

C A M B R I A

JUN 29 2001

June 25, 2001

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

3849

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



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.

SECOND 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.

Offsite Subsurface Investigation Report: On June 8, 2001 Cambria submitted an *Offsite Subsurface Investigation Report*. The report included investigation results from soil borings SB-4 and SB-5 and monitoring well MW-4, conduit study results, a sensitive receptor survey, and an site conceptual model.

Dual-Phase Vacuum Extraction (DVE): On March 20, 2001, Cambria completed a dual-phase extraction pilot test using wells MW-2 and MW-3. Cambria will provide an evaluation of the pilot test data in a forthcoming report by July 13, 2001. Data from previous DVE events are presented in Tables 1 and 2.

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

ANTICIPATED THIRD QUARTER 2001 ACTIVITIES

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

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 Geologist

Diane M. Lundquist, P.E.
Principal Engineer



Figure: 1 - Groundwater Elevation Contour Map

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

g:\oakland 105 fifth\qm2q01qm.doc



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

- Well designation
- Groundwater elevation, in feet above msl
- Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8020; MTBE results in parentheses are analyzed by EPA Method 8260
- Sanitary sewer line
- Storm drain line
- Flow direction
- MH ○ Manhole
- Storm drain inlet

All utility locations are approximate

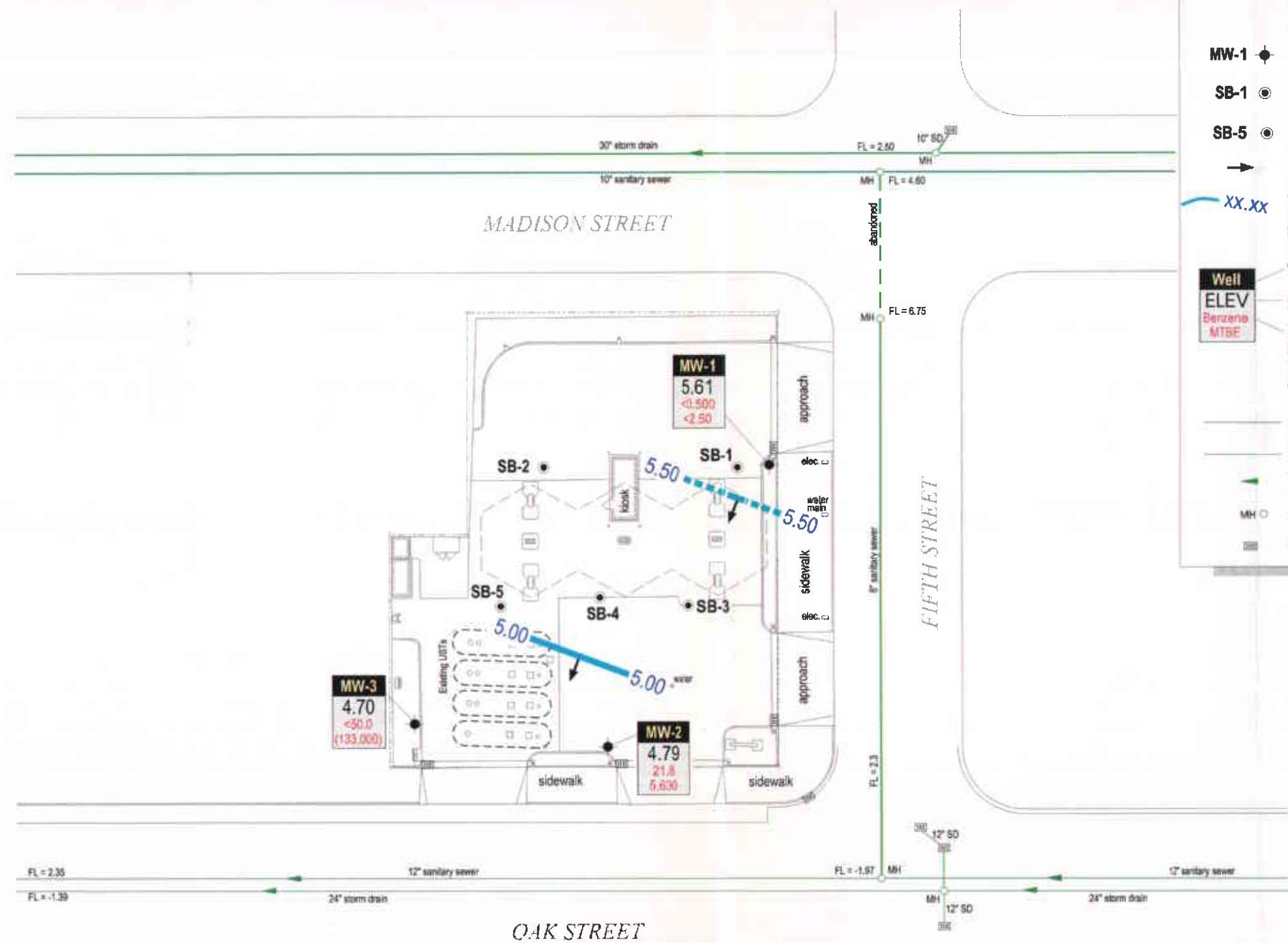


FIGURE 1

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	Total Pounds Removed:			<0.02202	7.36605	
				Total Gallons Removed:			<0.04733				<0.00302	1.18807	

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995757, 105 Fifth Street, Oakland, California

Date	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

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			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 (#)
				(Concentrations in ppmv)								
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.

