Shell Oil Products US

April 15, 2003

Mr. Bennett K. Horenstein
East Bay Municipal Utilities District
Environmental Services Division
PO Box 24055
Oakland, California 94623-1055

Subject: **Shell-branded Service Station**
2120 Montana Street
Oakland, California
First Quarter 2003 Self-Monitoring Report
EBMUD Discharge Permit No. 5050670-1 94602

Dear Mr. Horenstein:

During the current reporting period, the groundwater treatment and extraction system at the site referenced above did not operate. Therefore, the discharge was in compliance with the conditions specified in the above-referenced East Bay Municipal Utilities District Wastewater Discharge Permit.

I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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
Shell Oil Products US

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

CAMBRIA

April 15, 2003

Mr. Bennett K. Horenstein
Source Control Manager
c/o Mr. Florencio C. Gonzalez
East Bay Municipal Utilities District
Environmental Services Division
PO Box 24055
Oakland, California 94623-1055

Re: **First Quarter 2003 Self-Monitoring Report**
Shell-branded Service Station
2120 Montana Street
Oakland, California
EBMUD Discharge Permit # 5050670-1
Cambria Project # 245-0733-004

Dear Mr. Horenstein:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US, Cambria Environmental Technology, Inc. (Cambria), is providing an update of activities for the groundwater extraction (GWE) system at the referenced site, in lieu of the first quarter 2003 self-monitoring report. Discharge from the GWE system under the East Bay Municipal Utility District wastewater discharge permit #5050670-1 has not yet begun. Therefore, there is no data to report at this time, as specified by the permit. Cambria anticipates starting the GWE system by the beginning of April 2003. Cambria will provide the required notifications prior to start-up. The start-up information will be provided in the second quarter 2003 self-monitoring report.

Please contact Jacquelyn Jones at (510) 420-3316 if you require any additional information.

Sincerely,
Cambria Environmental Technology, Inc.

Jacquelyn Jones
Project Geologist

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

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

Cambria Environmental Technology, Inc.

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

cc: Karen Petryna, Shell Oil Products US, P.O. Box 7869, Burbank, CA 91510-7869
Amir Gholami, Alameda County Health Care Services Agency, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577

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Shell Oil Products US

Alameda County

JUN 25 2003

Environmental Health

June 23, 2003

RO173

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

Subject: **Shell-branded Service Station**
2120 Montana Street
Oakland, California

Dear Mr. Gholami:

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

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

Sincerely,

Shell Oil Products US

Karen Petryna

Karen Petryna
Sr. Environmental Engineer

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

CAMBRIA

June 23, 2003

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

Re: **First Quarter 2003 Monitoring Report**
Shell-branded Service Station
2120 Montana Street
Oakland, California
Incident #98995740
Cambria Project #245-0733-002

Dear Mr. Gholami:

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 at the northwest corner of Montana Street and Fruitvale Avenue in Oakland, California (Figures 1 and 2).

REMEDIATION SUMMARY

Mobile Groundwater Extraction (GWE): As recommended in our August 15, 2001 *Agency Response*, Cambria began weekly GWE in August 2001 from wells MW-1 and TBW-N using a vacuum truck. Mobile GWE ended on March 5, 2003 due to construction of the fixed GWE system. The cumulative estimated mass of total petroleum hydrocarbons as gasoline (TPHg) and methyl tertiary butyl ether (MTBE) removed by mobile GWE at the site is 13.3 pounds and 7.49 pounds, respectively. Additionally, approximately 2.68 pounds of SPH have been removed at the site through manual bailing and GWE.

Fixed GWE System Installation: Our September 4, 2002 work plan proposed the installation of a fixed GWE system at the site. This work plan was approved in a September 19, 2002 Alameda County Health Care Services Agency letter. System construction began in early February 2003, and system start-up occurred on April 2, 2003.

Cambria Environmental Technology, Inc.

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

FIRST QUARTER 2003 ACTIVITIES

Groundwater Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged and sampled the site wells, calculated groundwater elevations, and compiled the analytical data. Cambria prepared a vicinity map that 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 operation of the fixed GWE system on April 2, 2003. Wells MW-1 and TBW-N are used as extraction wells. System analytical data are summarized in Table 1. 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 average flow rate of approximately 0.91 gallons per minute.

As of May 21, 2003, a total of 44,246 gallons of groundwater have been extracted. A total of 11.2 pounds of TPHg, 0.393 pounds of benzene, and 2.24 pounds of MTBE have been recovered. Mass removal data are presented in Table 2.

ANTICIPATED SECOND QUARTER 2003 ACTIVITIES

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

Remedial Activities: Per Cambria 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) 450-1988 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

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

Table: 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, P.O. Box 7869, Burbank, CA 91510-7869

