

CAMBRIA

3849

March 30, 2001

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

Re: **First Quarter 2001 Monitoring Report**
Shell-branded Service Station
105 Fifth Street
Oakland, California
Incident #98995757
Cambria Project #243-0472-002

Spw/J. Loetterle 4/18/01

- o OFFSITE & SCUM: expect end of APRIL or 5/1
- o PILOT TEST? later



Dear Mr. Chan:

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.

FIRST 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 groundwater elevation contour map (Figure 1). Blaine's report, presenting the laboratory report and supporting field documents, is included as Attachment A.

Soil Boring and Monitoring Well Installation: On December 27, 2000, Cambria attempted to advance soil borings SB-⁶ and SB-⁷ and monitoring well MW-4. Due to subsurface conduits and aboveground obstacles near the proposed locations, the borings and well could not be completed. On February 12, 2001 Cambria successfully advanced soil borings SB-⁶ and SB-⁷ and monitoring well MW-4 in the proposed locations using a limited-access drill rig. A report of the site assessment activities is forthcoming.

Dual-Phase Vacuum Extraction (DVE): On March 20, 2001 Cambria completed a dual-phase extraction pilot test from well MW-2 and MW-3 at the site. DVE removes soil vapors and separate-phase hydrocarbons from the vadose zone and enhances groundwater removal from remediation or monitoring wells. Cambria will provide an evaluation of the pilot test data in a forthcoming report.

Oakland, CA
San Ramon, CA
Sonoma, CA
Portland, OR

**Cambria
Environmental
Technology, Inc.**

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

Are they planning to install a permanent system?

ANTICIPATED SECOND QUARTER 2001 ACTIVITIES

Groundwater Monitoring: Blaine will develop new well MW-4, gauge and sample all wells, and tabulate the data. Cambria will prepare a monitoring report. *- looks like no accountability for addnl wells in SB-4 or SB-5.*

Conduit Study, Sensitive Receptor Survey, and Site Conceptual Model (SCM): Cambria will conduct a conduit study in the vicinity of the site, a 2,000-foot radius sensitive receptor survey of the site and will prepare a SCM. Complete results of the conduit study, sensitive receptor survey, and SCM will be reported along with the site investigation activities. Preliminary locations of some utilities are shown on Figure 1.



CLOSING

We appreciate the opportunity to work with you on this project. Please call James Loetterle at (510) 420-3336 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc

James Loetterle
Staff Scientist

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

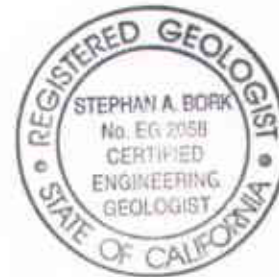


Figure: 1 - Groundwater Elevation Contour Map

Tables: 1 - Groundwater Mass Removal Data
2 - Vapor Mass Removal Data

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, Equiva Services LLC, P.O. Box 7869, Burbank, California 91510-7869
Arthur R. and Mary A. Hansen, Trs., et al, 820 Loyola Drive, Los Altos, CA 94024