(Rate = Concentration (ppmv) x system flow rate (cfm) x (1lb-mole/386ft³) x molecular weight (86 lb/lb-mole for TPHg, 78 lb/lb-mole for benzene, 88 lb/lb-mole for MTBE) x 60 min/hour x 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

BLAINE
TECH SERVICES, INC.



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

May 4, 2001

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

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

Monitoring performed on March 23 and April 17, 2001

Groundwater Monitoring Report 010417-U-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. Purge water (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

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)
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-1	04/17/2001	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	12.22	6.61	5.61	2.4/4.4
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-2	04/17/2001	598	179	21.8	<2.00	16.9	10.8	5,630	NA	10.87	6.08	4.79	1.5/2.6
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

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)
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
MW-3	04/17/2001	<5,000	347	<50.0	<50.0	<50.0	<50.0	134,000	133,000	11.27	6.57	4.70	1.3/1.2
MW-4	03/23/2001	NA	NA	NA	NA	NA	NA	NA	NA	9.50	8.21	1.29	NA
MW-4	04/17/2001	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	9.50	5.08	4.42	2.4/2.6

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

Top of casing for well MW-4 provided by Cambria Environmental Technology, Inc.



Sequoia Analytical

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

2 May, 2001

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

RE: 105 5th St.
Sequoia Report: MKD0514

Enclosed are the results of analyses for samples received by the laboratory on 04/18/01 10:43. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeff Smyly
Project Manager

CA ELAP Certificate #1210





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:
05/02/01 09:12

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MKD0514-01	Water	04/17/01 14:05	04/18/01 10:43
MW-2	MKD0514-02	Water	04/17/01 14:40	04/18/01 10:43
MW-3	MKD0514-03	Water	04/17/01 15:18	04/18/01 10:43
MW-4	MKD0514-04	Water	04/17/01 13:35	04/18/01 10:43

Sequoia Analytical - Morgan Hill

Jeff Smyly, Project Manager

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.





