

CAMBRIA

Amir's report
to 12/1/01
AMM

November 30, 2001

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

✓
4028

Re: **Third Quarter 2001 Monitoring Report**
Shell-branded Service Station
2120 Montana Street
Oakland, California
Incident #98995740
Cambria Project #243-0733-002

DEC 04 2001



Dear Mr. Gholami:

On behalf of Equiva Services LLC, 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. Cumulative groundwater purge volume and estimated mass removal data are presented in Table 1. Figure 3 shows methyl tertiary butyl ether (MTBE) concentrations and mass removal estimates over time for well MW-1. The cumulative estimated mass of total petroleum hydrocarbons as gasoline (TPHg) and MTBE removed through GWE to date at the site is 1.70 pounds and 1.69 pounds, respectively. Cambria also coordinated SPH thickness gauging on a monthly basis beginning in June 2001 and on a weekly basis beginning in October 2001. Table 2 summarizes SPH thicknesses in wells MW-1 and TBW-N and estimated SPH removed through manual bailing and/or GWE. Approximately 2.68 pounds of SPH have been removed at the site. SPH has not been detected in wells MW-1 or TBW-N since October 2001. Based on the lack of SPH in the wells, the mobile GWE frequency was reduced from weekly to biweekly. Continued GWE will be based on extracted groundwater volumes and concentrations trends.

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

THIRD QUARTER 2001 ACTIVITIES

Groundwater Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged and sampled the site wells, calculated groundwater elevations, and compiled the analytical data. Cambria prepared a vicinity map which includes previously submitted well survey information and a groundwater elevation contour map (Figures 1 and 2). As requested in July 23, 2001 and August 14, 2001 Alameda County Health Care Services Agency letters, the groundwater gradient was estimated and is shown on Figure 2. Blaine's report, presenting the laboratory report and supporting field documents, is included as Attachment A.

**ANTICIPATED FOURTH QUARTER 2001 ACTIVITIES**

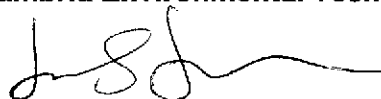
Groundwater Monitoring: Blaine will check for SPH, gauge and sample all wells, and tabulate the data. Cambria will prepare a monitoring report.

Mobile GWE: Biweekly GWE is schedule to continue through the fourth quarter 2001.


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.

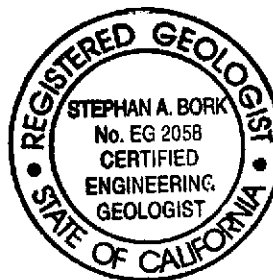
Sincerely,
Cambria Environmental Technology, Inc