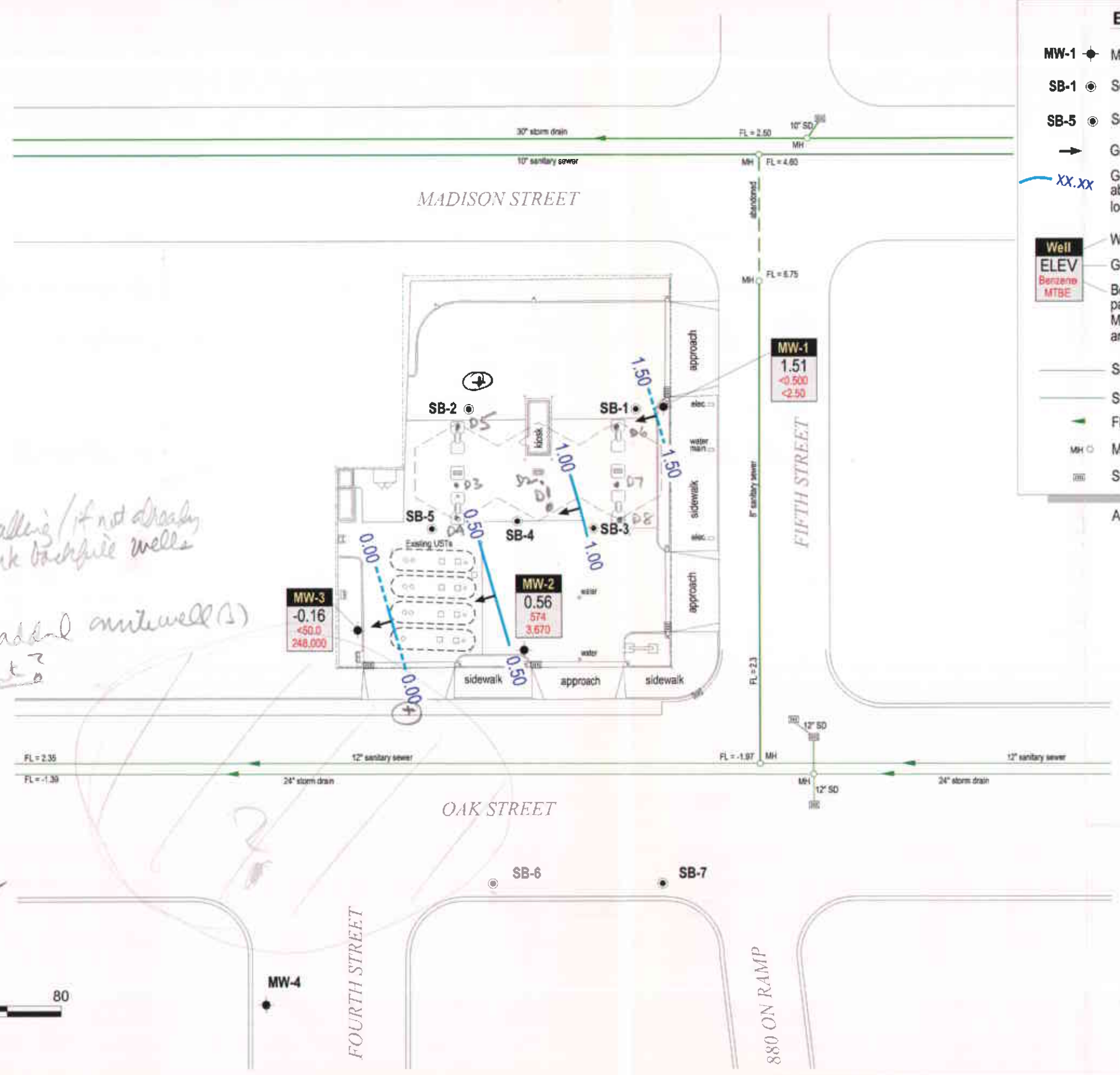
EXPLANATION

- MW-1 ● Monitoring well location
- SB-1 ● Soil boring location
- SB-5 ● Soil boring location (02/12/01)
- Groundwater flow direction
- XX.XX Groundwater elevation contour, in feet above mean sea level (msl), approximately located, dashed where inferred

Well	ELEV	Benzene	MTBE
MW-1	1.51	<0.500	<2.50
MW-2	0.56	574	3,670
MW-3	-0.16	<50.0	248,000

- Sanitary sewer line
- Storm drain line
- Flow direction
- MH ○ Manhole
- Storm drain inlet

All utility locations are approximate



Suggest installing (if not already present) tank backfill wells

How about add an outwell (?) for gradient?