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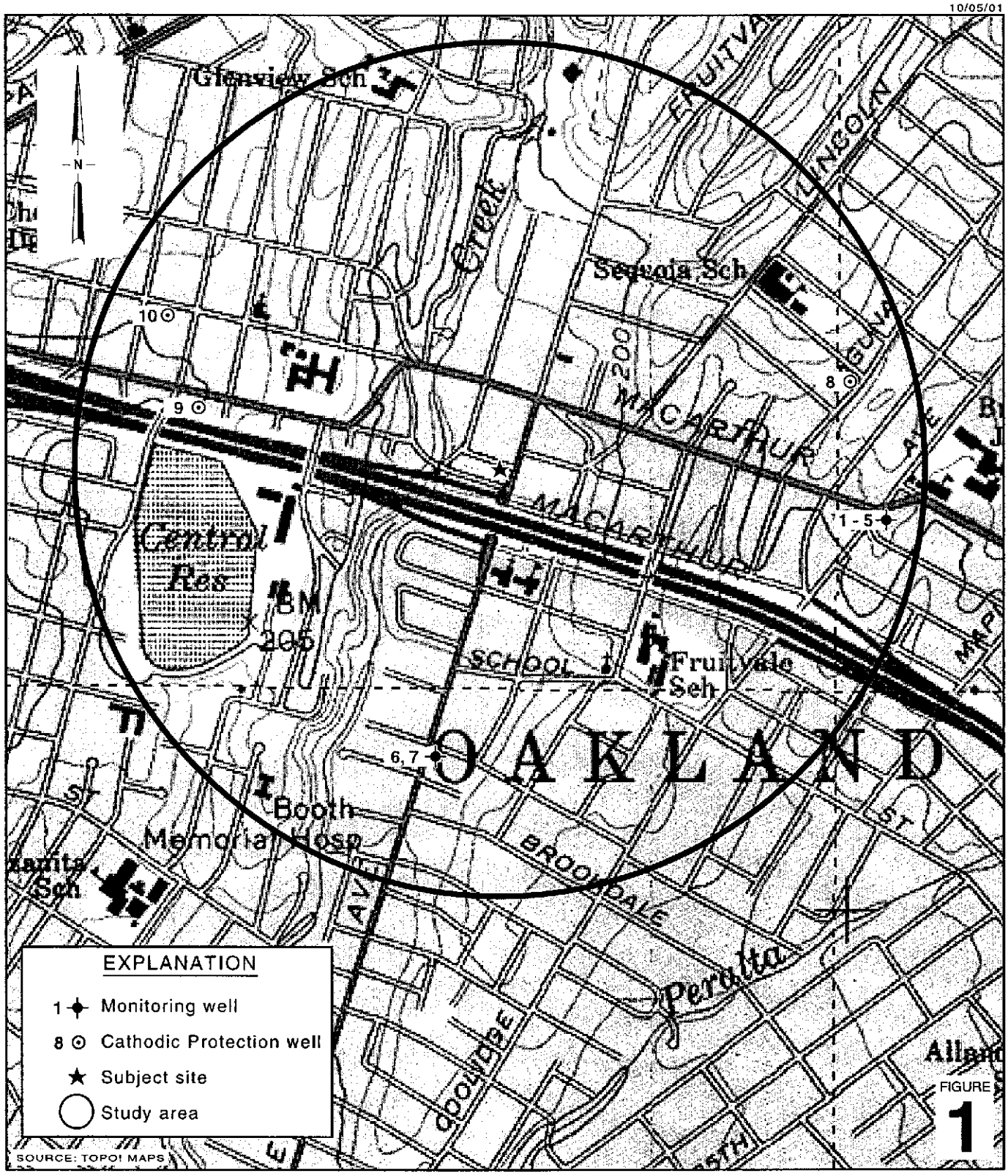
10/05/01



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SCALE : 1" = 1/6 MILE

Shell-branded Service Station
2120 Montana Street
Oakland, California
Incident #98995740

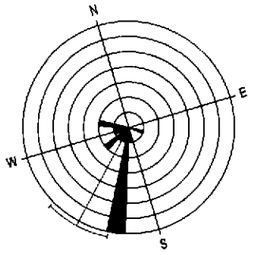
CAMBRIA

Vicinity / Area Well Survey Map
(1/2-Mile Radius)

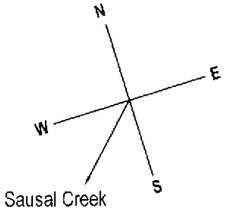
09/23/05

EXPLANATION

- SB-4 — Soil boring location (06/14-16/05)
- SV-D — Soil vapor sampling location (06/14-16/05)
- SB-7 — Attempted soil boring location (6/15/05)
- SV-A — Attempted soil vapor sampling location (6/14/05)
- MW-1 — Well used for groundwater extraction
- MW-2 — Monitoring well location
- TBW-N — Tank backfill well location
- SB-1 — Cambria soil boring location (10/99)
- D-1 — Cambria soil sampling location (11/97)
- INF — GWE system sampling location
- → Groundwater flow direction
- XX.XX — Groundwater elevation contour, in feet above mean sea level (msl), 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.
- Electrical and overhead electric line (E, OE)
- Sanitary sewer (SS)
- Water line (W)
- Telecommunications line (T)
- Remediation piping (R)
- Discharge line (D)
- Product dispenser number



