1,521	10/10/02	<5,000	0.016	0.032	<50	0.000	0.000	17,000	0.109	0.197
11/26/02	T-1	695	2,216	10/10/02	<5,000	0.014	0.046	<50	0.000	0.000	17,000	0.099	0.296
12/11/02	T-1	480	2,696	10/10/02	<5,000	0.010	0.056	<50	0.000	0.001	17,000	0.068	0.364
12/24/02	T-1	1,387	4,083	10/10/02	<5,000	0.029	0.085	<50	0.000	0.001	17,000	0.197	0.560
01/09/03	T-1	2,288	6,371	10/10/02	<5,000	0.048	0.133	<50	0.000	0.001	17,000	0.325	0.885
01/22/03	T-1	165	6,536	01/16/03	<1,000	0.001	0.134	12	0.000	0.001	5,800	0.008	0.893
02/10/03	T-1	0	6,536	01/16/03	<1,000	0.000	0.134	12	0.000	0.001	5,800	0.000	0.893
02/25/03	T-1	1,624	8,160	01/16/03	<1,000	0.007	0.140	12	0.000	0.002	5,800	0.079	0.972
03/12/03	T-1	1,000	9,160	01/16/03	<1,000	0.004	0.145	12	0.000	0.002	5,800	0.048	1.020
03/26/03	T-1	254	9,414	01/16/03	<1,000	0.001	0.146	12	0.000	0.002	5,800	0.012	1.032
04/07/03	**T-1**	**1,108**	**10,522**	**01/16/03**	**<1,000**	**0.005**	**0.150**	**12**	**0.000**	**0.002**	**5,800**	**0.054**	**1.086**
04/21/03	**T-1**	**1,297**	**11,819**	**01/16/03**	**<1,000**	**0.005**	**0.156**	**12**	**0.000**	**0.002**	**5,800**	**0.063**	**1.149**
05/05/03	**T-1**	**1,314**	**13,133**	**05/02/03**	**<2,500**	**0.014**	**0.169**	**<25**	**0.000**	**0.002**	**3,300**	**0.036**	**1.185**
05/19/03	**T-1**	**1,019**	**14,152**	**05/02/03**	**<2,500**	**0.011**	**0.180**	**<25**	**0.000**	**0.002**	**3,300**	**0.028**	**1.213**
06/09/03	**T-1**	**983**	**15,135**	**05/02/03**	**<2,500**	**0.010**	**0.190**	**<25**	**0.000**	**0.002**	**3,300**	**0.027**	**1.240**
10/08/02	T-2	550	550	07/16/02	<5,000	0.011	0.011	<50	0.000	0.000	17,000	0.078	0.078
10/21/02	T-2	750	1,300	07/16/02	<5,000	0.016	0.027	<50	0.000	0.000	17,000	0.106	0.184
11/09/02	T-2	150	1,450	07/16/02	<5,000	0.003	0.030	<50	0.000	0.000	17,000	0.021	0.206
11/26/02	T-2	0	1,450	07/16/02	<5,000	0.000	0.030	<50	0.000	0.000	17,000	0.000	0.206
12/11/02	T-2	0	1,450	07/16/02	<5,000	0.000	0.030	<50	0.000	0.000	17,000	0.000	0.206
12/24/02	T-2	1,383	2,833	07/16/02	<5,000	0.029	0.059	<50	0.000	0.001	17,000	0.196	0.402
01/09/03	T-2	2,309	5,142	07/16/02	<5,000	0.048	0.107	<50	0.000	0.001	17,000	0.328	0.729

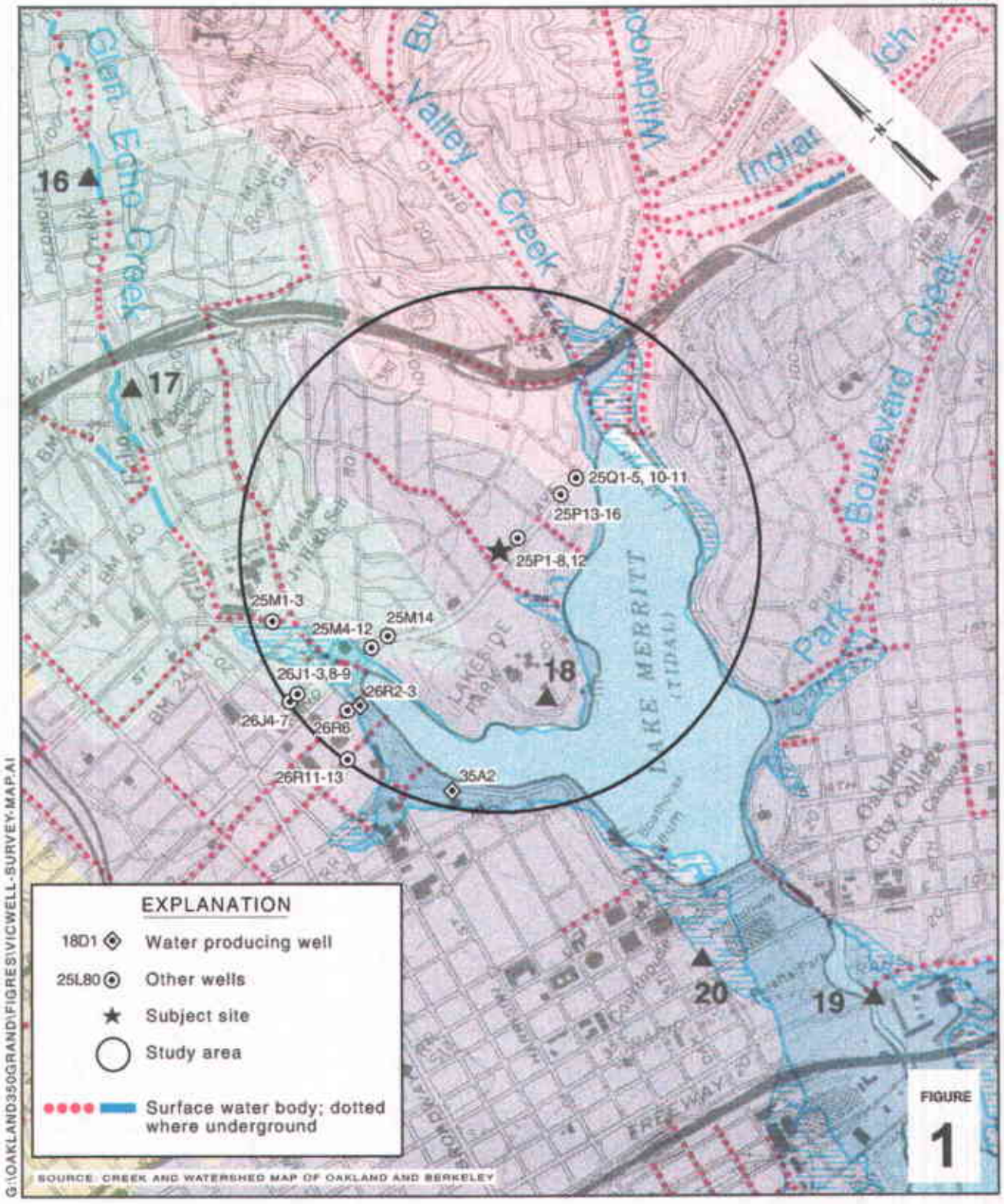
Table 1. Mass Removal Data, Shell-branded Service Station, 350 Grand Avenue, Oakland, California