FIGURE 1

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995757, 105 Fifth Street, 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)
04/21/00	MW-2	150	150	04/07/00	4,940	0.00618	0.00618	659	0.00082	0.00082	41,800	0.05232	0.05232
04/28/00	MW-2	100	250	04/07/00	4,940	0.00412	0.01031	659	0.00055	0.00137	41,800	0.03488	0.08720
05/05/00	MW-2	310	560	04/07/00	4,940	0.01278	0.02308	659	0.00170	0.00308	41,800	0.10813	0.19532
05/12/00	MW-2	350	910	04/07/00	4,940	0.01443	0.03751	659	0.00192	0.00500	41,800	0.12208	0.31740
06/02/00	MW-2	257	1,167	04/07/00	4,940	0.01059	0.04811	659	0.00141	0.00642	41,800	0.08964	0.40704
07/06/00	MW-2	334	1,501	04/07/00	4,940	0.01377	0.06187	659	0.00184	0.00825	41,800	0.11650	0.52354
09/12/00	MW-2	312	1,813	07/26/00	5,010	0.01304	0.07492	409	0.00106	0.00932	54,300	0.14137	0.66491
10/26/00	MW-2	56	1,869	07/26/00	5,010	0.00234	0.07726	409	0.00019	0.00951	54,300	0.02537	0.69028
04/21/00	MW-3	100	100	04/07/00	<1,000	<0.00083	<0.00083	853	0.00071	0.00071	283,000	0.23615	0.23615
04/28/00	MW-3	100	200	04/07/00	<1,000	<0.00083	<0.00167	853	0.00071	0.00142	283,000	0.23615	0.47229
05/05/00	MW-3	50	250	04/07/00	<1,000	<0.00042	<0.00209	853	0.00036	0.00178	283,000	0.11807	0.59036
05/12/00	MW-3	150	400	04/07/00	<1,000	<0.00125	<0.00334	853	0.00107	0.00285	283,000	0.35422	0.94458
06/02/00	MW-3	550	950	04/07/00	<1,000	<0.00459	<0.00793	853	0.00391	0.00676	283,000	1.29880	2.24338
07/06/00	MW-3	528	1,478	04/07/00	<1,000	<0.00441	<0.01233	853	0.00376	0.01052	283,000	1.24685	3.49023
08/16/00	MW-3	849	2,327	07/26/00	<20,000	<0.14169	<0.15402	<200	<0.00142	<0.01194	320,000	2.26699	5.75722
09/12/00	MW-3	188	2,515	07/26/00	<20,000	<0.03137	<0.18539	<200	<0.00031	<0.01225	320,000	0.50200	6.25922
10/26/00	MW-3	156	2,671	07/26/00	<20,000	<0.02603	<0.21143	<200	<0.00026	<0.01251	320,000	0.41655	6.67577
Total Gallons Extracted:		4,540		Total Pounds Removed:		<0.28869		<0.02202		7.36605		1.18807	
				Total Gallons Removed:		<0.04733		<0.00302					

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995757, 105 Fifth Street, 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 To Date (pounds)	Benzene Concentration (ppb)	Benzene Removed (pounds)	Benzene To Date (pounds)	MTBE Concentration (ppb)	MTBE Removed (pounds)	MTBE To Date (pounds)

Abbreviations & Notes:

TPPH = Total purgeable hydrocarbons as gasoline

MtBE = Methyl tert-butyl ether

µg/L = Micrograms per liter

ppb = Parts per billion, equivalent to µg/L

L = Liter

gal = Gallon

g = Gram

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 analyzed by EPA Method 8015/8020

MTBE analyzed by EPA Method 8260 in bold font, all other MTBE analyzed by EPA Method 8020

Concentrations based on most recent groundwater monitoring results

Groundwater extracted by vacuum trucks provided by ACTI. Water disposed of at a Martinez Refinery.

Table 2: Vapor Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995757, 105 Fifth Street, Oakland, California

Date	Well ID	Interval Hours of Operation (hours)	System Flow Rate (CFM)	Hydrocarbon Concentrations (Concentrations in ppmv)			TPPH		Benzene		MTBE	
				TPHg	Benzene	MTBE	TPHg Removal Rate (#/hour)	Cumulative TPHg Removed (#)	Benzene Removal Rate (#/hour)	Cumulative Benzene Removed (#)	MTBE Removal Rate (#/hour)	Cumulative MTBE Removed (#)
04/21/00	MW-2	1.00	9.0	1,949	52	836	0.234	0.234	0.006	0.006	0.103	0.103
06/02/00	MW-2	3.50	0.4	30	6.51	108	0.000	0.235	0.000	0.006	0.001	0.105
07/06/00	MW-2	4.00	0.7	<567	<6.3	647	<0.005	<0.256	<0.000	<0.006	0.006	0.130
08/16/00	MW-2	3.00	8.6	13,654	<39	1,861	1.570	<4.965	<0.004	<0.018	0.219	0.787
09/12/00	MW-2	4.00	7.6	12,100	<31.4	6,410	1.229	<9.883	<0.003	<0.030	0.666	3.452
10/26/00	MW-2	1.50	5.5	35.1	0.562	41.0	0.003	<9.887	0.000	<0.030	0.003	3.457
04/21/00	MW-3	1.00	7.0	<28	<0.31	594	<0.003	0.003	<0.000	<0.000	0.057	0.057
06/02/00	MW-3	4.25	0.3	<14.2	0.36	608	<0.000	0.003	0.000	<0.000	0.002	0.067
07/06/00	MW-3	4.00	0.7	38	4.4	133	0.000	0.004	0.000	<0.000	0.001	0.073
08/16/00	MW-3	6.75	7.0	<1,416	<15.7	3,333	<0.133	0.899	<0.001	<0.009	0.319	2.227
09/12/00	MW-3	4.00	7.6	<1,420	<15.7	1,850	<0.144	1.476	<0.001	<0.015	0.192	2.996
10/26/00	MW-3	4.00	7.2	<2,840	<31.4	531	<0.273	2.569	<0.003	<0.026	0.052	3.205
Total Pounds Removed:							TPHg =	<12.456	Benzene =	<0.056	MTBE =	6.662