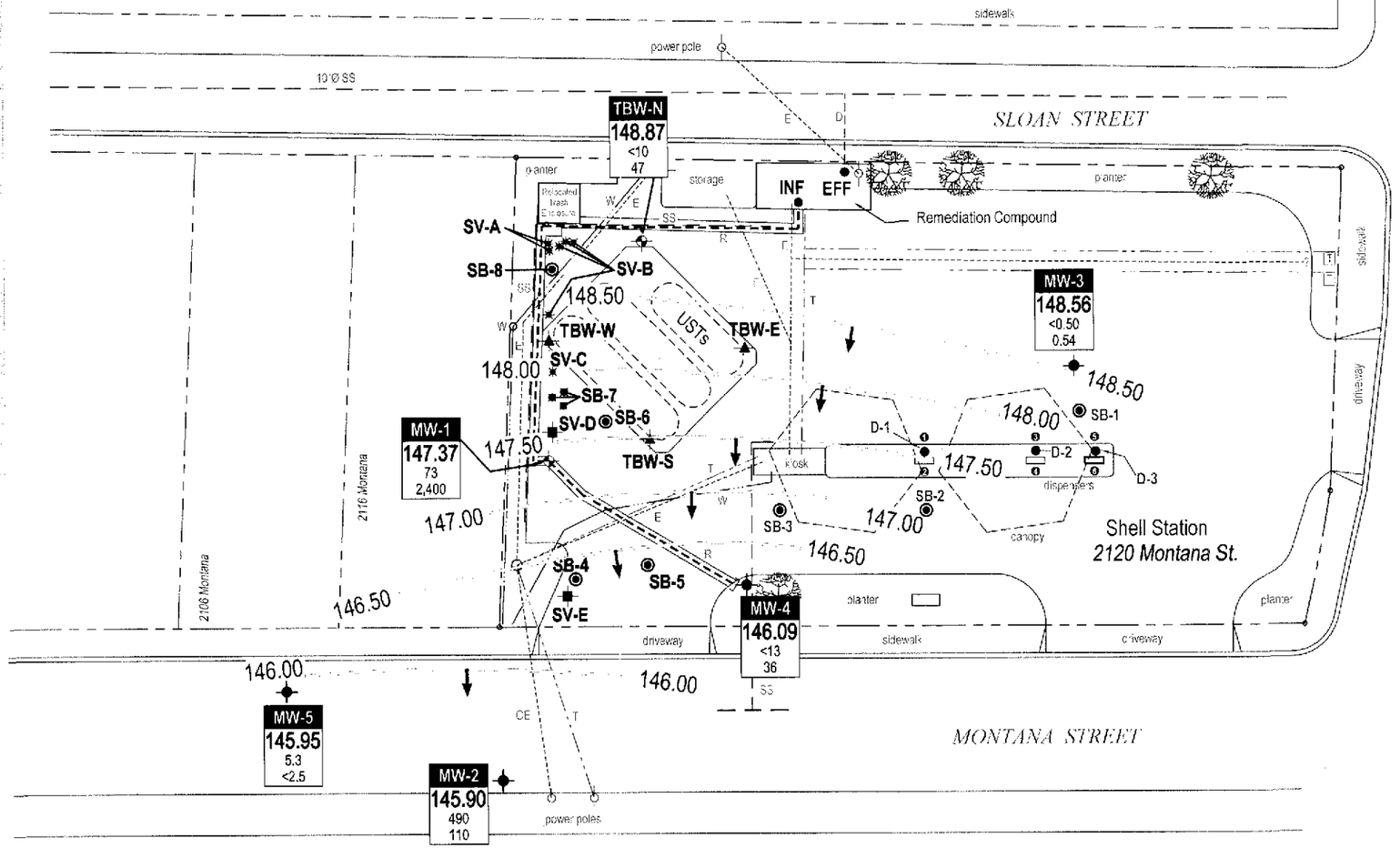
Groundwater Gradient Direction
(1Q01 through 3Q05)



Sausal Creek
(730 ft. SW)

Location of Sensitive Receptor
Relative to Site

Commercial property



0 15 30 60
Scale (ft)

G:\OAKLAND 2120 MONTANA\FIGURES\3Q05.DWG

Groundwater Elevation Contour Map

September 1, 2005

CAMBRIA

FIGURE
2

Shell-branded Service Station
2120 Montana Street
Oakland, California
Incident No.98995740

Table 1: Groundwater Extraction - System Analytical Data
Shell-branded Service Station, Incident #98995740, 2120 Montana 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)
04/02/2003	51,000	1,300	7,100	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
04/08/2003	45,000	1,200	8,600	1,600	5.3	3.2	220	<0.50	<0.50	<50	<0.50	<0.50
04/22/2003	<50	<25	1,700	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
05/01/2003	45,000	1,600	8,300	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
05/21/2003	12,000	370	1,500	<50	<0.50	<0.50	<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, Incident #98995740, 2120 Montana Street, Oakland, California

						TPHg			Benzene			MTBE		
Site Visit (mm/dd/yy)	Hour Meter hours	Flow Meter Reading (gal)	Period Volume (gal)	Operational Flow Rate (gpm)	Cumulative Volume (gal)	TPHg Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)	Benzene Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)	MTBE Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)
04/02/2003	0.0	393	0	0	0		0.000	0.000		0.000	0.000		0.000	0.000
04/02/2003	5.3	1,006	613	1.93	613	51,000	0.261	0.261	1,300	0.007	0.007	7,100	0.036	0.036
04/08/2003	11.4	2,010	1,004	2.74	1,617	45,000	0.377	0.638	1,200	0.010	0.017	8,600	0.072	0.108
04/22/2003	303.0	15,640	13,630	0.78	15,247	<50	0.003	0.641	<25	0.003	0.020	1,700	0.193	0.302
05/01/2003	399.0	17,840	2,200	0.38	17,447	45,000	0.826	1.47	1,600	0.029	0.049	8,300	0.152	0.454
05/20/2003	784.0	43,320	25,480	1.10	42,927		9.568	11.0		0.340	0.389		1.765	2.22
05/21/2003	808.5	44,639	1,319	0.90	44,246	12,000	0.132	11.2	370	0.004	0.393	1,500	0.017	2.24
		Total Extracted Volume=			**44,246**	**Total Pounds Removed:**		**11.2**	**Total Pounds Removed:**		**0.393**	**Total Pounds Removed:**		**2.24**
		Average Operational Flow Rate=		**0.91**		**Total Gallons Removed:**		**1.83**	**Total Gallons Removed:**		**0.054**	**Total Gallons Removed:**		**0.362**

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.

