Shell Oil Products US

March 5, 2003

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

Subject: **Former Shell Service Station**
8930 Bancroft Avenue
Oakland, California

Dear Ms. chu:

Attached for your review and comment is a copy of the *Fourth Quarter 2002 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

March 5, 2003

eva chu
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Re: **Fourth Quarter 2002 Monitoring Report**
Former Shell Service Station
8930 Bancroft Avenue
Oakland, California
Incident #98995742
Cambria Project #245-1408-002

Dear Ms. chu:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US, Cambria Environmental Technology, Inc. (Cambria) is submitting this groundwater monitoring report in accordance with the reporting requirements of 23 CCR 2652d. The site is located on the corner of Bancroft Avenue and 90th Avenue in Oakland, California (Figures 1 and 2).

REMEDIATION SUMMARY

2000 Mobile Groundwater Extraction (GWE): Weekly mobile GWE was performed on well MW-4 during March through May 2000. Mobile GWE is the process of extracting groundwater from wells using a vacuum truck. In this process, the vacuum created by the truck is applied to a dedicated extraction "stinger" installed in the extraction well. The extracted water is contained by the truck and removed from the site for disposal. The volume of extracted fluid is recorded and used to calculate the quantity of aqueous-phase constituents removed from the subsurface. Approximately 1,875 gallons of water were extracted from well MW-4, and an estimated 0.1 pounds of methyl tertiary butyl ether were removed. Cumulative groundwater purge volume and estimated mass removal data are presented in Table 1. GWE was discontinued due to low extraction volumes.

2002 Mobile GWE: Due to the presence of separate phase hydrocarbons (SPH) in well MW-5 beginning in February 2002, four additional weekly mobile GWE events were conducted at the site in August 2002 using well MW-5. Table 1 summarizes groundwater analytical data, cumulative extraction volumes and estimated mass removal data for the site. During the initial

Cambria Environmental Technology, Inc.

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

extraction event, approximately 0.02 feet of SPH were measured in well MW-5 prior to extraction. No SPH has been detected in well MW-5 since the extraction events. Based on this, the short-term mobile GWE appears to have successfully removed the SPH from well MW-5 and will not be continued at this time.

FOURTH QUARTER 2002 ACTIVITIES

Groundwater Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged and sampled selected site wells, calculated groundwater elevations, and compiled the analytical data. Cambria prepared a vicinity map which includes previously submitted well survey information (Figure 1) and a groundwater elevation contour map (Figure 2). Blaine's report, presenting the laboratory report and supporting field documents, is included as Attachment A.

Oxygen Releasing Compound (ORC): The ORC installed in well MW-4 was replaced during the fourth quarter 2002 monitoring event.

ANTICIPATED FIRST QUARTER 2003 ACTIVITIES

Groundwater Monitoring: Blaine will gauge and sample all site wells, measure dissolved oxygen concentrations in selected site wells, and tabulate the data. Cambria will prepare a monitoring report.

ORC Replacement: The ORC installed in well MW-4 is due to be replaced during the second quarter 2003 monitoring event.

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

Table: 1 - Groundwater Extraction - Mass Removal Data

Attachments: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, Shell Oil Products US, P.O. Box 7869, Burbank, CA 91510-7869
Leroy Griffin, Fire Prevention Bureau, 250 Frank Ogawa Plaza, 3rd Floor, Suite 3341, Oakland, CA 94612
Sidhu Associates, 8930 Bancroft Ave., Oakland, CA 94605

