

# C A M B R I A

November 16, 2000

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

#  
3769

00154120 PH 45  
SCARFOL  
MONITORING  
REPORT

Re: **Third Quarter 2000 Monitoring Report**  
Shell-branded Service Station  
4255 MacArthur Boulevard  
Oakland, California  
Incident #98995758  
Cambria Project #242-0524-002



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.

## HYDROCARBON REMOVAL SUMMARY

Separate-Phase Hydrocarbon Removal Summary	
This Quarter (pounds)	Cumulative Removal (pounds)
0.00	21.80

The table above summarizes the cumulative separate-phase hydrocarbon (SPH) removal from the site by manual bailing.

## THIRD QUARTER 2000 ACTIVITIES

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

**Groundwater Monitoring:** Blaine Tech Services, Inc. (Blaine) of San Jose, California checked for SPH, gauged and sampled the site wells, calculated groundwater elevations and compiled the analytical data. Cambria compiled the bioattenuation parameters analytical data (Table 1) and prepared a groundwater elevation contour map (Figure 1). Blaine's report, presenting the laboratory report and supporting field documents, is included as Attachment A.

**Active Remediation:** Cambria is re-initiating active remediation onsite beginning November 16, 2000. We will perform an initial dual vacuum extraction (DVE) event using a vacuum truck and stinger arrangement to remove vapors and groundwater from wells MW-2 and TB-2. Mass removal data will be calculated and included in the next quarterly monitoring report. Based on results of the initial DVE event, an optimized treatment program will commence.

#### **ANTICIPATED FOURTH QUARTER 2000 ACTIVITIES**



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

**Dual Vacuum Extraction:** Cambria expects to perform monthly site visits to oversee DVE operations using wells MW-2 and TB-2.

**Monitoring Well Installation:** In a letter from your office dated August 22, 2000, you suggested that the previously proposed monitoring well be permitted and installed on the adjacent trailer park property instead of on the downgradient CalTrans property. After reviewing historic and current site conditions, Cambria does not believe that an additional well is warranted at this time. The area in which the well would be re-located has been previously investigated. Additionally, it is not likely that there are significant receptors in the nearby downgradient direction due to the proximity of the Interstate 580 corridor to the site. Groundwater monitoring data from MW-2 and MW-4 illustrates that downgradient attenuation of benzene and methyl tert-butyl ether (MTBE) is occurring.

In lieu of further subsurface investigation at this time, Cambria recommends that we prepare a site conceptual model (SCM) which includes an area well survey and conduit study. The SCM will summarize known environmental-related information about the site and surrounding areas and will address the relative risk to potential receptors by hydrocarbons and MTBE at the site.

**Fourth Quarter 2000 Monitoring Report:** The fourth quarter 2000 monitoring report will be submitted no later than December 27, 2000.

# C A M B R I A

Barney Chan  
November 16, 2000

## CLOSING

We appreciate the opportunity to work with you on this project. Please call Troy Buggle at (510) 420-3333 if you have any questions or comments.

Sincerely,  
**Cambria Environmental Technology, Inc**



Troy A. Buggle  
Project Scientist

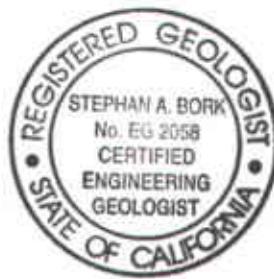
  
Stephan A. Bork, C.E.G., C.HG.  
Associate Hydrogeologist

Figure: 1 - Groundwater Elevation Contour Map

Table: 1 - Bioattenuation Parameters Analytical Data

Attachments: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, Equiva Services LLC, P.O. Box 7869, Burbank, California 91510-7869  
Roland C. Malone, Jr., PO Box 2099, Houston, TX 77252

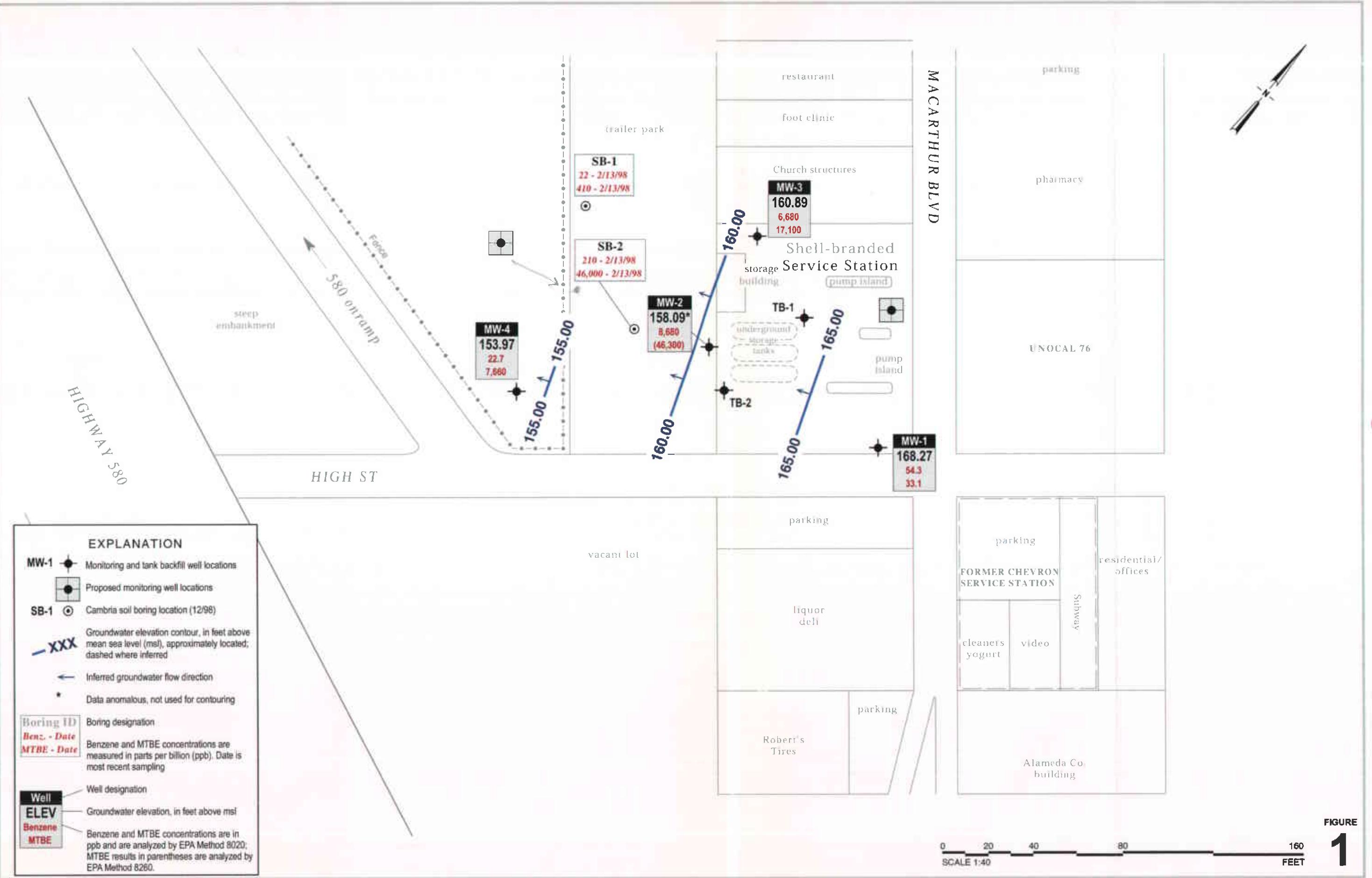
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**Groundwater Elevation Contour Map**  
July 26, 2000

CAMBRIA

**Shell-branded Service Station**  
4255 MacArthur Boulevard  
Oakland, California  
Incident #98995758

**1**



**Table 1.** Groundwater Analytical Data - Bioattenuation Parameters - Shell-branded Service Station, Incident #98995758,  
4255 MacArthur Boulevard, Oakland, California