Abbreviations and Notes:

CFM = Cubic feet per minute

TPHg = Total petroleum hydrocarbons as gasoline (C6-C12) by modified EPA Method 8015 in 1 liter tedlar bag samples

ppmv = Parts per million by volume

= Pounds

NA = Not available

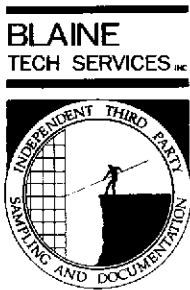
TPHG, Benzene, and MTBE analyzed by EPA Method 8015/8020 in 1 liter tedlar bag samples

TPHg / Benzene / MTBE removal rate = Rate based on Bay Area Air Quality Management District's Manual of Procedures for Soil Vapor Extraction dated July 17, 1991.

$$\text{Rate} = \text{Concentration (ppmv)} \times \text{system flow rate (cfm)} \times (1\text{lb-mole}/386\text{ft}^3) \times \text{molecular weight (86 lb/lb-mole for TPHg, 78 lb/lb-mole for benzene, 88 lb/lb-mole for MTBE)} \times 60 \text{ min/hour} \times 1/1,000,000$$

Cumulative TPHg / Benzene / MTBE removal = Previous removal rate multiplied by the hour-interval of operation plus the previous total

ATTACHMENT A
Blaine Groundwater Monitoring Report
and Field Notes



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

February 27, 2001

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

First Quarter 2001 Groundwater Monitoring at
Shell-branded Service Station
105 5th Street
Oakland, CA

Monitoring performed on January 30, 2001

Groundwater Monitoring Report **010130-X-2**

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.

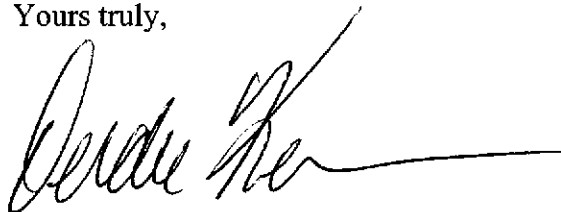
Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL CONCENTRATIONS**. The full analytical report for the most recent samples and the field data sheets are attached to this report.

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. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. concentrates on objective data collection and does not participate in the interpretation of analytical results, the definition of geological or hydrological conditions, the formulation of recommendations, or the marketing of remedial systems.

Please call if you have any questions.

Yours truly,

A handwritten signature in black ink, appearing to read "Deidre Kerwin", with a long horizontal flourish extending to the right.

Deidre Kerwin
Operations Manager

DK/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



Sequoia Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.sequoialabs.com

20 February, 2001

Nick Sudano
Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose, CA 95112

RE: 105 5th St.
Sequoia Report: MKA0779

Enclosed are the results of analyses for samples received by the laboratory on 01/30/01 11:12. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Wayne Stevenson
Client Services Manager

CA ELAP Certificate #1210



WELL CONCENTRATIONS
Shell-branded Service Station
105 5th Street
Oakland, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft)	GW Elevation (MSL)	DO Reading (ppm)
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MW-1	07/20/1999	NA	NA	NA	NA	NA	NA	NA	NA	12.22	17.56	-5.34	NA
MW-1	07/23/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	<2.00	12.22	6.45	5.77	NA
MW-1	11/01/1999	100	NA	15.6	3.12	4.04	12.6	6.69	NA	12.22	6.59	5.63	0.5/0.7
MW-1	01/05/2000	<50.0	<20.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	12.22	6.38	5.84	1.2/1.4
MW-1	04/07/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	12.22	5.83	6.39	1.6/2.4
MW-1	07/26/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	12.22	6.10	6.12	1.1/1.4
MW-1	10/28/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	12.22	14.08	-1.86	2.2/2.7
MW-1	01/30/2001	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	12.22	10.71	1.51	1.2/1.6