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02/14/03

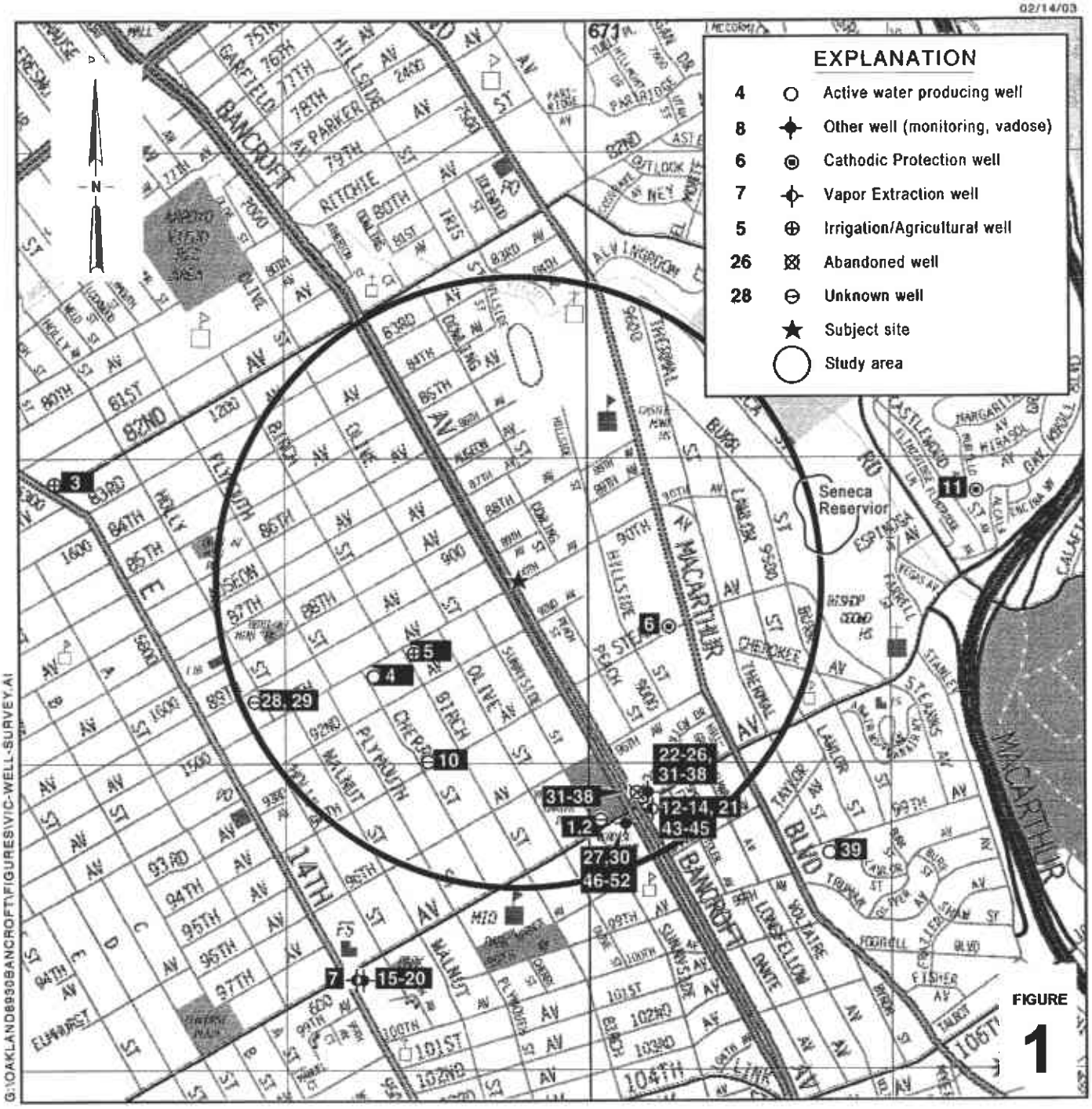

FIGURE 1

0 1/8 1/4 1/2 1

SCALE 1" = 1/4 MILE

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Former Shell-branded Station
8930 Bancroft Avenue
Oakland, California
Incident #98995742

CAMBRIA

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

Groundwater Elevation Contour Map

December 19, 2002

Former Shell Station
8930 Bancroft

MW-1
44.53
<0.50 - 2/26/02
<0.50 - 2/26/02

MW-2
44.20
<0.50 - 9/9/02
<5.0 - 9/9/02

MW-3
44.60
<0.50 - 2/26/02
1.5 - 2/26/02

MW-4
43.64
<0.50 - 12/26/02
47 - 12/26/02

MW-5
44.09
<0.50 - 12/26/02
180 - 12/26/02

MW-6
43.64
<0.50 - 9/9/02
<5.0 - 9/9/02

44.50
44.20
43.90

property line
former USTs
former pump island
USTs
dispensers
8 6 7 5 4 2 3 1

48"ϕ SD
12"ϕ SD
15"ϕ SD
42"ϕ SD
10"ϕ SS
8"ϕ SS

FL = 44.99'
FL = 44.21'
FL = 44.08'
FL = 43.97'
FL = 43.06'
FL = 51.30'
FL = 46.11'
FL = 45.00'

median
median

BANCROFT AVENUE
90TH AVENUE

SB-A
SB-B
SB-C
sidewalk
sidewalk
residential property
residential property
residential property

Groundwater Flow Direction
(2Q00 through 4Q02)

Nearest Sensitive Receptor to Site
Irrigation Well
1,100 ft. WSW

0 15 30 60
Scale (ft)

EXPLANATION

- MW-1 — Monitoring well location
- SB-A — Cambria soil boring location (04/01/01)
- Groundwater flow direction
- XX.XX — Groundwater elevation contour, in feet above mean sea level (msl), approximately located; dashed where inferred
- Well / ELEV / Benzene / MTBE
  - Well designation
  - Groundwater elevation, in feet above msl
  - Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8260.
- Sanitary Sewer line (SS)
- Storm Drain line (SD)
- Flow direction
- Storm drain inlet
- Manhole
- FL — Flowline elevation (in feet above msl)