1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
(408) 573-7771 FAX
(408) 573-0555 PHONE
CONTRACTOR'S LICENSE #746684
www.blainetech.com

May 2, 2003

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

First Quarter 2003 Groundwater Monitoring at
Shell-branded Service Station
2120 Montana Street
Oakland, CA

Monitoring performed on March 31, 2003

Groundwater Monitoring Report **030331-RH-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: Anni Kreml
Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A
Oakland, CA 94608

WELL CONCENTRATIONS
Shell-branded Service Station
2120 Montana 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)	SPH Thickness (ft.)
MW-1	03/19/3001	NA	NA	NA	NA	NA	NA	NA	159.59	12.14	147.45	ND
MW-1	03/23/2001	16,600	753	1,720	407	2,330	NA	27,500	159.59	12.25	147.34	ND
MW-1	05/31/2001	<20,000d	1,000d	920d	490d	2,000d	NA	54,000d	161.13	12.22	148.91	ND
MW-1	06/27/2001	NA	NA	NA	NA	NA	NA	NA	159.59	13.00b	NA	ND
MW-1	07/09/2001	NA	NA	NA	NA	NA	NA	NA	159.59	13.17	146.67	0.31
MW-1	09/25/2001	NA	NA	NA	NA	NA	NA	NA	159.59	14.27	145.66	0.43
MW-1	11/20/2001	NA	NA	NA	NA	NA	NA	NA	159.59	13.49	146.14	0.05
MW-1	12/05/2001	NA	NA	NA	NA	NA	NA	NA	159.59	11.32	148.31	0.05
MW-1	03/01/2002	NA	NA	NA	NA	NA	NA	NA	159.59	13.22	146.56	0.24
MW-1	06/06/2002	NA	NA	NA	NA	NA	NA	NA	159.59	12.99	147.00	0.50
MW-1	07/16/2002	NA	NA	NA	NA	NA	NA	NA	159.59	13.37	146.22	ND
MW-1	09/06/2002	NA	NA	NA	NA	NA	NA	NA	159.57	13.30	146.70	0.54
MW-1	12/12/2002	NA	NA	NA	NA	NA	NA	NA	159.57	13.78	146.61	1.03
MW-1	**03/31/2003**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**159.57**	**11.21**	**148.38**	**0.03**
MW-2	03/19/3001	NA	NA	NA	NA	NA	NA	NA	158.03	11.60	146.43	ND
MW-2	03/23/2001	4,450	280	41.0	62.1	63.0	NA	16,600	158.03	11.76	146.27	ND
MW-2	05/31/2001	<20,000a	820a	<200a	<200a	<200a	NA	63,000a	158.03	11.40	146.63	ND
MW-2	06/27/2001	<50,000	610	4.0	13	9.2	NA	47,000	158.03	12.65	145.38	ND
MW-2	09/25/2001	<2,000	41	<20	<20	<20	NA	6,400	158.03	12.89	145.14	ND
MW-2	12/05/2001	<2,000	74	<20	<20	<20	NA	8,400	158.03	10.40	147.63	ND
MW-2	03/01/2002	<1,000	<10	<10	<10	<10	NA	2,900	158.03	11.52	146.51	ND
MW-2	06/06/2002	<5,000	210	<50	<50	<50	NA	23,000	158.03	12.15	145.88	ND
MW-2	07/16/2002	NA	NA	NA	NA	NA	NA	NA	158.03	12.25	145.78	ND
MW-2	09/06/2002	<2,000	56	<20	<20	<20	NA	11,000	158.01	12.44	145.57	ND
MW-2	12/12/2002	<2,500	80	<25	<25	<25	NA	13,000	158.01	12.53	145.48	ND
MW-2	**03/31/2003**	**<5,000**	**230**	**1,200**	**95**	**150**	**NA**	**13,000**	**158.01**	**11.98**	**146.03**	**ND**

WELL CONCENTRATIONS
Shell-branded Service Station
2120 Montana 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)	SPH Thickness (ft.)
MW-3	03/19/3001	NA	NA	NA	NA	NA	NA	NA	161.13	11.42	149.71	ND
MW-3	03/23/2001	<50.0	<0.500	<0.500	<0.500	<0.500	NA	1.26	161.13	11.42	149.71	ND
MW-3	05/31/2001	<50e	<0.50e	<0.50e	<0.50e	<0.50e	NA	<5.0e	159.59	13.00	146.59	ND
MW-3	06/27/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	161.13	12.32	148.81	ND
MW-3	09/25/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	161.13	12.50	148.63	ND
MW-3	12/05/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	161.13	10.13	151.00	ND
MW-3	03/01/2002	<50	<0.50	<0.50	<0.50	0.73	NA	<5.0	161.13	11.63	149.50	ND
MW-3	06/06/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	161.13	11.55	149.58	ND
MW-3	07/16/2002	NA	NA	NA	NA	NA	NA	NA	161.13	11.72	149.41	ND
MW-3	09/06/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	161.11	12.24	148.87	ND
MW-3	12/12/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	161.11	12.18	148.93	ND
MW-3	**03/31/2003**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**NA**	**0.78**	**161.11**	**11.94**	**149.17**	**ND**
MW-4	07/10/2002	NA	NA	NA	NA	NA	NA	NA	NM	13.19	NA	ND
MW-4	07/16/2002	800	1.1	1.1	2.6	2.4	NA	450	NM	13.56	NA	ND
MW-4	09/06/2002	1,100	3.0	1.8	8.0	4.6	NA	110	160.09	13.67	146.42	ND
MW-4	12/12/2002	130	<0.50	<0.50	<0.50	<0.50	NA	940	160.09	14.06	146.03	ND
MW-4	**03/31/2003**	**<250**	**<2.5**	**<2.5**	**<2.5**	**<5.0**	**NA**	**500**	**160.09**	**13.69**	**146.40**	**ND**
MW-5	07/10/2002	NA	NA	NA	NA	NA	NA	NA	NM	12.22	NA	ND
MW-5	07/16/2002	6,100	65	7.2	100	130	NA	410	NM	12.50	NA	ND
MW-5	09/06/2002	5,900	100	8.1	41	32	NA	230	158.25	12.77	145.48	ND
MW-5	12/12/2002	4,900	70	5.7	25	17	NA	280	158.25	12.71	145.54	ND
MW-5	**03/31/2003**	**6,400**	**61**	**4.9**	**23**	**13**	**NA**	**330**	**158.25**	**11.93**	**146.32**	**ND**
TBW-N	09/25/2001 c	120,000	3,200	2,800	4,000	18,000	NA	31,000	NM	12.25	NM	ND
TBW-N	11/20/2001	72,000	2,200	3,600	2,600	14,000	NA	35,000	NM	12.13	NM	ND
TBW-N	12/05/2001	76,000	1,600	3,200	2,900	15,000	NA	30,000	NM	11.51	NM	ND