MW-2	07/20/1999	NA	NA	NA	NA	NA	NA	NA	NA	10.87	18.24	-7.37	NA
MW-2	07/23/1999	13,800	NA	1,790	<100	<100	682	29,900	29,400	10.87	5.98	4.89	NA
MW-2	11/01/1999	2,420	NA	316	10.8	119	44.2	17,000	NA	10.87	6.03	4.84	0.5/0.3
MW-2	01/05/2000	2,120a	687	301a	<5.00a	116a	84.4a	14,700	NA	10.87	5.90	4.97	2.1/2.6
MW-2	04/07/2000	4,940b	1,300	659b	<25.0b	214b	314b	41,800b	NA	10.87	5.37	5.50	0.4/0.2
MW-2	07/26/2000	5,010	1,520	409	<50.0	302	307	54,300	NA	10.87	5.81	5.06	2.1/2.2
MW-2	10/28/2000	1,720	412	82.2	<10.0	46.0	102	9,800	NA	10.87	14.59	-3.72	0.7/0.7
MW-2	01/30/2001	1,640	574	14.7	<5.00	40.1	58.1	3,670	NA	10.87	10.31	0.56	1.8/2.0

MW-3	07/20/1999	NA	NA	NA	NA	NA	NA	NA	NA	11.27	19.07	-7.80	NA
MW-3	07/23/1999	128	NA	<0.500	<0.500	<0.500	<0.500	404,000	324,000	11.27	6.43	4.84	NA
MW-3	11/01/1999	<1,000	NA	<10.0	<10.0	<10.0	<10.0	169,000	224,000	11.27	6.48	4.79	0.5/0.3
MW-3	01/05/2000	137	322	<1.00	<1.00	<1.00	<1.00	165,000	219,000	11.27	6.35	4.92	2.4/2.2
MW-3	04/07/2000	<1,000	264	853	<10.0	<10.0	<10.0	283,000	196,000a	11.27	5.91	5.36	04/0.2
MW-3	07/26/2000	<20,000	585	<200	<200	<200	<200	437,000	320,000	11.27	5.83	5.44	1.9/1.7
MW-3	10/28/2000	<12,500	441	<125	<125	<125	<125	266,000	308,000	11.27	17.51	-6.24	1.1/1.4
MW-3	01/30/2001	<5,000	555	<50.0	<50.0	<50.0	<50.0	248,000	167,000a	11.27	11.43	-0.16	2.0/2.2

WELL CONCENTRATIONS
Shell-branded Service Station
105 5th Street
Oakland, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft)	GW Elevation (MSL)	DO Reading (ppm)
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Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015

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

BTEX = benzene, toluene, ethylbenzene, xylenes by EPA Method 8020

MTBE = methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

GW = Groundwater

DO = Dissolved Oxygen

ug/L = parts per billion

ppm = parts per million

msl = Mean sea level

ft = Feet

<n = Below detection limit

NA = Not applicable

n/n = Pre-purge/Post-purge

Notes:

a = Sample was analyzed outside of the EPA recommended holding time

b = Result was generated out of hold time



Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose CA, 95112

Project: 105 5th St.
Project Number: 105 5th St./ Oakland
Project Manager: Nick Sudano

Reported:
02/20/01 09:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MKA0779-01	Water	01/30/01 08:05	01/30/01 11:12
MW-2	MKA0779-02	Water	01/30/01 08:34	01/30/01 11:12
MW-3	MKA0779-03	Water	01/30/01 09:05	01/30/01 11:12

Sequoia Analytical - Morgan Hill

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Wayne Stevenson, Client Services Manager

Page Page 1 of 9





Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose CA, 95112

Project: 105 5th St.
Project Number: 105 5th St./ Oakland
Project Manager: Nick Sudano

