CAMBRIA

August 12, 2002

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

AUG 15 2002

Re: **Second Quarter 2002 Monitoring Report**
Shell-branded Service Station
2120 Montana Street
Oakland, California
Incident #98995740
Cambria Project #244-0733-002

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. Based on the lack of significant separate-phase hydrocarbons (SPH) in the wells, the mobile GWE frequency was reduced from weekly to biweekly in November 2001 and to monthly in January 2002. Cumulative groundwater purge volume and estimated mass removal data are presented in Table 1. Figures 3 and 4 show methyl tertiary butyl ether (MTBE) concentrations and mass removal estimates over time for wells MW-1 and TBW-N, respectively. The cumulative estimated mass of total petroleum hydrocarbons as gasoline and MTBE removed by GWE to date at the site is 8.95 pounds and 5.48 pounds, respectively. Additionally, approximately 2.68 pounds of SPH have been removed at the site through manual bailing and GWE.

Oakland, CA
San Ramon, CA
Sonoma, CA

Cambria Environmental Technology, Inc.

1144 65th Street
Suite B
Oakland, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

SECOND QUARTER 2002 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.

Investigation and Pilot Test Status: As proposed in our March 25, 2002 *Subsurface Investigation and Pilot Test Work Plan*, Cambria installed two groundwater monitoring wells at the site on June 21, 2002 and conducted a 5-day soil vapor extraction pilot test on tank backfill well TBW-E between June 24 and 28, 2002.

ANTICIPATED THIRD QUARTER 2002 ACTIVITIES

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

Investigation and Pilot Test Report: As discussed above, Cambria completed the fieldwork proposed in our March 25, 2002 *Subsurface Investigation and Pilot Test Work Plan* during June 2002. Cambria will submit a report detailing the results of the investigation and pilot test during the third quarter 2002 as well as an interim remediation work plan for the site.

Mobile GWE: Mobile GWE will be continued pending interim remediation system installation at the site.

CLOSING

We appreciate the opportunity to work with you on this project. Please call Jacquelyn Jones at (510) 420-3316 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc

Jacquelyn L. Jones
Project Geologist

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

Figures: 1 - Vicinity/Area Well Survey Map
2 - Groundwater Elevation Contour Map
3 - MTBE and Mass Removal – Well MW-1
4 - MTBE and Mass Removal – Well TBW-N