WELL CONCENTRATIONS
Shell-branded Service Station
2120 Montana 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)	SPH Thickness (ft)
TBW-N	03/01/2002	91,000	1,200	4,200	2,800	14,000	NA	29,000	NM	11.88	NM	ND
TBW-N	06/06/2002	100,000	2,100	8,200	3,400	17,000	NA	18,000	NM	12.48	NM	ND
TBW-N	07/16/2002	NA	NA	NA	NA	NA	NA	NA	NM	12.39	NM	ND
TBW-N	09/06/2002	69,000	870	4,800	2,300	11,000	NA	17,000	161.26	12.36	148.90	ND
TBW-N	12/12/2002	Well inaccessible		NA	NA	NA	NA	NA	161.26	NA	NA	NA
TBW-N	12/19/2002	110,000	1,900	13,000	3,100	18,000	NA	19,000	161.26	10.82	150.44	NA
TBW-N	**03/31/2003**	**62,000**	**1,600**	**6,500**	**2,200**	**11,000**	**NA**	**11,000**	**161.26**	**10.63**	**150.63**	**NA**

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to May 31, 2001, analyzed by EPA Method 8015.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to May 31, 2001, analyzed by EPA Method 8020.

MTBE = Methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

GW = Groundwater

TBW-N = tank backfill well-north

NA = Not analyzed

ND = Not detected

NM = Not measured

ug/L = parts per billion

MSL = Mean sea level

ft = Feet

<n = Below detection limit

WELL CONCENTRATIONS
Shell-branded Service Station
2120 Montana 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)	SPH Thickness (ft.)

Notes:

a = Resampled on June 27, 2001, due to possible mislabeling.

b = Separate phase hydrocarbons encountered during purge; groundwater elevation may not be accurate.

c = Sample TBW-N was analyzed once within hold time, but the analyte concentrations all exceeded the instrument working ranges. The sample was diluted and re-analyzed out of hold time. The diluted analysis is reported because it more accurately reflects the concentrations present.

d = These results are listed as MW-3 on analytical report due to possible mislabeling in field or laboratory. Resampled on June 27, 2001, to confirm mislabeling.

e = These results are listed as MW-1 on analytical report due to possible mislabeling in field or laboratory. Resampled on June 27, 2001, to confirm mislabeling.

Survey data provided by Cambria Environmental Technology, May 2001.

Site surveyed February 12 and June 26, 2002, by Virgil Chavez Land Surveying of Vallejo, California.

When separate phase hydrocarbons are present, ground water elevation is adjusted using the relation:

corrected ground water elevation = Top-of-casing elevation - depth to water + (0.8 x hydrocarbon thickness).

SEVERN TRENT STL

Submission#: 2003-04-0009

Blaine Tech Services, Inc.

April 15, 2003

1680 Rogers Avenue
San Jose, CA 95112-1105

Attn.: Leon Gearhart

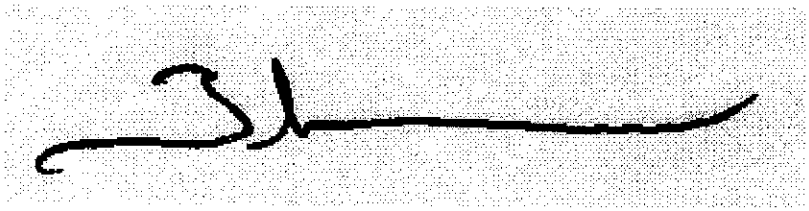
Project#: 030331-RH1
Project: 98995740
Site: 2120 Montana Street
Oakland, CA

Dear Mr.Gearhart,

Attached is our report for your samples received on 03/31/2003 16:14
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 05/15/2003 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 #: 2003-04-0009

Gas/BTEX/MTBE by 8260B

Blaine Tech Services, Inc.
Attn.: Leon Gearhart

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

Project: 030331-RH1
98995740

Received: 03/31/2003 16:14

Site: 2120 Montana Street
Oakland, CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-2	03/31/2003 08:37	Water	1
MW-3	03/31/2003 10:55	Water	2
MW-4	03/31/2003 10:45	Water	3
MW-5	03/31/2003 10:00	Water	4
TBW-N	03/31/2003 10:30	Water	5

Gas/BTEX/MTBE by 8260B

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 030331-RH1
98995740

Received: 03/31/2003 16:14

Site: 2120 Montana Street
Oakland, CA

Prep(s): 5030B
Sample ID: **MW-2**
Sampled: 03/31/2003 08:37
Matrix: Water
Analysis Flag: o (See Legend and Note Section)

Test(s): 8260FAB
Lab ID: 2003-04-0009 - 1
Extracted: 4/11/2003 13:11
QC Batch#: 2003/04/11-V2.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	5000	ug/L	100.00	04/11/2003 13:11	
Benzene	230	50	ug/L	100.00	04/11/2003 13:11	
Toluene	1200	50	ug/L	100.00	04/11/2003 13:11	
Ethylbenzene	95	50	ug/L	100.00	04/11/2003 13:11	
Total xylenes	150	100	ug/L	100.00	04/11/2003 13:11	
Methyl tert-butyl ether (MTBE)	13000	50	ug/L	100.00	04/11/2003 13:11	
Surrogates(s)						
1,2-Dichloroethane-d4	108.0	76-114	%	100.00	04/11/2003 13:11	
Toluene-d8	93.5	88-110	%	100.00	04/11/2003 13:11	