Reported:
02/20/01 09:21

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MKA0779-01) Water Sampled: 01/30/01 08:05 Received: 01/30/01 11:12									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1B02002	02/02/01	02/02/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		100 %	70-130		"	"	"	"	
MW-2 (MKA0779-02) Water Sampled: 01/30/01 08:34 Received: 01/30/01 11:12									
Purgeable Hydrocarbons	1640	500	ug/l	10	1B01003	02/01/01	02/01/01	DHS LUFT	P-01
Benzene	14.7	5.00	"	"	"	"	"	"	
Toluene	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	40.1	5.00	"	"	"	"	"	"	
Xylenes (total)	58.1	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	3670	100	"	40	"	"	02/02/01	"	M-03
<i>Surrogate: a,a,a-Trifluorotoluene</i>		117 %	70-130		"	"	02/01/01	"	
MW-3 (MKA0779-03) Water Sampled: 01/30/01 09:05 Received: 01/30/01 11:12									
Purgeable Hydrocarbons	ND	5000	ug/l	100	1B01003	02/01/01	02/01/01	DHS LUFT	
Benzene	ND	50.0	"	"	"	"	"	"	
Toluene	ND	50.0	"	"	"	"	"	"	
Ethylbenzene	ND	50.0	"	"	"	"	"	"	
Xylenes (total)	ND	50.0	"	"	"	"	"	"	
Methyl tert-butyl ether	248000	5000	"	2000	"	"	02/02/01	"	M-03
<i>Surrogate: a,a,a-Trifluorotoluene</i>		88.1 %	70-130		"	"	02/01/01	"	





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose CA, 95112	Project: 105 5th St. Project Number: 105 5th St./ Oakland Project Manager: Nick Sudano	Reported: 02/20/01 09:21
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**Diesel Hydrocarbons (C9-C24) by DHS LUFT
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MKA0779-01) Water Sampled: 01/30/01 08:05 Received: 01/30/01 11:12									
Diesel Range Hydrocarbons	ND	50.0	ug/l	1	1B02016	02/02/01	02/06/01	DHS LUFT	
Surrogate: <i>n</i> -Pentacosane		82.4 %	50-150		"	"	"	"	
MW-2 (MKA0779-02) Water Sampled: 01/30/01 08:34 Received: 01/30/01 11:12									
Diesel Range Hydrocarbons	574	50.0	ug/l	1	1B02016	02/02/01	02/06/01	DHS LUFT	D-15
Surrogate: <i>n</i> -Pentacosane		108 %	50-150		"	"	"	"	
MW-3 (MKA0779-03) Water Sampled: 01/30/01 09:05 Received: 01/30/01 11:12									
Diesel Range Hydrocarbons	555	50.0	ug/l	1	1B02016	02/02/01	02/06/01	DHS LUFT	D-15
Surrogate: <i>n</i> -Pentacosane		94.6 %	50-150		"	"	"	"	





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1680 Rogers Avenue
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Project Manager: Nick Sudano

Reported:
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**MTBE Confirmation by EPA Method 8260A
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (MKA0779-03) Water Sampled: 01/30/01 09:05 Received: 01/30/01 11:12									
Methyl tert-butyl ether	167000	10000	ug/l	10000	1B15023	02/14/01	02/14/01	EPA 8260A	H-02
Surrogate: 1,2-Dichloroethane-d4		80.0 %	70-130		"	"	"	"	H-02





Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose CA, 95112

Project: 105 5th St.
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Project Manager: Nick Sudano

Reported:
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1B01003 - EPA 5030B [P/T]

Blank (1B01003-BLK1)

Prepared & Analyzed: 02/01/01

Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.16		"	10.0		91.6	70-130			

LCS (1B01003-BS1)

Prepared & Analyzed: 02/01/01

Benzene	9.21	0.500	ug/l	10.0		92.1	70-130			
Toluene	9.57	0.500	"	10.0		95.7	70-130			
Ethylbenzene	10.0	0.500	"	10.0		100	70-130			
Xylenes (total)	29.4	0.500	"	30.0		98.0	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.23		"	10.0		92.3	70-130			

Matrix Spike (1B01003-MS1)

Source: MKA0781-01

Prepared & Analyzed: 02/01/01

Benzene	9.36	0.500	ug/l	10.0	ND	93.6	60-140			
Toluene	9.67	0.500	"	10.0	ND	96.7	60-140			
Ethylbenzene	10.0	0.500	"	10.0	ND	100	60-140			
Xylenes (total)	30.2	0.500	"	30.0	ND	101	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.98		"	10.0		99.8	70-130			

Matrix Spike Dup (1B01003-MSD1)

Source: MKA0781-01

Prepared & Analyzed: 02/01/01

Benzene	9.68	0.500	ug/l	10.0	ND	96.8	60-140	3.36	25	
Toluene	9.87	0.500	"	10.0	ND	98.7	60-140	2.05	25	
Ethylbenzene	9.93	0.500	"	10.0	ND	99.3	60-140	0.702	25	
Xylenes (total)	30.5	0.500	"	30.0	ND	102	60-140	0.988	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.3		"	10.0		103	70-130			