NOTE: Conduit locations are approximate

FIGURE
2

Former Shell-branded Station
8930 Bancroft Avenue
Oakland, California
Incident #98995742

CAMBRIA

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995742, 8930 Bancroft Avenue, 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)
03/15/00	MW-4	650	650	12/23/99	<100	0.00027	0.00027	<1.0	0.00000	0.00000	8,400	0.04556	0.04556
03/22/00	MW-4	100	750	03/22/00	<500	0.00021	0.00048	<5.00	0.00000	0.00000	5,020	0.00419	0.04975
03/27/00	MW-4	75	825	03/22/00	<500	0.00016	0.00064	<5.00	0.00000	0.00001	5,020	0.00314	0.05289
04/03/00	MW-4	150	975	03/22/00	<500	0.00031	0.00095	<5.00	0.00000	0.00001	5,020	0.00628	0.05917
04/17/00	MW-4	300	1,275	03/22/00	<500	0.00063	0.00157	<5.00	0.00001	0.00002	5,020	0.01257	0.07174
04/24/00	MW-4	150	1,425	03/22/00	<500	0.00031	0.00189	<5.00	0.00000	0.00002	5,020	0.00628	0.07802
05/01/00	MW-4	75	1,500	03/22/00	<500	0.00016	0.00204	<5.00	0.00000	0.00002	5,020	0.00314	0.08117
05/08/00	MW-4	150	1,650	03/22/00	<500	0.00031	0.00236	<5.00	0.00000	0.00002	5,020	0.00628	0.08745
05/15/00	MW-4	75	1,725	03/22/00	<500	0.00016	0.00251	<5.00	0.00000	0.00003	5,020	0.00314	0.09059
05/22/00	MW-4	75	1,800	03/22/00	<500	0.00016	0.00267	<5.00	0.00000	0.00003	5,020	0.00314	0.09373
05/29/00	MW-4	75	1,875	03/22/00	<500	0.00016	0.00283	<5.00	0.00000	0.00003	5,020	0.00314	0.09687
08/08/02	MW-5	163	163	08/08/02	350	0.00048	0.00048	<0.50	0.00000	0.00000	65	0.00009	0.00009
08/16/02	MW-5	218	381	08/16/02	16,000	0.02911	0.02958	<2.5	0.00000	0.00000	310	0.00056	0.00065
08/16/02	MW-5	0	381	08/16/02	58	0.00000	0.02958	<0.50	0.00000	0.00000	60	0.00000	0.00065
08/22/02	MW-5	377	758	08/22/02	1,500	0.00472	0.03430	<0.50	0.00000	0.00000	110	0.00035	0.00100
08/29/02	MW-5	146	904	08/29/02	120	0.00015	0.03445	<0.50	0.00000	0.00000	76	0.00009	0.00109
Total Gallons Extracted:			2,779		**Total Pounds Removed:**		0.03727			0.00003			0.09796
					Total Gallons Removed:		0.00611			0.00000			0.01580

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995742, 8930 Bancroft Avenue, 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 = Gallon
Mass removed based on the formula: volume extracted (gal) x Concentration (µg/L) x (g/10^6µg) x (pound/453.6g) x (3.785 L/gal)
Volume removal data based on the formula: density (in gms/cc) x 9.339 (ccxlbs/gmsxgals)
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

January 23, 2003

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

Fourth Quarter 2002 Groundwater Monitoring at
Former Shell Service Station
8930 Bancroft Avenue
Oakland, CA

Monitoring performed on December 19 and 26, 2002

Groundwater Monitoring Report **021226-DW-4**

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

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

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

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

Please call if you have any questions.