Table: 1 - Groundwater Extraction – Mass Removal Data

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

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

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10/05/01

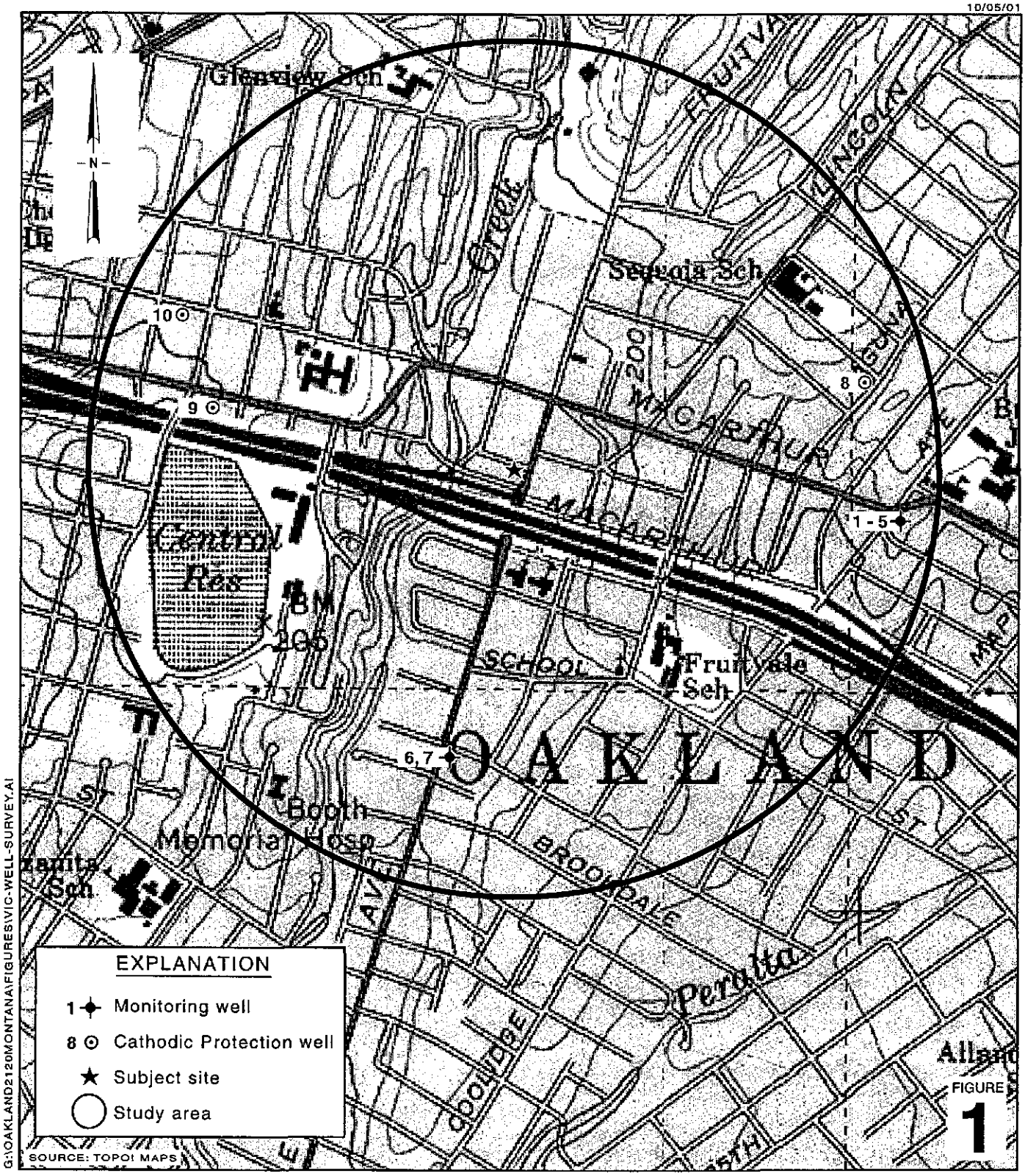

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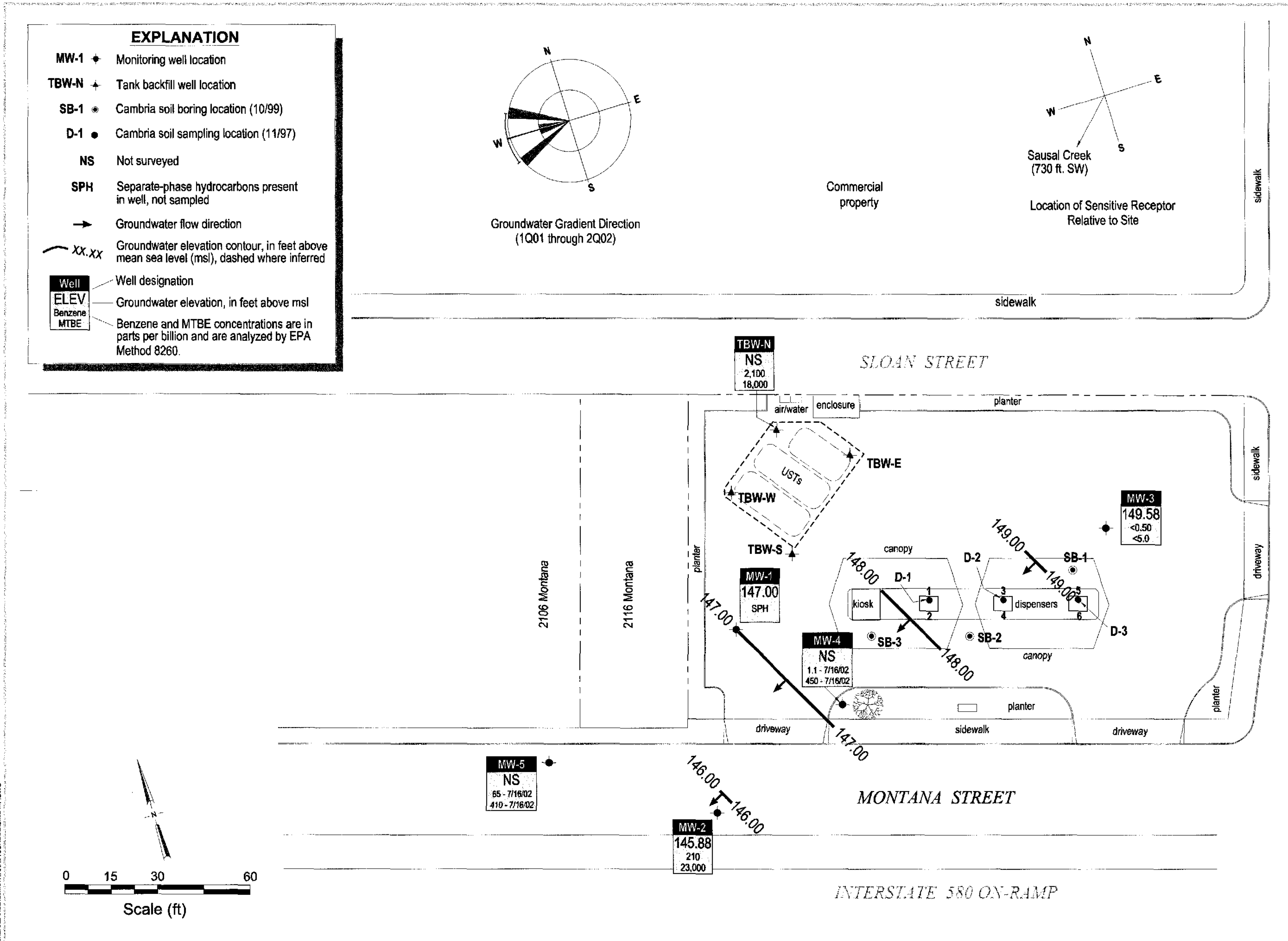
FIGURE 1

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

CAMBRIA

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



EXPLANATION
MW-1 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)
NS Not surveyed
SPH Separate-phase hydrocarbons present in well, not sampled
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.
Groundwater Gradient Direction (1Q01 through 2Q02)
Commercial property
Sausal Creek (730 ft. SW)
Location of Sensitive Receptor Relative to Site
SLOAN STREET
MONTANA STREET
FRUITVALE AVENUE
INTERSTATE 580 ON-RAMP
2106 Montana
2116 Montana
sidewalk
planter
driveway
air/water
enclosure
USTs
canopy
kiosk
dispensers
TBW-N NS 2,100 18,000
TBW-E
TBW-W
TBW-S
MW-1 147.00 SPH
MW-2 145.88 210 23,000
MW-3 149.58 <0.50 <5.0
MW-4 NS 1.1 - 7/16/02 450 - 7/16/02
MW-5 NS 65 - 7/16/02 410 - 7/16/02
SB-1
SB-2
SB-3
D-1
D-2
D-3
146.00
147.00
148.00
149.00
Scale (ft)
0 15 30 60