Gas/BTEX/MTBE by 8260B

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 030331-RH1
98995740

Received: 03/31/2003 16:14

Site: 2120 Montana Street
Oakland, CA

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	**MW-3**	Lab ID:	2003-04-0009 - 2
Sampled:	03/31/2003 10:55	Extracted:	4/11/2003 13:37
Matrix:	Water	QC Batch#:	2003/04/11-V2.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	04/11/2003 13:37	
Benzene	ND	0.50	ug/L	1.00	04/11/2003 13:37	
Toluene	ND	0.50	ug/L	1.00	04/11/2003 13:37	
Ethylbenzene	ND	0.50	ug/L	1.00	04/11/2003 13:37	
Total xylenes	ND	1.0	ug/L	1.00	04/11/2003 13:37	
Methyl tert-butyl ether (MTBE)	0.78	0.50	ug/L	1.00	04/11/2003 13:37	
Surrogates(s)						
1,2-Dichloroethane-d4	104.7	76-114	%	1.00	04/11/2003 13:37	
Toluene-d8	89.5	88-110	%	1.00	04/11/2003 13:37	

Gas/BTEX/MTBE by 8260B

Blaine Tech Services, Inc.
Attn.: Leon Gearhart

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

Project: 030331-RH1
98995740

Received: 03/31/2003 16:14

Site: 2120 Montana Street
Oakland, CA

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	**MW-4**	Lab ID:	2003-04-0009 - 3
Sampled:	03/31/2003 10:45	Extracted:	4/12/2003 14:42
Matrix:	Water	QC Batch#:	2003/04/12-V2.62

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	250	ug/L	5.00	04/12/2003 14:42	g
Benzene	ND	2.5	ug/L	5.00	04/12/2003 14:42	
Toluene	ND	2.5	ug/L	5.00	04/12/2003 14:42	
Ethylbenzene	ND	2.5	ug/L	5.00	04/12/2003 14:42	
Total xylenes	ND	5.0	ug/L	5.00	04/12/2003 14:42	
Methyl tert-butyl ether (MTBE)	500	2.5	ug/L	5.00	04/12/2003 14:42	
Surrogates(s)						
1,2-Dichloroethane-d4	99.6	76-114	%	5.00	04/12/2003 14:42	
Toluene-d8	98.9	88-110	%	5.00	04/12/2003 14:42	

Gas/BTEX/MTBE by 8260B

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 030331-RH1
98995740

Received: 03/31/2003 16:14

Site: 2120 Montana Street
Oakland, CA

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	**MW-5**	Lab ID:	2003-04-0009 - 4
Sampled:	03/31/2003 10:00	Extracted:	4/12/2003 15:04
Matrix:	Water	QC Batch#:	2003/04/12-V2.62

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	6400	250	ug/L	5.00	04/12/2003 15:04	
Benzene	61	2.5	ug/L	5.00	04/12/2003 15:04	
Toluene	4.9	2.5	ug/L	5.00	04/12/2003 15:04	
Ethylbenzene	23	2.5	ug/L	5.00	04/12/2003 15:04	
Total xylenes	13	5.0	ug/L	5.00	04/12/2003 15:04	
Methyl tert-butyl ether (MTBE)	330	2.5	ug/L	5.00	04/12/2003 15:04	
Surrogates(s)						
1,2-Dichloroethane-d4	106.6	76-114	%	5.00	04/12/2003 15:04	
Toluene-d8	95.3	88-110	%	5.00	04/12/2003 15:04	

Gas/BTEX/MTBE by 8260B

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 030331-RH1
98995740

Received: 03/31/2003 16:14

Site: 2120 Montana Street
Oakland, CA

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	**TBW-N**	Lab ID:	2003-04-0009.5
Sampled:	03/31/2003 10:30	Extracted:	4/11/2003 14:42
Matrix:	Water	QC Batch#:	2003/04/11-V2.27

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	62000	5000	ug/L	100.00	04/11/2003 14:42	
Benzene	1600	50	ug/L	100.00	04/11/2003 14:42	
Toluene	6500	50	ug/L	100.00	04/11/2003 14:42	
Ethylbenzene	2200	50	ug/L	100.00	04/11/2003 14:42	
Total xylenes	11000	100	ug/L	100.00	04/11/2003 14:42	
Methyl tert-butyl ether (MTBE)	11000	50	ug/L	100.00	04/11/2003 14:42	
Surrogates(s)						
1,2-Dichloroethane-d4	107.9	76-114	%	100.00	04/11/2003 14:42	
Toluene-d8	90.6	88-110	%	100.00	04/11/2003 14:42	

Gas/BTEX/MTBE by 8260B

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 030331-RH1
98995740

Received: 03/31/2003 16:14

Site: 2120 Montana Street
Oakland, CA

Batch QC Report

Prep(s): 5030B — Test(s): 8260FAB

Method Blank — **Water** — **QC Batch # 2003/04/11-V2.27**

MB: 2003/04/11-V2.27-005 — Date Extracted: 04/11/2003 12:32

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	04/11/2003 12:32	
Benzene	ND	0.5	ug/L	04/11/2003 12:32	
Toluene	ND	0.5	ug/L	04/11/2003 12:32	
Ethylbenzene	ND	0.5	ug/L	04/11/2003 12:32	
Total xylenes	ND	1.0	ug/L	04/11/2003 12:32	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	04/11/2003 12:32	
Surrogates(s)					
1,2-Dichloroethane-d4	113.4	76-114	%	04/11/2003 12:32	
Toluene-d8	89.6	88-110	%	04/11/2003 12:32	

Gas/BTEX/MTBE by 8260B

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 030331-RH1
98995740

Received: 03/31/2003 16:14

Site: 2120 Montana Street
Oakland, CA

Batch QC Report

Prep(s): 5030B — Test(s): 8260FAB

Method Blank — **Water** — **QC Batch # 2003/04/12-V2.62**

MB: 2003/04/12-V2.62-056 — Date Extracted: 04/12/2003 10:54

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	04/12/2003 10:54	
Benzene	ND	0.5	ug/L	04/12/2003 10:54	
Toluene	ND	0.5	ug/L	04/12/2003 10:54	
Ethylbenzene	ND	0.5	ug/L	04/12/2003 10:54	
Total xylenes	ND	1.0	ug/L	04/12/2003 10:54	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	04/12/2003 10:54	
Surrogates(s)					
1,2-Dichloroethane-d4	106.0	76-114	%	04/12/2003 10:54	
Toluene-d8	107.8	88-110	%	04/12/2003 10:54	