Yours truly,

Leon Gearhart
Project Coordinator

LG/jt

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

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

WELL CONCENTRATIONS
Former Shell Service Station
8930 Bancroft Avenue
Oakland, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (mg/L)
MW-1	12/17/1998	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	53.19	11.87	NA	41.32	NA	NA
MW-1	03/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	53.19	8.21	NA	44.98	NA	NA
MW-1	06/16/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	53.19	15.04	NA	38.15	NA	NA
MW-1	09/30/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	53.19	16.02	NA	37.17	NA	NA
MW-1	12/23/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	53.19	14.78	NA	38.41	NA	NA
MW-1	03/22/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	53.19	8.44	NA	44.75	NA	NA
MW-1	06/01/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	53.19	13.71	NA	39.48	NA	NA
MW-1	09/08/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	53.19	14.95	NA	38.24	NA	NA
MW-1	12/04/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	5.82	NA	53.19	13.85	NA	39.34	NA	NA
MW-1	03/09/2001	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	53.19	9.07	NA	44.12	NA	NA
MW-1	06/27/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	53.19	14.90	NA	38.29	NA	NA
MW-1	09/20/2001	NA	NA	NA	NA	NA	NA	NA	NA	53.19	15.53	NA	37.66	NA	NA
MW-1	12/05/2001	NA	NA	NA	NA	NA	NA	NA	NA	53.19	10.41	NA	42.78	NA	3.8
MW-1	02/26/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<0.50	53.19	11.09	NA	42.10	NA	NA
MW-1	06/06/2002	NA	NA	NA	NA	NA	NA	NA	NA	53.19	14.13	NA	39.06	NA	NA
MW-1	09/09/2002	NA	NA	NA	NA	NA	NA	NA	NA	53.20	15.55	NA	37.65	NA	NA
MW-1	**12/19/2002**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**53.20**	**8.67**	**NA**	**44.53**	**NA**	**NA**
MW-2	12/17/1998	9,900	NA	<5.0	37	22	47	48	<20	52.66	11.65	NA	41.01	NA	NA
MW-2	03/09/1999	2,760	NA	12.3	7.50	85.4	444	<50.0	NA	52.66	8.07	NA	44.59	NA	NA
MW-2	06/16/1999	2,570	NA	36.3	11.6	6.19	10.8	<50.0	NA	52.66	14.63	NA	38.03	NA	NA
MW-2	09/30/1999	1,960	NA	19.1	3.20	4.55	26.9	<25.0	NA	52.66	15.63	NA	37.03	NA	NA
MW-2	12/23/1999	145	NA	1.30	<0.500	<0.500	0.899	<2.50	NA	52.66	14.42	NA	38.24	NA	NA
MW-2	03/22/2000	6,060	NA	18.9	<10.0	210	651	<100	NA	52.66	8.19	NA	44.47	NA	NA
MW-2	06/01/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	52.66	11.46	NA	41.20	NA	NA
MW-2	09/08/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	52.66	14.63	NA	38.03	NA	NA
MW-2	12/04/2000	201	NA	1.35	<0.500	3.39	8.58	<2.50	NA	52.66	13.45	NA	39.21	NA	NA

WELL CONCENTRATIONS
Former Shell Service Station
8930 Bancroft Avenue
Oakland, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (mg/L)
MW-2	03/09/2001	396	NA	2.82	<0.500	8.69	18.7	<2.50	NA	52.66	8.89	NA	43.77	NA	NA
MW-2	06/27/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	52.66	14.88	NA	37.78	NA	NA
MW-2	09/20/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	52.66	15.19	NA	37.47	NA	NA
MW-2	12/05/2001	NA	NA	NA	NA	NA	NA	NA	NA	52.66	10.02	NA	42.64	NA	2.8
MW-2	02/26/2002	180	NA	<0.50	<0.50	2.7	4.1	NA	<0.50	52.66	10.76	NA	41.90	NA	NA
MW-2	06/06/2002	NA	NA	NA	NA	NA	NA	NA	NA	52.66	13.83	NA	38.83	NA	NA
MW-2	09/09/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	52.66	15.23	NA	37.43	NA	NA
MW-2	**12/19/2002**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**52.66**	**8.46**	**NA**	**44.20**	**NA**	**NA**
MW-3	12/17/1998	<50	NA	<0.50	<0.50	<0.50	<0.50	10	11	51.30	11.85	NA	39.45	NA	NA
MW-3	03/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	51.30	6.53	NA	44.77	NA	NA
MW-3	06/16/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	51.30	12.71	NA	38.59	NA	NA
MW-3	09/30/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	5.14	NA	51.30	14.07	NA	37.23	NA	NA
MW-3	12/23/1999	<500	NA	<5.00	<5.00	<5.00	<5.00	<25.0	NA	51.30	12.82	NA	38.48	NA	NA
MW-3	03/22/2000	<50.0	NA	<0.500	1.48	<0.500	1.90	<5.00	NA	51.30	6.81	NA	44.49	NA	NA
MW-3	06/01/2000	<50.0	NA	<0.500	0.821	<0.500	<0.500	4.39	NA	51.30	11.85	NA	39.45	NA	NA
MW-3	09/08/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	3.62	NA	51.30	12.55	NA	38.75	NA	NA
MW-3	12/04/2000	<50.0	NA	<0.500	<0.500	<0.500	0.588	4.74	NA	51.30	11.65	NA	39.65	NA	NA
MW-3	03/09/2001	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	51.30	7.28	NA	44.02	NA	NA
MW-3	06/27/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	51.30	13.16	NA	38.14	NA	NA
MW-3	09/20/2001	NA	NA	NA	NA	NA	NA	NA	NA	51.30	13.35	NA	37.95	NA	NA
MW-3	12/05/2001	NA	NA	NA	NA	NA	NA	NA	NA	51.30	8.14	NA	43.16	NA	1.2
MW-3	02/26/2002	<50	NA	<0.50	7.2	<0.50	<0.50	NA	1.5	51.30	9.09	NA	42.21	NA	0.6
MW-3	06/06/2002	NA	NA	NA	NA	NA	NA	NA	NA	51.30	12.13	NA	39.17	NA	0.8
MW-3	09/09/2002	NA	NA	NA	NA	NA	NA	NA	NA	51.35	13.54	NA	37.81	NA	1.0
MW-3	**12/19/2002**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**51.35**	**6.75**	**NA**	**44.60**	**NA**	**0.6**
MW-4	12/17/1998	700	NA	4.3	0.88	<0.50	<0.50	21,000	26,000	50.73	10.80	NA	39.93	NA	NA