FIGURE

2

Groundwater Elevation Contour Map

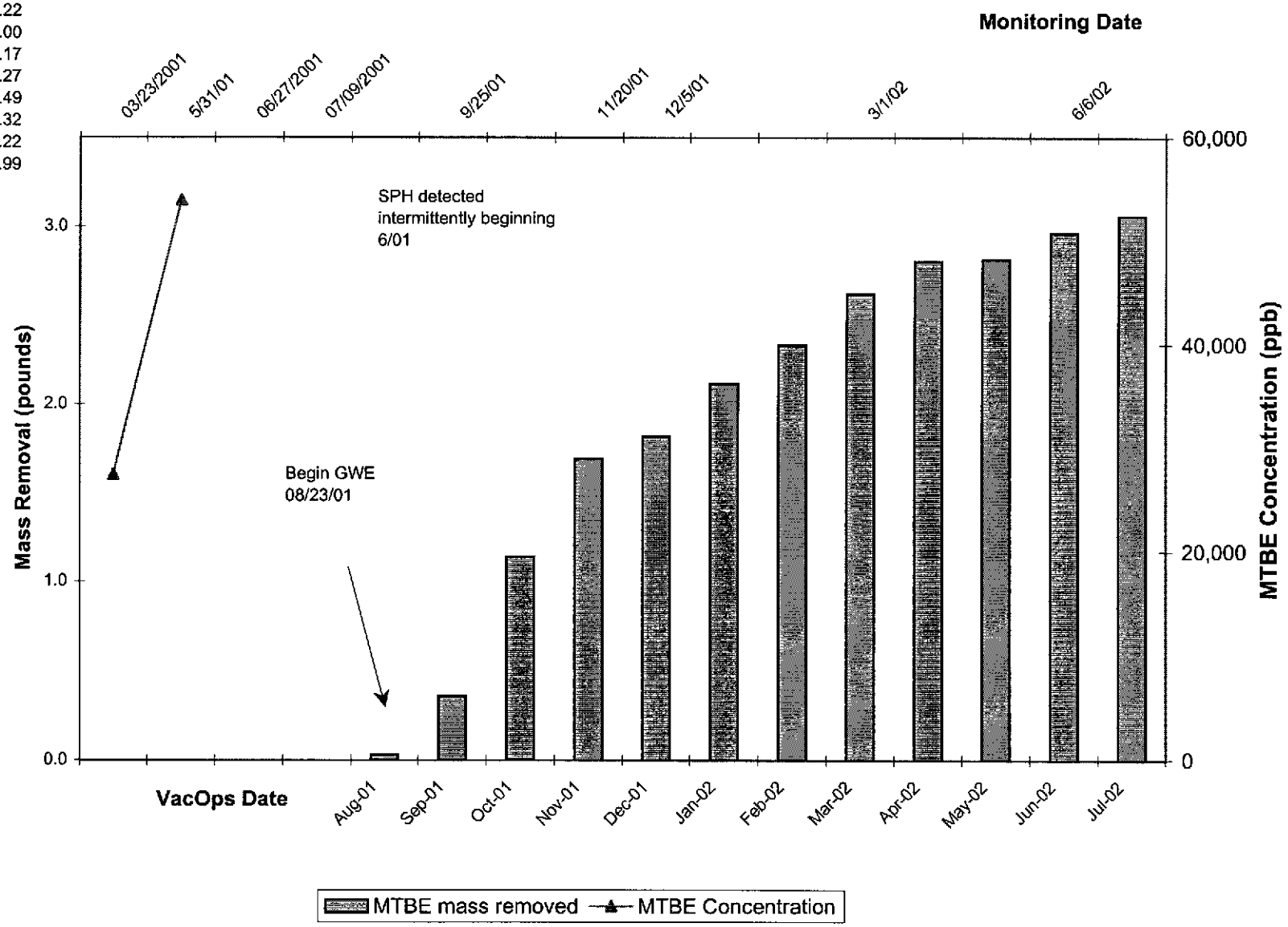
June 6, 2002

CAMBRIA

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

Figure 3
MTBE and Mass Removal
Well MW-1

Date	DTW - ft
03/23/01	12.25
05/31/01	12.22
06/27/01	13.00
070/9/01	13.17
09/25/01	14.27
11/20/01	13.49
12/05/01	11.32
03/01/02	13.22
06/06/02	12.99



2120 Montana Street, Oakland

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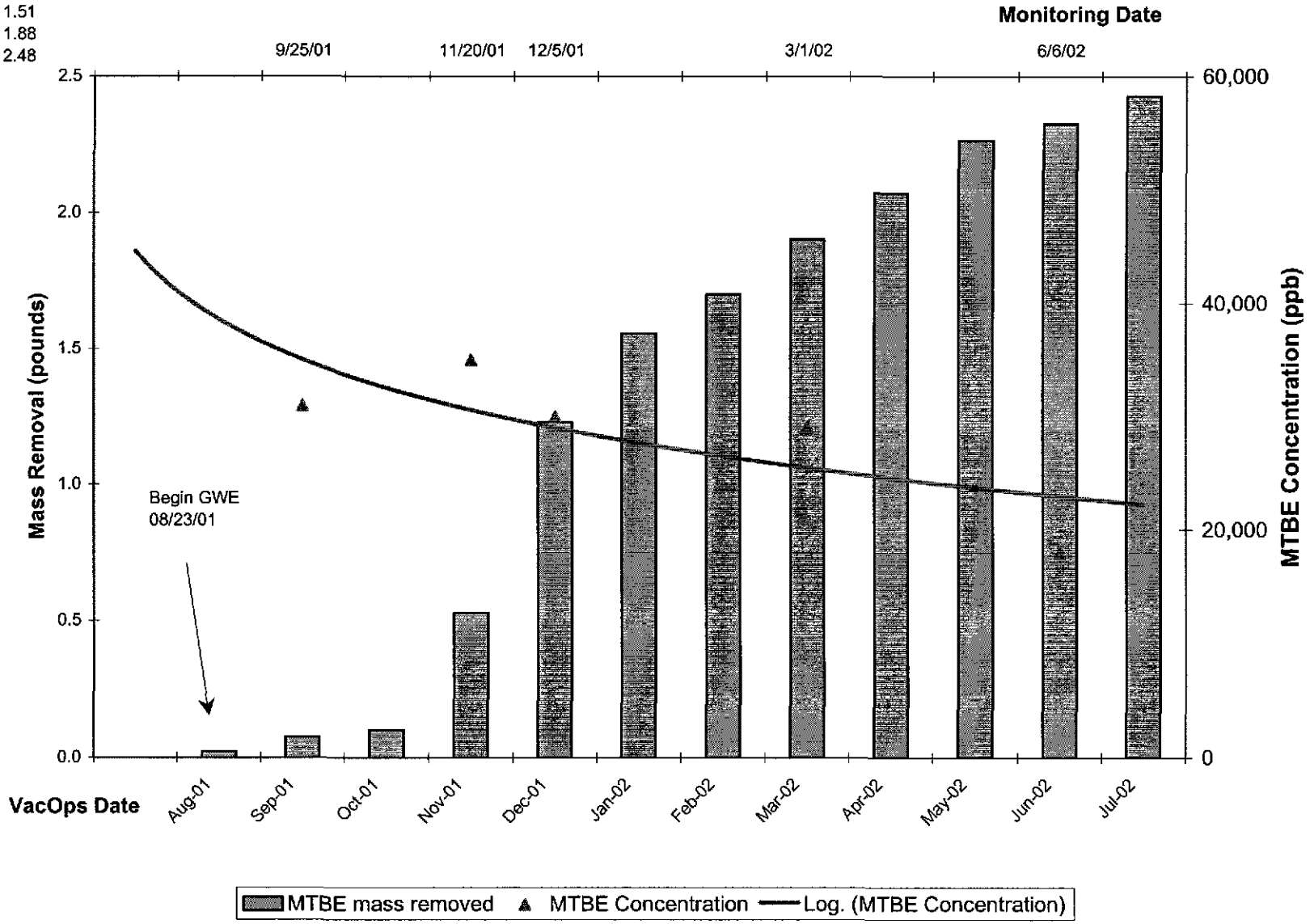
Figure 4
MTBE and Mass Removal
Well TBW-N