Well ID	Date	ORP (mV)	DO	Total Alkalinity	Ferrous Iron	Nitrate as Nitrate	Sulfate	Notes
				◀	(Concentrations in mg/L)	→		
MW-1	07/17/98	---	0.8	460	1.6	<1.0	12	
	07/23/99	---	1.0	480	0.790	7.49	28.6	
	07/26/00	-140	13.2	92.9	<0.0100	7.80	387	
MW-2	07/17/98	---	---	---	---	---	---	SPH
	07/23/99	---	1.4	440	26.0	<1.00	3.24	
	07/26/00	113	2.2	26.5	3.74	7.59	399	
MW-3	07/17/98	---	1.3	860	5.3	<1.0	6.5	
	07/17/98	---	1.3	860	5.4	<1.0	5.8	duplicate
	07/23/99	---	1.3	920	76.0	<1.00	4.23	
	07/26/00	-70	0.9	440	4.04	<1.00	355	
MW-4	07/17/98	---	1.4	630	2.8	<1.0	13	
	07/23/99	---	0.9	620	46.0	7.41	6.03	
	07/26/00	-137	1.4	228	0.223	6.30	372	

Abbreviations & Notes:

ORP = Oxidation reduction potential, measured pre-purge

mV = Millivolts

DO = Dissolved oxygen, measured pre-purge

mg/L = Milligrams per liter

SPH = Separate-phase hydrocarbons in well; not sampled

--- = Not analyzed / Not available

<n = Below detection limit of n mg/L

Total alkalinity by EPA Method 310.2, concentrations in mg CaCO<sub>3</sub>/L

Ferrous iron by EPA Method 200.7

Nitrate as nitrate and sulfate by EPA Method 300.0

**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](http://www.blainetech.com)

August 25, 2000

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

Third Quarter 2000 Groundwater Monitoring at  
Shell-branded Service Station  
4255 MacArthur Boulevard  
Oakland, CA

Monitoring performed on July 26, 2000

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**Groundwater Monitoring Report 000726-Y-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. Purge water (if applicable) is, likewise, collected and transported to the Martinez Refining Company.

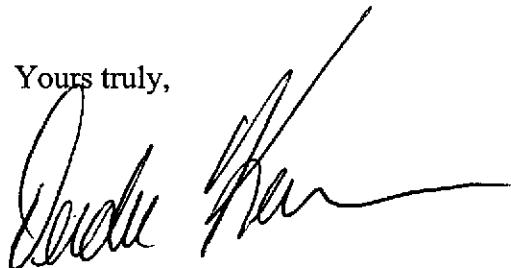
Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL CONCENTRATIONS**. The full analytical report for the most recent samples and the field data sheets are attached to this report.

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".

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 65<sup>th</sup> Street, Suite C  
Oakland, CA 94608-2411

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**4255 MacArthur Boulevard**  
**Oakland, CA**  
**Wic #204-5510-0600**

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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)	ORP Reading (mV)
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MW-1	11/17/1993	410	21	11	7.9	47	NA	NA	175.79	8.59	NA	167.20	NA	NA	NA
MW-1	01/20/1994	1,200	180	19	48	47	NA	NA	175.79	8.22	NA	167.57	NA	NA	NA
MW-1	04/25/1994	3,100	610	<10	130	27	NA	NA	175.79	7.63	NA	168.16	NA	NA	NA
MW-1	07/07/1994	2,400	1,000	10	250	20	NA	NA	175.79	8.31	NA	167.48	NA	NA	NA
MW-1	10/27/1994	2,200	500	3.1	72	1.8	NA	NA	175.79	8.84	NA	166.95	NA	NA	NA
MW-1	11/17/1994	NA	NA	NA	NA	NA	NA	NA	175.79	7.60	NA	168.19	NA	NA	NA
MW-1	11/28/1994	NA	NA	NA	NA	NA	NA	NA	175.79	7.56	NA	168.23	NA	NA	NA
MW-1	01/13/1995	570	75	2.5	6.7	11	NA	NA	175.79	7.11	NA	168.68	NA	NA	NA
MW-1	04/12/1995	1,800	480	<5.0	79	<5.0	NA	NA	175.79	7.08	NA	168.71	NA	NA	NA
MW-1	07/25/1995	120	15	1.1	2.1	2.9	NA	NA	175.79	7.73	NA	168.06	NA	NA	NA
MW-1 (D)	07/25/1995	300	88	2.4	11	6.5	NA	NA	175.79	7.73	NA	168.06	NA	NA	NA
MW-1	10/18/1995	130	9.5	0.8	1.3	1.7	NA	NA	175.79	8.42	NA	167.37	NA	NA	NA
MW-1 (D)	10/18/1995	120	11	0.8	1.4	1.8	NA	NA	175.79	8.42	NA	167.37	NA	NA	NA
MW-1	01/17/1996	250	22	0.9	1.6	2.3	NA	NA	175.79	7.83	NA	167.96	NA	NA	NA
MW-1	04/25/1996	<50	4.6	<0.5	<0.5	0.6	500b	NA	175.79	7.35	NA	168.44	NA	NA	NA
MW-1	07/17/1996	<250	15	<2.5	<2.5	<2.5	540	NA	175.79	7.70	NA	168.09	NA	NA	NA
MW-1	10/01/1996	1,200	500	12	57	82	1,900	NA	175.79	8.07	NA	167.72	NA	NA	NA
MW-1	01/22/1997	640	170	4.3	33	33	1,200	NA	175.79	7.21	NA	168.58	NA	NA	NA
MW-1	04/08/1997	<200	34	<2.0	3.3	4.3	950	NA	175.79	7.75	NA	168.04	NA	NA	NA
MW-1 (D)	04/08/1997	<200	66	<2.0	6.4	8	740	NA	175.79	7.75	NA	168.04	NA	NA	NA
MW-1	07/08/1997	190	49	1.2	5.8	8.6	560	NA	175.79	8.01	NA	167.78	NA	NA	NA
MW-1	10/08/1997	<100	7	<1.0	<1.0	<1.0	620	NA	175.79	8.10	NA	167.69	NA	NA	NA
MW-1	01/09/1998	970	390	12	48	71	1,200	NA	175.79	7.14	NA	168.65	NA	NA	NA
MW-1	04/13/1998	<50	136	<0.50	1.5	1.8	170	NA	175.79	6.78	NA	169.01	NA	NA	NA
MW-1	07/17/1998	2,500	750	11	88	67	150	NA	175.79	7.28	NA	168.51	NA	NA	NA
MW-1	10/02/1998	8,000	970	36	270	440	35	NA	175.79	7.77	NA	168.02	NA	NA	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**4255 MacArthur Boulevard**  
**Oakland, CA**  
**Wic #204-5510-0600**

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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)	ORP Reading (mV)
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MW-1	02/03/1999	210	56	0.82	<0.50	3.2	220	NA	175.79	7.45	NA	168.34	NA	1.4	NA
MW-1	04/29/1999	<50	4.5	<0.50	0.56	<0.50	140	196	175.79	7.58	NA	168.21	NA	1.2	140
MW-1	07/23/1999	<50.0	<0.500	<0.500	<0.500	<0.500	120	111*	175.79	8.51	NA	167.28	NA	1.0	NA
MW-1	11/01/1999	<50.0	<0.500	<0.500	<0.500	<0.500	2.90	NA	175.79	8.30	NA	167.49	NA	1.4	-71
MW-1	01/17/2000	<50	<0.50	<0.50	<0.50	<0.50	3.30	NA	175.79	8.04	NA	167.75	NA	16.9	64
MW-1	04/17/2000	<50.0	1.08	<0.500	<0.500	<0.500	<2.50	NA	175.79	8.00	NA	167.79	NA	1.8	112
MW-1	07/26/2000	125	54.3	2.16	5.45	9.86	33.1	NA	175.79	7.52	NA	168.27	NA	13.2	-140