WELL CONCENTRATIONS
Former Shell Service Station
8930 Bancroft Avenue
Oakland, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (mg/L)
MW-4	03/09/1999	83.9	NA	<0.500	<0.500	<0.500	<0.500	17,900	23,700	50.73	6.91	NA	43.82	NA	NA
MW-4	06/16/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	10,600	19,200	50.73	12.84	NA	37.89	NA	NA
MW-4	09/30/1999	51.2	NA	<0.500	<0.500	<0.500	<0.500	12,200	12,300	50.73	13.74	NA	36.99	NA	NA
MW-4	12/23/1999	<100	NA	<1.00	<1.00	<1.00	<1.00	7,990	8,400	50.73	12.40	NA	38.33	NA	NA
MW-4	03/22/2000	<500	NA	<5.00	<5.00	<5.00	<5.00	4,970	5,020	50.73	7.32	NA	43.41	NA	NA
MW-4	06/01/2000	<100	NA	<1.00	<1.00	<1.00	<1.00	5,260	3,580	50.73	11.50	NA	39.23	NA	NA
MW-4	09/08/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	3,610	3,300a	50.73	12.55	NA	38.18	NA	NA
MW-4	12/04/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	2,960	3,520a	50.73	11.77	NA	38.96	NA	NA
MW-4	03/09/2001	<50.0	NA	<0.500	<0.500	<0.500	<0.500	1,930	2,500	50.73	7.48	NA	43.25	NA	NA
MW-4	06/27/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	1,100	1,100	50.73	12.97	NA	37.76	NA	NA
MW-4	09/20/2001	<250	NA	3.8	14	2.6	7.8	NA	940	50.73	13.30	NA	37.43	NA	NA
MW-4	12/05/2001	<200	NA	<2.0	<2.0	<2.0	<2.0	NA	750	50.73	8.41	NA	42.32	NA	1.2
MW-4	02/26/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	320	50.73	9.40	NA	41.33	NA	0.7
MW-4	06/06/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	160	50.73	11.97	NA	38.76	NA	0.6
MW-4	09/09/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	50	50.72	13.23	NA	37.49	NA	3.6
MW-4	**12/19/2002**	**Unable to sample**		**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**50.72**	**7.08**	**NA**	**43.64**	**NA**	**0.8**
MW-4	**12/26/2002**	**<50**	**NA**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**NA**	**47**	**50.72**	**7.23**	**NA**	**43.49**	**NA**	**1.8**
MW-5	12/17/1998	750	NA	<0.50	17	1.8	3.5	33	32	51.43	11.51	NA	39.92	NA	NA
MW-5	03/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	51.43	7.15	NA	44.28	NA	NA
MW-5	06/16/1999	646	NA	9.26	1.05	<1.00	<1.00	<10.0	NA	51.43	13.47	NA	37.96	NA	NA
MW-5	09/30/1999	484	NA	1.93	0.511	<0.500	<0.500	159	NA	51.43	14.41	NA	37.02	NA	NA
MW-5	12/23/1999	944	NA	4.59	17.7	3.79	16.7	214	NA	51.43	14.07	NA	37.36	NA	NA
MW-5	03/22/2000	8,770	NA	197	96.5	<50.0	188	2,450	NA	51.43	7.31	NA	44.12	NA	NA
MW-5	06/01/2000	227	NA	0.565	<0.500	<0.500	<0.500	35.9	NA	51.43	12.15	NA	39.28	NA	NA
MW-5	09/08/2000	159	NA	0.606	<0.500	<0.500	1.74	1,000	NA	51.43	13.30	NA	38.13	NA	NA
MW-5	12/04/2000	1,510	NA	19.2	<10.0	<10.0	134	1,360	NA	51.43	12.19	NA	39.24	NA	NA
MW-5	03/09/2001	3,460	NA	37.9	121	40.6	208	235	NA	51.43	7.79	NA	43.64	NA	NA