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPHg Concentration (ppb)	TPHg Removed (pounds)	Cumulative TPHg Removed (pounds)	Benzene Concentration (ppb)	Benzene Removed (pounds)	Cumulative Benzene Removed (pounds)	MTBE Concentration (ppb)	MTBE Removed (pounds)	Cumulative MTBE Removed (pounds)
01/22/03	T-2	2,200	7,342	01/16/03	<1,000	0.009	0.116	<10	0.000	0.001	2,900	0.053	0.783
02/10/03	T-2	2,103	9,445	01/16/03	<1,000	0.009	0.125	<10	0.000	0.001	2,900	0.051	0.834
02/25/03	T-2	1,883	11,328	01/16/03	<1,000	0.008	0.133	<10	0.000	0.001	2,900	0.046	0.879
03/12/03	T-2	1,130	12,458	01/16/03	<1,000	0.005	0.138	<10	0.000	0.001	2,900	0.027	0.906
03/26/03	T-2	2,000	14,458	01/16/03	<1,000	0.008	0.146	<10	0.000	0.001	2,900	0.048	0.955
04/07/03	**T-2**	**1,000**	**15,458**	**01/16/03**	**<1,000**	**0.004**	**0.150**	**<10**	**0.000**	**0.002**	**2,900**	**0.024**	**0.979**
04/21/03	**T-2**	**2,254**	**17,712**	**01/16/03**	**<1,000**	**0.009**	**0.160**	**<10**	**0.000**	**0.002**	**2,900**	**0.055**	**1.034**
05/05/03	**T-2**	**2,252**	**19,964**	**05/02/03**	**<500**	**0.005**	**0.164**	**<5.0**	**0.000**	**0.002**	**1,000**	**0.019**	**1.052**
05/19/03	**T-2**	**1,823**	**21,787**	**05/02/03**	**<500**	**0.004**	**0.168**	**<5.0**	**0.000**	**0.002**	**1,000**	**0.015**	**1.068**
06/09/03	**T-2**	**1,751**	**23,538**	**05/02/03**	**<500**	**0.004**	**0.172**	**<5.0**	**0.000**	**0.002**	**1,000**	**0.015**	**1.082**
Total Gallons Extracted:			**38,723**		**Total Pounds Removed:**		**0.370**			**0.004**			**2.33**
					Total Gallons Removed:		**0.061**			**0.001**			**0.376**

Abbreviations & Notes:

TPHg = Total purgeable hydrocarbons as gasoline
MTBE = Methyl tert-butyl ether
ppb = Parts per billion
gal = Gallon
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)
TPHg, benzene, and MTBE analyzed by EPA Method 8260.
Concentrations based on most recent groundwater monitoring results.
If concentration is less than the laboratory detection limit, one half of the detection limit concentration is used in the mass removal calculation.
Groundwater extracted by vacuum trucks provided by Onyx Industrial. Water disposed of at a Martinez Refinery.

04/02/03



Shell-branded Service Station
350 Grand Avenue
Oakland, California
Incident #98995755

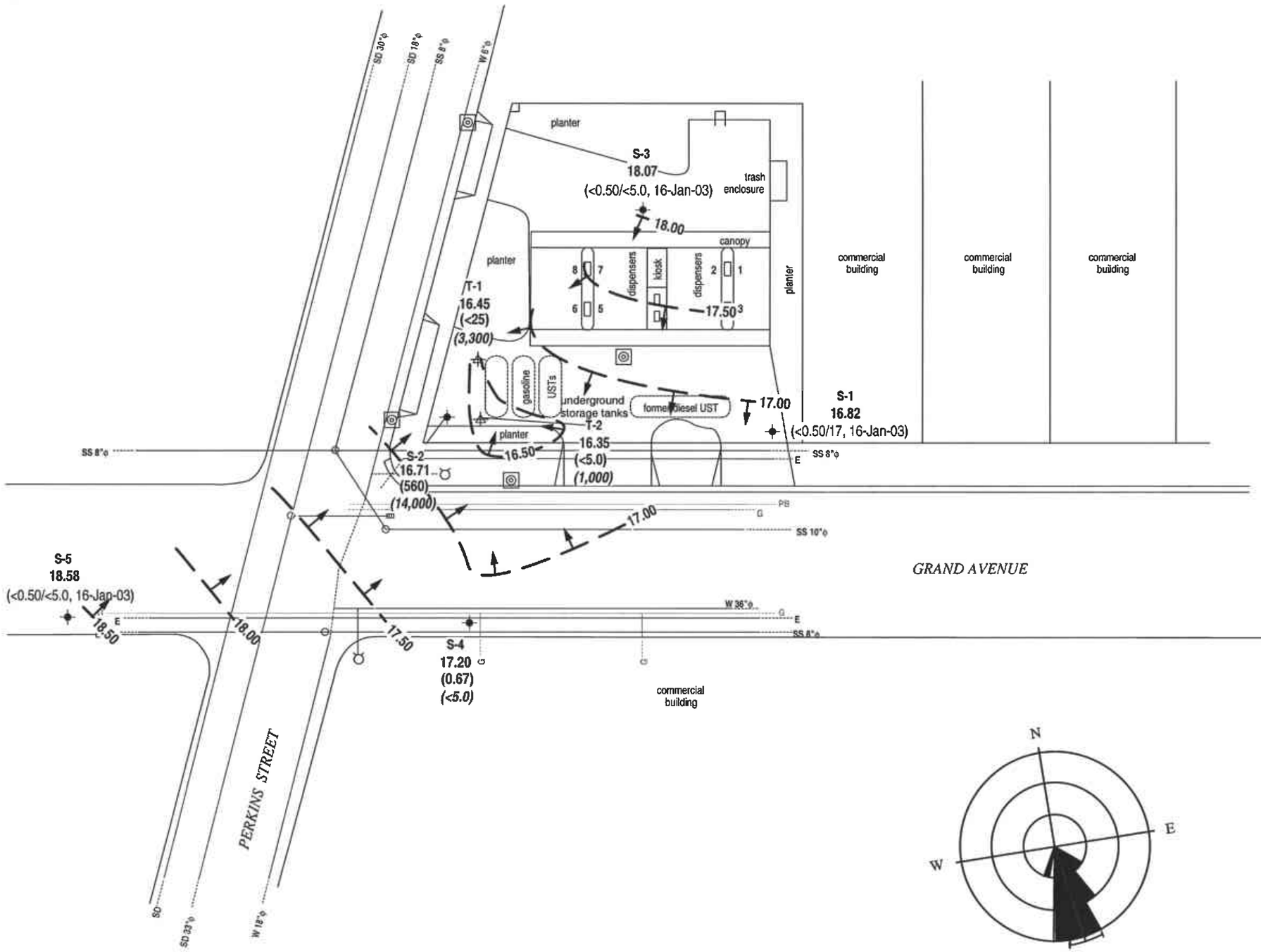
CAMBRIA

Vicinity/Area Well Survey Map

25Jun03

Groundwater Contour/Chemical Concentration Map

May 2, 2003



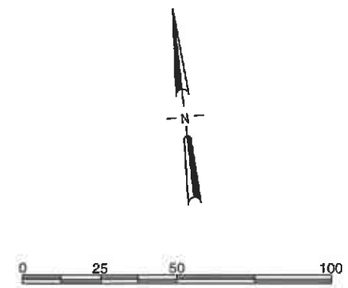
EXPLANATION

- Proposed soil boring location
- Groundwater monitoring well
- T-1 Tank backfill well location
- E — Electric utility line
- W — Water main utility line
- G — Gas utility line
- SS — Sanitary sewer utility line
- SD — Storm drain utility line
- PB — Pacific Bell utility line
- Storm drain inlet
- Manhole
- Fire hydrant
- Groundwater elevation contour in feet above mean sea level (ft msl). Arrows indicate approximate direction of groundwater flow.
- 16.71 Groundwater elevation in ft msl
- (560) Benzene concentration in parts per billion (ppb)
- (<0.5014,000) MTBE concentration in ppb
- (<0.50/<5.0, 16-Jan-03) Benzene/MTBE concentrations in ppb, date last sampled

Approximate hydraulic gradient = 0.009 to 0.015

NOTE: Utilities lines are dashed where inferred.