MW-2	11/17/1993	31,000	9,400	4,600	1,000	3,900	NA	NA	170.91	12.31	NA	158.60	NA	NA	NA
MW-2	01/20/1994	40,000	6,900	5,600	780	4,100	NA	NA	170.91	11.48	NA	159.43	NA	NA	NA
MW-2 (D)	01/20/1994	41,000	7,200	6,200	900	4,800	NA	NA	170.91	11.48	NA	159.43	NA	NA	NA
MW-2	04/25/1994	60,000	9,300	6,100	1,400	6,200	NA	NA	170.91	10.84	NA	160.07	NA	NA	NA
MW-2	07/07/1994	280,000a	40,000	26,000	8,100	32,000	NA	NA	170.91	11.89	NA	159.02	NA	NA	NA
MW-2 (D)	07/07/1994	53,000	13,000	6,600	2,000	8,400	NA	NA	170.91	11.89	NA	159.02	NA	NA	NA
MW-2	10/27/1994	130,000	14,000	12,000	2,400	13,000	NA	NA	170.91	12.89	NA	158.02	NA	NA	NA
MW-2 (D)	10/27/1994	390,000	8,800	7,000	1,700	11,000	NA	NA	170.91	12.89	NA	158.02	NA	NA	NA
MW-2	11/17/1994	NA	NA	NA	NA	NA	NA	NA	170.91	9.11	NA	161.80	NA	NA	NA
MW-2	11/28/1994	NA	NA	NA	NA	NA	NA	NA	170.91	9.22	NA	161.69	NA	NA	NA
MW-2	01/13/1995	75,000	5,900	12,000	3,100	17,000	NA	NA	170.91	8.10	NA	162.81	NA	NA	NA
MW-2	04/12/1995	100,000	8,500	11,000	2,400	12,000	NA	NA	170.91	10.12	NA	160.79	NA	NA	NA
MW-2 (D)	04/12/1995	80,000	4,200	9,300	2,500	12,000	NA	NA	170.91	10.12	NA	160.79	NA	NA	NA
MW-2	07/25/1995	NA	NA	NA	NA	NA	NA	NA	170.91	11.53	NA	159.80	0.52	NA	NA
MW-2	10/18/1995	NA	NA	NA	NA	NA	NA	NA	170.91	14.02	NA	156.99	0.13	NA	NA
MW-2	01/17/1996	NA	NA	NA	NA	NA	NA	NA	170.91	10.27	NA	160.78	0.17	NA	NA
MW-2	04/25/1996	NA	NA	NA	NA	NA	NA	NA	170.91	11.68	NA	159.25	0.03	NA	NA
MW-2	07/17/1996	NA	NA	NA	NA	NA	NA	NA	170.91	12.78	NA	158.81	0.48	NA	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**4255 MacArthur Boulevard**  
**Oakland, CA**  
**Wic #204-5510-0600**

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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)	ORP Reading (mV)
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MW-2	10/01/1996	NA	NA	NA	NA	NA	NA	170.91	14.21	NA	156.70	0.28	NA	NA	
MW-2	01/22/1997	NA	NA	NA	NA	NA	NA	170.91	10.92	NA	160.08	0.11	NA	NA	
MW-2	04/08/1997	NA	NA	NA	NA	NA	NA	170.91	14.12	NA	156.95	0.20	NA	NA	
MW-2	07/08/1997	NA	NA	NA	NA	NA	NA	170.91	14.98	NA	156.08	0.19	NA	NA	
MW-2	10/08/1997	NA	NA	NA	NA	NA	NA	170.91	12.97	NA	157.98	0.05	NA	NA	
MW-2	01/08/1998	NA	NA	NA	NA	NA	NA	170.91	12.54	NA	158.43	0.08	NA	NA	
MW-2	04/13/1998	180,000	2,800	5,200	2,400	13,000	71,000	NA	170.91	10.05	NA	160.86	NA	NA	NA
MW-2	07/17/1998	NA	NA	NA	NA	NA	NA	170.91	11.75	NA	159.24	0.10	NA	NA	
MW-2	10/02/1998	NA	NA	NA	NA	NA	NA	170.91	16.78	NA	154.22	0.11	NA	NA	
MW-2	02/03/1999	NA	NA	NA	NA	NA	NA	170.91	9.90	9.82	161.07	0.08	NA	NA	
MW-2	04/29/1999	NA	NA	NA	NA	NA	NA	170.91	9.86	9.81	161.09	0.05	NA	NA	
MW-2	07/23/1999	65,800	6,500	4,480	1,960	8,960	46,600	58,500*	170.91	14.45	NA	156.46	NA	1.4	NA
MW-2	11/01/1999	NA	NA	NA	NA	NA	NA	170.91	11.84	11.81	159.09	0.03	NA	NA	
MW-2	01/17/2000	46,000	6,000	2,400	1,500	5,500	50,000	31,000	170.91	11.00	NA	159.91	NA	1.3	-54
MW-2	04/17/2000	96,300	8,150	10,200	2,820	14,900	112,000	108,000	170.91	11.06	NA	159.85	NA	2.6	125
MW-2	07/26/2000	72,400	8,680	5,620	2,810	13,400	66,200	46,300	170.91	12.82	NA	158.09	NA	2.2	113

MW-3	11/17/1993	18,000	5,400	660	720	2,200	NA	NA	174.61	15.40	NA	159.21	NA	NA	NA
MW-3	01/20/1994	55,000	13,000	2,600	2,200	6,500	NA	NA	174.61	14.61	NA	160.00	NA	NA	NA
MW-3	04/25/1994	96,000	11,000	1,600	3,100	9,900	NA	NA	174.61	13.12	NA	161.49	NA	NA	NA
MW-3 (D)	04/25/1994	78,000	12,000	1,900	2,600	7,300	NA	NA	174.61	13.12	NA	161.49	NA	NA	NA
MW-3	07/07/1994	NA	NA	NA	NA	NA	NA	NA	174.61	14.54	NA	160.07	0.02	NA	NA
MW-3	10/27/1994	NA	NA	NA	NA	NA	NA	NA	174.61	15.62	NA	159.03	0.05	NA	NA
MW-3	11/17/1994	NA	NA	NA	NA	NA	NA	NA	174.61	13.83	NA	160.78	NA	NA	NA
MW-3	11/28/1994	NA	NA	NA	NA	NA	NA	NA	174.61	14.02	NA	160.59	NA	NA	NA
MW-3	01/13/1995	180,000	3,200	2,700	1,700	5,200	NA	NA	174.61	12.13	NA	162.48	NA	NA	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**4255 MacArthur Boulevard**  
**Oakland, CA**  
**Wic #204-5510-0600**