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:
05/02/01 09:12

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 (MKD0514-01) Water Sampled: 04/17/01 14:05 Received: 04/18/01 10:43									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1D20003	04/20/01	04/20/01	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>		86.1 %	70-130		"	"	"	"	
MW-2 (MKD0514-02) Water Sampled: 04/17/01 14:40 Received: 04/18/01 10:43									
Purgeable Hydrocarbons	598	200	ug/l	4	1D24002	04/24/01	04/24/01	DHS LUFT	P-01
Benzene	21.8	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
Ethylbenzene	16.9	2.00	"	"	"	"	"	"	
Xylenes (total)	10.8	2.00	"	"	"	"	"	"	
Methyl tert-butyl ether	5630	100	"	40	"	"	04/26/01	"	M-03
<i>Surrogate: a,a,a-Trifluorotoluene</i>		99.9 %	70-130		"	"	04/24/01	"	
MW-3 (MKD0514-03) Water Sampled: 04/17/01 15:18 Received: 04/18/01 10:43									
Purgeable Hydrocarbons	ND	5000	ug/l	100	1D24002	04/24/01	04/24/01	DHS LUFT	R-05
Benzene	ND	50.0	"	"	"	"	"	"	R-05
Toluene	ND	50.0	"	"	"	"	"	"	R-05
Ethylbenzene	ND	50.0	"	"	"	"	"	"	R-05
Xylenes (total)	ND	50.0	"	"	"	"	"	"	R-05
Methyl tert-butyl ether	134000	1000	"	400	"	"	04/20/01	"	A-01,M-03,R-05
<i>Surrogate: a,a,a-Trifluorotoluene</i>		107 %	70-130		"	"	04/24/01	"	R-05





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:
05/02/01 09:12

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-4 (MKD0514-04) Water Sampled: 04/17/01 13:35 Received: 04/18/01 10:43									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1D20003	04/20/01	04/20/01	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>		90.1 %		70-130	"	"	"	"	





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:
05/02/01 09:12

Diesel Hydrocarbons (C9-C24) by DHS LUFT
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MKD0514-01) Water Sampled: 04/17/01 14:05 Received: 04/18/01 10:43									
Diesel Range Hydrocarbons	ND	50.0	ug/l	1	1D26029	04/26/01	04/30/01	DHS LUFT	
Surrogate: n-Pentacosane		79.5 %	50-150		"	"	"	"	
MW-2 (MKD0514-02) Water Sampled: 04/17/01 14:40 Received: 04/18/01 10:43									
Diesel Range Hydrocarbons	179	50.0	ug/l	1	1D26029	04/26/01	04/30/01	DHS LUFT	D-15
Surrogate: n-Pentacosane		72.8 %	50-150		"	"	"	"	
MW-3 (MKD0514-03) Water Sampled: 04/17/01 15:18 Received: 04/18/01 10:43									
Diesel Range Hydrocarbons	347	50.0	ug/l	1	1D26029	04/26/01	04/30/01	DHS LUFT	D-15
Surrogate: n-Pentacosane		77.6 %	50-150		"	"	"	"	
MW-4 (MKD0514-04) Water Sampled: 04/17/01 13:35 Received: 04/18/01 10:43									
Diesel Range Hydrocarbons	ND	50.0	ug/l	1	1D26029	04/26/01	04/30/01	DHS LUFT	
Surrogate: n-Pentacosane		75.1 %	50-150		"	"	"	"	





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:
05/02/01 09:12

MTBE Confirmation by EPA Method 8260A

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (MKD0514-03) Water Sampled: 04/17/01 15:18 Received: 04/18/01 10:43									
Methyl tert-butyl ether	133000	2000	ug/l	2000	1D27009	04/26/01	04/27/01	EPA 8260A	A-01a
Surrogate: 1,2-Dichloroethane-d4		95.2 %		70-130	"	"	"	"	





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:
05/02/01 09:12

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1D20003 - EPA 5030B [P/T]

Blank (1D20003-BLK1)

Prepared: 04/20/00 Analyzed: 04/20/01

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	"							
Surrogate: a,a,a-Trifluorotoluene	8.41		"	10.0		84.1	70-130			

LCS (1D20003-BS1)