Jacquelyn L. Jones
Project Geologist



Stephan A. Bork, C.E.G., C.H.G.
Associate Hydrogeologist



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

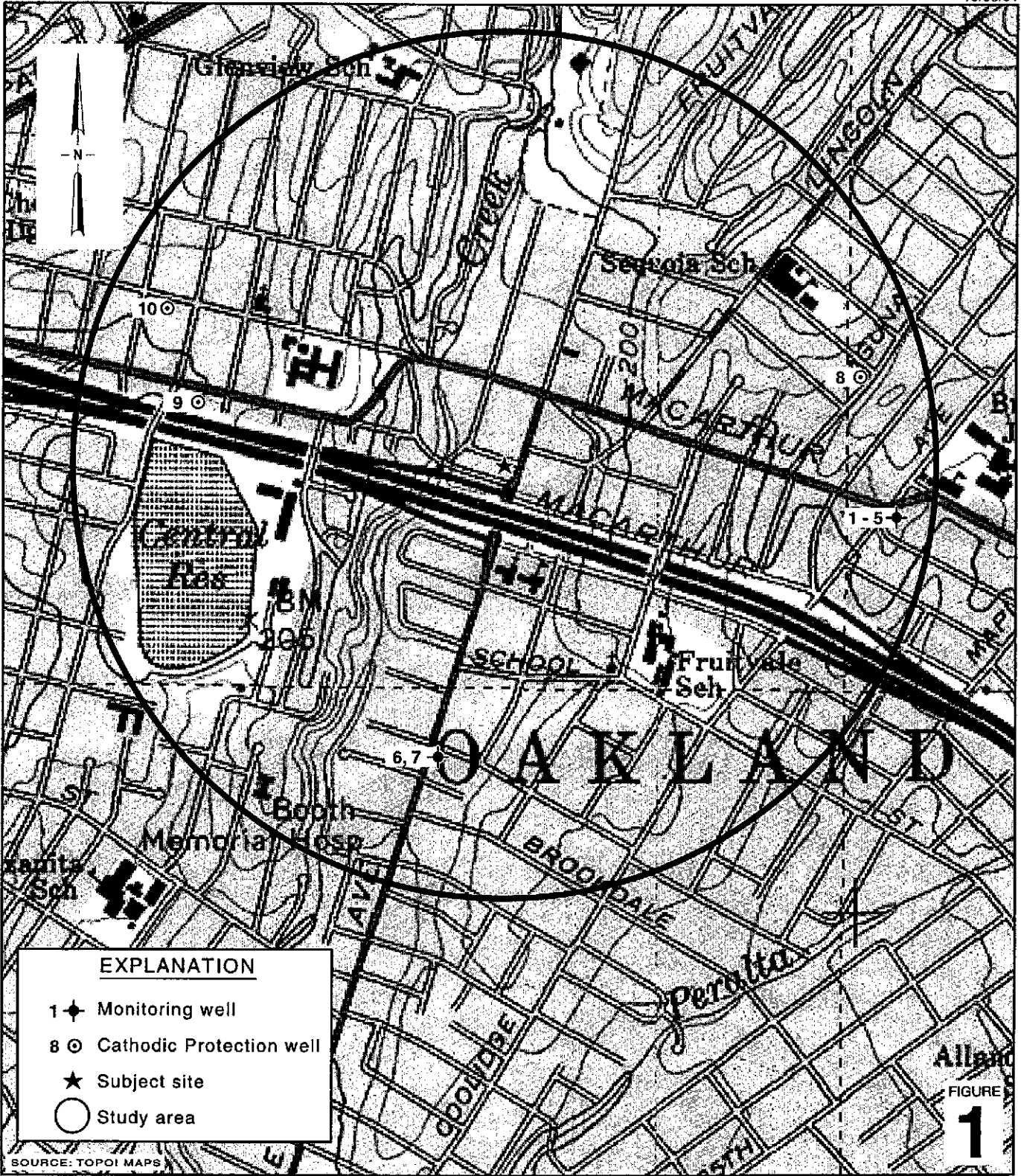
- Tables:
- 1 - Groundwater Extraction – Mass Removal Data
 - 2 - Separate-Phase Hydrocarbon Removal Data
 - 3 - Groundwater Analytical Data - Oxygenates

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, Equiva Services LLC, P.O. Box 7869, Burbank, California 91510-7869
Equilon Enterprises LLC c/o Stewart Title Guaranty Company 1980 Post Oak Blvd.,
Suite 110, Houston, Texas 77056

g:\oakland 2120montana\qm\3q01qm.doc

G:\OAKLAND\2120MONTANA\FIGURES\VIC-WELL-SURVEY.A1

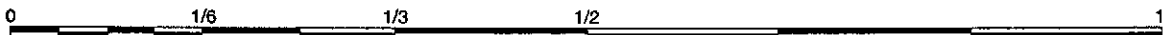


EXPLANATION

- 1 ◆ Monitoring well
- 8 ○ Cathodic Protection well
- ★ Subject site
- Study area