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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)	ORP Reading (mV)
MW-3 (D)	01/13/1995	23,000	4,000	690	960	3,000	NA	NA	174.61	12.13	NA	162.48	NA	NA	NA
MW-3	04/12/1995	56,000	8,700	1,500	2,100	6,300	NA	NA	174.61	12.96	NA	161.65	NA	NA	NA
MW-3	07/25/1995	NA	NA	NA	NA	NA	NA	NA	174.61	14.28	NA	160.38	0.06	NA	NA
MW-3	10/18/1995	NA	NA	NA	NA	NA	NA	NA	174.61	15.88	NA	158.77	0.05	NA	NA
MW-3	01/17/1996	NA	NA	NA	NA	NA	NA	NA	174.61	13.86	NA	160.94	0.24	NA	NA
MW-3	04/25/1996	NA	NA	NA	NA	NA	NA	NA	174.61	13.82	NA	160.81	0.02	NA	NA
MW-3	07/17/1996	NA	NA	NA	NA	NA	NA	NA	174.61	16.11	NA	158.52	0.03	NA	NA
MW-3	10/01/1996	46,000	7,300	530	1,700	3,900	3,200	NA	174.61	16.56	NA	158.05	NA	NA	NA
MW-3 (D)	10/01/1996	47,000	7,100	530	1,700	4,000	2,900	NA	174.61	16.56	NA	158.05	NA	NA	NA
MW-3	01/22/1997	82,000	5,200	1,300	2,800	8,900	1,100	NA	174.61	13.07	NA	161.54	NA	NA	NA
MW-3 (D)	01/22/1997	61,000	8,400	1,100	2,300	7,000	2,700	NA	174.61	13.07	NA	161.54	NA	NA	NA
MW-3	04/08/1997	NA	NA	NA	NA	NA	NA	NA	174.61	17.09	NA	157.54	0.03	NA	NA
MW-3	07/08/1997	56,000	8,800	580	2,000	4,900	2,800	NA	174.61	15.85	NA	158.76	NA	NA	NA
MW-3	10/08/1997	48,000	8,000	590	1,700	3,400	5,100	NA	174.61	16.22	NA	158.39	NA	NA	NA
MW-3	01/08/1998	47,000	9,400	810	2,300	4,700	6,300	NA	174.61	13.80	NA	160.81	NA	NA	NA
MW-3 (D)	01/08/1998	48,000	8,100	750	2,000	4,100	5,800	NA	174.61	13.80	NA	160.81	NA	NA	NA
MW-3	04/13/1998	32,000	6,800	540	1,400	3,400	4,000	NA	174.61	12.97	NA	161.64	NA	NA	NA
MW-3 (D)	04/13/1998	36,000	7,300	660	1,600	3,700	4,000	NA	174.61	12.97	NA	161.64	NA	NA	NA
MW-3	07/17/1998	71,000	11,000	590	2,200	6,900	3,900	NA	174.61	11.51	NA	163.10	NA	NA	NA
MW-3 (D)	07/17/1998	76,000	12,000	700	2,600	8,000	3,000	NA	174.61	11.51	NA	163.10	NA	NA	NA
MW-3	10/02/1998	66,000	8,900	510	2,000	4,900	4,600	NA	174.61	16.50	NA	158.11	NA	NA	NA
MW-3 (D)	10/02/1998	59,000	9,400	460	2,000	4,900	4,700	NA	174.61	16.50	NA	158.11	NA	NA	NA
MW-3	02/03/1999	36,000	6,800	300	1,600	2,900	18,000	NA	174.61	15.21	NA	159.40	NA	1.3	NA
MW-3	04/29/1999	45,000	8,100	580	2,200	5,800	4,700	5,150	174.61	15.43	NA	159.18	NA	1.5	-68
MW-3	07/23/1999	29,400	3,540	215	810	3,800	4,720	6,950*	174.61	14.95	NA	159.66	NA	1.3	NA
MW-3	11/01/1999	20,000	4,190	294	1,060	1,740	5,540	8,590	174.61	14.66	NA	159.95	NA	0.6	-110

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**4255 MacArthur Boulevard**  
**Oakland, CA**  
**Wic #204-5510-0600**

No *Acen* @ MW-3

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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)	ORP Reading (mV)
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MW-3	01/17/2000	17,000	3,900	89	1,100	1,200	7,900	NA	174.61	13.94	NA	160.67	NA	1.3	-40
MW-3	04/17/2000	28,100	5,240	247	1,540	2,750	16,600	NA	174.61	14.00	NA	160.61	NA	1.1	-86
MW-3	07/26/2000	24,300	6,680	159	1,610	1,640	17,100	NA	174.61	13.72	NA	160.89	NA	0.9	-70

MW-4	11/17/1994	NA	NA	NA	NA	NA	NA	NA	164.06	6.62	NA	157.44	NA	NA	NA
MW-4	11/28/1994	2,900	200	17	76	260	NA	NA	164.06	6.11	NA	157.95	NA	NA	NA
MW-4	01/13/1995	1,900	130	5.6	13	40	NA	NA	164.06	6.05	NA	158.01	NA	NA	NA
MW-4	04/12/1995	680	150	<2.0	10	13	NA	NA	164.06	6.31	NA	157.75	NA	NA	NA
MW-4	07/25/1995	340	100	0.8	8.8	3	NA	NA	164.06	7.36	NA	156.70	NA	NA	NA
MW-4	10/18/1995	150	31	<0.5	3.5	0.8	NA	NA	164.06	8.54	NA	155.52	NA	NA	NA
MW-4	01/17/1996	290	14	<0.5	1.8	0.8	NA	NA	164.06	8.48	NA	155.58	NA	NA	NA
MW-4	04/25/1996	<500	65	<5	<5	<5	1,700	NA	164.06	7.40	NA	156.66	NA	NA	NA
MW-4 (D)	04/25/1996	<500	66	<5	8.7	<5	1,500	NA	164.06	7.40	NA	156.66	NA	NA	NA
MW-4	07/17/1996	<500	84	<5.0	6.5	<5.0	1,500	NA	164.06	7.75	NA	156.31	NA	NA	NA
MW-4 (D)	07/17/1996	<500	54	<5.0	<5.0	<5.0	1,700	2,100	164.06	7.75	NA	156.31	NA	NA	NA
MW-4	10/01/1996	<500	1.9	<5.0	<5.0	<5.0	3,000	NA	164.06	8.82	NA	155.24	NA	NA	NA
MW-4	01/22/1997	580	130	<2.5	18	5.2	1,200	NA	164.06	7.51	NA	156.55	NA	NA	NA
MW-4	04/08/1997	770	200	7	26	55	1,500	8	164.06	7.18	NA	156.88	NA	NA	NA
MW-4	07/08/1997	570	78	<5.0	14	11	1,200	NA	164.06	9.00	NA	155.06	NA	NA	NA
MW-4 (D)	07/08/1997	640	81	<5.0	16	19	1,600	NA	164.06	9.00	NA	155.06	NA	NA	NA
MW-4	10/08/1997	<500	40	<5.0	7.4	5.4	1,400	NA	164.06	8.97	NA	155.09	NA	NA	NA
MW-4 (D)	10/08/1997	<500	36	<5.0	5.9	<5.0	1,400	NA	164.06	8.97	NA	155.09	NA	NA	NA
MW-4	01/08/1998	<1,000	55	<10	13	<10	2,000	NA	164.06	7.90	NA	156.16	NA	NA	NA
MW-4	04/13/1998	350	110	2.4	20	26	<2.5	NA	164.06	7.35	NA	156.71	NA	NA	NA
MW-4	07/17/1998	210	66	0.78	5.4	9.8	1,700	NA	164.06	6.95	NA	157.11	NA	NA	NA
MW-4	10/02/1998	<50	0.69	<0.50	<0.50	<0.50	2,900	NA	164.06	7.35	NA	156.71	NA	NA	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**4255 MacArthur Boulevard**  
**Oakland, CA**  
**Wic #204-5510-0600**

*No alterations on MW-4*

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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)	ORP Reading (mV)
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MW-4	02/03/1999	560	120	2.5	29	34	6,800	NA	164.06	7.71	NA	156.35	NA	0.9	NA
MW-4	04/29/1999	390	80	1.9	13	19	7,000	8,360	164.06	7.83	NA	156.23	NA	1.1	-125
MW-4	07/23/1999	460	93.6	8.40	25.2	28.8	3,760	6,000*	164.06	11.33	NA	152.73	NA	0.9	NA
MW-4	11/01/1999	77.3	0.520	<0.500	<0.500	<0.500	539	NA	164.06	10.66	NA	153.40	NA	2.8	3
MW-4	01/17/2000	160	27	<0.50	12	6.3	12,000	NA	164.06	10.15	NA	153.91	NA	3.9	-17
MW-4	04/17/2000	<500	26	6.38	9.35	10.4	9,070	NA	164.06	10.10	NA	153.96	NA	1.7	-129
MW-4	07/26/2000	<500	22.7	<5.00	7.59	6.96	7,660	NA	164.06	10.09	NA	153.97	NA	1.4	-137