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Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1B02002 - EPA 5030B [P/T]

Blank (1B02002-BLK1)

Prepared & Analyzed: 02/02/01

Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.4		"	10.0		104	70-130			

LCS (1B02002-BS1)

Prepared & Analyzed: 02/02/01

Purgeable Hydrocarbons	314	50.0	ug/l	250		126	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.8		"	10.0		108	70-130			

Matrix Spike (1B02002-MS1)

Source: MKA0690-04

Prepared & Analyzed: 02/02/01

Benzene	10.0	0.500	ug/l	10.0	ND	100	60-140			
Toluene	8.99	0.500	"	10.0	ND	89.9	60-140			
Ethylbenzene	8.97	0.500	"	10.0	ND	89.7	60-140			
Xylenes (total)	27.0	0.500	"	30.0	ND	90.0	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.4		"	10.0		104	70-130			

Matrix Spike Dup (1B02002-MSD1)

Source: MKA0690-04

Prepared & Analyzed: 02/02/01

Benzene	10.4	0.500	ug/l	10.0	ND	104	60-140	3.92	25	
Toluene	10.6	0.500	"	10.0	ND	106	60-140	16.4	25	
Ethylbenzene	9.59	0.500	"	10.0	ND	95.9	60-140	6.68	25	
Xylenes (total)	27.9	0.500	"	30.0	ND	93.0	60-140	3.28	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	11.1		"	10.0		111	70-130			





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Project: 105 5th St.
Project Number: 105 5th St./ Oakland
Project Manager: Nick Sudano

Reported:
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**Diesel Hydrocarbons (C9-C24) by DHS LUFT - Quality Control
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Notes
Batch 1B02016 - EPA 3510B										
Blank (1B02016-BLK1)				Prepared: 02/02/01 Analyzed: 02/05/01						
Diesel Range Hydrocarbons	ND	50.0	ug/l							
Surrogate: n-Pentacosane	79.3		"	100		79.3	50-150			
LCS (1B02016-BS1)				Prepared: 02/02/01 Analyzed: 02/05/01						
Diesel Range Hydrocarbons	784	50.0	ug/l	1000		78.4	60-140			
Surrogate: n-Pentacosane	82.8		"	100		82.8	50-150			
Matrix Spike (1B02016-MS1)				Source: MKA0520-02		Prepared: 02/02/01 Analyzed: 02/05/01				
Diesel Range Hydrocarbons	3140	50.0	ug/l	1000	2390	75.0	50-150			
Surrogate: n-Pentacosane	128		"	100		128	50-150			
Matrix Spike Dup (1B02016-MSD1)				Source: MKA0520-02		Prepared: 02/02/01 Analyzed: 02/05/01				
Diesel Range Hydrocarbons	2960	50.0	ug/l	1000	2390	57.0	50-150	5.90	50	
Surrogate: n-Pentacosane	121		"	100		121	50-150			





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Project: 105 5th St.
Project Number: 105 5th St./ Oakland
Project Manager: Nick Sudano

Reported:
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MTBE Confirmation by EPA Method 8260A - Quality Control Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1B15023 - EPA 5030B P/T										
Blank (1B15023-BLK1)										
				Prepared & Analyzed: 02/14/01						
Methyl tert-butyl ether	ND	1.00	ug/l							
Surrogate: 1,2-Dichloroethane-d4	7.93		"	10.0		79.3	70-130			
LCS (1B15023-BS1)										
				Prepared: 02/14/01 Analyzed: 02/15/01						
Methyl tert-butyl ether	10.4	1.00	ug/l	10.0		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	8.84		"	10.0		88.4	70-130			
LCS Dup (1B15023-BSD1)										
				Prepared & Analyzed: 02/14/01						
Methyl tert-butyl ether	11.2	1.00	ug/l	10.0		112	70-130	7.41	25	
Surrogate: 1,2-Dichloroethane-d4	11.9		"	10.0		119	70-130			
Matrix Spike (1B15023-MS1)										
				Source: MKA0773-12 Prepared & Analyzed: 02/14/01						
Methyl tert-butyl ether	4920	200	ug/l	2000	3720	60.0	70-130			Q-01
Surrogate: 1,2-Dichloroethane-d4	7.57		"	10.0		75.7	70-130			
Matrix Spike Dup (1B15023-MSD1)										
				Source: MKA0773-12 Prepared & Analyzed: 02/14/01						
Methyl tert-butyl ether	4980	200	ug/l	2000	3720	63.0	70-130	1.21	25	Q-01
Surrogate: 1,2-Dichloroethane-d4	8.28		"	10.0		82.8	70-130			