SOURCE: TOPOI MAPS

Alland
FIGURE
1



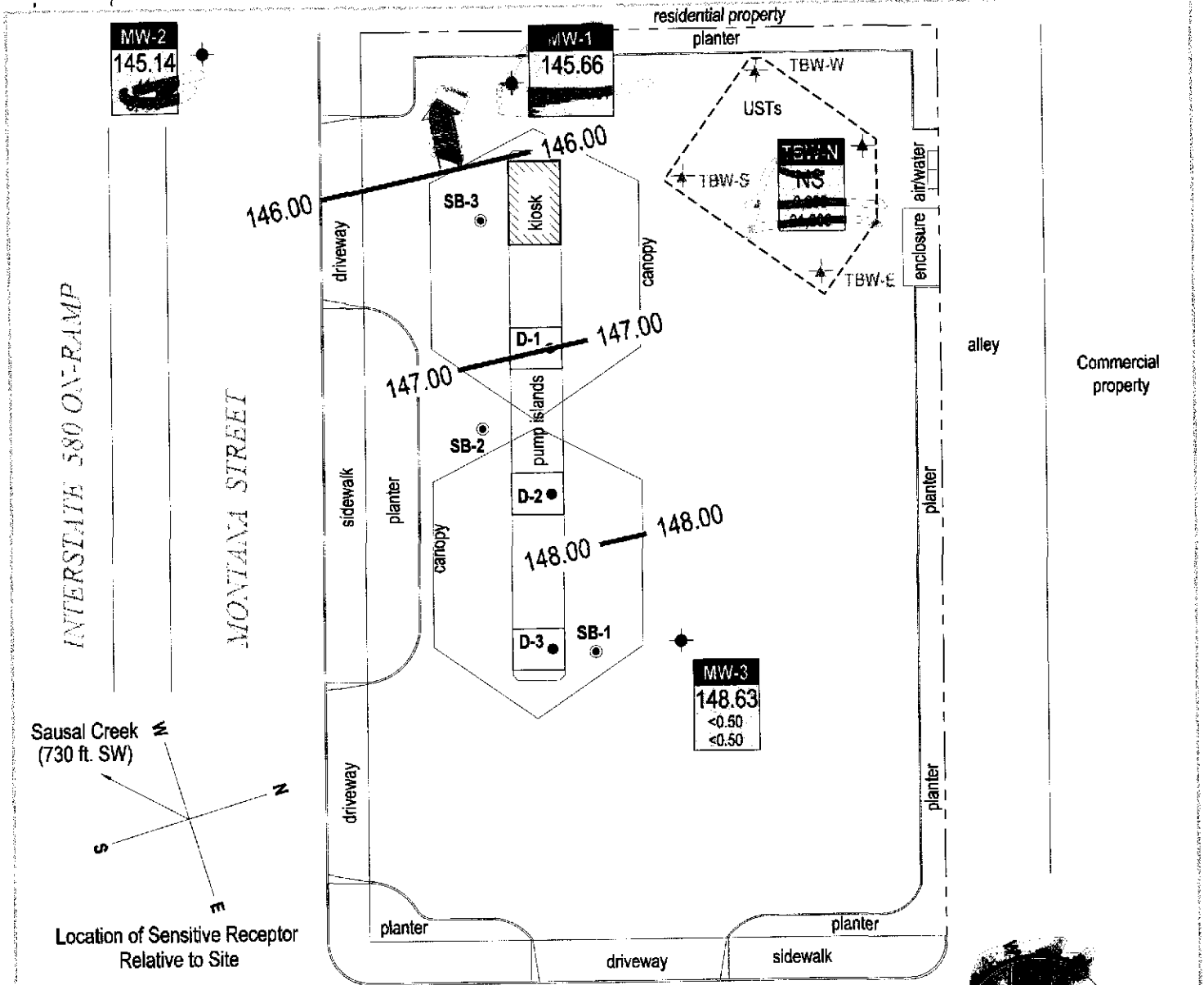
SCALE : 1" = 1/6 MILE

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



C A M B R I A

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



Sausal Creek
(730 ft. SW)

Location of Sensitive Receptor
Relative to Site

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, well not sampled
- XX.XX Groundwater flow direction and gradient (ft/ft)
- XX.XX Groundwater elevation contour, in feet above mean sea level (msl), approximately located, dashed where inferred
- Well designation
- ELEV Groundwater elevation, in feet above msl
- Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8260.

FRUITVALE AVENUE

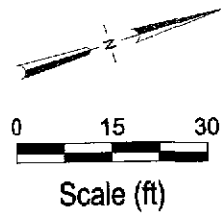
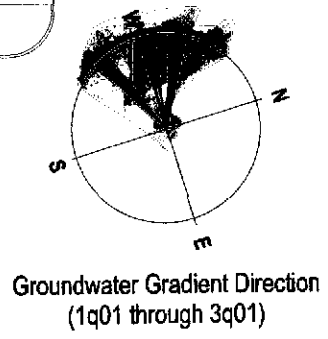