TB-1	04/29/1999	NA	6.00	NA	NA	NA	NA	3.8	-132						
TB-1	11/01/1999	NA	12.65	NA	NA	NA	NA	0.2	-165						
TB-1	01/17/2000	NA	7.72	NA	NA	NA	NA	0.8	-178						
TB-1	04/17/2000	NA	7.65	NA	NA	NA	NA	0.5	-152						
TB-1	07/26/2000	NA	5.13	NA	NA	NA	NA	1.0	-124						

TB-2	04/29/1999	NA	4.76	NA	NA	NA	NA	4.2	-108						
TB-2	11/01/1999	NA	11.33	NA	NA	NA	NA	0.5	-148						
TB-2	01/17/2000	NA	9.79	NA	NA	NA	NA	0.7	-162						
TB-2	04/17/2000	NA	9.75	NA	NA	NA	NA	0.9	-121						
TB-2	07/26/2000	NA	4.73	NA	NA	NA	NA	0.9	-85						

*need to analyze bedrock  
mass & mass removal.*

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**4255 MacArthur Boulevard**  
**Oakland, CA**  
**Wic #204-5510-0600**

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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)	ORP Reading (mV)
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Abbreviations:

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

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

MTBE = methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

SPH = Separate-Phase Hydrocarbons

GW = Groundwater

ug/L = parts per billion

msl = Mean sea level

ft = Feet

< n = Below detection limit

D = Duplicate sample

NA = Not applicable

DO = Dissolved Oxygens

ppm = parts per million

ORP = Oxidation Reduction Potential

mV = millivolts

Notes:

\* = Sample analyzed outside the EPA recommended holding time.

a = Ground water surface had a sheen when sampled

b = MTBE value is estimated by Sequoia Analytical of Redwood City, California

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).



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

Project: 4255 McArthur Blvd.  
Project Number: 4255 McArthur Blvd./ Oakland  
Project Manager: Nick Sudano

**Reported:**  
08/11/00 10:08

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MJG0789-01	Water	07/26/00 13:15	07/27/00 12:19
MW-2	MJG0789-02	Water	07/26/00 14:04	07/27/00 12:19
MW-3	MJG0789-03	Water	07/26/00 13:38	07/27/00 12:19
MW-4	MJG0789-04	Water	07/26/00 14:50	07/27/00 12:19

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.*

Ted Terrasas, Project Manager

Page 1 of 15





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

Project: 4255 McArthur Blvd.  
Project Number: 4255 McArthur Blvd./ Oakland  
Project Manager: Nick Sudano

Reported:  
08/11/00 10:08

## 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
<b>MW-4 (MJG0789-04) Water Sampled: 07/26/00 14:50 Received: 07/27/00 12:19</b>									
Purgeable Hydrocarbons	ND	500	ug/l	10	0H04002	08/04/00	08/04/00	DHS LUFT	R-05
Benzene	22.7	5.00	"	"	"	"	"	"	R-05
Toluene	ND	5.00	"	"	"	"	"	"	R-05
Ethylbenzene	7.59	5.00	"	"	"	"	"	"	R-05
Xylenes (total)	6.96	5.00	"	"	"	"	"	"	R-05
Methyl tert-butyl ether	7660	250	"	100	"	"	08/07/00	"	M-03
Surrogate: a,a,a-Trifluorotoluene		88.3 %		70-130		"	08/04/00	"	





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Project: 4255 McArthur Blvd.  
Project Number: 4255 McArthur Blvd./ Oakland  
Project Manager: Nick Sudano

Reported:  
08/11/00 10:08

## 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
<b>MW-4 (MJG0789-04) Water Sampled: 07/26/00 14:50 Received: 07/27/00 12:19</b>									
Purgeable Hydrocarbons	ND	500	ug/l	10	0H04002	08/04/00	08/04/00	DHS LUFT	R-05
Benzene	22.7	5.00	"	"	"	"	"	"	R-05
Toluene	ND	5.00	"	"	"	"	"	"	R-05
Ethylbenzene	7.59	5.00	"	"	"	"	"	"	R-05
Xylenes (total)	6.96	5.00	"	"	"	"	"	"	R-05
Methyl tert-butyl ether	7660	250	"	100	"	"	08/07/00	"	M-03
Surrogate: a,a,a-Trifluorotoluene		88.3 %		70-130		"	"	08/04/00	"

dsp





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

Project: 4255 McArthur Blvd.  
Project Number: 4255 McArthur Blvd./Oakland  
Project Manager: Nick Sudano

**Reported:**  
08/11/00 10:08

## Total Metals by EPA 6000/7000 Series Methods

### Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (MJG0789-01) Water   Sampled: 07/26/00 13:15   Received: 07/27/00 12:19</b>									
Ferrous Iron	ND	0.0100	mg/l	1	0H02016	08/02/00	08/02/00	EPA 6010A	
<b>MW-2 (MJG0789-02) Water   Sampled: 07/26/00 14:04   Received: 07/27/00 12:19</b>									
Ferrous Iron	3.74	0.0100	mg/l	1	0H02016	08/02/00	08/02/00	EPA 6010A	
<b>MW-3 (MJG0789-03) Water   Sampled: 07/26/00 13:38   Received: 07/27/00 12:19</b>									
Ferrous Iron	4.04	0.0100	mg/l	1	0H02016	08/02/00	08/02/00	EPA 6010A	
<b>MW-4 (MJG0789-04) Water   Sampled: 07/26/00 14:50   Received: 07/27/00 12:19</b>									
Ferrous Iron	0.223	0.0100	mg/l	1	0H02016	08/02/00	08/02/00	EPA 6010A	





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Project Manager: Nick Sudano

**Reported:**  
08/11/00 10:08

**Total Metals by EPA 6000/7000 Series Methods**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (MJG0789-01) Water Sampled: 07/26/00 13:15 Received: 07/27/00 12:19</b>									
Ferrous Iron	ND	0.0100	mg/l	1	0H02016	08/02/00	08/02/00	EPA 6010A	
<b>MW-2 (MJG0789-02) Water Sampled: 07/26/00 14:04 Received: 07/27/00 12:19</b>									
Ferrous Iron	3.74	0.0100	mg/l	1	0H02016	08/02/00	08/02/00	EPA 6010A	
<b>MW-3 (MJG0789-03) Water Sampled: 07/26/00 13:38 Received: 07/27/00 12:19</b>									
Ferrous Iron	4.04	0.0100	mg/l	1	0H02016	08/02/00	08/02/00	EPA 6010A	
<b>MW-4 (MJG0789-04) Water Sampled: 07/26/00 14:50 Received: 07/27/00 12:19</b>									
Ferrous Iron	0.223	0.0100	mg/l	1	0H02016	08/02/00	08/02/00	EPA 6010A	





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Project Number: 4255 McArthur Blvd./ Oakland  
Project Manager: Nick Sudano

Reported:  
08/11/00 10:08

**Anions by EPA Method 300.0**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (MJG0789-01) Water Sampled: 07/26/00 13:15 Received: 07/27/00 12:19</b>									
Nitrate as NO <sub>3</sub>	7.80	1.00	mg/l	10	0G28025	07/27/00	07/27/00	EPA 300.0	
Sulfate as SO <sub>4</sub>	387	50.0	"	100	"	"	"	"	
<b>MW-2 (MJG0789-02) Water Sampled: 07/26/00 14:04 Received: 07/27/00 12:19</b>									
Nitrate as NO <sub>3</sub>	7.59	1.00	mg/l	10	0G28025	07/27/00	07/27/00	EPA 300.0	
Sulfate as SO <sub>4</sub>	399	50.0	"	100	"	"	"	"	
<b>MW-3 (MJG0789-03) Water Sampled: 07/26/00 13:38 Received: 07/27/00 12:19</b>									
Nitrate as NO <sub>3</sub>	ND	1.00	mg/l	10	0G28025	07/27/00	07/27/00	EPA 300.0	
Sulfate as SO <sub>4</sub>	355	50.0	"	100	"	"	"	"	
<b>MW-4 (MJG0789-04) Water Sampled: 07/26/00 14:50 Received: 07/27/00 12:19</b>									
Nitrate as NO <sub>3</sub>	6.30	1.00	mg/l	10	0G28025	07/27/00	07/27/00	EPA 300.0	
Sulfate as SO <sub>4</sub>	372	50.0	"	100	0H02022	07/28/00	07/28/00	"	