Groundwater Flow Direction
(01/08/98 to 06/09/03)



FIGURE

2

Shell-branded Service Station
350 Grand Avenue
Oakland, California

0715

Date	DTW - ft
07/16/02	7.71
10/10/02	8.91
01/16/03	7.55
05/02/03	7.69

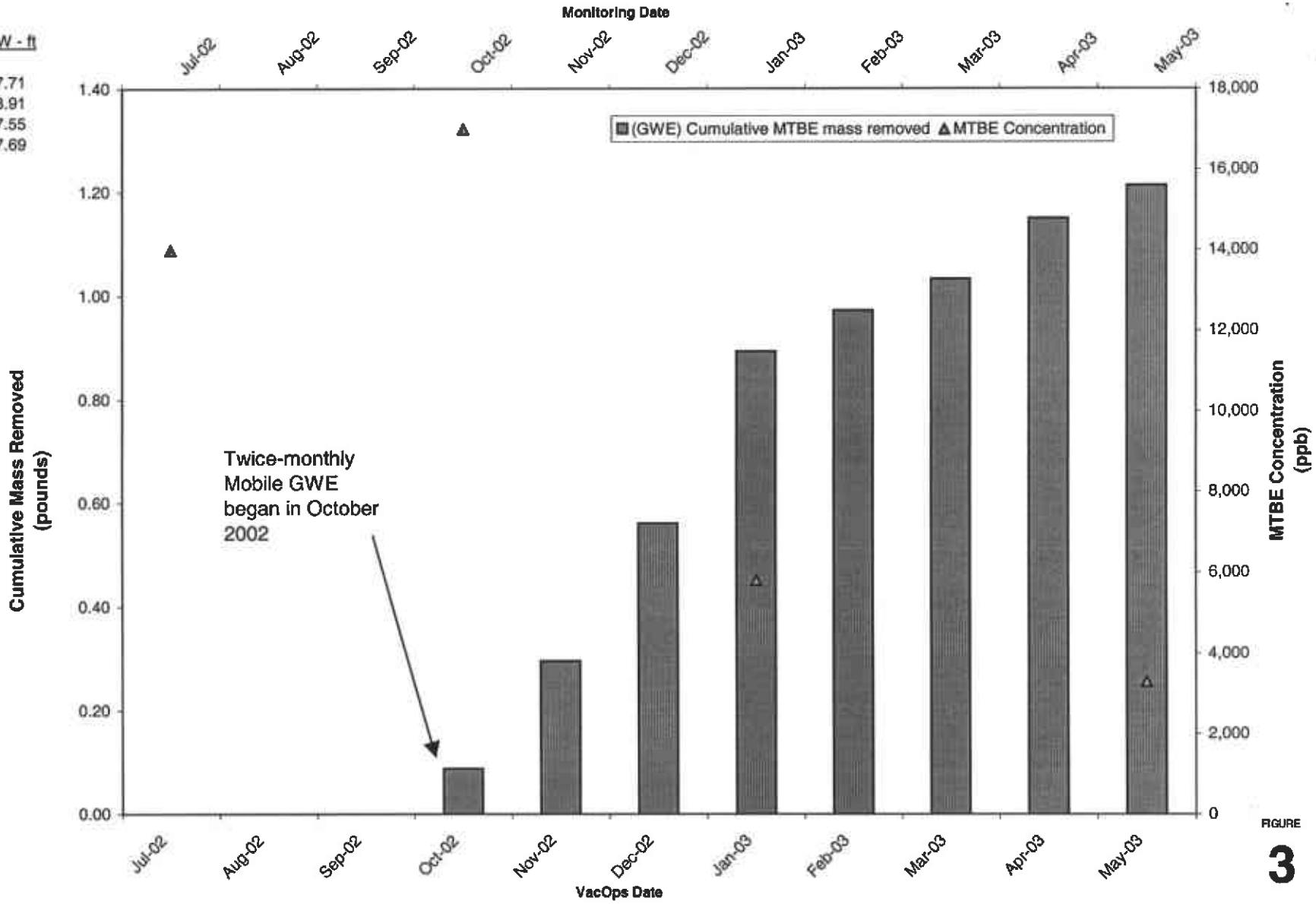


FIGURE
3

Shell-branded Service Station
350 Grand Avenue
Oakland, California

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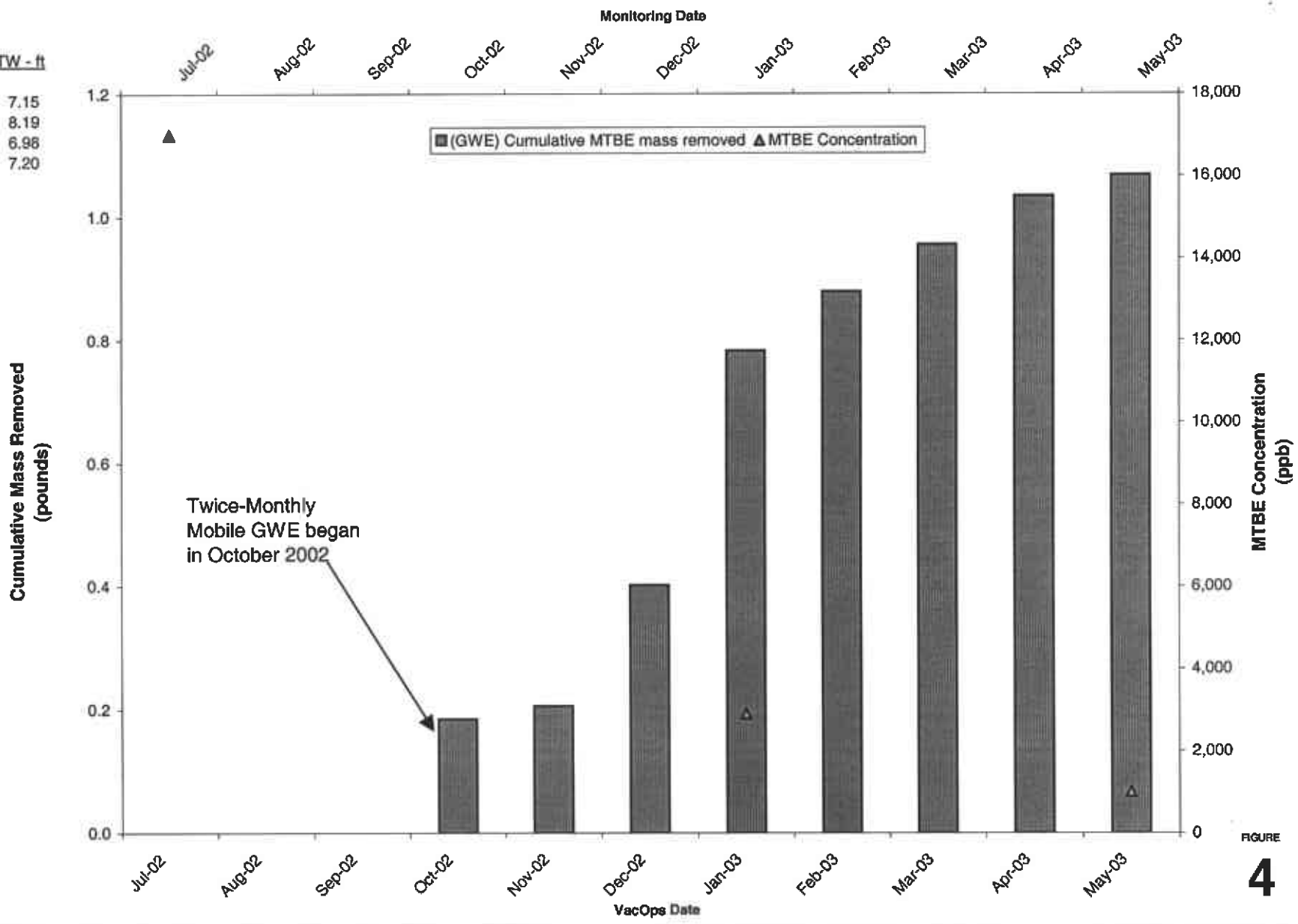
MTBE Concentration and Mass Removed - Well T-1

Date	DTW - ft
07/16/02	7.15
10/10/02	8.19
01/16/03	6.98
05/02/03	7.20



FIGURE

4

Shell-branded Service Station
350 Grand Avenue
Oakland, California

CAMBRIA

MTBE Concentration and Mass Removed - Well T-2

APPENDIX A

Blaine Tech Services, Inc.
Groundwater Monitoring Report

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

June 12, 2003

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

Second Quarter 2003 Groundwater Monitoring at
Shell-branded Service Station
350 Grand Avenue
Oakland, CA

Monitoring performed on May 2, 2003

Groundwater Monitoring Report **030502-DA-1**

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

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

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

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

Please call if you have any questions.