FIGURE 2

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



C A M B R I A

Groundwater Elevation Contour Map

September 25, 2001

G:\OAKLANDS\120MONTANA\FIGURES\COMO1.MP.DWG

**Figure 3
MTBE and Mass Removal
Well MW-1**

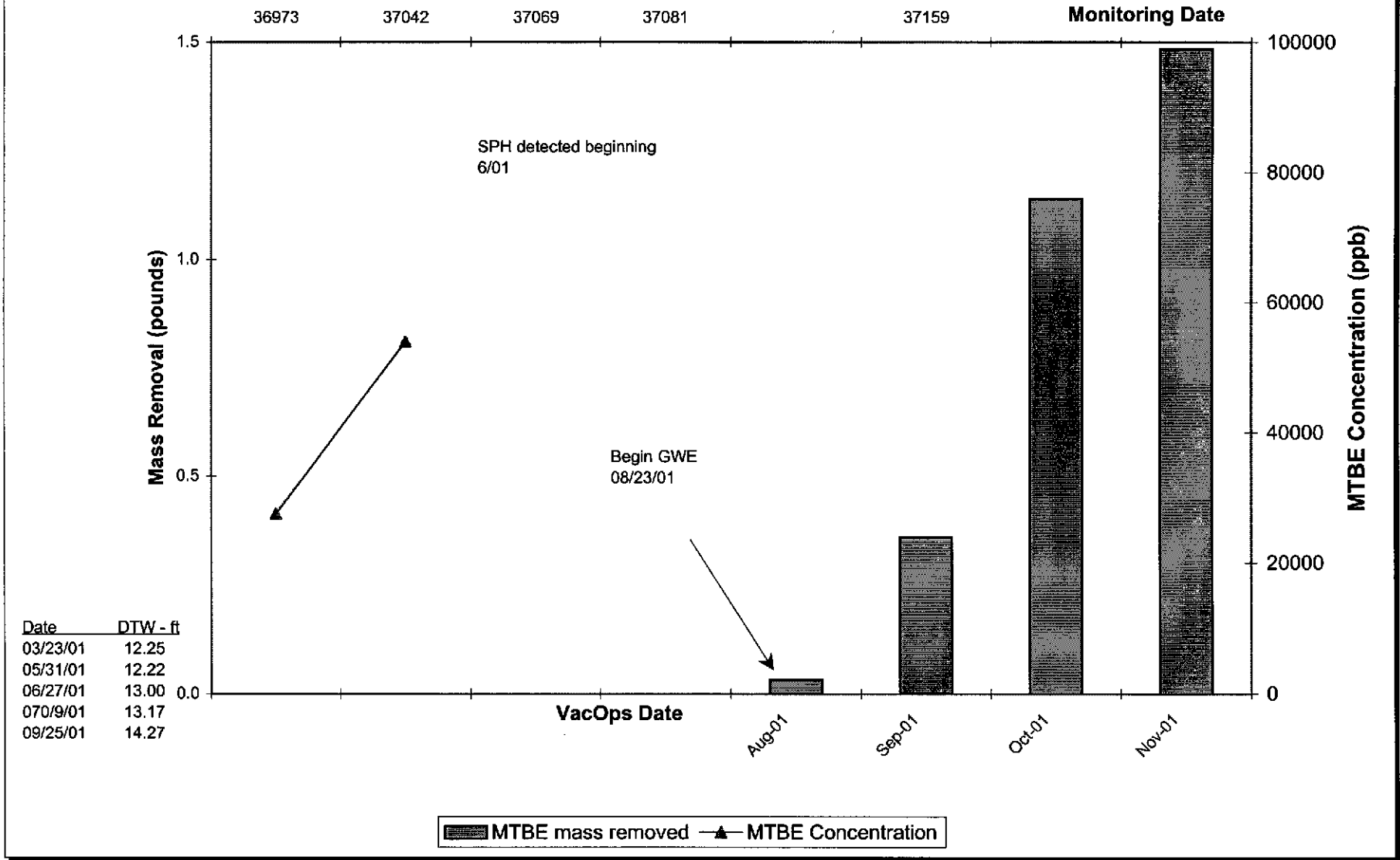


Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995740, 2120 Montana St., Oakland, California

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
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
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
Total Gallons Extracted:		7,267		Total Pounds Removed:		1.69684		0.06200		1.69092			
				Total Gallons Removed:		0.27817		0.00849		0.27273			

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)

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/10⁶µg) 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 ACTI. Water disposed of at a Martinez Refinery.