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Project Number: 4255 McArthur Blvd./ Oakland  
Project Manager: Nick Sudano

Reported:  
08/11/00 10:08

## Anions by EPA Method 300.0

### Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (MJG0789-01) Water Sampled: 07/26/00 13:15 Received: 07/27/00 12:19</b>									
Nitrate as NO <sub>3</sub>	7.80	1.00	mg/l	10	0G28025	07/27/00	07/27/00	EPA 300.0	
Sulfate as SO <sub>4</sub>	387	50.0	"	100	"	"	"	"	
<b>MW-2 (MJG0789-02) Water Sampled: 07/26/00 14:04 Received: 07/27/00 12:19</b>									
Nitrate as NO <sub>3</sub>	7.59	1.00	mg/l	10	0G28025	07/27/00	07/27/00	EPA 300.0	
Sulfate as SO <sub>4</sub>	399	50.0	"	100	"	"	"	"	
<b>MW-3 (MJG0789-03) Water Sampled: 07/26/00 13:38 Received: 07/27/00 12:19</b>									
Nitrate as NO <sub>3</sub>	ND	1.00	mg/l	10	0G28025	07/27/00	07/27/00	EPA 300.0	
Sulfate as SO <sub>4</sub>	355	50.0	"	100	"	"	"	"	
<b>MW-4 (MJG0789-04) Water Sampled: 07/26/00 14:50 Received: 07/27/00 12:19</b>									
Nitrate as NO <sub>3</sub>	6.30	1.00	mg/l	10	0G28025	07/27/00	07/27/00	EPA 300.0	
Sulfate as SO <sub>4</sub>	372	50.0	"	100	0H02022	07/28/00	07/28/00	"	



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Project Number: 4255 McArthur Blvd./ Oakland  
Project Manager: Nick Sudano

Reported:  
08/11/00 10:08

## 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 0H07004 - EPA 5030B [P/T]

Blank (0H07004-BLK1)										Prepared & Analyzed: 08/07/00
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: <i>a,a,a</i> -Trifluorotoluene	9.52		"	10.0		95.2	70-130			

LCS (0H07004-BS1)										Prepared & Analyzed: 08/07/00
Benzene	9.52	0.500	ug/l	10.0		95.2	70-130			
Toluene	10.2	0.500	"	10.0		102	70-130			
Ethylbenzene	8.87	0.500	"	10.0		88.7	70-130			
Xylenes (total)	28.9	0.500	"	30.0		96.3	70-130			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	9.88		"	10.0		98.8	70-130			

Matrix Spike (0H07004-MS1)		Source: MJG0855-10								Prepared & Analyzed: 08/07/00
Benzene	8.51	0.500	ug/l	10.0	ND	85.1	60-140			
Toluene	9.38	0.500	"	10.0	ND	93.8	60-140			
Ethylbenzene	8.20	0.500	"	10.0	ND	82.0	60-140			
Xylenes (total)	25.6	0.500	"	30.0	ND	85.3	60-140			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	9.59		"	10.0		95.9	70-130			

Matrix Spike Dup (0H07004-MSD1)		Source: MJG0855-10								Prepared & Analyzed: 08/07/00
Benzene	9.33	0.500	ug/l	10.0	ND	93.3	60-140	9.19	25	
Toluene	10.1	0.500	"	10.0	ND	101	60-140	7.39	25	
Ethylbenzene	8.92	0.500	"	10.0	ND	89.2	60-140	8.41	25	
Xylenes (total)	27.4	0.500	"	30.0	ND	91.3	60-140	6.79	25	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	9.98		"	10.0		99.8	70-130			





# Sequoia Analytical

885 Jarvis Drive  
Morgan Hill, CA 95037  
(408) 776-9600  
FAX (408) 782-6308  
[www.sequelalabs.com](http://www.sequelalabs.com)

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

Project: 4255 McArthur Blvd.  
Project Number: 4255 McArthur Blvd./ Oakland  
Project Manager: Nick Sudano

**Reported:**  
08/11/00 10:08

## 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 0H07004 - EPA 5030B [P/T]

<b>Blank (0H07004-BLK1)</b>	Prepared & Analyzed: 08/07/00								
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>	9.52		"	10.0		95.2	70-130		
<b>LCS (0H07004-BS1)</b>	Prepared & Analyzed: 08/07/00								
Benzene	9.52	0.500	ug/l	10.0		95.2	70-130		
Toluene	10.2	0.500	"	10.0		102	70-130		
Ethylbenzene	8.87	0.500	"	10.0		88.7	70-130		
Xylenes (total)	28.9	0.500	"	30.0		96.3	70-130		
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.88		"	10.0		98.8	70-130		
<b>Matrix Spike (0H07004-MS1)</b>	Source: MJG0855-10			Prepared & Analyzed: 08/07/00					
Benzene	8.51	0.500	ug/l	10.0	ND	85.1	60-140		
Toluene	9.38	0.500	"	10.0	ND	93.8	60-140		
Ethylbenzene	8.20	0.500	"	10.0	ND	82.0	60-140		
Xylenes (total)	25.6	0.500	"	30.0	ND	85.3	60-140		
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.59		"	10.0		95.9	70-130		
<b>Matrix Spike Dup (0H07004-MSD1)</b>	Source: MJG0855-10			Prepared & Analyzed: 08/07/00					
Benzene	9.33	0.500	ug/l	10.0	ND	93.3	60-140	9.19	25
Toluene	10.1	0.500	"	10.0	ND	101	60-140	7.39	25
Ethylbenzene	8.92	0.500	"	10.0	ND	89.2	60-140	8.41	25
Xylenes (total)	27.4	0.500	"	30.0	ND	91.3	60-140	6.79	25
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.98		"	10.0		99.8	70-130		





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

Project: 4255 McArthur Blvd.  
Project Number: 4255 McArthur Blvd./ Oakland  
Project Manager: Nick Sudano

Reported:  
08/11/00 10:08

## Total Metals by EPA 6000/7000 Series Methods - Quality Control

### Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 0H02016 - EPA 3005A</b>										
<b>Blank (0H02016-BLK1)</b> Prepared & Analyzed: 08/02/00										
Ferrous Iron      ND      0.0100      mg/l										
<b>LCS (0H02016-BS1)</b> Prepared & Analyzed: 08/02/00										
Ferrous Iron      1.08      0.0100      mg/l      1.00      108      80-120										
<b>Matrix Spike (0H02016-MS1)</b> Source: MJG0783-02      Prepared & Analyzed: 08/02/00										
Ferrous Iron      1.17      0.0100      mg/l      1.00      0.0885      108      80-120										
<b>Matrix Spike Dup (0H02016-MSD1)</b> Source: MJG0783-02      Prepared & Analyzed: 08/02/00										
Ferrous Iron      1.17      0.0100      mg/l      1.00      0.0885      108      80-120      0      20										





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

Project: 4255 McArthur Blvd.  
Project Number: 4255 McArthur Blvd./ Oakland  
Project Manager: Nick Sudano

**Reported:**  
08/11/00 10:08

## Total Metals by EPA 6000/7000 Series Methods - 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 0H02016 - EPA 3005A

**Blank (0H02016-BLK1)** Prepared & Analyzed: 08/02/00

Ferrous Iron	ND	0.0100	mg/l
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**LCS (0H02016-BS1)** Prepared & Analyzed: 08/02/00

Ferrous Iron	1.08	0.0100	mg/l	1.00	108	80-120
--------------	------	--------	------	------	-----	--------

**Matrix Spike (0H02016-MS1)** Source: MJG0783-02 Prepared & Analyzed: 08/02/00

Ferrous Iron	1.17	0.0100	mg/l	1.00	0.0885	108	80-120
--------------	------	--------	------	------	--------	-----	--------