WELL CONCENTRATIONS
Former Shell Service Station
8930 Bancroft Avenue
Oakland, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (mg/L)
MW-5	06/27/2001	310	NA	0.97	<0.50	<0.50	<0.50	14	NA	51.43	13.89	NA	37.54	NA	NA
MW-5	09/20/2001	310	NA	<0.50	<0.50	<0.50	<0.50	NA	21	51.43	13.95	NA	37.48	NA	NA
MW-5	12/05/2001	8,800	NA	14	2.9	33	410	NA	2,300	51.43	8.89	NA	42.54	NA	0.6
MW-5	02/26/2002	NA	NA	NA	NA	NA	NA	NA	NA	51.43	9.87	NA	NA	b	NA
MW-5	03/12/2002	NA	NA	NA	NA	NA	NA	NA	NA	51.43	8.84	8.64	42.75	0.20	NA
MW-5	06/06/2002	NA	NA	NA	NA	NA	NA	NA	NA	51.43	12.59	12.54	38.88	0.05	NA
MW-5	09/09/2002	210	NA	<0.50	<0.50	<0.50	0.90	NA	200	51.44	13.94	NA	37.50	NA	NA
MW-5	**12/19/2002**	**Unable to sample**		**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**51.44**	**7.35**	**NA**	**44.09**	**NA**	**NA**
MW-5	**12/26/2002**	**1,400**	**NA**	**<0.50**	**21**	**6.9**	**60**	**NA**	**180**	**51.44**	**7.13**	**NA**	**44.31**	**NA**	**NA**
MW-6	12/17/1998	940	NA	27	0.32	2.4	2.3	3.0	3.2	51.88	11.37	NA	40.51	NA	NA
MW-6	03/09/1999	336	NA	7.78	1.60	2.40	6.36	<10.0	NA	51.88	8.10	NA	43.78	NA	NA
MW-6	06/16/1999	308	NA	2.45	<0.500	<0.500	<0.500	7.39	NA	51.88	14.49	NA	37.39	NA	NA
MW-6	09/30/1999	80.2	NA	<0.500	<0.500	<0.500	<0.500	24.8	NA	51.88	15.30	NA	36.58	NA	NA
MW-6	12/23/1999	149	NA	0.518	<0.500	<0.500	<0.500	6.43	NA	51.88	13.19	NA	38.69	NA	NA
MW-6	03/22/2000	382	NA	3.31	2.18	0.619	2.35	5.61	NA	51.88	8.27	NA	43.61	NA	NA
MW-6	06/01/2000	158	NA	0.830	<0.500	<0.500	1.10	10.9	NA	51.88	11.13	NA	40.75	NA	NA
MW-6	09/08/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	51.88	14.28	NA	37.60	NA	NA
MW-6	12/04/2000	231	NA	4.93	<0.500	<0.500	<0.500	4.57	NA	51.88	12.62	NA	39.26	NA	NA
MW-6	03/09/2001	789	NA	11.6	2.72	<2.00	<2.00	28.0	NA	51.88	8.65	NA	43.23	NA	NA
MW-6	06/27/2001	140	NA	<0.50	1.1	<0.50	<0.50	<2.5	NA	51.88	14.95	NA	36.93	NA	NA
MW-6	09/20/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	51.88	14.70	NA	37.18	NA	NA
MW-6	12/05/2001	NA	NA	NA	NA	NA	NA	NA	NA	51.88	9.62	NA	42.26	NA	1.8
MW-6	02/26/2002	130	NA	<0.50	2.6	0.69	4.1	NA	6.4	51.88	10.14	NA	41.74	NA	NA
MW-6	06/06/2002	NA	NA	NA	NA	NA	NA	NA	NA	51.88	13.52	NA	38.36	NA	NA
MW-6	09/09/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	51.86	14.92	NA	36.94	NA	NA
MW-6	**12/19/2002**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**51.86**	**8.22**	**NA**	**43.64**	**NA**	**NA**

WELL CONCENTRATIONS
Former Shell Service Station
8930 Bancroft Avenue
Oakland, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (mg/L)

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to September 20, 2001, analyzed by EPA Method 8015.

TEPH = Total petroleum hydrocarbons as diesel by modified EPA Method 8015.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to September 20, 2001, analyzed by EPA Method 8020.

MTBE = Methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

SPH = Separate-phase hydrocarbons

GW = Groundwater

ug/L = Parts per billion

MSL = Mean sea level

ft = Feet

<n = Below detection limit

NA = Not applicable

DO = Dissolved oxygen

mg/L = Parts per million

Notes:

a = This sample analyzed outside of EPA recommended holding time.

b = SPH detected in well, but exact thickness could not be measured.

When separate-phase hydrocarbons are present, groundwater elevation is adjusted using the relation:

Groundwater Elevation = Top-of-Casing Elevation - Depth to Water + (0.8 x Hydrocarbon Thickness).

Site surveyed February 12 and May 16, 2002, by Virgil Chavez Land Surveying of Vallejo, California.