Prepared: 04/20/00 Analyzed: 04/20/01

Purgeable Hydrocarbons	224	50.0	ug/l	250		89.6	70-130			
Surrogate: a,a,a-Trifluorotoluene	12.5		"	10.0		125	70-130			

Matrix Spike (1D20003-MS1)

Source: MKD0527-01

Prepared: 04/20/00 Analyzed: 04/20/01

Purgeable Hydrocarbons	238	50.0	ug/l	250	ND	95.2	60-140			
Surrogate: a,a,a-Trifluorotoluene	11.7		"	10.0		117	70-130			

Matrix Spike Dup (1D20003-MSD1)

Source: MKD0527-01

Prepared: 04/20/00 Analyzed: 04/20/01

Purgeable Hydrocarbons	208	50.0	ug/l	250	ND	83.2	60-140	13.5	25	
Surrogate: a,a,a-Trifluorotoluene	11.1		"	10.0		111	70-130			

Batch 1D24002 - EPA 5030B [P/T]

Blank (1D24002-BLK1)

Prepared & Analyzed: 04/24/01

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	"							
Surrogate: a,a,a-Trifluorotoluene	9.73		"	10.0		97.3	70-130			





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:
05/02/01 09:12

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 1D24002 - EPA 5030B [P/T]

LCS (1D24002-BS1)		Prepared & Analyzed: 04/24/01								
Benzene	9.89	0.500	ug/l	10.0		98.9	70-130			
Toluene	9.69	0.500	"	10.0		96.9	70-130			
Ethylbenzene	9.97	0.500	"	10.0		99.7	70-130			
Xylenes (total)	30.0	0.500	"	30.0		100	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.93		"	10.0		99.3	70-130			

Matrix Spike (1D24002-MS1)		Source: MKD0510-03		Prepared & Analyzed: 04/24/01						
Benzene	10.8	0.500	ug/l	10.0	ND	108	60-140			
Toluene	9.83	0.500	"	10.0	ND	98.3	60-140			
Ethylbenzene	9.60	0.500	"	10.0	ND	96.0	60-140			
Xylenes (total)	30.1	0.500	"	30.0	ND	100	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.4		"	10.0		104	70-130			

Matrix Spike Dup (1D24002-MSD1)		Source: MKD0510-03		Prepared & Analyzed: 04/24/01						
Benzene	11.9	0.500	ug/l	10.0	ND	119	60-140	9.69	25	
Toluene	10.4	0.500	"	10.0	ND	104	60-140	5.64	25	
Ethylbenzene	10.7	0.500	"	10.0	ND	107	60-140	10.8	25	
Xylenes (total)	30.9	0.500	"	30.0	ND	103	60-140	2.62	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.3		"	10.0		103	70-130			





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:
05/02/01 09:12

**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 1D26029 - EPA 3510B										
Blank (1D26029-BLK1)				Prepared: 04/26/01 Analyzed: 04/27/01						
Diesel Range Hydrocarbons	ND	50.0	ug/l							
Surrogate: <i>n</i> -Pentacosane	72.7		"	100		72.7	50-150			
LCS (1D26029-BS1)				Prepared: 04/26/01 Analyzed: 04/27/01						
Diesel Range Hydrocarbons	683	50.0	ug/l	1000		68.3	60-140			
Surrogate: <i>n</i> -Pentacosane	72.4		"	100		72.4	50-150			
Matrix Spike (1D26029-MS1)				Source: MKD0514-01		Prepared: 04/26/01 Analyzed: 04/30/01				
Diesel Range Hydrocarbons	694	50.0	ug/l	1000	ND	69.4	50-150			
Surrogate: <i>n</i> -Pentacosane	75.4		"	100		75.4	50-150			
Matrix Spike Dup (1D26029-MSD1)				Source: MKD0514-01		Prepared: 04/26/01 Analyzed: 04/30/01				
Diesel Range Hydrocarbons	669	50.0	ug/l	1000	ND	66.9	50-150	3.67	50	
Surrogate: <i>n</i> -Pentacosane	75.0		"	100		75.0	50-150			