Yours truly,

Leon Gearhart
Project Coordinator

LG/jt

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

cc: Ana Friel
Cambria Environmental Technology, Inc.
P.O. Box 259
Sonoma, CA 95476-0259

WELL CONCENTRATIONS
Shell-branded Service Station
350 Grand Avenue
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)
S-1	01/23/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.84	9.73	11.11	NA
S-1	04/25/1991	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.84	7.37	13.47	NA
S-1	07/19/1991	<50	<50	6.8	<0.5	<0.5	<0.5	NA	NA	20.84	8.92	11.92	NA
S-1	10/09/1991	120	260d	10	<0.5	<0.5	<0.5	NA	NA	20.84	9.62	11.22	NA
S-1	01/23/1992	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.84	8.94	11.90	NA
S-1	04/27/1992	<50	70b	1.2	<0.5	<0.5	<0.5	NA	NA	20.84	7.06	13.78	NA
S-1	07/10/1992	<50	930	13	<0.5	<0.5	<0.5	NA	NA	20.84	8.31	12.53	NA
S-1	10/06/1992	62	110	<0.5	<0.5	<0.5	<0.5	NA	NA	20.84	9.55	11.29	NA
S-1	01/06/1993	85	81	1.1	<0.5	<0.5	<0.5	NA	NA	20.84	9.86	10.98	NA
S-1	04/26/1993	<50	53c	<0.5	<0.5	<0.5	<0.5	NA	NA	20.84	6.30	14.54	NA
S-1 (D)	04/26/1993	<50	53c	<0.5	<0.5	<0.5	<0.5	NA	NA	20.84	6.30	14.54	NA
S-1	07/20/1993	<50	140	<0.5	<0.5	<0.5	<0.5	NA	NA	20.84	8.78	12.06	NA
S-1	10/18/1993	<50	210	<0.5	<0.5	<0.5	<0.5	NA	NA	20.84	9.20	11.64	NA
S-1	01/07/1994	<50	<50	1.4	1.5	0.55	2.8	NA	NA	20.84	9.53	11.31	NA
S-1 (D)	01/07/1994	<50	53	1.2	1.5	<0.5	2.7	NA	NA	20.84	9.53	11.31	NA
S-1	04/11/1994	<50	320	2.8	<0.5	<0.5	<0.5	NA	NA	20.84	8.50	12.34	NA
S-1 (D)	04/11/1994	<50	220	2.6	<0.5	<0.5	<0.5	NA	NA	20.84	8.50	12.34	NA
S-1	07/14/1994	NA	NA	NA	NA	NA	NA	NA	NA	20.84	8.45	12.39	NA
S-1	07/19/1994	<50	110	<0.5	<0.5	<0.5	<0.5	NA	NA	20.84	9.07	11.77	NA
S-1	10/06/1994	110	370	1.4	<0.5	<0.5	<0.5	NA	NA	20.84	11.68	9.16	NA
S-1	01/04/1995	120	1,000	2.5	<0.5	1.5	1.7	NA	NA	20.84	8.51	12.33	NA
S-1	04/12/1995	<50	290	2.1	<0.5	<0.5	<0.5	NA	NA	20.84	6.66	14.18	NA
S-1 (D)	04/12/1995	<50	480	<0.5	<0.5	<0.5	<0.5	NA	NA	20.84	6.66	14.18	NA
S-1	07/07/1995	<50	370	5.5	<0.5	<0.5	<0.5	NA	NA	20.84	6.95	13.89	NA
S-1 (D)	07/07/1995	<50	450	6.5	<0.5	<0.5	<0.5	NA	NA	20.84	6.95	13.89	NA
S-1	10/05/1995	<50	200	3.9	1.2	<0.5	2.4	NA	NA	20.84	8.50	12.34	NA

WELL CONCENTRATIONS
Shell-branded Service Station
350 Grand Avenue
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)
S-1	01/12/1996	230	1,500	2.5	<0.5	0.9	0.6	NA	NA	20.84	8.02	12.82	NA
S-1	04/02/1996	95	2,000	0.91	<0.5	<0.5	<0.5	140	NA	20.84	4.98	15.86	NA
S-1	07/30/1996	<50	510	<0.5	<0.5	<0.5	<0.5	67	NA	20.84	6.40	14.44	NA
S-1 (D)	07/30/1996	<50	380	<0.5	<0.5	<0.5	<0.5	68	NA	20.84	6.40	14.44	NA
S-1	10/02/1996	<50	250	<0.5	<0.5	<0.5	<0.5	96	NA	20.84	7.53	13.31	NA
S-1	09/19/1997	<50	120	<0.50	<0.50	<0.50	<0.50	37	NA	20.84	8.54	12.30	0.8
S-1	01/08/1998	<50	210	<0.50	<0.50	<0.50	<0.50	74	NA	20.84	9.09	11.75	2.6
S-1	07/17/1998	<50	99	<0.50	<0.50	<0.50	<0.50	25	NA	20.86	6.48	14.38	2.6
S-1	01/28/1999	92.7	212	4.5	1.83	1.59	12.1	2.17	NA	20.86	10.46	10.40	2.2
S-1	07/23/1999	537	<50	81.1	91.3	24.8	81.6	47.9	NA	20.86	10.02	10.84	2.1
S-1	01/24/2000	<50.0	79.6	<0.500	<0.500	<0.500	<0.500	8.41	NA	20.86	8.42	12.44	2.2
S-1	07/27/2000	<50.0	127	<0.500	<0.500	<0.500	<0.500	31.9	NA	20.86	7.34	13.52	1.6
S-1	01/12/2001	<50.0	225	<0.500	<0.500	<0.500	<0.500	35.9	NA	20.86	8.15	12.71	1.8
S-1	02/16/2001	<50	140	<0.50	<0.50	<0.50	1.0	NA	24	20.86	7.42	13.44	6.1
S-1	07/09/2001	<50	57	<0.50	<0.50	<0.50	<0.50	NA	19	20.86	7.95	12.91	5.4
S-1	08/07/2001	NA	NA	NA	NA	NA	NA	NA	NA	20.86	7.67	13.19	NA
S-1	10/02/2001	NA	NA	NA	NA	NA	NA	NA	2.5	20.86	7.74	13.12	4.6
S-1	01/18/2002	<50	68	<0.50	<0.50	<0.50	<0.50	NA	31	20.86	6.37	14.49	6.7
S-1	04/17/2002	NA	NA	NA	NA	NA	NA	NA	NA	20.86	6.58	14.28	NA
S-1	07/16/2002	<50	100	<0.50	<0.50	<0.50	0.99	NA	35	23.66	7.38	16.28	7.0
S-1	10/10/2002	NA	NA	NA	NA	NA	NA	NA	NA	23.26	7.89	15.37	NA
S-1	01/16/2003	<50	54	<0.50	<0.50	<0.50	<0.50	NA	17	23.26	6.52	16.74	0.7
S-1	**05/02/2003**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**23.26**	**6.44**	**16.82**	**NA**
S-2	01/23/1991	2,500	1,200	550	15	33	42	NA	NA	21.24	10.55	10.69	NA
S-2	04/25/1991	32,000	20,000b	2,900	480	1,400	2,300	NA	NA	21.24	8.24	13.00	NA