Date	DTW - ft
09/25/01	12.25
11/20/01	12.13
12/05/01	11.51
03/01/02	11.88
06/06/02	12.48



2120 Montana Street, Oakland

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Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995740, 2120 Montana St., Oakland, California

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH			Benzene			MTBE		
					TPPH Concentration (ppb)	TPPH Removed (pounds)	TPPH Removed To Date (pounds)	Benzene Concentration (ppb)	Benzene Removed (pounds)	Benzene Removed To Date (pounds)	MTBE Concentration (ppb)	MTBE Removed (pounds)	MTBE Removed To Date (pounds)
08/23/01	MW-1	100	100	03/23/01	16,600	0.01385	0.01385	753	0.00063	0.00063	27,500	0.02295	0.02295
08/30/01	MW-1	40	140	03/23/01	16,600	0.00554	0.01939	753	0.00025	0.00088	27,500	0.00918	0.03213
09/09/01	MW-1	500	640	03/23/01	16,600	0.06926	0.08865	753	0.00314	0.00402	27,500	0.11473	0.14686
09/21/01	MW-1	320	960	03/23/01	16,600	0.04433	0.13298	753	0.00201	0.00603	27,500	0.07343	0.22029
09/29/01	MW-1	600	1,560	03/23/01	16,600	0.08311	0.21609	753	0.00377	0.00980	27,500	0.13768	0.35797
10/05/01	MW-1	362	1,922	03/23/01	16,600	0.05014	0.26623	753	0.00227	0.01208	27,500	0.08307	0.44104
10/12/01	MW-1	700	2,622	03/23/01	16,600	0.09696	0.36319	753	0.00440	0.01647	27,500	0.16063	0.60167
10/19/01	MW-1	350	2,972	03/23/01	16,600	0.04848	0.41167	753	0.00220	0.01867	27,500	0.08031	0.68198
10/29/01	MW-1	1,995	4,967	03/23/01	16,600	0.27634	0.68801	753	0.01254	0.03121	27,500	0.45779	1.13978
11/02/01	MW-1	700	5,667	03/23/01	16,600	0.09696	0.78497	753	0.00440	0.03561	27,500	0.16063	1.30041
11/16/01	MW-1	800	6,467	03/23/01	16,600	0.11081	0.89579	753	0.00503	0.04063	27,500	0.18358	1.48398
11/30/01	MW-1	900	7,367	03/23/01	16,600	0.12466	1.02045	753	0.00565	0.04629	27,500	0.20652	1.69050
12/14/01	MW-1	300	7,667	03/23/01	16,600	0.04155	1.06200	753	0.00188	0.04817	27,500	0.06884	1.75934
12/28/01	MW-1	250	7,917	03/23/01	16,600	0.03463	1.09663	753	0.00157	0.04974	27,500	0.05737	1.81671
01/12/02	MW-1	1,300	9,217	03/23/01	16,600	0.18007	1.27670	753	0.00817	0.05791	27,500	0.29831	2.11502
02/14/02	MW-1	950	10,167	03/23/01	16,600	0.13159	1.40830	753	0.00597	0.06388	27,500	0.21800	2.33302
03/11/02*	MW-1	1,258	11,425	03/23/01	16,600	0.17425	1.58255	753	0.00790	0.07179	27,500	0.28867	2.62169
04/01/02	MW-1	791	12,216	03/23/01	16,600	0.10957	1.69212	753	0.00497	0.07676	27,500	0.18151	2.80320
05/01/02	MW-1	60	12,276	03/23/01	16,600	0.00831	1.70043	753	0.00038	0.07713	27,500	0.01377	2.81697
06/05/02	MW-1	643	12,919	03/23/01	16,600	0.08907	1.78949	753	0.00404	0.08117	27,500	0.14755	2.96452
07/11/02	MW-1	400	13,319	03/23/01	16,600	0.05541	1.84490	753	0.00251	0.08369	27,500	0.09179	3.05631
08/23/01	TBW-N	85	85	09/25/01	120,000	0.08511	0.08511	3,200	0.00227	0.00227	31,000	0.02199	0.02199
08/30/01	TBW-N	0	85	09/25/01	120,000	0.00000	0.08511	3,200	0.00000	0.00227	31,000	0.00000	0.02199
09/09/01	TBW-N	0	85	09/25/01	120,000	0.00000	0.08511	3,200	0.00000	0.00227	31,000	0.00000	0.02199
09/21/01	TBW-N	200	285	09/25/01	120,000	0.20026	0.28538	3,200	0.00534	0.00761	31,000	0.05174	0.07372
09/29/01	TBW-N	0	285	09/25/01	120,000	0.00000	0.28538	3,200	0.00000	0.00761	31,000	0.00000	0.07372
10/05/01	TBW-N	0	285	09/25/01	120,000	0.00000	0.28538	3,200	0.00000	0.00761	31,000	0.00000	0.07372

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995740, 2120 Montana St., Oakland, California