KIFF ANALYTICAL LLC

Report Number : 30631
Date : 1/3/03

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

Subject : 2 Water Samples
Project Name : 8930 Bancroft Avenue, Oakland
Project Number : 021226-DW-4
P.O. Number : 98995742

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 : 30631
Date : 1/3/03

Project Name : **8930 Bancroft Avenue, Oakland**
Project Number : **021226-DW-4**

Sample : **MW-4** Matrix : Water Lab Number : 30631-01
Sample Date :12/26/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	12/28/02
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	12/28/02
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	12/28/02
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	12/28/02
Methyl-t-butyl ether (MTBE)	**47**	5.0	ug/L	EPA 8260B	12/28/02
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	12/28/02
Toluene - d8 (Surr)	89.7		% Recovery	EPA 8260B	12/28/02
4-Bromofluorobenzene (Surr)	116		% Recovery	EPA 8260B	12/28/02

Sample : **MW-5** Matrix : Water Lab Number : 30631-02
Sample Date :12/26/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	12/29/02
Toluene	**21**	0.50	ug/L	EPA 8260B	12/29/02
Ethylbenzene	**6.9**	0.50	ug/L	EPA 8260B	12/29/02
Total Xylenes	**60**	0.50	ug/L	EPA 8260B	12/29/02
Methyl-t-butyl ether (MTBE)	**180**	5.0	ug/L	EPA 8260B	12/29/02
TPH as Gasoline	**1400**	50	ug/L	EPA 8260B	12/29/02
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	12/29/02
4-Bromofluorobenzene (Surr)	98.6		% Recovery	EPA 8260B	12/29/02

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

Report Number : 30631

Date : 1/3/03

QC Report : Method Blank Data

Project Name : **8930 Bancroft Avenue, Oakland**

Project Number : **021226-DW-4**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/28/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/28/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/28/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/28/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	12/28/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/28/02
Toluene - d8 (Surr)	91.0		%	EPA 8260B	12/28/02
4-Bromofluorobenzene (Surr)	115		%	EPA 8260B	12/28/02
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/28/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/28/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/28/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/28/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	12/28/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/28/02
Toluene - d8 (Surr)	100		%	EPA 8260B	12/28/02
4-Bromofluorobenzene (Surr)	99.0		%	EPA 8260B	12/28/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St. Suite 300 Davis. CA 95616 530-297-4800

Report Number : 30631

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 1/3/03

Project Name : **8930 Bancroft Avenue,**

Project Number : **021226-DW-4**

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	30631-01	<0.50	40.0	40.0	39.2	38.8	ug/L	EPA 8260B	12/28/02	97.9	97.0	0.949	70-130	25
Toluene	30631-01	<0.50	40.0	40.0	34.0	33.8	ug/L	EPA 8260B	12/28/02	85.0	84.6	0.442	70-130	25
Tert-Butanol	30631-01	<5.0	200	200	188	189	ug/L	EPA 8260B	12/28/02	94.0	94.4	0.377	70-130	25
Methyl-t-Butyl Ether	30631-01	47	40.0	40.0	91.4	91.9	ug/L	EPA 8260B	12/28/02	111	112	1.14	70-130	25
Benzene	30636-02	<0.50	40.0	40.0	40.5	39.7	ug/L	EPA 8260B	12/28/02	101	99.3	1.87	70-130	25
Toluene	30636-02	<0.50	40.0	40.0	39.0	38.6	ug/L	EPA 8260B	12/28/02	97.4	96.6	0.825	70-130	25
Tert-Butanol	30636-02	<5.0	200	200	202	195	ug/L	EPA 8260B	12/28/02	101	97.7	3.32	70-130	25
Methyl-t-Butyl Ether	30636-02	<0.50	40.0	40.0	38.7	38.5	ug/L	EPA 8260B	12/28/02	96.8	96.2	0.647	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 30631

Date : 1/3/03

QC Report : Laboratory Control Sample (LCS)

Project Name : **8930 Bancroft Avenue,**

Project Number : **021226-DW-4**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	12/28/02	96.4	70-130
Toluene	40.0	ug/L	EPA 8260B	12/28/02	86.4	70-130
Tert-Butanol	200	ug/L	EPA 8260B	12/28/02	92.9	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	12/28/02	120	70-130
Benzene	40.0	ug/L	EPA 8260B	12/28/02	98.9	70-130
Toluene	40.0	ug/L	EPA 8260B	12/28/02	95.3	70-130
Tert-Butanol	200	ug/L	EPA 8260B	12/28/02	95.1	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	12/28/02	93.8	70-130

KIFF ANALYTICAL, LLC

Approved By: Joel 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

30631

INCIDENT NUMBER (S&E ONLY): 98995742

SAP or CRMT NUMBER (TS/CRMT):

DATE: 12-26-02

PAGE: 1 of 1

SAMPLING COMPANY:	LOG CODE:	SITE ADDRESS (Street and City):	GLOBAL ID NO.:
Blaine Tech Services	BTSS	8930 Bancroft Avenue, Oakland	PENDING