WELL CONCENTRATIONS
Shell-branded Service Station
350 Grand Avenue
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)
S-2	07/19/1991	21,000	30,000b	4,700	430	1,200	2,400	NA	NA	21.24	9.55	11.69	NA
S-2	10/09/1991	29,000	32,000b	6,300	510	1,700	2,400	NA	NA	21.24	10.26	10.98	NA
S-2	01/23/1992	31,000	36,000b	5,800	480	2,000	2,700	NA	NA	21.24	9.51	11.73	NA
S-2	04/27/1992	21,000d	12,000b	4,800	320	1,600	1,400	NA	NA	21.24	7.83	13.41	NA
S-2	07/10/1992	31,000	3,700e	7,500	940	3,400	3,500	NA	NA	21.24	8.57	12.67	NA
S-2	10/06/1992	57,000	4,500e	9,300	1,200	4,000	4,900	NA	NA	21.24	9.49	11.75	NA
S-2	01/06/1993	55,000	5,600	5,600	360	3,000	3,000	NA	NA	21.24	8.56	12.68	NA
S-2	04/26/1993	32,000	9,400e	10,000	500	4,400	3,600	NA	NA	21.24	6.84	14.40	NA
S-2	07/20/1993	25,000	8,400e	5,800	300	2,700	1,400	NA	NA	21.24	8.52	12.72	NA
S-2 (D)	07/20/1993	25,000	8,900e	5,900	310	2,800	1,400	NA	NA	21.24	8.52	12.72	NA
S-2	10/18/1993	23,000	18,000e	3,700	200	2,100	1,600	NA	NA	21.24	9.36	11.88	NA
S-2 (D)	10/18/1993	28,000	14,000e	3,700	210	2,100	1,600	NA	NA	21.24	9.36	11.88	NA
S-2	01/07/1994	120,000	22,000e	6,900	400	3,100	2,600	NA	NA	21.24	8.37	12.87	NA
S-2	04/11/1994	34,000	17,000e	4,800	170	1,900	880	NA	NA	21.24	6.96	14.28	NA
S-2	07/14/1994	NA	NA	NA	NA	NA	NA	NA	NA	21.24	7.49	13.75	NA
S-2	07/19/1994	23,000	NA	4,300	210	1,100	1,000	NA	NA	21.24	8.02	13.22	NA
S-2 (D)	07/19/1994	29,000	NA	4,700	270	1,200	1,200	NA	NA	21.24	8.02	13.22	NA
S-2	10/06/1994	61,000	NA	4,600	290	1,900	1,900	NA	NA	21.24	11.00	10.24	NA
S-2 (D)	10/06/1994	52,000	NA	5,200	270	2,100	1,900	NA	NA	21.24	11.00	10.24	NA
S-2	01/04/1994	23,000	NA	4,500	49	1,300	500	NA	NA	21.24	8.07	13.17	NA
S-2 (D)	01/04/1995	18,000	NA	3,800	33	1,100	390	NA	NA	21.24	8.07	13.17	NA
S-2	04/12/1995	29,000	NA	4,300	210	990	700	NA	NA	21.24	6.12	15.12	NA
S-2	07/07/1995	26,000	NA	4,200	180	1,100	730	NA	NA	21.24	6.35	14.89	NA
S-2	10/05/1995	26,000	10,000	3,500	150	1,100	640	NA	NA	21.24	7.36	13.88	NA
S-2 (D)	10/05/1995	33,000	9,400	4,200	210	1,500	850	NA	NA	21.24	7.36	13.88	NA
S-2	01/12/1996	36,000	13,000	4,100	240	1,400	790	NA	NA	21.24	7.64	13.60	NA

WELL CONCENTRATIONS
Shell-branded Service Station
350 Grand Avenue
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)
S-2 (D)	01/12/1996	40,000	11,000	4,100	260	1,400	860	NA	NA	21.24	7.64	13.60	NA
S-2	04/02/1996	12,000	7,300	1,300	120	460	150	4,000	NA	21.24	6.18	15.06	NA
S-2 (D)	04/02/1996	17,000	5,800	1,800	29	590	140	7,600	NA	21.24	6.18	15.06	NA
S-2	07/30/1996	18,000	13,000	3,000	100	1,200	420	17,000	19,000	21.24	7.22	14.02	NA
S-2	10/02/1996	28,000	18,000	3,700	110	1,100	260	20,000	NA	21.24	7.60	13.64	NA
S-2 (D)	10/02/1996	25,000	31,000	3,500	100	1,100	260	19,000	NA	21.24	7.60	13.64	NA
S-2	09/19/1997	21,000	11,000	2,300	120	500	110	11,000	NA	21.24	7.45	13.79	2.1
S-2	01/08/1998	35,000	8,100	3,200	260	850	320	23,000	NA	21.24	6.96	14.28	2.3
S-2 (D)	01/08/1998	27,000	5,400	3,400	190	860	200	23,000	NA	21.24	6.96	14.28	2.3
S-2	07/17/1998	19,000	12,000	1,700	130	610	130	13,000	NA	21.24	6.67	14.57	2.3
S-2	01/28/1999	482	99	24	7.52	5.41	63.7	11	NA	21.24	10.63	10.61	2.4
S-2	07/23/1999	320	223	52.0	54.5	14.7	48.6	33.9	NA	21.24	10.12	11.12	2.6
S-2	01/24/2000	18,500	7,600	1,440	140	472	68.9	6,940	NA	21.24	8.63	12.61	1.6
S-2	07/27/2000	14,900	10,200	1,250	98.8	437	<50.0	22,200	30,200	21.24	7.94	13.30	2.0
S-2	01/12/2001 h	17,200	8,050	930	88.8	497	57.0	23,200	18,500	21.24	8.82	12.42	1.9
S-2	02/16/2001	20,000	<5,000	990	93	450	63	NA	21,000	21.24	7.10	14.14	1.6
S-2	07/09/2001	16,000	26,000	690	62	210	<50	NA	27,000	21.24	8.35	12.89	2.1
S-2	08/07/2001	NA	NA	NA	NA	NA	NA	NA	NA	21.24	8.19	13.05	NA
S-2	10/02/2001	18,000	<12,000	810	89	470	69	NA	23,000	21.24	8.50	12.74	2.0
S-2	01/18/2002	21,000	21,000	750	79	470	69	NA	23,000	21.24	6.96	14.28	5.9
S-2	04/17/2002	34,000	<26,000	620	70	390	60	NA	17,000	21.24	7.39	13.85	0.6
S-2	07/16/2002	14,000	<10,000	630	75	310	33	NA	20,000	24.03	7.95	16.08	6.0
S-2	10/10/2002	11,000	<6,000	480	50	190	<50	NA	15,000	23.73	8.36	15.37	1.0
S-2	01/16/2003	16,000	<8,000	720	88	290	89	NA	17,000	23.73	6.98	16.75	0.7
S-2	**05/02/2003**	**12,000 g**	**4,800 i**	**560**	**<50**	**<50**	**<100**	**NA**	**14,000**	**23.73**	**7.02**	**16.71**	**1.1**

WELL CONCENTRATIONS
Shell-branded Service Station
350 Grand Avenue
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)
S-3	01/23/1991	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	14.67	8.03	NA
S-3	04/25/1991	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	12.96	9.74	NA
S-3	07/19/1991	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	12.45	10.25	NA
S-3	10/09/1991	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	12.98	9.72	NA
S-3	01/23/1992	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	13.06	9.64	NA
S-3	04/27/1992	<50	100	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	7.25	15.45	NA
S-3	07/10/1992	<50	68	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	8.46	14.24	NA
S-3	10/06/1992	<50	<10	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	11.77	10.93	NA
S-3	01/06/1993	<50	<10	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	12.53	10.17	NA
S-3	04/26/1993	<50	69	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	4.28	18.42	NA
S-3	07/20/1993	<50	120	<0.5	0.6	<0.5	<0.5	NA	NA	22.70	5.70	17.00	NA
S-3	10/18/1993	<50	160	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	10.30	12.40	NA
S-3	01/07/1994 a	160	58	59	26	4.9	22	NA	NA	22.70	12.40	10.30	NA
S-3	04/11/1994	<50	<50	<0.52	<0.5	<0.5	<0.5	NA	NA	22.70	10.94	11.76	NA
S-3	07/14/1994	NA	NA	NA	NA	NA	NA	NA	NA	22.70	7.90	14.80	NA
S-3	07/19/1994	<50	110d	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	8.12	14.58	NA
S-3	10/06/1994	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	12.15	10.55	NA
S-3	01/04/1995	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	11.18	11.52	NA
S-3	04/12/1995	<50	110	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	3.76	18.94	NA
S-3	07/07/1995	<50	410	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	4.72	17.98	NA
S-3	10/05/1995	<50	160	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	5.80	16.90	NA
S-3	01/12/1996	100	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.70	7.00	15.70	NA
S-3	04/02/1996	<50	170	<0.5	<0.5	<0.5	<0.5	3.4	NA	22.70	3.42	19.28	NA
S-3	07/30/1996	<50	92	<0.5	<0.5	<0.5	<0.5	4.3	NA	22.70	5.89	16.81	NA
S-3	10/02/1996	<50	160	<0.5	<0.5	<0.5	<0.5	4.1	NA	22.70	7.20	15.50	NA
S-3	09/19/1997	<50	260	<0.50	<0.50	<0.50	<0.50	4.3	NA	22.70	6.92	15.78	1.4