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH Concentration (ppb)	TPPH Removed (pounds)	TPPH Removed To Date (pounds)	Benzene Concentration (ppb)	Benzene Removed (pounds)	Benzene Removed To Date (pounds)	MTBE Concentration (ppb)	MTBE Removed (pounds)	MTBE Removed To Date (pounds)
					TPPH			**Benzene**			**MTBE**		
10/12/01	TBW-N	100	385	09/25/01	120,000	0.10013	0.38551	3,200	0.00267	0.01028	31,000	0.02587	0.09959
10/19/01	TBW-N	0	385	09/25/01	120,000	0.00000	0.38551	3,200	0.00000	0.01028	31,000	0.00000	0.09959
10/29/01	TBW-N	5	390	09/25/01	120,000	0.00501	0.39052	3,200	0.00013	0.01041	31,000	0.00129	0.10088
11/02/01	TBW-N	10	400	09/25/01	120,000	0.01001	0.40053	3,200	0.00027	0.01068	31,000	0.00259	0.10347
11/16/01	TBW-N	400	800	09/25/01	120,000	0.40053	0.80106	3,200	0.01068	0.02136	31,000	0.10347	0.20694
11/30/01	TBW-N	1,100	1,900	11/20/01	72,000	0.66087	1.46193	2,200	0.02019	0.04155	35,000	0.32126	0.52820
12/14/01	TBW-N	2,000	3,900	12/05/01	76,000	1.26834	2.73027	1,600	0.02670	0.06826	30,000	0.50066	1.02886
12/28/01	TBW-N	800	4,700	12/05/01	76,000	0.50734	3.23761	1,600	0.01068	0.07894	30,000	0.20026	1.22912
01/12/02	TBW-N	1,300	6,000	12/05/01	76,000	0.82442	4.06203	1,600	0.01736	0.09629	30,000	0.32543	1.55455
02/14/02	TBW-N	582	6,582	12/05/01	76,000	0.36909	4.43112	1,600	0.00777	0.10406	30,000	0.14569	1.70025
03/11/02*	TBW-N	838	7,420	03/01/02	91,000	0.63632	5.06744	1,200	0.00839	0.11246	29,000	0.20278	1.90303
04/01/02	TBW-N	700	8,120	03/01/02	91,000	0.53154	5.59898	1,200	0.00701	0.11946	29,000	0.16939	2.07242
05/01/02	TBW-N	801	8,921	03/01/02	91,000	0.60823	6.20721	1,200	0.00802	0.12749	29,000	0.19383	2.26625
06/05/02	TBW-N	400	9,321	06/06/02	100,000	0.33377	6.54098	2,100	0.00701	0.13449	18,000	0.06008	2.32633
07/11/02	TBW-N	672	9,993	06/06/02	100,000	0.56074	7.10172	2,100	0.01178	0.14627	18,000	0.10093	2.42726
Total Gallons Extracted:			**23,312**		**Total Pounds Removed:**		**8.94662**			**0.22996**			**5.48357**
					Total Gallons Removed:		**1.46666**			**0.03150**			**0.88445**

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995740, 2120 Montana St., Oakland, California

					TPPH			Benzene			MTBE		
Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH Concentration (ppb)	TPPH Removed (pounds)	TPPH Removed To Date (pounds)	Benzene Concentration (ppb)	Benzene Removed (pounds)	Benzene Removed To Date (pounds)	MTBE Concentration (ppb)	MTBE Removed (pounds)	MTBE Removed To Date (pounds)

Abbreviations & Notes:

TPPH = Total purgeable hydrocarbons as gasoline
MtBE = Methyl tert-butyl ether
ppb = Parts per billion
gal = Gallons
* = Volume pumped estimated.
Mass removed based on the formula: volume extracted (gal) x concentration (µg/L) x ($g/10^6 µg$) x (pound/453.6g) x (3.785 L/gal)
Volume removal data based on the formula: density (in gms/cc) x 9.339 (ccxlbs/gmsxgals)
TPPH, benzene, 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. Water disposed of at a Martinez Refinery.

ATTACHMENT A

Blaine Groundwater Monitoring Report
and Field Notes

BLAINE
TECH SERVICES, INC.

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

August 1, 2002

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

Second Quarter 2002 Groundwater Monitoring at
Shell-branded Service Station
2120 Montana Street
Oakland, CA

Monitoring performed on June 6, July 10 and 16, 2002

Groundwater Monitoring Report **020606-MM-3 (Re-issue)**

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.
1144 65th Street, Suite C
Oakland, CA 94608-2411

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-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-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

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	03/01/2002	<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-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-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**
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
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**

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.)

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

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.
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).

KIFF ANALYTICAL LLC

Report Number : 27523
Date : 7/26/02

Leon Gearhart
Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112-1105

Subject : 2 Water Samples
Project Name : 2120 Montana Street, Oakland
Project Number : 020716-DW-2
P.O. Number : 98995740

Dear Mr. Gearhart,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 27523
Date : 7/26/02

Project Name : **2120 Montana Street, Oakland**
Project Number : **020716-DW-2**

Sample : **MW-4** Matrix : Water Lab Number : 27523-01
Sample Date :7/16/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**1.1**	1.0	ug/L	EPA 8260B	7/24/02
Toluene	**1.1**	1.0	ug/L	EPA 8260B	7/24/02
Ethylbenzene	**2.6**	1.0	ug/L	EPA 8260B	7/24/02
Total Xylenes	**2.4**	1.0	ug/L	EPA 8260B	7/24/02
Methyl-t-butyl ether (MTBE)	**450**	10	ug/L	EPA 8260B	7/24/02
TPH as Gasoline	**800**	100	ug/L	EPA 8260B	7/24/02
Toluene - d8 (Surr)	108		% Recovery	EPA 8260B	7/24/02
4-Bromofluorobenzene (Surr)	84.6		% Recovery	EPA 8260B	7/24/02

Sample : **MW-5** Matrix : Water Lab Number : 27523-02
Sample Date :7/16/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**65**	1.0	ug/L	EPA 8260B	7/24/02
Toluene	**7.2**	1.0	ug/L	EPA 8260B	7/24/02
Ethylbenzene	**100**	1.0	ug/L	EPA 8260B	7/24/02
Total Xylenes	**130**	1.0	ug/L	EPA 8260B	7/24/02
Methyl-t-butyl ether (MTBE)	**410**	10	ug/L	EPA 8260B	7/24/02
TPH as Gasoline	**6100**	100	ug/L	EPA 8260B	7/24/02
Toluene - d8 (Surr)	98.8		% Recovery	EPA 8260B	7/24/02
4-Bromofluorobenzene (Surr)	109		% Recovery	EPA 8260B	7/24/02