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:
05/02/01 09:12

**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
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Batch 1D27009 - EPA 5030B P/T

Blank (1D27009-BLK1)

Prepared & Analyzed: 04/26/01

Methyl tert-butyl ether	ND	1.00	ug/l							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>10.5</i>		"	<i>10.0</i>		<i>105</i>	<i>70-130</i>			

LCS (1D27009-BS1)

Prepared & Analyzed: 04/26/01

Methyl tert-butyl ether	10.6	1.00	ug/l	10.0		106	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>9.80</i>		"	<i>10.0</i>		<i>98.0</i>	<i>70-130</i>			

LCS Dup (1D27009-BSD1)

Prepared & Analyzed: 04/26/01

Methyl tert-butyl ether	8.70	1.00	ug/l	10.0		87.0	70-130	19.7	25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>9.81</i>		"	<i>10.0</i>		<i>98.1</i>	<i>70-130</i>			





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:
05/02/01 09:12

Notes and Definitions

- A-01 MTBE was prepared on 4/20/01.
- A-01a The concentration reported is an estimated value above the linear quantitation range. The value confirms the MTBE result from 8020 analysis.
- D-15 Chromatogram Pattern: Unidentified Hydrocarbons C9-C24
- M-03 Sample was analyzed at a second dilution.
- P-01 Chromatogram Pattern: Gasoline C6-C12
- R-05 The reporting limit(s) for this sample have been raised due to high levels of non-target interferents.
- 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



LAB: SEQUOIA

EQUIVA Services LLC Chain Of Custody Record

Lab Identification (if necessary):

Address:

City, State, Zip:

Equiva Project Manager to be Invoiced:

- SCIENCE & ENGINEERING
- TECHNICAL SERVICES
- CRMT HOUSTON

Karen Petryna

INCIDENT NUMBER (S&E ONLY)

4-17-01

9 8 9 9 5 7 5 7

S&E or CRMT NUMBER (S&E/CRMT)

PAGE: 1 of 1

CONSULTANT COMPANY:

Iaine Tech Services

ADDRESS:

680 Rogers Avenue

CITY:

San Jose, CA 95112

TELEPHONE:

08-573-0555

FAX:

408-573-7771

E-MAIL:

naudano@iainetech.com

SITE ADDRESS (Street and City):

105 5th Street, Oakland

PROJECT CONTACT (Report to):

Nick Budano

CONSULTANT PROJECT NO.:

BTS # 010416-02 010417-02

SAMPLER NAME(S) (Print):

Tommy Alpers

LAB USE ONLY

MK00514

TURNAROUND TIME (BUSINESS DAYS):

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

LA - RWQCB REPORT FORMAT LIST AGENCY:

COMS 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 DATE TIME MATRIX NO. OF CONT.

Field Sample Identification	SAMPLING DATE	TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable (8015m)	BTEX (8021B)	MTBE (8021B)	MTBE (8260B)	TPH - Diesel, Extractable (8015m)	Oxygenates (E) by 8260	Ethanol, Methanol (8015B)	1,2-DCA & EDB by 8010	MTBE (8008) Confirmation, See Note
MW-1	4/17/01	1405	W	5	X	X	X		X				X
MW-2		1440		5	X	X	X		X				X
MW-3		1518		5	X	X	X		X				X
MW-4		1335		5	X	X	X		X				X

Relinquished by: (Signature)

Relinquished by: (Signature)

Relinquished by: (Signature)

Received by: (Signature)

Received by: (Signature)

Received by: (Signature)

Date: 4/18/01

Time: 841

Date: 4/18/01

Time: 1043

Date:

Time:

WELL GAUGING DATA

Project # 0104-17-02 Date 4-17-01 Client EQUIVA

Site 105 5TH ST. OAKLAND / 98995757

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 TOB
MW-1	4					6.61	23.61	
MW-2	4					6.08	23.58	
MW-3	4	GAUGED w/ STINGER IN WELL				6.57	24.87	
MW-4	2					5.08	20.03	