Table 2. Separate-Phase Hydrocarbon Removal Data - Shell-branded Service Station, 2120 Montana Street, Oakland, California, Incident # 98995740

Well ID	Date	SPH Thickness (ft)	SPH Removed (lbs)	Cumulative SPH Removed (lbs)
MW-1	06/27/01	0.15	1.61	1.61
MW-1	07/09/01	0.31	0.00	1.61
MW-1	08/10/01	0.30	0.00	1.61
MW-1	08/17/01	0.00	0.00	1.61
MW-1	08/31/01	0.44	0.00	1.61
MW-1	09/25/01	0.43	0.32	1.93
MW-1	09/28/01	0.17	0.00	1.93
MW-1	10/01/01	0.00	0.67	2.60
MW-1	10/19/01	0.00	0.00	2.60
MW-1	10/22/01	0.00	0.00	2.60
MW-1	10/26/01	0.00	0.00	2.60
MW-1	10/29/01	0.00	0.00	2.60
MW-1	11/02/01	0.00	0.00	2.60
MW-1	11/05/00	0.00	0.00	2.60
MW-1	11/09/01	0.00	0.00	2.60
MW-1	11/16/01	0.00	0.00	2.60
MW-1	11/19/01	0.00	0.00	2.60
TBW-N	08/10/01	0.11	0.00	0.00
TBW-N	08/17/01	0.00	0.00	0.00
TBW-N	08/31/01	0.35	0.00	0.00
TBW-N	09/25/01	0.00	0.00	0.00
TBW-N	10/01/01	0.00	0.00	0.00
TBW-N	10/19/01	0.08	0.00	0.00
TBW-N	10/22/01	0.06	0.08	0.08
TBW-N	10/26/01	0.06	0.00	0.08
TBW-N	10/29/01	0.03	0.00	0.08
TBW-N	11/02/01	0.00	0.00	0.08
TBW-N	11/05/01	0.00	0.00	0.08
TBW-N	11/09/01	0.00	0.00	0.08
TBW-N	11/16/01	0.00	0.00	0.08
TBW-N	11/19/01	0.00	0.00	0.08
Total Pounds Removed:				2.68

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

November 6, 2001

Karen Petryna
Equiva Services LLC
P.O. Box 7869
Burbank, CA 91510-7869

Third Quarter 2001 Groundwater Monitoring at
Shell-branded Service Station
2120 Montana Street
Oakland, CA

Monitoring performed on September 25, 2001

Groundwater Monitoring Report **010925-B-3**

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,



Nick Sudano
Project Coordinator

NS/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.)
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MW-1	3/19/01	NA	NA	NA	NA	NA	NA	NA	159.59	12.14	147.45	NA
MW-1	3/23/01	16,600	753	1,720	407	2,330	NA	27,500	159.59	12.25	147.34	NA
MW-1	5/31/01	<20,000d	1,000d	920d	490d	2,000d	NA	54,000d	161.13	12.22	148.91	NA
MW-1	6/27/01	NA	NA	NA	NA	NA	NA	NA	159.59	13.00b	NA	NA
MW-1	7/9/01	NA	NA	NA	NA	NA	NA	NA	159.59	13.17	146.67	0.31
MW-1	9/25/01	NA	NA	NA	NA	NA	NA	NA	159.59	14.27	145.66	0.43

MW-2	3/19/01	NA	NA	NA	NA	NA	NA	NA	158.03	11.60	146.43	NA
MW-2	3/23/01	4,450	280	41.0	62.1	63.0	NA	16,600	158.03	11.76	146.27	NA
MW-2	5/31/01	<20,000a	820a	<200a	<200a	<200a	NA	63,000a	158.03	11.40	146.63	NA
MW-2	6/27/01	<50,000	610	4.0	13	9.2	NA	47,000	158.03	12.65	145.38	NA
MW-2	9/25/01	<2,000	41	<20	<20	<20	NA	6,400	158.03	12.89	145.14	NA

MW-3	3/19/01	NA	NA	NA	NA	NA	NA	NA	161.13	11.42	149.71	NA
MW-3	3/23/01	<50.0	<0.500	<0.500	<0.500	<0.500	NA	1.26	161.13	11.42	149.71	NA
MW-3	5/31/01	<50e	<0.50e	<0.50e	<0.50e	<0.50e	NA	<5.0e	159.59	13.00	146.59	NA
MW-3	6/27/01	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	161.13	12.32	148.81	NA
MW-3	9/25/01	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	161.13	12.50	148.63	NA

TBW-N	09/25/2001 c	120,000	3,200	2,800	4,000	18,000	NA	31,000	NA	12.25	NA	NA
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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.)
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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

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).