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 27523

Date : 7/26/02

QC Report : Method Blank Data

Project Name : **2120 Montana Street, Oakland**

Project Number : **020716-DW-2**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	7/23/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	7/23/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	7/23/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	7/23/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	7/23/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	7/23/02
Toluene - d8 (Surr)	97.2		%	EPA 8260B	7/23/02
4-Bromofluorobenzene (Surr)	107		%	EPA 8260B	7/23/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 27523

Date : 7/26/02

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **2120 Montana Street,**

Project Number : **020716-DW-2**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	27525-04	<0.50	20.0	20.0	20.0	20.0	ug/L	EPA 8260B	7/23/02	100	100	0.274	70-130	25
Toluene	27525-04	<0.50	20.0	20.0	19.4	19.4	ug/L	EPA 8260B	7/23/02	97.2	97.1	0.103	70-130	25
Tert-Butanol	27525-04	<5.0	99.8	100	98.5	95.8	ug/L	EPA 8260B	7/23/02	98.7	95.8	2.97	70-130	25
Methyl-t-Butyl Ether	27525-04	6.5	20.0	20.0	24.8	25.0	ug/L	EPA 8260B	7/23/02	91.9	92.8	0.909	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 27523

QC Report : Laboratory Control Sample (LCS)

Date : 7/26/02

Project Name : **2120 Montana Street,**

Project Number : **020716-DW-2**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	20.0	ug/L	EPA 8260B	7/23/02	101	70-130
Toluene	20.0	ug/L	EPA 8260B	7/23/02	97.8	70-130
Tert-Butanol	100	ug/L	EPA 8260B	7/23/02	96.7	70-130
Methyl-t-Butyl Ether	20.0	ug/L	EPA 8260B	7/23/02	95.4	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

LAB: Kiff

SHELL Chain Of Custody Record

Lab Identification (if necessary):

Address:

City, State, Zip:

Shell Project Manager to be Invoiced: Karen Petryna

☑ SCIENCE & ENGINEERING ☐ TECHNICAL SERVICES ☐ CRMT HOUSTON

27523

INCIDENT NUMBER (S&E ONLY): 98995740

SAP or CRMT NUMBER (TS/CRMT):

DATE: 7-16-02

PAGE: 1 of 1

SAMPLING COMPANY: Blaine Tech Services	LOG 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
E-MAIL: lgearhart@blainetech.com	
SITE ADDRESS (Street and City): 2120 Montana Street, Oakland	GLOBAL ID NO.: T0600101805
EDF DELIVERABLE TO (Responsible Party or Designee): Anni Kreml	PHONE NO.: 510-420-3335
E-MAIL: ShellOaklandEDF@cambria-env.com	CONSULTANT PROJECT NO.: 020716-DW-2
SAMPLER NAME(S) (Print): Dave Walter	BTS #
LAB USE ONLY	

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

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

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

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

REQUESTED ANALYSIS

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)	TEMPERATURE ON RECEIPT C°
	MW-4	7-16	12:50	W	3	X	X	X								-01
	MW-5	7-16	13:15	W	3	X	X	X								-02

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

Relinquished by: (Signature) David C Shaft	Received by: (Signature)	Date: 7/17/02	Time: 1316
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff	Date: 07/17/02	Time: 1316

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

10/16/00 Revision

Q&Q Graphic (714) 898-9702

KIFF ANALYTICAL LLC

Report Number : 26776
Date : 6/17/02

Leon Gearhart
Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112-1105

Subject : 3 Water Samples
Project Name : 2120 Montana Street, Oakland
Project Number : 020606-MM3
P.O. Number : 98995740

Dear Mr. Gearhart,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 26776
Date : 6/17/02

Subject : 3 Water Samples
Project Name : 2120 Montana Street, Oakland
Project Number : 020606-MM3
P.O. Number : 98995740

Case Narrative

Matrix Spike/Matrix Spike Duplicate Results associated with samples MW-2, TBW-N for the analyte Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 916-297-4800

KIFF ANALYTICAL LLC

Report Number : 26776
Date : 6/17/02

Project Name : **2120 Montana Street, Oakland**
Project Number : **020606-MM3**

Sample : **MW-2** Matrix : Water Lab Number : 26776-01
Sample Date :6/6/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**210**	50	ug/L	EPA 8260B	6/14/02
Toluene	**< 50**	50	ug/L	EPA 8260B	6/14/02
Ethylbenzene	**< 50**	50	ug/L	EPA 8260B	6/14/02
Total Xylenes	**< 50**	50	ug/L	EPA 8260B	6/14/02
Methyl-t-butyl ether (MTBE)	**23000**	500	ug/L	EPA 8260B	6/14/02
TPH as Gasoline	**< 5000**	5000	ug/L	EPA 8260B	6/14/02
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	6/14/02
4-Bromofluorobenzene (Surr)	107		% Recovery	EPA 8260B	6/14/02

Sample : **MW-3** Matrix : Water Lab Number : 26776-02
Sample Date :6/6/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	6/11/02
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	6/11/02
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	6/11/02
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	6/11/02
Methyl-t-butyl ether (MTBE)	**< 5.0**	5.0	ug/L	EPA 8260B	6/11/02
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	6/11/02
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	6/11/02
4-Bromofluorobenzene (Surr)	94.2		% Recovery	EPA 8260B	6/11/02

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 26776
Date : 6/17/02

Project Name : **2120 Montana Street, Oakland**
Project Number : **020606-MM3**

Sample : **TBW-N** Matrix : Water Lab Number : 26776-03
Sample Date :6/6/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**2100**	50	ug/L	EPA 8260B	6/14/02
Toluene	**8200**	50	ug/L	EPA 8260B	6/14/02
Ethylbenzene	**3400**	50	ug/L	EPA 8260B	6/14/02
Total Xylenes	**17000**	50	ug/L	EPA 8260B	6/14/02
Methyl-t-butyl ether (MTBE)	**18000**	500	ug/L	EPA 8260B	6/14/02
TPH as Gasoline	**100000**	5000	ug/L	EPA 8260B	6/14/02
Toluene - d8 (Surr)	98.1		% Recovery	EPA 8260B	6/14/02
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	6/14/02