EQUIVA WELL MONITORING DATA SHEET

BTS #: 010417-02	Site: 98995757
Sampler: Tommy ALPERS	Date: 4-17-01
Well I.D.: MW-1	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 2361	Depth to Water: 661
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:

- | | |
|--|---|
| <input type="checkbox"/> Bailer
<input type="checkbox"/> Disposable Bailer
<input type="checkbox"/> Middleburg
<input checked="" type="checkbox"/> Electric Submersible | <input type="checkbox"/> Waterra
<input type="checkbox"/> Peristaltic
<input type="checkbox"/> Extraction Pump
<input type="checkbox"/> Other: _____ |
|--|---|

Sampling Method:

- | | |
|---|---------------------------------------|
| <input checked="" type="checkbox"/> Bailer
<input type="checkbox"/> Disposable Bailer
<input type="checkbox"/> Extraction Port
<input type="checkbox"/> Dedicated Tubing | <input type="checkbox"/> Other: _____ |
|---|---------------------------------------|

$11.05 \text{ (Gals.)} \times 3 = 33.15 \text{ Gals.}$
 1 Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	<u>0.06</u>
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
14:00	73.4	6.9	1573	122	11.25	
14:01	70.3	6.9	850	43	22.5	
14:02	68.6	6.8	462	150	33.75	

Did well dewater? Yes No Gallons actually evacuated: 33.75

Sampling Time: 1405 Sampling Date: 4-17-01

Sample I.D.: MW1 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): 2.4 Pre-purge: 2.4 mg/L Post-purge: 4.4 mg/L

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

EQUIVA WELL MONITORING DATA SHEET

BTS #: 010417-02	Site: 98995757
Sampler: TOMMY ALPERG	Date: 4-17-01
Well I.D.: MW-2	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 23.58	Depth to Water: 6.08
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVO</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: _____

11.37 (Gals.) X 3 = 34.12 Gals.
 1 Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	<u>0.63</u>
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1430	75.4	6.9	420	7200	11.5	
1431	71.8	6.7	510	65	23	
1432	71.8	6.7	550	41	34.5	

Did well dewater? Yes No Gallons actually evacuated: 34.5

Sampling Time: 1440 Sampling Date: 4-17-01

Sample I.D.: MW2 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): N5 Pre-purge: 1.5 mg/L Post-purge: 2.6 mg/L

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

EQUIVA WELL MONITORING DATA SHEET

BTS #: 010417-02	Site: 98995757
Sampler: TOMMY ALPERS	Date: 4-17-01
Well I.D.: MW-3	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 24.87	Depth to Water: 6.57 6.57
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: _____

11.84	(Gals.) X	35.52	=	35.52	Gals.
1 Case Volume		Specified Volumes		Calculated Volume	

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	<u>0.63</u>
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1504	74.3	6.9	627	83	12	ODOR (SEWER) Sneil
1505	68.6	6.7	896	35	24	
1507	67.6	6.7	929	140	36	

Did well dewater? Yes No

Gallons actually evacuated: 36

Sampling Time: 1518

Sampling Date: 4-17-01

Sample I.D.: MW3

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): 1.3 Pre-purge: 1.3 mg/L Post-purge: 1.2 mg/L

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

EQUIVA WELL MONITORING DATA SHEET

BTS #: 010417-02	Site: 98995757
Sampler: TOMMY ALPERS	Date: 4-17-01
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8
Total Well Depth: 20.03	Depth to Water: 508
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH

Purge Method:

- | | |
|--|--|
| <input type="checkbox"/> Bailer | <input type="checkbox"/> Waterra |
| <input type="checkbox"/> Disposable Bailer | <input type="checkbox"/> Peristaltic |
| <input checked="" type="checkbox"/> Middleburg | <input type="checkbox"/> Extraction Pump |
| <input checked="" type="checkbox"/> Electric Submersible | <input type="checkbox"/> Other _____ |