WELL CONCENTRATIONS
Shell-branded Service Station
350 Grand Avenue
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)
S-3 (D)	09/19/1997	<50	290	<0.50	<0.50	<0.50	<0.50	5.2	NA	22.70	6.92	15.78	1.4
S-3	01/08/1998	<50	170	<0.50	<0.50	<0.50	0.92	120	NA	22.70	5.77	16.93	2.7
S-3	07/17/1998	<50	97	<0.50	<0.50	<0.50	<0.50	33	NA	22.71	4.17	18.54	2.7
S-3	01/28/1999	656	<50.0	45.4	10.2	4.98	83.2	87.2	NA	22.71	8.15	14.56	1.8
S-3	07/23/1999	<50.0	77.3	<0.500	<0.500	<0.500	<0.500	39.3	NA	22.71	7.46	15.25	1.9
S-3	01/24/2000	<50.0	77.2	<0.500	<0.500	<0.500	<0.500	12.0	NA	22.71	5.92	16.79	2.1
S-3	07/27/2000	<50.0	142	<0.500	<0.500	<0.500	<0.500	<5.00	NA	22.71	6.54	16.17	1.7
S-3	01/12/2001 f	<50.0	96	<0.500	<0.500	<0.500	<0.500	<2.50	NA	22.71	8.25	14.46	1.7
S-3	02/16/2001	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	2.0	22.71	11.37	11.34	NA
S-3	07/09/2001	<50	<50	<0.50	0.54	<0.50	<0.50	NA	<5.0	22.71	9.70	13.01	1.4
S-3	08/07/2001	NA	NA	NA	NA	NA	NA	NA	NA	22.71	11.48	11.23	NA
S-3	10/02/2001	NA	NA	NA	NA	NA	NA	NA	NA	22.71	11.56	11.15	NA
S-3	01/18/2002	<50	120	<0.50	<0.50	<0.50	<0.50	NA	<5.0	22.71	7.74	14.97	1.5
S-3	04/17/2002	NA	NA	NA	NA	NA	NA	NA	NA	22.71	6.45	16.26	NA
S-3	07/16/2002	<50	72	<0.50	<0.50	<0.50	0.61	NA	<5.0	25.49	7.70	17.79	5.0
S-3	10/10/2002	NA	NA	NA	NA	NA	NA	NA	NA	25.14	10.15	14.99	NA
S-3	01/16/2003	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	25.14	8.60	16.54	2.9
S-3	**05/02/2003**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**25.14**	**7.07**	**18.07**	**NA**
S-4	07/17/1998	<50	220	<0.50	<0.50	<0.50	<0.50	<2.5	NA	19.96	6.59	13.37	2.5
S-4 (D)	07/17/1998	<50	260	<0.50	<0.50	<0.50	<0.50	<2.5	NA	19.96	6.59	13.37	2.5
S-4	01/28/1999	<50.0	356	0.882	<0.500	<0.500	0.71	<2.00	NA	19.96	10.57	9.39	3.0
S-4	07/23/1999	<50.0	<50	<0.500	<0.500	<0.500	<0.500	8.27	NA	19.96	10.06	9.90	2.1
S-4	01/24/2000	Unable to sample		NA	NA	NA	NA	NA	NA	19.96	8.29	11.67	NA
S-4	02/02/2000	<50.0	410	<0.500	<0.500	<0.500	<0.500	<5.00	NA	19.96	9.93	10.03	2.0
S-4	07/27/2000	Well inaccessible		NA	NA	NA	NA	NA	NA	19.96	NA	NA	NA

WELL CONCENTRATIONS
Shell-branded Service Station
350 Grand Avenue
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)
S-4	08/02/2000	<50.0	265	<0.500	<0.500	<0.500	<0.500	<2.50	NA	19.96	8.05	11.91	2.0
S-4	01/12/2001	Well Inaccessible		NA	NA	NA	NA	NA	NA	19.96	NA	NA	NA
S-4	01/25/2001	<50.0	235	<0.500	0.629	0.656	4.65	<2.50	NA	19.96	10.12	9.84	2.0
S-4	02/16/2001	Well Inaccessible		NA	NA	NA	NA	NA	NA	19.96	NA	NA	NA
S-4	07/09/2001	Well inaccessible		NA	NA	NA	NA	NA	NA	19.96	NA	NA	NA
S-4	08/07/2001	<50	<50	<0.50	<0.50	<0.50	<1.0	NA	<5.0	19.96	8.77	11.19	2.3
S-4	10/02/2001	<50	350	<0.50	<0.50	<0.50	<0.50	NA	<5.0	19.96	9.09	10.87	2.6
S-4	01/18/2002	Well Inaccessible		NA	NA	NA	NA	NA	NA	19.96	NA	NA	NA
S-4	01/23/2002	Insufficient water		NA	NA	NA	NA	NA	NA	19.96	7.13	12.83	NA
S-4	04/17/2002	Insufficient water		NA	NA	NA	NA	NA	NA	19.96	6.28	13.68	NA
S-4	04/26/2002	<50	260	<0.50	<0.50	<0.50	<0.50	NA	<5.0	19.96	5.63	14.33	g
S-4	07/16/2002	<50	250	<0.50	<0.50	<0.50	1.1	NA	<5.0	22.75	6.90	15.85	1.6
S-4	10/10/2002	Insufficient water		NA	NA	NA	NA	NA	NA	22.34	9.20	13.14	NA
S-4	01/16/2003	<50	280	<0.50	<0.50	<0.50	<0.50	NA	<5.0	22.34	7.11	15.23	2.1
S-4	**05/02/2003**	**53**	**130 I**	**0.67**	**<0.50**	**3.8**	**2.4**	**NA**	**<5.0**	**22.34**	**5.14**	**17.20**	**0.61**
S-5	07/17/1998	<50	110	<0.50	<0.50	<0.50	<0.50	<2.5	NA	22.27	6.78	15.49	2.2
S-5	01/28/1999	<50.0	109	<0.500	<0.500	<0.500	<0.500	<2.00	NA	22.27	10.75	11.52	2.0
S-5	07/23/1999	<50.0	204	<0.500	<0.500	<0.500	<0.500	5.95	NA	22.27	10.21	12.06	1.8
S-5	01/24/2000	Unable to sample		NA	NA	NA	NA	NA	NA	22.27	8.23	14.04	NA
S-5	02/02/2000	<50.0	172	<0.500	<0.500	<0.500	<0.500	<5.00	NA	22.27	10.15	12.12	1.9
S-5	07/27/2000	<50.0	119	<0.500	<0.500	<0.500	<0.500	<5.00	NA	22.27	7.41	14.86	2.0
S-5	01/12/2001	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	22.27	8.80	13.47	NA
S-5	01/25/2001	NA	193	NA	NA	NA	NA	NA	NA	22.27	9.77	12.50	1.7
S-5	02/16/2001	Well inaccessible		NA	NA	NA	NA	NA	NA	22.27	NA	NA	NA
S-5	07/09/2001	Well inaccessible		NA	NA	NA	NA	NA	NA	22.27	NA	NA	NA

WELL CONCENTRATIONS
Shell-branded Service Station
350 Grand Avenue
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)
S-5	08/07/2001	<50	<50	<0.50	<0.50	<0.50	<1.0	NA	<5.0	22.27	8.97	13.30	2.2
S-5	10/02/2001	NA	NA	NA	NA	NA	NA	NA	NA	22.27	8.44	13.83	NA
S-5	01/18/2002	<50	190	<0.50	<0.50	<0.50	0.51	NA	<5.0	22.27	6.67	15.60	1.9
S-5	04/17/2002	NA	NA	NA	NA	NA	NA	NA	NA	22.27	6.95	15.32	NA
S-5	07/16/2002	<50	1,200	<0.50	<0.50	<0.50	1.2	NA	<5.0	25.06	7.31	17.75	1.8
S-5	10/10/2002	NA	NA	NA	NA	NA	NA	NA	NA	24.78	8.07	16.71	NA
S-5	01/16/2003	<50	110	<0.50	<0.50	<0.50	<0.50	NA	<5.0	24.78	6.42	18.36	2.3
S-5	**05/02/2003**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**24.78**	**6.20**	**18.58**	**NA**
T-1	07/16/2002	<5,000	180	<50	<50	<50	<50	NA	14,000	NA	7.71	NA	5.0
T-1	10/10/2002	<5,000	320	<50	<50	<50	<50	NA	17,000	24.14	8.91	15.23	2.3
T-1	01/16/2003	<1,000	230	12	<10	<10	<10	NA	5,800	24.14	7.55	16.59	1.2
T-1	**05/02/2003**	**<2,500**	**400 i**	**<25**	**<25**	**<25**	**<50**	**NA**	**3,300**	**24.14**	**7.69**	**16.45**	**0.8**
T-2	07/16/2002	<5,000	390	<50	<50	<50	<50	NA	17,000	NA	7.15	NA	4.0
T-2	10/10/2002	Insufficient water		NA	NA	NA	NA	NA	NA	23.55	8.19	15.36	NA
T-2	01/16/2003	<1,000	120	<10	<10	<10	<10	NA	2,900	23.55	6.98	16.57	1.5
T-2	**05/02/2003**	**<500**	**190 i**	**<5.0**	**<5.0**	**<5.0**	**<10**	**NA**	**1,000**	**23.55**	**7.20**	**16.35**	**1.3**
HP-1	01/27/1993	22,000	14,000	2,500	130	1,400	140	NA	NA	NA	NA	NA	NA
HP-2	01/27/1993	<50	NA	<0.5	4.4	<0.5	<0.5	NA	NA	NA	NA	NA	NA
HP-3	01/27/1993	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA

WELL CONCENTRATIONS
Shell-branded Service Station
350 Grand Avenue
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 February 16, 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 February 16, 2001, analyzed by EPA Method 8020.
MTBE = Methyl-tertiary-butyl ether
TOB = Top of Wellbox Elevation
TOC = Top of Casing Elevation
GW = Groundwater
HP = Hydropunch ground water sample
T = Tank backfill well
DO = Dissolved Oxygen
ug/L = Parts per billion
ppm =Parts per million
MSL = Mean sea level
ft = Feet
<n = Below detection limit
D = Duplicate sample
NA = Not applicable

WELL CONCENTRATIONS
Shell-branded Service Station
350 Grand Avenue
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)

Notes:

a = TPPH/BETX concentrations anomalous with historical data. Lab verified concentrations.

b = Compounds reported as TPH-D appear to be the less volatile constituents of gasoline.

c = Compounds reported as TPH-D are primarily due to the presence of a heavier petroleum product, possibly motor oil.

d = Chromatogram pattern indicated an unidentified hydrcocarbon.

e = Compounds reported as TPH-D are primarily due to the presence of lighter petroleum product, possibly gasoline.

f = These results are listed as S-2 on the analytical report due to possible mislabeling in the field or laboratory.
Resampled on February 16,2001 to confirm mislabeling.

g = DO reading not taken due to insufficient water.

h = These results are listed as S-3 on the analytical report due to possible mislabeling in the field or laboratory.

i = Hydrocarbon reported does not match the pattern of STL's diesel standard.

j = Hydrocarbon reported in the gasoline range does not match STL's gasoline standard.
Resampled on February 16,2001 to confirm mislabeling.

Wells S-1, S-3, S-4, and S-5 surveyed on May 4, 1998, by Virgil Chavez Land Surveying of Vallejo, California.

Site surveyed March 5 and July 29, 2002, by Virgil Chavez Land Surveying of Vallejo, California.

Beginning October 10, 2002, depth to water referenced to Top of Casing elevation.

SEVERN TRENT STL

Submission#: 2003-05-0119

Blaine Tech Services, Inc.

May 19, 2003

1680 Rogers Avenue
San Jose, CA 95112-1105

Attn.: Leon Gearhart

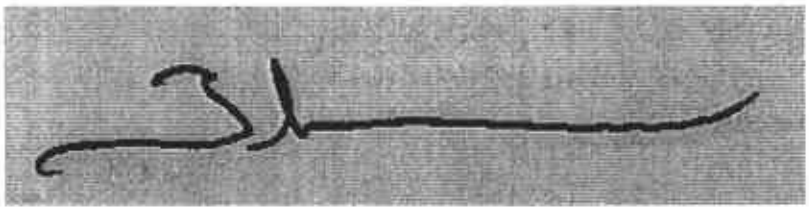
Project#: 030503-DA1
Project: 98995755
Site: 350 Grand Ave., Oakland

Dear Mr.Gearhart,

Attached is our report for your samples received on 05/05/2003 15:46
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 06/19/2003 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 #: 2003-05-0119

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: 030503-DA1
98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
S-2	05/02/2003 10:45	Water	1
S-4	05/02/2003 11:05	Water	2
T-1	05/02/2003 10:40	Water	3
T-2	05/02/2003 10:15	Water	4

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: 030503-DA1
98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., Oakland

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	S-2	Lab ID:	2003-05-0119 - 1
Sampled:	05/02/2003 10:45	Extracted:	5/7/2003 07:37
Matrix:	Water	QC Batch#:	2003/05/07-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	4800	50	ug/L	1.00	05/09/2003 21:06	ndp
Surrogates(s)						
o-Terphenyl	101.1	60-130	%	1.00	05/09/2003 21:06	

Diesel (C10-C24) by 8015m

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: 030503-DA1
98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., Oakland

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	S-4	Lab ID:	2003-05-0119 - 2
Sampled:	05/02/2003 11:05	Extracted:	5/7/2003 07:37
Matrix:	Water	QC Batch#:	2003/05/07-04.10

Analysis Flag: rl (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	130	63	ug/L	1.25	05/09/2003 21:43	ndp
Surrogates(s)						
o-Terphenyl	71.0	60-130	%	1.25	05/09/2003 21:43	

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: 030503-DA1
98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., Oakland

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	T-1	Lab ID:	2003-05-0119 - 3
Sampled:	05/02/2003 10:40	Extracted:	5/7/2003 07:37
Matrix:	Water	QC Batch#:	2003/05/07-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	400	50	ug/L	1.00	05/09/2003 22:20	ndp
Surrogates(s)						
o-Terphenyl	105.1	60-130	%	1.00	05/09/2003 22:20	

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: 030503-DA1
98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., Oakland

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	T-2	Lab ID:	2003-05-0119 - 4
Sampled:	05/02/2003 10:15	Extracted:	5/7/2003 07:37
Matrix:	Water	QC Batch#:	2003/05/07-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	190	50	ug/L	1.00	05/09/2003 22:57	ndp
Surrogates(s)						
o-Terphenyl	77.1	60-130	%	1.00	05/09/2003 22:57	

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: 030503-DA1
98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., Oakland

Batch QC Report

Prep(s): 3510/8015M — Test(s): 8015M
Method Blank — Water — QC Batch # 2003/05/07-04.10
MB: 2003/05/07-04.10-003 — Date Extracted: 05/07/2003 07:37

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	05/07/2003 14:46	
Surrogates(s)					
o-Terphenyl	81.6	60-130	%	05/07/2003 14:46	

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: 030503-DA1
98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., Oakland

Batch QC Report

Prep(s): 3510/8015M — Test(s): 8015M

Laboratory Control Spike — Water — QC Batch # 2003/05/07-04.10

LCS 2003/05/07-04.10-001 — Extracted: 05/07/2003 — Analyzed: 05/07/2003 13:32

LCSD 2003/05/07-04.10-002 — Extracted: 05/07/2003 — Analyzed: 05/07/2003 14:09

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	680	764	1000	68.0	76.4	11.6	60-130	25		
Surrogates(s)										
o-Terphenyl	16.8	17.2	20.0	83.8	85.8		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: 030503-DA1
98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., Oakland

Legend and Notes

Analysis Flag

rl

Reporting limits raised due to reduced sample size.