Report Number : 22556

Date : 10/12/2001

Nick Sudano
Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112-1105

Subject : 3 Water Samples
Project Name : 2120 Montana Street, Oakland
Project Number : 010925-B3
P.O. Number : 98995740

Dear Mr. Sudano,

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,

A handwritten signature in black ink that reads "Joel Kiff". The signature is written in a cursive style with a large initial "J".

Joel Kiff




Report Number : 22556

Date : 10/12/2001

Subject : 3 Water Samples
Project Name : 2120 Montana Street, Oakland
Project Number : 010925-B3
P.O. Number : 98995740

Case Narrative

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.

Approved By:  Joel Kiff

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



Report Number : 22556

Date : 10/12/2001

Project Name : 2120 Montana Street, Oakland

Project Number : 010925-B3

Sample : MW-2

Matrix : Water

Lab Number : 22556-01

Sample Date :9/25/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	41	20	ug/L	EPA 8260B	10/7/2001
Toluene	< 20	20	ug/L	EPA 8260B	10/7/2001
Ethylbenzene	< 20	20	ug/L	EPA 8260B	10/7/2001
Total Xylenes	< 20	20	ug/L	EPA 8260B	10/7/2001
Methyl-t-butyl ether (MTBE)	6400	20	ug/L	EPA 8260B	10/7/2001
Diisopropyl ether (DIPE)	< 20	20	ug/L	EPA 8260B	10/7/2001
Ethyl-t-butyl ether (ETBE)	< 20	20	ug/L	EPA 8260B	10/7/2001
Tert-amyl methyl ether (TAME)	< 20	20	ug/L	EPA 8260B	10/7/2001
Tert-Butanol	480	200	ug/L	EPA 8260B	10/7/2001
Ethanol	< 500	500	ug/L	EPA 8260B	10/7/2001
TPH as Gasoline	< 2000	2000	ug/L	EPA 8260B	10/7/2001
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	10/7/2001
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	10/7/2001

Approved By:  Joel Kiff



Report Number : 22556

Date : 10/12/2001

Project Name : 2120 Montana Street, Oakland

Project Number : 010925-B3

Sample : MW-3

Matrix : Water

Lab Number : 22556-02

Sample Date :9/25/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	10/9/2001
Toluene	< 0.50	0.50	ug/L	EPA 8260B	10/9/2001
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	10/9/2001
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	10/9/2001
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	10/9/2001
Diisopropyl ether (DIPE)	< 2.0	2.0	ug/L	EPA 8260B	10/9/2001
Ethyl-t-butyl ether (ETBE)	< 2.0	2.0	ug/L	EPA 8260B	10/9/2001
Tert-amyl methyl ether (TAME)	< 2.0	2.0	ug/L	EPA 8260B	10/9/2001
Tert-Butanol	< 50	50	ug/L	EPA 8260B	10/9/2001
Ethanol	< 500	500	ug/L	EPA 8260B	10/9/2001
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	10/9/2001
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	10/9/2001
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	10/9/2001

Approved By:  Joel Kiff



Report Number : 22556

Date : 10/12/2001

Project Name : 2120 Montana Street, Oakland

Project Number : 010925-B3

Sample : TBW-N

Matrix : Water

Lab Number : 22556-03

Sample Date :9/25/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	3200	100	ug/L	EPA 8260B	10/11/2001
Toluene	2800	100	ug/L	EPA 8260B	10/11/2001
Ethylbenzene	4000	100	ug/L	EPA 8260B	10/11/2001
Total Xylenes	18000	100	ug/L	EPA 8260B	10/11/2001
Methyl-t-butyl ether (MTBE)	31000	1000	ug/L	EPA 8260B	10/11/2001
TPH as Gasoline	120000	10000	ug/L	EPA 8260B	10/11/2001
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	10/11/2001
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	10/11/2001

Approved By:  Joel Kiff

Report Number : 22556

Date : 10/12/2001

Project Name : **2120 Montana Street,**

Project Number : **010925-B3**

22556 Quality Control Data - Method Blank

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	10/6/2001
Toluene	< 0.50	0.50	ug/L	EPA 8260B	10/6/2001
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	10/6/2001
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	10/6/2001
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	10/6/2001
Diisopropyl ether (DIPE)	< 2.0	2.0	ug/L	EPA 8260B	10/6/2001
Ethyl-t-butyl ether (ETBE)	< 2.0	2.0	ug/L	EPA 8260B	10/6/2001
Tert-amyl methyl ether (TAME)	< 2.0	2.0	ug/L	EPA 8260B	10/6/2001
Tert-Butanol	< 50	50	ug/L	EPA 8260B	10/6/2001
Ethanol	< 500	500	ug/L	EPA 8260B	10/6/2001
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	10/6/2001
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	10/6/2001
4-Bromofluorobenzene (Surr)	107		% Recovery	EPA 8260B	10/6/2001