Sampling Method:

- Bailer
 Disposable Bailer
 Extraction Port
 Dedicated Tubing

Other: _____

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

2.39 (Gals.) X 3 = 7.17 Gals.
 1 Case Volume Specified Volumes Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
13:21	66.9	7.4	2157	>200	2.5	
13:23	65.4	7.4	2227	>200	5	
13:26	65.6	6.9	2221	>200	7.5	

Did well dewater? Yes No Gallons actually evacuated: 7.5

Sampling Time: 13:35 Sampling Date: 4-17-01

Sample I.D.: MW-4 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): 2.4	Pre-purge: (2.4) mg/L	Post-purge: (2.6) mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV

WELL GAUGING DATA

Project # 010323-X1 Date 3/23/01 Client EQuiva

Site 105 5th st

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 <u>TOC</u>	Total Depth Post Development
MW-4	2					8.21	19.94	TOC	19.99

WELL DEVELOPMENT DATA SHEET

Project #: <u>010323-X1</u>	Client: <u>EQUIVA</u>
Developer: <u>HOYT</u>	Date Developed: <u>3/23/01</u>
Well I.D. <u>MW-4</u>	Well Diameter: (circle one) <u>(2)</u> 3 4 6
Total Well Depth: Before <u>19.94</u> After <u>19.99</u>	Depth to Water: Before <u>9.21</u> After <u>17.90</u>
Reason not developed:	If Free Product, thickness:
Additional Notations:	

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

<u>1.8</u>	X	<u>10</u>	=	<u>18.7</u>
1 Case Volume		Specified Volumes		gallons

Purging Device: Bailer Electric Submersible
 Middleburg Suction Pump

Type of Installed Pump _____
 Other equipment used _____

TIME	TEMP (F)	pH	COND.	TURBIDITY	VOLUME REMOVED:	NOTATIONS:
						<u>SURBAED well FOR 10min</u>
<u>0713</u>						<u>Begin Purging Soft Bottom</u>
<u>0715</u>	<u>61.5</u>	<u>6.64</u>	<u>2566</u>	<u>7200</u>	<u>2</u>	<u>Silty Turbid</u>
<u>0717</u>	<u>62.6</u>	<u>6.89</u>	<u>2570</u>	<u>7200</u>	<u>4</u>	
<u>0719</u>	<u>62.7</u>	<u>7.39</u>	<u>2480</u>	<u>7200</u>	<u>6</u>	<u>Less Silty</u>
<u>0721</u>	<u>63.1</u>	<u>7.47</u>	<u>2517</u>	<u>7200</u>	<u>8</u>	<u>DTW 15.05</u>
	<u>62.8</u>	<u>7.58</u>	<u>2476</u>	<u>7200</u>	<u>10</u>	
						<u>Pause -> Check Levels TD 19.98 DTW 16.60</u>
<u>0728</u>						<u>Resume Purging</u>
<u>0730</u>	<u>63.1</u>	<u>7.38</u>	<u>2272</u>	<u>7200</u>	<u>12</u>	<u>Less Turbid Hard Bottom</u>
<u>0732</u>	<u>63.4</u>	<u>7.73</u>	<u>2206</u>	<u>7200</u>	<u>14</u>	
<u>0734</u>	<u>63.1</u>	<u>7.82</u>	<u>2151</u>	<u>7200</u>	<u>16</u>	<u>Water Clearing</u>
<u>0736</u>	<u>62.8</u>	<u>7.82</u>	<u>2147</u>	<u>7200</u>	<u>18</u>	
<u>0738</u>	<u>62.9</u>	<u>7.83</u>	<u>2133</u>	<u>2200</u>	<u>20</u>	<u>Hard Bottom TD 19.99</u>
Did Well Dewater? <u>no</u> If yes, note above.				Gallons Actually Evacuated: <u>20</u>		