**Matrix Spike Dup (0H02016-MSD1)** Source: MJG0783-02 Prepared & Analyzed: 08/02/00

Ferrous Iron	1.17	0.0100	mg/l	1.00	0.0885	108	80-120	0	20
--------------	------	--------	------	------	--------	-----	--------	---	----





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

Project: 4255 McArthur Blvd.  
Project Number: 4255 McArthur Blvd./ Oakland  
Project Manager: Nick Sudano

**Reported:**  
08/11/00 10:08

**Anions by EPA Method 300.0 - 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 0G28025 - General Preparation**

**Blank (0G28025-BLK1)** Prepared & Analyzed: 07/27/00

Nitrate as NO <sub>3</sub>	ND	0.100	mg/l
Sulfate as SO <sub>4</sub>	ND	0.500	"

**LCS (0G28025-BS1)** Prepared & Analyzed: 07/27/00

Nitrate as NO <sub>3</sub>	9.71	0.100	mg/l	10.0	97.1	90-110
Sulfate as SO <sub>4</sub>	9.65	0.500	"	10.0	96.5	90-110

**Matrix Spike (0G28025-MS1)** Source: MJG0789-01 Prepared & Analyzed: 07/27/00

Nitrate as NO <sub>3</sub>	99.7	1.00	mg/l	100	7.80	91.9	80-120
Sulfate as SO <sub>4</sub>	546	5.00	"	100	387	159	80-120

Q-03

**Matrix Spike Dup (0G28025-MSD1)** Source: MJG0789-01 Prepared & Analyzed: 07/27/00

Nitrate as NO <sub>3</sub>	99.5	1.00	mg/l	100	7.80	91.7	80-120	0.201	20
Sulfate as SO <sub>4</sub>	541	5.00	"	100	387	154	80-120	0.920	20

Q-03

**Batch 0H02022 - General Preparation**

**Blank (0H02022-BLK1)** Prepared & Analyzed: 07/28/00

Nitrate as NO <sub>3</sub>	ND	0.100	mg/l
Sulfate as SO <sub>4</sub>	ND	0.500	"

**LCS (0H02022-BS1)** Prepared & Analyzed: 07/28/00

Nitrate as NO <sub>3</sub>	9.76	0.100	mg/l	10.0	97.6	90-110
Sulfate as SO <sub>4</sub>	9.72	0.500	"	10.0	97.2	90-110

**Matrix Spike (0H02022-MS1)** Source: MJG0819-05 Prepared & Analyzed: 07/28/00

Nitrate as NO <sub>3</sub>	133	1.00	mg/l	100	33.4	99.6	80-120
Sulfate as SO <sub>4</sub>	123	5.00	"	100	25.8	97.2	80-120





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1680 Rogers Avenue  
San Jose CA, 95112

Project: 4255 McArthur Blvd.  
Project Number: 4255 McArthur Blvd./ Oakland  
Project Manager: Nick Sudano

**Reported:**  
08/11/00 10:08

**Anions by EPA Method 300.0 - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 0G28025 - General Preparation**

**Blank (0G28025-BLK1)**      Prepared & Analyzed: 07/27/00

Nitrate as NO <sub>3</sub>	ND	0.100	mg/l							
Sulfate as SO <sub>4</sub>	ND	0.500	"							

**LCS (0G28025-BS1)**      Prepared & Analyzed: 07/27/00

Nitrate as NO <sub>3</sub>	9.71	0.100	mg/l	10.0		97.1	90-110			
Sulfate as SO <sub>4</sub>	9.65	0.500	"	10.0		96.5	90-110			

**Matrix Spike (0G28025-MS1)**      Source: MJC0789-01      Prepared & Analyzed: 07/27/00

Nitrate as NO <sub>3</sub>	99.7	1.00	mg/l	100	7.80	91.9	80-120			
Sulfate as SO <sub>4</sub>	546	5.00	"	100	387	159	80-120			Q-03

**Matrix Spike Dup (0G28025-MSD1)**      Source: MJC0789-01      Prepared & Analyzed: 07/27/00

Nitrate as NO <sub>3</sub>	99.5	1.00	mg/l	100	7.80	91.7	80-120	0.201	20	
Sulfate as SO <sub>4</sub>	541	5.00	"	100	387	154	80-120	0.920	20	Q-03

**Batch 0H02022 - General Preparation**

**Blank (0H02022-BLK1)**      Prepared & Analyzed: 07/28/00

Nitrate as NO <sub>3</sub>	ND	0.100	mg/l							
Sulfate as SO <sub>4</sub>	ND	0.500	"							

**LCS (0H02022-BS1)**      Prepared & Analyzed: 07/28/00

Nitrate as NO <sub>3</sub>	9.76	0.100	mg/l	10.0		97.6	90-110			
Sulfate as SO <sub>4</sub>	9.72	0.500	"	10.0		97.2	90-110			

**Matrix Spike (0H02022-MS1)**      Source: MJC0819-05      Prepared & Analyzed: 07/28/00

Nitrate as NO <sub>3</sub>	133	1.00	mg/l	100	33.4	99.6	80-120			
Sulfate as SO <sub>4</sub>	123	5.00	"	100	25.8	97.2	80-120			



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

Project: 4255 McArthur Blvd.  
Project Number: 4255 McArthur Blvd./ Oakland  
Project Manager: Nick Sudano

**Reported:**  
08/11/00 10:08

## Notes and Definitions

- M-03      Sample was analyzed at a second dilution per clients request.
- P-01      Chromatogram Pattern: Gasoline C6-C12
- Q-03      The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte already present in the sample.
- 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





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

Project: 4255 McArthur Blvd.  
Project Number: 4255 McArthur Blvd./ Oakland  
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08/11/00 10:08

## Notes and Definitions

- M-03      Sample was analyzed at a second dilution per clients request.
- P-01      Chromatogram Pattern: Gasoline C6-C12
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- R-05      The reporting limit(s) for this sample have been raised due to high levels of non-target interferents.
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- 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



## WELL GAUGING DATA

Project # 000726-43 Date 7-26-00 Client ETQVIVASite 4255 MACARTHUR BLVD 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	D.O./OER
MW-1	4	ORC*				7.52	23.36	TOC	
MW-2	4	SKINNY OR				12.82	19.61		
MW-3	4	ORC*				13.72	21.81		
MW-4	2	ORC	PURED ORC TO GAUGE			10.09	30.30		
TB-1	4	ORC*				5.13	13.37		1.0/-124
TB-2	4	ORC*				4.73	12.84	-	0.9/-85

~~\* ALL WELLS GAUGED w/ ORC's IN WELL~~

## WELL GAUGING DATA

Project # 000726-43 Date 7-26-00 Client EQUIVASite 4255 MACARTHUR BLVD 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	D.O./ ORP
MW-1	4	ORC*				7.52	23.36	TOC	
MW-2	4	SKIMMER				12.82	19.61		
MW-3	4	ORC*				13.72	21.81		
MW-4	2	ORC Poured ORC TO GAUGE				10.09	30.30		
TB-1	4	ORC*				5.13	13.37		1.0/-124
TB-2	4	ORC*				4.73	12.84	-	0.9/-85
<i>* = wells gauged w/ ORC's in well</i>									

# EQUIVA WELL MONITORING DATA SHEET

Project #: 000726-43	Job # 204-5510 -0600																		
Sampler: Leon G.	Date: 7-26-00																		
Well I.D.: mw-2	Well Diameter: 2 3 (4) 6 8																		
Total Well Depth: 19.61	Depth to Water: 12.87																		
Depth to Free Product:	Thickness of Free Product (feet):																		
Referenced to: PVC	Grade	D.O. Meter (if req'd): YSI	HACH																
<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>2"</td> <td>0.16</td> <td>5"</td> <td>1.02</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>4"</td> <td>0.65</td> <td>Other</td> <td><math>\text{radius}^2 \cdot 0.163</math></td> </tr> </tbody> </table>				Well Diameter	Multiplier	Well Diameter	Multiplier	2"	0.16	5"	1.02	3"	0.37	6"	1.47	4"	0.65	Other	$\text{radius}^2 \cdot 0.163$
Well Diameter	Multiplier	Well Diameter	Multiplier																
2"	0.16	5"	1.02																
3"	0.37	6"	1.47																
4"	0.65	Other	$\text{radius}^2 \cdot 0.163$																