Approved By:  Joel Kiff

Report Number : 22556

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 10/12/2001

Project Name : 2120 Montana Street,

Project Number : 010925-B3

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
Spike Recovery Data														
Benzene	22546-01	12	18.9	20.0	35.2	36.2	ug/L	EPA 8260B	10/6/2001	120	118	1.47	70-130	25
Toluene	22546-01	0.53	18.9	20.0	18.6	19.9	ug/L	EPA 8260B	10/6/2001	195.7	96.8	1.15	70-130	25
Tert-Butanol	22546-01	<5.0	94.3	100	94.2	102	ug/L	EPA 8260B	10/6/2001	199.8	102	2.49	70-130	25
Methyl-t-Butyl Ether	22546-01	<0.50	18.9	20.0	14.2	15.5	ug/L	EPA 8260B	10/6/2001	175.2	77.6	3.08	70-130	25

KIFF ANALYTICAL, LLC

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

Approved By:  Joel Kiff

Report Number : 22556

Date : 10/12/2001

QC Report : Laboratory Control Sample (LCS)

Project Name : **2120 Montana Street,**

Project Number : **010925-B3**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	10/6/2001	105	70-130
Toluene	40.0	ug/L	EPA 8260B	10/6/2001	99.6	70-130
Tert-Butanol	200	ug/L	EPA 8260B	10/6/2001	102	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	10/6/2001	79.8	70-130

KIFF ANALYTICAL, LLC

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

Approved By:  _____
Joel Kiff

LAB: KIFF

EQUIVA Services LLC Chain Of Custody Record

Lab Identification (if necessary):

Address:

City, State, Zip:

Equiva Project Manager to be invoiced:

SCIENCE & ENGINEERING

CRMT. HOUSTON

Karen Petryna

22556

INCIDENT NUMBER (S&E ONLY)

9 8 9 9 5 7 4 0

SAP or CRMT NUMBER (TS/CRMT)

DATE: 9/25/01

PAGE: 1 of 1

CONSULTANT COMPANY:

Blaine Tech Services

ADDRESS:
1680 Rogers Avenue

CITY:
San Jose, CA 95112

TELEPHONE:
408-573-0555

FAX:
408-573-7771

E-MAIL:
naudano@blainetech.com

SITE ADDRESS (Street and City):

2120 Montana Street, Oakland

PROJECT CONTACT (Report to):

Nick Sudano

CONSULTANT PROJECT NO.:

BTS # 010925-B3

LAB USE ONLY

Shawn O'Bryan

TURNAROUND TIME (BUSINESS DAYS):

10 DAYS 5 DAYS 72 HOURS 48 HOURS 24 HOURS LESS THAN 24 HOURS

LA - RWQCB REPORT FORMAT LIST AGENCY:

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

SPECIAL INSTRUCTIONS OR NOTES: _____ TEMPERATURE ON RECEIPT C° _____

REQUESTED ANALYSIS

FIELD NOTES:

Container/Preservative
or PID Readings
or Laboratory Notes

LAB USE ONLY	Field Sample Identification		SAMPLING		MATRIX	NO. OF CONT.	TPH- Gas, Purgeable	BTX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5 ppbRL)	Oxygenates (5) by (8260)	Ethanol (8260B)	Methanol	1,2-DCA (8260B)	EDB (8260B)	TPH-Diesel, Extractable (8015m)	MTBE (8260B) Confirmation, See note	
	DATE	TIME																
	MW-2	9/25/01	1703	W	3	X	X	X			XX							
	MW-3	↓	1726	↓	↓	X	X	X			XX							
	TBW-N	↓	1740	↓	↓	X	X	X										

Requested by: (Signature)	Received by: (Signature)	Date:	Time:
Requested by: (Signature)	Received by: (Signature)	Date:	Time:
Requested by: (Signature)	Received by: (Signature)	Date: <u>092600</u>	Time: <u>1045</u>

DISTRIBUTION: White with S&E report, Green to File, Yellow and Pink to Client.