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 26776

Date : 6/17/02

QC Report : Method Blank Data

Project Name : **2120 Montana Street, Oakland**

Project Number : **020606-MM3**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/14/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/14/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/14/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/14/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	6/14/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/14/02
Toluene - d8 (Surr)	102		%	EPA 8260B	6/14/02
4-Bromofluorobenzene (Surr)	100		%	EPA 8260B	6/14/02
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/10/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/10/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/10/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/10/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	6/10/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/10/02
Toluene - d8 (Surr)	99.6		%	EPA 8260B	6/10/02
4-Bromofluorobenzene (Surr)	96.3		%	EPA 8260B	6/10/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 26776

Date : 6/17/02

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **2120 Montana Street,**

Project Number : **020606-MM3**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	26799-01	<0.50	39.8	39.9	39.2	39.0	ug/L	EPA 8260B	6/14/02	98.4	97.8	0.611	70-130	25
Toluene	26799-01	<0.50	39.8	39.9	39.9	39.7	ug/L	EPA 8260B	6/14/02	100	99.4	0.726	70-130	25
Tert-Butanol	26799-01	120	199	200	328	349	ug/L	EPA 8260B	6/14/02	102	113	9.53	70-130	25
Methyl-t-Butyl Ether	26799-01	220	39.8	39.9	233	239	ug/L	EPA 8260B	6/14/02	26.7	42.8	46.5	70-130	25
Benzene	26803-01	<0.50	40.0	40.0	41.5	40.1	ug/L	EPA 8260B	6/10/02	104	100	3.43	70-130	25
Toluene	26803-01	<0.50	40.0	40.0	38.9	38.2	ug/L	EPA 8260B	6/10/02	97.4	95.5	1.94	70-130	25
Tert-Butanol	26803-01	<5.0	200	200	202	205	ug/L	EPA 8260B	6/10/02	101	102	1.13	70-130	25
Methyl-t-Butyl Ether	26803-01	<0.50	40.0	40.0	40.1	40.2	ug/L	EPA 8260B	6/10/02	100	101	0.398	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 26776

Date : 6/17/02

QC Report : Laboratory Control Sample (LCS)

Project Name : **2120 Montana Street,**

Project Number : **020606-MM3**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	6/14/02	99.1	70-130
Toluene	40.0	ug/L	EPA 8260B	6/14/02	101	70-130
Tert-Butanol	200	ug/L	EPA 8260B	6/14/02	108	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	6/14/02	83.6	70-130
Benzene	40.0	ug/L	EPA 8260B	6/10/02	98.7	70-130
Toluene	40.0	ug/L	EPA 8260B	6/10/02	92.8	70-130
Tert-Butanol	200	ug/L	EPA 8260B	6/10/02	101	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	6/10/02	98.7	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

LAB: KIFF

SHELL Chain Of Custody Record

Lab Identification (if necessary):

Address:

City, State, Zip:

Shell Project Manager to be Invoiced: Karen Petryna

☑ SCIENCE & ENGINEERING ☐ TECHNICAL SERVICES ☐ CRMT HOUSTON

26776

INCIDENT NUMBER (S&E ONLY): 98995740

SAP or CRMT NUMBER (TS/CRMT):

DATE: 6/6/02

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

E-MAIL: ShellOaklandEDF@cambria-env.com

CONSULTANT PROJECT NO.: BTS # 020606-MM3

PROJECT CONTACT (Hardcopy or PDF Report to): Leon Gearhart

TELEPHONE: 408-573-0555

FAX: 408-573-7771

E-MAIL: lgearhart@blainetech.com

SAMPLER NAME(S) (Print): Matthew Miller

LAB USE ONLY

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

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

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

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

REQUESTED ANALYSIS

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: Container/Preservative or PID Readings or Laboratory Notes / TEMPERATURE ON RECEIPT C°
	MW-2	6/6	1440	W	3	X	X	X									-01
	MW-3	↓	1425	W	3	X	X	X									-02
	TBW-N	↓	1500	W	3	X	X	X									-03

Relinquished by: (Signature) [signature]

Received by: (Signature)

Date: 6/7/02 Time: 11:24

Relinquished by: (Signature)

Received by: (Signature)

Date: Time:

Relinquished by: (Signature)

Received by: (Signature) John Cerato / Kiff Analytical

Date: 060702 Time: 1124

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

10/18/00 Revision

Q&Q Graphic (714) 898-9702

WELL GAUGING DATA

Project # 020716-DW-2 Date 7-16-02 Client Shell

Site 7120 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	odor				13.37	—		
mw-2	2					12.25	20.00		
mw-3	2					11.72	20.11		
mw-4	4					13.56	19.85		
mw-5	2					12.50	19.90		
TBW-N	4	*gauged w/ stinger in well				12.39	13.23	↓	

SHELL WELL MONITORING DATA SHEET

BTS #: 020716-OW-2	Site: 2120 Montana St Oakland
Sampler: Dave Walter	Date: 7-16-02
Well I.D.: MW-4	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 19.85	Depth to Water: 13.56
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer; Disposable Bailer; Middleburg; X Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other ____

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

4.1 (Gals.) X	3 =	12.3 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

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

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
12:42	68.6	6.9	423	65	5	
12:43	67.9	6.9	276	27	10	
12:45	67.3	6.9	283	33	15	

Did well dewater? Yes (No) Gallons actually evacuated: 15

Sampling Time: 12:50 Sampling Date: 7-16-02

Sample I.D.: MW-4 Laboratory: (Kiff) SPL Other ____

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 020716-OW-2	Site: 2120 Montana St Oakland
Sampler: Dave Walter	Date: 7-16-02
Well I.D.: MW-5	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 19.90	Depth to Water: 12.50
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

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

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

1.2 (Gals.) X	3 =	3.6 Gals.
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
13:05	66.5	6.9	903	7200	1.2	Brown
13:07	64.7	6.8	973	7200	2.4	
13:09	65.0	6.9	975	7200	3.6	

Did well dewater? Yes (No) Gallons actually evacuated: 3.6

Sampling Time: 13:15 Sampling Date: 7-16-02

Sample I.D.: MW-5 Laboratory: (Kiff) SPL Other_____

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

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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

D.B I.D. (if applicable): Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

WELL GAUGING DATA

Project # 020710-RM-1 Date 7-10-02 Client Shell

Site 2120 Mountain 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-4	4	odor				13.19	19.92		
MW-5	2					12.22	18.55	↓	