Gas/BTEX/MTBE by 8260B

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 030331-RH1
98995740

Received: 03/31/2003 16:14

Site: 2120 Montana Street
Oakland, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike | **Water** | **QC Batch # 2003/04/11-V2.27**

LCS 2003/04/11-V2.27-003 Extracted: 04/11/2003 Analyzed: 04/11/2003 11:41

LCSD 2003/04/11-V2.27-004 Extracted: 04/11/2003 Analyzed: 04/11/2003 12:10

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	25.4	26.0	25.0	101.6	104.0	2.3	69-129	20		
Toluene	26.0	26.9	25.0	104.0	107.6	3.4	70-130	20		
Methyl tert-butyl ether (MTBE)	34.5	34.7	25.0	138.0	138.8	0.6	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	555	558	500	111.0	111.6		76-114			
Toluene-d8	458	458	500	91.6	91.6		88-110			

Gas/BTEX/MTBE by 8260B

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 030331-RH1
98995740

Received: 03/31/2003 16:14

Site: 2120 Montana Street
Oakland, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike **Water** **QC Batch # 2003/04/12-V2.62**

LCS 2003/04/12-V2.62-010 Extracted: 04/12/2003 Analyzed: 04/12/2003 10:10

LCSD 2003/04/12-V2.62-055 Extracted: 04/12/2003 Analyzed: 04/12/2003 10:32

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	23.4	24.5	25.0	93.6	98.0	4.6	69-129	20		
Toluene	24.3	24.0	25.0	97.2	96.0	1.2	70-130	20		
Methyl tert-butyl ether (MTBE)	26.3	27.6	25.0	105.2	110.4	4.8	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	499	517	500	99.8	103.4		76-114			
Toluene-d8	481	510	500	96.2	102.0		88-110			

Gas/BTEX/MTBE by 8260B

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 030331-RH1
98995740

Received: 03/31/2003 16:14

Site: 2120 Montana Street
Oakland, CA

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 73058

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

Shell Project Manager to be invoiced:
[X] SCIENCE & ENGINEERING
[ ] TECHNICAL SERVICES
[ ] CRMT HOUSTON

Karen Petryna

2003-04-0009

INCIDENT NUMBER (S&E ONLY): 9 8 9 9 5 7 4 0

SAP or CRMT NUMBER (TS/CRMT): [redacted]

DATE: 3/31/03

PAGE: 1 of 1

SAMPLING COMPANY: Blaine Tech Services	LOG CODE: BTSS	SITE ADDRESS (Street and City): 2120 Montana Street, Oakland	GLOBAL ID NO.: T0600101805
ADDRESS: 1680 Rogers Avenue, San Jose, CA 95112		EDF DELIVERABLE TO (Responsible Party or Designee): Anni Kreml	PHONE NO.: 510-420-3335
PROJECT CONTACT (Hardcopy or PDF Report to): Leon Gearhart		E-MAIL: ShellOaklandEDF@cambria-env.com	CONSULTANT PROJECT NO.: BTS # 030331-RH1
TELEPHONE: 408-573-0555	FAX: 408-573-7771	E-MAIL: lgearhart@blainetech.com	SAMPLER NAME(S) (Print): Ryan Hansted

LAB USE ONLY

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

[ ] LA - RWQCB REPORT FORMAT [ ] UST AGENCY: ______

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

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

REQUESTED ANALYSIS

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

TEMPERATURE ON RECEIPT C°: 2.6 °C

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	1,2-DCA (8260B)	EDB (8260B)	TPH - Diesel, Extractable (8015m)	FIELD NOTES
	MW-2	3/31/03	857	GW	3	X	X	X								
	MW-3	↓	1055	↓	↓	X	X	X								
	MW-4	↓	1045	↓	↓	X	X	X								
	MW-5	↓	1000	↓	↓	X	X	X								
	TBW-N	↓	1030	↓	↓	X	X	X								

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
[signature] 1726	[signature]	3/31/03	1614
Relinquished by: (Signature) [signature] 3/31/03	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Nounak. STL-SF	3-31-03	1730

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

10/16/00 Revision

STL

STL San Francisco

Sample Receipt Checklist

Submission #:2003- 04 - 0009

Checklist completed by (initials) DSH Date: 04/01 /03

Courier name: ☑ STL San Francisco ☐ Client _____

Custody seals intact on shipping container/samples	Yes ___	No ___	Not Present ✓
Chain of custody present?	Yes ✓	No ___	
Chain of custody signed when relinquished and received?	Yes ✓	No ___	
Chain of custody agrees with sample labels?	Yes ✓	No ___	
Samples in proper container/bottle?	Yes ✓	No ___	
Sample containers intact?	Yes ✓	No ___	
Sufficient sample volume for indicated test?	Yes ✓	No ___	
All samples received within holding time?	Yes ✓	No ___	
Container/Temp Blank temperature in compliance (4° C ± 2)?	Temp: 2.6 °C	Yes ✓	No ___
Water - VOA vials have zero headspace?	No VOA vials submitted ___	Yes ✓	No ___

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~O), M (medium ~ O) or L (large ~ O)

Water - pH acceptable upon receipt? ☒ Yes ☐ No

☐ pH adjusted– Preservative used: ☐ HNO_3 ☐ HCl ☐ H_2SO_4 ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments:

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: ___/___/03

Client contacted: ☐ Yes ☐ No

Summary of discussion:

Corrective Action (per PM/Client):