Purge Method: Bailer  
 Middleburg  
 Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method: Bailer  
 Extraction Port  
 Other: \_\_\_\_\_

<b>4.4</b>	<b>X</b>	<b>3</b>	<b>= 13.2</b>	Gals.
1 Case Volume (Gals.)		Specified Volumes	Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1359	74.4	6.8	1476	61	5	strong odor
1400	73.2	6.7	1056	59	9	
1400	72.2	6.7	872		14	

EMPTIED SKIMMER - HONEY SHEEN, NO FR

Did well dewater? Yes (No) Gallons actually evacuated: 14

Sampling Time: 1404 Sampling Date: 7-26-00

Sample I.D.: mw-2 Laboratory: Sequoia BC Other: \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: NITRATE, SULFATE, ALKALINITY, FERRIC IRON

D.O. (if req'd): Pre-purge: 2.2 mg/l Post-purge: \_\_\_\_\_ mg/l

O.R.P. (if req'd): Pre-purge: 113 mV Post-purge: \_\_\_\_\_ mV

# EQUIVA WELL MONITORING DATA SHEET

Project #: 000726-43	Job # 204-9910 -0600																		
Sampler: Leon G.	Date: 7-26-00																		
Well I.D.: mw-2	Well Diameter: 2 3 (4) 6 8																		
Total Well Depth: 19.61	Depth to Water: 12.87																		
Depth to Free Product:	Thickness of Free Product (feet):																		
Referenced to: PVC	Grade	D.O. Meter (if req'd): VSI HACH																	
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>2"</td> <td>0.16</td> <td>5"</td> <td>1.02</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>4"</td> <td>0.65</td> <td>Other</td> <td><math>\text{radius}^2 * 0.163</math></td> </tr> </tbody> </table>				Well Diameter	Multiplier	Well Diameter	Multiplier	2"	0.16	5"	1.02	3"	0.37	6"	1.47	4"	0.65	Other	$\text{radius}^2 * 0.163$
Well Diameter	Multiplier	Well Diameter	Multiplier																
2"	0.16	5"	1.02																
3"	0.37	6"	1.47																
4"	0.65	Other	$\text{radius}^2 * 0.163$																
Purge Method: Bailer	Sampling Method: Bailer																		
Middleburg	Extraction Port																		
Electric Submersible																			
Extraction Pump																			
Other: <i>clip</i>																			
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td>4.4</td> <td>X</td> <td>3</td> <td>=</td> <td>13.2</td> <td>Gals.</td> </tr> <tr> <td>1 Case Volume (Gals.)</td> <td></td> <td>Specified Volumes</td> <td></td> <td>Calculated Volume</td> <td></td> </tr> </table>				4.4	X	3	=	13.2	Gals.	1 Case Volume (Gals.)		Specified Volumes		Calculated Volume					
4.4	X	3	=	13.2	Gals.														
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume															
Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations													
1359	74.4	6.8	1476	61	5	STRONG ODOUR													
1400	73.2	6.7	1056	59	9														
1400	72.2	6.7	672		14														
<i>EMPTIED SKIMMER - HEAVY SHEEN, NO FR</i>																			
Did well dewater? Yes	No	Gallons actually evacuated: 14																	
Sampling Time: 1404	Sampling Date: 7-26-00																		
Sample I.D.: mw-2	Laboratory: Sequoia BC					Other: _____													
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: NITRATE, SULFATE, ALKALINITY, FERROUS IRON																		
D.O. (if req'd):	Pre-purge:	2.2	mg/L	Post-purge:	mg/L														
O.R.P. (if req'd):	Pre-purge:	113	mV	Post-purge:	mV														

# EQUIVA WELL MONITORING DATA SHEET

BTS #: <i>000726-43</i>	Site: <i>204-5510-0600</i>		
Sampler: <i>LEON G.</i>	Date: <i>7-26-00</i>		
Well I.D.: <i>mw-4</i>	Well Diameter: <i>(2) 3 4 6 8</i>		
Total Well Depth: <i>30.30</i>	Depth to Water: <i>10.09</i>		
Depth to Free Product:	Thickness of Free Product (feet):		
Referenced to: <i>PVC</i>	Grade	D.O. Meter (if req'd): <i>YSI</i>	HACH

Purge Method:

 Bailer

Waterra

Sampling Method:

 Bailer

Disposable Bailer

Disposable Bailer

Peristaltic

Extraction Port

Middleburg

Extraction Pump

Dedicated Tubing

Electric Submersible

Other \_\_\_\_\_

Other: \_\_\_\_\_

<i>3.2</i>	(Gals.) X	<i>3</i>	=	<i>9.6</i>	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 <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
<i>1434</i>	<i>70.3</i>	<i>6.8</i>	<i>1130</i>	<i>&gt;200</i>	<i>3</i>	
<i>1439</i>	<i>69.9</i>	<i>6.7</i>	<i>1122</i>	<i>&gt;200</i>	<i>7</i>	
<i>1444</i>	<i>69.8</i>	<i>6.7</i>	<i>1102</i>	<i>&gt;200</i>	<i>10</i>	

Did well dewater? Yes

 NoGallons actually evacuated: *10*Sampling Time: *1450*Sampling Date: *7-26-00*Sample I.D.: *mw-4*Laboratory:  Sequoia  Columbia  OtherAnalyzed for:  TPH-G  BTEX  MTBE  TPH-D Other: *SULFATE, ALKALINITY, NITRATE, FERROUS IRON*

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:	<i>1.4</i> mg/L	Post-purge:	
O.R.P. (if req'd):	Pre-purge:	<i>-137</i> mV	Post-purge:	

# EQUIVA WELL MONITORING DATA SHEET

BTS #:	<u>000726-43</u>	Site:	<u>204-550-0600</u>
Sampler:	<u>LEON G.</u>	Date:	<u>7-26-00</u>
Well I.D.:	<u>mw-4</u>	Well Diameter:	( <u>2</u> ) 3 4 6 8
Total Well Depth:	<u>30.30</u>	Depth to Water:	<u>10.09</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

Waterra

Sampling Method:

Bailer

Disposable Bailer

Disposable Bailer

Extraction Port

Middleburg

Dedicated Tubing

Electric Submersible

Other \_\_\_\_\_

Other: dup

<u>3.2</u>	(Gals.) X	<u>3</u>	=	<u>9.6</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	$\text{radius}^2 \cdot 0.163$

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
<u>1434</u>	<u>70.3</u>	<u>6.8</u>	<u>1130</u>	<u>&gt;200</u>	<u>3</u>	
<u>1439</u>	<u>69.9</u>	<u>6.7</u>	<u>1122</u>	<u>&gt;200</u>	<u>7</u>	
<u>1444</u>	<u>69.8</u>	<u>6.7</u>	<u>1102</u>	<u>&gt;200</u>	<u>10</u>	

Did well dewater? Yes

No

Gallons actually evacuated: 10

Sampling Time: 1450

Sampling Date: 7-26-00

Sample I.D.: mw-4

Laboratory:  Sequoia  Columbia  Other

Analyzed for:  TPH-G  BTEX  MTBE  TPH-D Other: SULFATE, ACIDITY, NITRATE, FERRIC IRON

EB I.D. (if applicable):

<sup>w</sup> time

Duplicate I.D. (if applicable):

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

D.O. (if req'd):	<input checked="" type="checkbox"/> Pre-purge:	<u>1.4</u> mg/l	Post-purge:		mg/l
O.R.P. (if req'd):	<input checked="" type="checkbox"/> Pre-purge:	<u>-137</u> mV	Post-purge:		mV