ADDRESS:	EDF DELIVERABLE TO (Responsible Party or Designee):	PHONE NO.:	E-MAIL:	CONSULTANT PROJECT NO.:
1680 Rogers Avenue, San Jose, CA 95112	Anni Kreml	510-420-3335	ShellOaklandEDF@cambria-env.com	021226-DW-4

PROJECT CONTACT (Hardcopy or PDF Report to):	TELEPHONE:	FAX:	E-MAIL:	SAMPLER NAME(S) (Print):
Leon Gearhart	408-573-0555	408-573-7771	lgearhart@blainetech.com	Dave Walter

LAB USE ONLY

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

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

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	12-26	15:19	W	3	X	X	X																-01
	MW-5	12-26	15:40	W	3	X	X	X																-02

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

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
David C Walt			
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
	John Cuttle/Kriff Analytical	12-27-02	1121

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

10/16/00 Revision

WELL GAUGING DATA

Project # 021226-DW-4 Date 12-26-02 Client Shell

Site 8930 Bancroft 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	3	gauged Chad	w/ stinger in well to remove ORC's			7.23	19.57	✓	
mw-5	3	gauged	w/ stinger in	well		7.13	19.63	✓	

SHELL WELL MONITORING DATA SHEET

STS #: 02126-DW-4	Site: 8930 Bancroft Oakland
Sampler: Dave Walter	Date: 12-26-02
Well I.D.: MW-4	Well Diameter: 2 (3) 4 6 8 ____
Total Well Depth: 19.57	Depth to Water: 7.23
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; Y Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other ____

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

4.6	(Gals.) X	3	=	13.8	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
15:11	65.8	6.9	451	>200	5	heavy sheen
15:17	67.9	6.9	418	>200	10	odor
15:13	68.7	6.8	385	>200	15	
				DTW @ 80%	= 9.69	DTW @ sampling = 8.03

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

Sampling Time: 15:19 Sampling Date: 12-26-02

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

SHELL WELL MONITORING DATA SHEET

TS #: 021126-DW-4	Site: 8930 Bancroft Oakland
ampler: Dave Walter	Date: 12-26-02
ell I.D.: MW-5	Well Diameter: 2 (3) 4 6 8 ___
otal Well Depth: 19.63	Depth to Water: 7.13
epth to Free Product:	Thickness of Free Product (feet):
eferenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

rge Method: Bailer, Disposable Bailer, Middleburg, X Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other_____

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

4.6 (Gals.) X 3 = 13.8 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
1513	68.1	6.8	333	>200	5	odor/gray/sheen
1533	69.6	6.7	338	7200	10	
1534	70.1	6.7	335	7200	15	
				80% recharge	9.63	DTW @ sampling = 9.41

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

mpling Time: 15:40 Sampling Date: 12-26-02

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

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

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

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

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

WELL GAUGING DATA

Project # 021219 ~~021219~~-RH2 Date 12/18/02 Client Shell

Site 8930 Bancroft Ave, 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	Pre-purge DO	
mw-1	3					9.67	16.88			G
mw-2	3					8.46	19.20			G
mw-3	3					6.79	19.66		0.6	x G
mw-4	3	gauged w/ stinger in well				7.08	19.57		0.8	x
mw-5	3	"	"	"	"	7.35	19.63			
mw-6	3					8.22	19.70			G

SHELL WELL MONITORING DATA SHEET

BTS #: 021213-RH2	Site: 8930 Bancroft Ave, Oakland
Sampler: Ryan H	Date: 12/19/02
Well I.D.: MW-4	Well Diameter: 2 (3) 4 6 8 ___
Total Well Depth (TD): 19.57	Depth to Water (DTW): 7.08
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.56	

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

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

1 Case Volume	Specified Volumes	Calculated Volume
4.6 (Gals.) X	3	= 13.8 Gals.

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

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1224	62.6	6.7	290	>200	4.6	Blackish
1228	59.0	6.5	176	>200	9.2	"
1232	59.6	6.6	134	>200	13.8	"
	No Sample due to weather					
	WATER RUNNING INTO WELLBOX					

Did well dewater? Yes (No) Gallons actually evacuated: 13.8

Sampling Date: 12/19/02 Sampling Time: Depth to Water:

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 #: 021213-RH2	Site: 8930 Bancroft Ave, Oakland
Sampler: Ryan H	Date: 12/19/02
Well I.D.: MW-5	Well Diameter: 2 (3) 4 6 8 ___
Total Well Depth (TD): 19.63	Depth to Water (DTW): 7.35
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.81	

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

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

4.5 (Gals.) X 3 = 13.5 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

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

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
	No purge or sample due to weather.					
			UNDER LARGE PUDDLE OF WATER			

Did well dewater? Yes No Gallons actually evacuated:

Sampling Date: 12/19/02 Sampling Time: Depth to Water:

Sample I.D.: MW-5 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