WELL GAUGING DATA

Project # 030331-RH1 Date 3/31/03 Client Shell

Site 2120 Montana 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	2		11.17	0.03		11.21	—		
mw-2	2	odor				11.98	20.00		
mw-3	2					11.94	20.11		
mw-4	4	odor				13.69	19.85		
mw-5	2					11.93	19.90		
TBW-N	4	odor	pulled hose to gauge			10.63	12.25 ~~13.23~~		

* removed pump to gauge with interphase probe

SHELL WELL MONITORING DATA SHEET

BTS #: 030331-RH1	Site: 8120 Montana St, Oakland
Sampler: Ryan H	Date: 3/31/03
Well I.D.: mw-1	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth (TD): ———	Depth to Water (DTW): 11.21
Depth to Free Product: 11.17	Thickness of Free Product (feet): 0.03
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 / Middleburg / Electric Submersible / Waterra / Peristaltic / Extraction Pump / Other ___

Sampling Method: 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

___ (Gals.) X ___ = 0 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
	Free product, unable to sample					

Did well dewater? Yes No — Gallons actually evacuated: 0

Sampling Date: 3/31/03 Sampling Time: Depth to Water:

Sample I.D.: Laboratory: Kiff STL Other STL San Fran

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 #: 03033-RH1	Site: 8120 Mentan St, Oakland
Sampler: Ryan H	Date: 3/31/03
Well I.D.: mw-2	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth (TD): 20.00	Depth to Water (DTW): 11.98
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]: 13.58	

Purge Method: Bailer; (Disposable Bailer); Middleburg; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

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

1.25 (Gals.) X 3 = 3.75 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
548	63.9	6.3	1017	>200	1.25	blackish, odor
550	63.5	6.3	997	>200	2.5	" "
552	63.5	6.3	982	>200	3.75	" "

Did well dewater? Yes (No) Gallons actually evacuated: 3.75

Sampling Date: 3/31/03 Sampling Time: 557 Depth to Water: 13.95 due to traffic

Sample I.D.: mw-2 Laboratory: Kiff SPL Other (STL San Fran)

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 #: 03033-RHJ	Site: 8120 Moraga St, Oakland
Sampler: Ryan H	Date: 3/31/03
Well I.D.: mw-3	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth (TD): 20.11	Depth to Water (DTW): 11.94
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]: 13.57	

Purge Method: (Bailer) Waterra Sampling Method: (Bailer)
Disposable Bailer Peristaltic Disposable Bailer
Middleburg Extraction Pump Extraction Port
Electric Submersible Other_____ Dedicated Tubing
Other:

1.30 (Gals.) X	3	= 3.9 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

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

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
930	66.6	7.0	668	>200	1.5	brown, cloudy
932	67.0	6.9	661	>200	3.0	" "
934	67.4	6.9	669	>200	4.0	dark brown, cloudy

Did well dewater? Yes (No) Gallons actually evacuated: 4.0

Sampling Date: 3/31/03 Sampling Time: 1055 Depth to Water: 12.28

Sample I.D.: mw-3 Laboratory: Kiff SPL Other (STL San Fran)

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 #: 030331-EH1	Site: 2120 Mountain St, Oakland
Sampler: Ryan H	Date: 3/31/03
Well I.D.: MW-4	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): 19.85	Depth to Water (DTW): 13.69
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]: 14.92	

Purge Method: Bailer, Disposable Bailer, Middleburg, (Electric Submersible), Waterra, Peristaltic, Extraction Pump, Other_____

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

4.0 (Gals.) X 3 = 12.0 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
919	65.8	6.8	717	11.6	4.0	clear, odor
	Well dewatered @ 6.0 gal					DTW = 17.92
1045	69.1	7.8	737	21.4	6.0	clear

Did well dewater? (Yes) No Gallons actually evacuated: 6.0

Sampling Date: 3/31/03 Sampling Time: 1045 Depth to Water: 14.28

Sample I.D.: MW-4 Laboratory: Kiff SPL Other (STL San Fran)

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 #: 030331-RH1	Site: 2120 Manton St, Oakland
Sampler: Ryan H	Date: 3/31/03
Well I.D.: mw-5	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth (TD): 19.90	Depth to Water (DTW): 11.93
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.52	

Purge Method: (Bailer) / Disposable Bailer / Middleburg / Electric Submersible / Waterra / Peristaltic / Extraction Pump / Other_____

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

1.25 (Gals.) X 3 = 3.75 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
0950	63.4	6.9	865	>200	1.25	dark brown, cloudy
	well dewatered @ 2.0 gal					DTW = 17.85
1000	64.5	6.9	840	>200	2.0	brown, cloudy

Did well dewater? (Yes) No Gallons actually evacuated: 2.0

Sampling Date: 3/31/03 Sampling Time: 1000 Depth to Water: 16.40 due to traffic

Sample I.D.: mw-5 Laboratory: Kiff SPL Other (STL San Fran)

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 #: 030331-RH1	Site: 2120 Manton St, Oakland
Sampler: Ryan H	Date: 3/31/03
Well I.D.: TBW-N	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): ~~13.23~~ 12.25 ✓✓	Depth to Water (DTW): 10.63
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]: 11.15	

Purge Method: (Bailer) Disposable Bailer, Middleburg, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other_____

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

1.0 ~~1.75~~ (Gals.) X	3	= 3.0 ~~5.25~~ 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
1019	67.2	6.9	1581	>200	1.0	brown, cloudy, odor, sheen
1022	66.4	6.8	1569	>200	2.0	" " " "
1025	66.6	6.8	1537	>200	3.0	" " " "

Did well dewater? Yes (No) Gallons actually evacuated: 3.0

Sampling Date: 3/31/03 Sampling Time: 1030 Depth to Water: 10.63

Sample I.D.: TBW-N Laboratory: Kiff SPL Other (STL San Fran)

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