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Project: 105 5th St.
Project Number: 105 5th St./ Oakland
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Reported:
02/20/01 09:21

Notes and Definitions

- D-15 Chromatogram Pattern: Unidentified Hydrocarbons C9-C24
- H-02 This sample was analyzed outside of EPA recommended hold time.
- M-03 Sample was analyzed at a second dilution.
- P-01 Chromatogram Pattern: Gasoline C6-C12
- Q-01 The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference



EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>010130-X2</u>	Site: <u>98995757</u>
Sampler: <u>HOYT</u>	Date: <u>01/30/01</u>
Well I.D.: <u>mw-1</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth: <u>23.52</u>	Depth to Water: <u>10.71</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): <u>(YSI)</u> HACH

Purge Method:

- Bailer
 Disposable Bailer
 Middleburg
 Electric Submersible
 Waterra
 Peristaltic
 Extraction Pump
 Other _____

Sampling Method:

- Bailer
 Disposable Bailer
 Extraction Port
 Dedicated Tubing
 Other: _____

<u>8.3</u>	(Gals.) X	<u>3</u>	=	<u>24.9</u>	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	radius ² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
<u>0800</u>	<u>60.4</u>	<u>6.89</u>	<u>311</u>	<u>93.4</u>	<u>8.5</u>	
<u>0801</u>	<u>64.7</u>	<u>6.88</u>	<u>202</u>	<u>7200</u>	<u>16</u>	
<u>0802</u>	<u>65.8</u>	<u>6.87</u>	<u>178</u>	<u>7200</u>	<u>25</u>	

Did well dewater? Yes No Gallons actually evacuated: 25

Sampling Time: 0805 Sampling Date: 1/30/01

Sample I.D.: mw-1 Laboratory: (Sequoia) Columbia 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):	<u>(Pre-purge)</u>	<u>1.2</u> mg/L	<u>(Post-purge)</u>	<u>1.6</u> mg/L
O.R.P. (if req'd):	<u>(Pre-purge)</u>	mV	<u>(Post-purge)</u>	mV

EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>010130-X2</u>	Site: <u>9 8925757</u>
Sampler: <u>HOTT</u>	Date: <u>1/30/01</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>23.35</u>	Depth to Water: <u>10.31</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

Purge Method:

- Bailer
- Disposable Bailer
- Middleburg
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other _____

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- Other: _____

$$\frac{8.4 \text{ (Gals.)} \times 3}{1 \text{ Case Volume}} = \frac{25.4 \text{ Gals.}}{\text{Specified Volumes}} \text{ Calculated Volume}$$

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
0829	66.4	6.66	791	100.6	8.5	odor
0830	68.6	6.67	830	153.7	17	↓
0831	68.8	6.79	764	121.0	26	

Did well dewater? Yes No Gallons actually evacuated: 26

Sampling Time: 0834 Sampling Date: 1/30/01

Sample I.D.: MW-2 Laboratory: Sequoia Columbia 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: 2.0 mg/L

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

EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>010130-X1</u>	Site: <u>98995757</u>
Sampler: <u>140XT</u>	Date: <u>01/30/01</u>
Well I.D.: <u>MW-3</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>24.70</u>	Depth to Water: <u>11.43</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

Purge Method:

- Bailer
- Disposable Bailer
- Middleburg
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other _____

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- Other: _____

$$\frac{6.7 \text{ (Gals.)} \times 3}{\text{I Case Volume Specified Volumes}} = \frac{20.1 \text{ Gals.}}{\text{Calculated Volume}}$$

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
0857	65.4	6.79	985	78.5	7	0.60 ↓ ✓
0858	66.7	6.80	983	97.7	14	
0859	68.3	6.78	961	7200	21	

Did well dewater? Yes No Gallons actually evacuated: 20521

Sampling Time: 0904 Sampling Date: 1/30/01

Sample I.D.: MW-3 Laboratory: Sequoia Columbia 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: 20 mg/L Post-purge: 2.2 mg/L

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