WELL DEVELOPMENT DATA SHEET

Project #: 070710-Am-1	Client: Shell
Developer: Am	Date Developed: 7-10-07
Well I.D. MW-4	Well Diameter: (circle one) 2 3 (4) 6
Total Well Depth: Before 19.82 After 19.92	Depth to Water: Before 13.19 After 19.01
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):	Well dia.		VCF
(12 x (d^2/4) x π) /231	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

4.3	X	3	=	43
1 Case Volume		Specified Volumes		gallons

Purging Device: Bailer ☐ Electric Submersible ☒
Middleburg ☐ Suction Pump ☐

Type of Installed Pump _____
Other equipment used 4" Surge Block Surged 15 min prior to Purging

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
10:01	84.2	7.5	2803	>200	4.3	Light gray / odor
10:03	75.5	7.6	476	>200	8.6	" Bottom. " "
10:05	72.7	7.5	541	>200	12.9	" "
10:07	70.6	7.2	396	96	17.2	" "
10:09	69.5	7.3	383	172	21.5	Light brown / odor
10:11	69.6	7.3	455	168	25.8	Cloudy / odor
10:13	69.7	7.3	464	173	30.1	" "
10:15	69.6	7.3	484	165	34.4	" "
10:17	70.3	7.3	523	194	38.7	" "
10:19	70.6	7.3	499	>200	43	" "

Did Well Dewater? NO	If yes, note above.	Gallons Actually Evacuated:	43

WELL DEVELOPMENT DATA SHEET

Project #: 020710-AM1	Client: Shell
Developer: AM	Date Developed: 7-10-07
Well I.D. MW-5	Well Diameter: (circle one) (2) 3 4 6
Total Well Depth: Before 18.55 After 19.93	Depth to Water: Before 12.22 After 18.22
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):	Well dia.		VCF
$(12 \times (d^2/4) \times \pi) / 231$	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

1.0	x	10	=	10
1 Case Volume		Specified Volumes		gallons

Purging Device: Bailer ☐ Electric Submersible ☐
Middleburg ☒ Suction Pump ☐

Type of Installed Pump _____
Other equipment used 2" surge block surged 15 min prior to purging

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
9:20	73.1	7.6	1626	7200	1	silty / brown
9:21	70.7	7.3	1942	>200	2	" "
9:22	69.9	7.6	1776	>200	3	little hard bottom
9:24	70.4	7.5	1560	>200	4	silty /
9:26	73.3	7.9	1521	>200	5	" "
9:28	74.1	7.9	1544	>200	6	" "
9:30	73.2	7.9	1532	>200	7	silt / brown
9:32	73.5	7.6	1557	>200	8	" "
9:34	75.4	7.7	1773	>200	9	" "
9:36	74.5	7.7	1788	>200	10	" "

Did Well Dowater? NO	If yes, note above.	Gallons Actually Evacuated:	10

WELL GAUGING DATA

Project # 020606-MM3 Date 6/6/02 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	odor	12.49	0.50	-	12.99	-		
MW-2	2					12.15	20.00		
MW-3	2					11.55	20.11		
TBW-N	4	odor	gauged w/ slinger		in well	12.48	13.23		

EQUIVA WELL MONITORING DATA SHEET

BTS #: 020606-MM13	Site: 2120 Montana St
Sampler: MM	Date: 6/6/02
Well I.D.: MW-1	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: —	Depth to Water: 12.99
Depth to Free Product: 12.49	Thickness of Free Product (feet): 0.50
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer, Disposable Bailer, Middleburg, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other ____

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

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

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
No Sample taken due to product in well						
		No SPH bailed				

Did well dewater? Yes No — Gallons actually evacuated:

Sampling Time: — Sampling Date: 6/6/02

Sample I.D.: — Laboratory: (Kiff) Sequoia Other ____

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

EB I.D. (if applicable): @ Time — Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

EQUIVA WELL MONITORING DATA SHEET

BTS #: 020606-MM13	Site: 2120 Montana St
Sampler: MJM	Date: 6/6/02
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: ~~12.89~~ 20.00	Depth to Water: 12.15
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

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

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

1.2

~~0.17~~ (Gals.) X 3 = ~~0.51~~ 3.6 Gals.

1 Case Volume | Specified Volumes | Calculated Volume

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1433	65.6	6.87	763	>200	1.2	brownish-gray
1435	64.7	6.82	824	>200	2.4	"
1437	65.4	6.79	870	>200	3.6	"

Did well dewater? Yes (No) Gallons actually evacuated: 3.6

Sampling Time: 1440 Sampling Date: 6/6/02

Sample I.D.: MW-2 Laboratory: (Kiff) Sequoia Other_____

Analyzed for: (TPH-G BTEX MTBE) TPH-D Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

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EQUIVA WELL MONITORING DATA SHEET

BTS #: 020606-MM3	Site: 2120 Montana St
Sampler: MJM	Date: 6/6/02
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: ~~12.52~~ 20.11	Depth to Water: 11.55
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

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

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

1.4 4.2

~~6.15~~ (Gals.) X 3 = ~~6.45~~ 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.	Turbidity	Gals. Removed	Observations
1417	70.4	6.67	635	>200	1.4	brownish/gray/silt
1420	68.5	6.54	617	>200	2.8	"
1422	68.6	6.58	621	>200	4.2	"

Did well dewater? Yes (No) Gallons actually evacuated: 4.2

Sampling Time: 1425 Sampling Date: 6/6/02

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

Analyzed for: (TPH-G BTEX MTBE) TPH-D Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

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EQUIVA WELL MONITORING DATA SHEET

BTS #: 020606-MM13	Site: 2120 Montana St
Sampler: MJM	Date: 6/6/02
Well I.D.: TBW-N	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: ~~17.4~~ 13.23	Depth to Water: 12.48
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

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

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

0.5 (Gals.) X 3 = 1.5 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1450	68.6	6.60	1317	>200	0.5	brownish gray/sheer odor
1452	67.9	6.60	1331	>200	1	"
1455	67.9	6.59	1335	>200	1.5	"

Did well dewater? Yes (No) Gallons actually evacuated: 1.5

Sampling Time: 1500 Sampling Date: 6/6/02

Sample I.D.: TBW-N Laboratory: (Kiff) Sequoia Other_____

Analyzed for: (TPH-G BTEX MTBE) TPH-D Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

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