Q&C Graphic (714) 888-8700

10/16/00 Revision

WELL GAUGING DATA

Project # 010925-B3 Date 9/25/01 Client Equiva

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		13.84	.43	200ml	14.27	—	TOC
MW-2	2					12.29	19.95	↓
MW-3	2					12.50	20.10	↓
IBW-N	4	Odor				12.25	12.70	↓

EQUIVA WELL MONITORING DATA SHEET

BTS #: 010925-B3	Site: 98995740
Sampler: O. Bryan	Date: 9/25/01
Well I.D.: MW-1	Well Diameter: 2 3 4 6 8
Total Well Depth: -	Depth to Water: 14.27
Depth to Free Product: 13.84	Thickness of Free Product (feet): .43
Referenced to: FVC Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: ~~Bailer~~
~~Disposable Bailer~~
~~Middleburg~~
~~Electric Submersible~~

Watera
~~Peristaltic~~
~~Extraction Pump~~
 Other _____

Sampling Method: ~~Bailer~~
~~Disposable Bailer~~
~~Extraction Port~~
~~Dedicated Tubing~~

Other: _____

_____ (Gals.) X _____ = _____ Gals. 1 Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
						Bailed ≈ 200ml mixed w/ 2 liters of water from well. No samples taken

Did well dewater? Yes No Gallons actually evacuated: _____

Sampling Time: _____ Sampling Date: _____

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 #: <u>010925-B3</u>	Site: <u>98995740</u>
Sampler: <u>O'Bryan</u>	Date: <u>9/25/01</u>
Well I.D.: <u>MW-2</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth: <u>19.95</u>	Depth to Water: <u>12.87</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(VC)</u> Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer Waterra Sampling Method: (Bailer)
 Disposable Bailer Peristaltic Disposable Bailer
(Middleburg) Extraction Pump Extraction Port
 Electric Submersible Other _____ 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	radius ² * 0.163

1.1 (Gals.) X 3 = 3.3 Gals.
 1 Case Volume Specified Volumes Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
<u>1654</u>	<u>68.1</u>	<u>7.4</u>	<u>1840</u>	<u>7200</u>	<u>1.25</u>	
<u>1656</u>	<u>67.2</u>	<u>7.3</u>	<u>944</u>	<u>>200</u>	<u>2.5</u>	
<u>1658</u>	<u>67.1</u>	<u>7.1</u>	<u>1103</u>	<u>7200</u>	<u>3.5</u>	

Did well dewater? Yes (No) Gallons actually evacuated: 3.5

Sampling Time: 1703 Sampling Date: 9/25/01

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

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

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 #: <u>010925-B3</u>	Site: <u>9899 5740</u>
Sampler: <u>O'Bryan</u>	Date: <u>9/25/01</u>
Well I.D.: <u>MW-3</u>	Well Diameter: <u>2</u> 3 4 6 8 _____
Total Well Depth: <u>20:10</u>	Depth to Water: <u>12.50</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer Waterra Sampling Method: Bailer

Disposable Bailer Peristaltic

Middleburg Extraction Pump

Electric Submersible Other _____

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	radius ² * 0.163

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1718	69.0	7.1	735	>200	1.5	
1720	69.1	7.1	672	>200	3	
1722	69.0	7.2	661		4	

Did well dewater? Yes No Gallons actually evacuated: 4

Sampling Time: 1726 Sampling Date: 9/25/01

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):	mV	Post-purge:	mV

EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>010925-B3</u>	Site: <u>9899 5740</u>
Sampler: <u>O'Bryan</u>	Date: <u>9/25/01</u>
Well I.D.: <u>TBW-N</u>	Well Diameter: 2 3 <u>(4)</u> 6 8 _____
Total Well Depth: <u>12.70</u>	Depth to Water: <u>12.25</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

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

$\underline{.3} \text{ (Gals.)} \times \underline{3} = \underline{.9} \text{ Gals.}$ 1 Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
<u>1736</u>	<u>66.1</u>	<u>6.2</u>	<u>1483</u>	<u>>200</u>	<u>.3</u>	
<u>1738</u>	<u>66.7</u>	<u>6.2</u>	<u>1511</u>	<u>>200</u>	<u>.6</u>	
<u>1740</u>	<u>66.2</u>	<u>6.2</u>	<u>1486</u>	<u>>200</u>	<u>.9</u>	

Did well dewater? Yes No Gallons actually evacuated: .9

Sampling Time: 1741 Sampling Date: 9/25/01

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