Result Flag

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

SEVERN TRENT STL

Submission #: 2003-05-0119

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: 030503-DA1
98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
S-2	05/02/2003 10:45	Water	1
S-4	05/02/2003 11:05	Water	2
T-1	05/02/2003 10:40	Water	3
T-2	05/02/2003 10:15	Water	4

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: 030503-DA1
98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., Oakland

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	S-2	Lab ID:	2003-05-0119 - 1
Sampled:	05/02/2003 10:45	Extracted:	5/14/2003 15:53
Matrix:	Water	QC Batch#:	2003/05/14-1a.27

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	12000	5000	ug/L	100.00	05/14/2003 15:53	g
Benzene	560	50	ug/L	100.00	05/14/2003 15:53	
Toluene	ND	50	ug/L	100.00	05/14/2003 15:53	
Ethylbenzene	ND	50	ug/L	100.00	05/14/2003 15:53	
Total xylenes	ND	100	ug/L	100.00	05/14/2003 15:53	
Methyl tert-butyl ether (MTBE)	14000	500	ug/L	100.00	05/14/2003 15:53	
Surrogates(s)						
1,2-Dichloroethane-d4	99.6	76-130	%	100.00	05/14/2003 15:53	
Toluene-d8	94.6	78-115	%	100.00	05/14/2003 15:53	

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: 030503-DA1
98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., Oakland

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	S-4	Lab ID:	2003-05-0119 - 2
Sampled:	05/02/2003 11:05	Extracted:	5/14/2003 16:20
Matrix:	Water	QC Batch#:	2003/05/14-1a.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	53	50	ug/L	1.00	05/14/2003 16:20	
Benzene	0.67	0.50	ug/L	1.00	05/14/2003 16:20	
Toluene	ND	0.50	ug/L	1.00	05/14/2003 16:20	
Ethylbenzene	3.8	0.50	ug/L	1.00	05/14/2003 16:20	
Total xylenes	2.4	1.0	ug/L	1.00	05/14/2003 16:20	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L	1.00	05/14/2003 16:20	
Surrogates(s)						
1,2-Dichloroethane-d4	103.8	76-130	%	1.00	05/14/2003 16:20	
Toluene-d8	96.6	78-115	%	1.00	05/14/2003 16:20	

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: 030503-DA1
98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., Oakland

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	T-1	Lab ID:	2003-05-0119 - 3
Sampled:	05/02/2003 10:40	Extracted:	5/15/2003 13:00
Matrix:	Water	QC Batch#:	2003/05/15-1E.64

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	2500	ug/L	50.00	05/15/2003 13:00	
Benzene	ND	25	ug/L	50.00	05/15/2003 13:00	
Toluene	ND	25	ug/L	50.00	05/15/2003 13:00	
Ethylbenzene	ND	25	ug/L	50.00	05/15/2003 13:00	
Total xylenes	ND	50	ug/L	50.00	05/15/2003 13:00	
Methyl tert-butyl ether (MTBE)	3300	250	ug/L	50.00	05/15/2003 13:00	
Surrogates(s)						
1,2-Dichloroethane-d4	100.6	76-130	%	50.00	05/15/2003 13:00	
Toluene-d8	99.7	78-115	%	50.00	05/15/2003 13:00	

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: 030503-DA1
98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., Oakland

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	T-2	Lab ID:	2003-05-0119 - 4
Sampled:	05/02/2003 10:15	Extracted:	5/15/2003 13:22
Matrix:	Water	QC Batch#:	2003/05/15-1E.64

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	500	ug/L	10.00	05/15/2003 13:22	
Benzene	ND	5.0	ug/L	10.00	05/15/2003 13:22	
Toluene	ND	5.0	ug/L	10.00	05/15/2003 13:22	
Ethylbenzene	ND	5.0	ug/L	10.00	05/15/2003 13:22	
Total xylenes	ND	10	ug/L	10.00	05/15/2003 13:22	
Methyl tert-butyl ether (MTBE)	1000	50	ug/L	10.00	05/15/2003 13:22	
Surrogates(s)						
1,2-Dichloroethane-d4	102.4	76-130	%	10.00	05/15/2003 13:22	
Toluene-d8	102.6	78-115	%	10.00	05/15/2003 13:22	

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: 030503-DA1
98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260FAB
Method Blank — Water — QC Batch # 2003/05/14-1a.27
MB: 2003/05/14-1a.27-005 — Date Extracted: 05/14/2003 15:17

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	05/14/2003 15:17	
Benzene	ND	0.5	ug/L	05/14/2003 15:17	
Toluene	ND	0.5	ug/L	05/14/2003 15:17	
Ethylbenzene	ND	0.5	ug/L	05/14/2003 15:17	
Total xylenes	ND	1.0	ug/L	05/14/2003 15:17	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L	05/14/2003 15:17	
Surrogates(s)					
1,2-Dichloroethane-d4	102.9	76-130	%	05/14/2003 15:17	
Toluene-d8	96.0	78-115	%	05/14/2003 15:17	

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: 030503-DA1
98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., Oakland

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2003/05/15-1E.64-003

Water

Test(s): 8260FAB
QC Batch # 2003/05/15-1E.64
Date Extracted: 05/15/2003 11:04

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	05/15/2003 11:04	
Benzene	ND	0.5	ug/L	05/15/2003 11:04	
Toluene	ND	0.5	ug/L	05/15/2003 11:04	
Ethylbenzene	ND	0.5	ug/L	05/15/2003 11:04	
Total xylenes	ND	1.0	ug/L	05/15/2003 11:04	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L	05/15/2003 11:04	
Surrogates(s)					
1,2-Dichloroethane-d4	99.0	76-130	%	05/15/2003 11:04	
Toluene-d8	96.0	78-115	%	05/15/2003 11:04	

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: 030503-DA1
98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260FAB

Laboratory Control Spike — Water — QC Batch # 2003/05/14-1a.27

LCS 2003/05/14-1a.27-003 — Extracted: 05/14/2003 — Analyzed: 05/14/2003 14:24

LCSD 2003/05/14-1a.27-004 — Extracted: 05/14/2003 — Analyzed: 05/14/2003 14:55

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	22.4	24.2	25	89.6	96.8	7.7	69-129	20		
Toluene	24.0	25.1	25	96.0	100.4	4.5	70-130	20		
Methyl tert-butyl ether (MTBE)	26.0	28.1	25	104.0	112.4	7.8	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	523	514	500	104.6	102.8		76-130			
Toluene-d8	494	491	500	98.8	98.2		78-115			

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: 030503-DA1
98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260FAB

Laboratory Control Spike — Water — QC Batch # 2003/05/15-1E.64

LCS 2003/05/15-1E.64-002 — Extracted: 05/15/2003 — Analyzed: 05/15/2003 10:20

LCSD 2003/05/15-1E.64-001 — Extracted: 05/15/2003 — Analyzed: 05/15/2003 10:42

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	22.8	23.7	25	91.2	94.8	3.9	69-129	20		
Toluene	22.2	23.0	25	88.8	92.0	3.5	70-130	20		
Methyl tert-butyl ether (MTBE)	24.4	24.1	25	97.6	96.4	1.2	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	528	507	500	105.6	101.4		76-130			
Toluene-d8	495	508	500	99.0	101.6		78-115			

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

Blaine Tech Services, Inc.

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San Jose, CA 95112-1105
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98995755

Received: 05/05/2003 15:46

Site: 350 Grand Ave., 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.

SHELL Chain Of Custody Record

73944

Lab Identification (if necessary):

Address:

City, State, Zip:

Shell Project Manager to be Invoiced:
Karen Petryna

☑ ACTIVITY & ORDER ENTRY
☐ TECHNICAL SERVICES
☐ GRMT, HOUSTON

2003-05-0119

INCIDENT NUMBER (S&E ONLY): 98395755

SAP or GRMT NUMBER (TS/GRMT):

DATE: 5/2/03

PAGE: 1 of 1

Consulting Company: Blaine Tech Services | Lab Code: BTSS

Address: 1680 Rogers Avenue, San Jose, CA 95112

Project Contact (Hardcopy or PDF Report to): Leon Gearhart

Telephone: 408-573-0555 | Fax: 408-573-7771 | Email: lgearhart@blainetech.com

Site Address (Street and City): 350 Grand Ave., Oakland

Global ID No.: T0600101255

Lead Organization / Lead Contact (Responsible Party or Designee): Anni Kraml

Phone No.: (510) 420-3335

Email: ShellOaklandEDF@cambrie-env.com

Consultant Project No.: BTS #030502-011

Sampler Name(s) (Print): MICHAEL MCNAMARA DAVE A

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:

GOLDSTRIKE 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 - 3ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	EDB & 1,2-DCA (8260B)	TPH - D	Environmental Health	Alameda County	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
	S-2	5/2/03	1045	W	5	X	X	X						X			
	S-4		1105		4	X	X	X						X			
	T-1		1040		5	X	X	X						X			
	T-2		1015		5	X	X	X						X			

TEMPERATURE ON RECEIPT: 3.8°C

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
David Arbut	[signature]	5/5/03	1546
[signature]	[signature]	5/5/03	
	Nouna B. STL-SF	5/5/03	1716

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

10/15/00 Revision