

C A M B R I A

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

August 16, 2000

ENVIRONMENTAL
PROTECTION
000 AUG 16 PM 3:13

Re: **First 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.

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

FIRST QUARTER 2000 ACTIVITIES

**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 gasoline constituents analytical data. No SPH were detected this quarter. 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. Groundwater samples are analyzed for bio-attenuation parameters on an annual basis during the third quarter monitoring activities. Analytical data for bioattenuation parameters are summarized in Table 1.

Groundwater Extraction: Cambria visited the site on February 28, 2000 to oversee groundwater extraction from monitoring well MW-2 and tank backfill well TB-2. Groundwater was extracted from the wells using a vacuum truck. Well MW-2 was dewatered after extracting approximately 200 gallons of groundwater. Approximately 4,500 gallons of groundwater were extracted from well TB-2. Groundwater extraction data and hydrocarbon removal are summarized in Table 2.



ANTICIPATED SECOND 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.

Monitoring Well Installation: Cambria is evaluating alternative locations for a previously proposed monitoring well.

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 Buggle
Project Environmental Scientist



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



Figure: 1 - Groundwater Elevation Contour Map

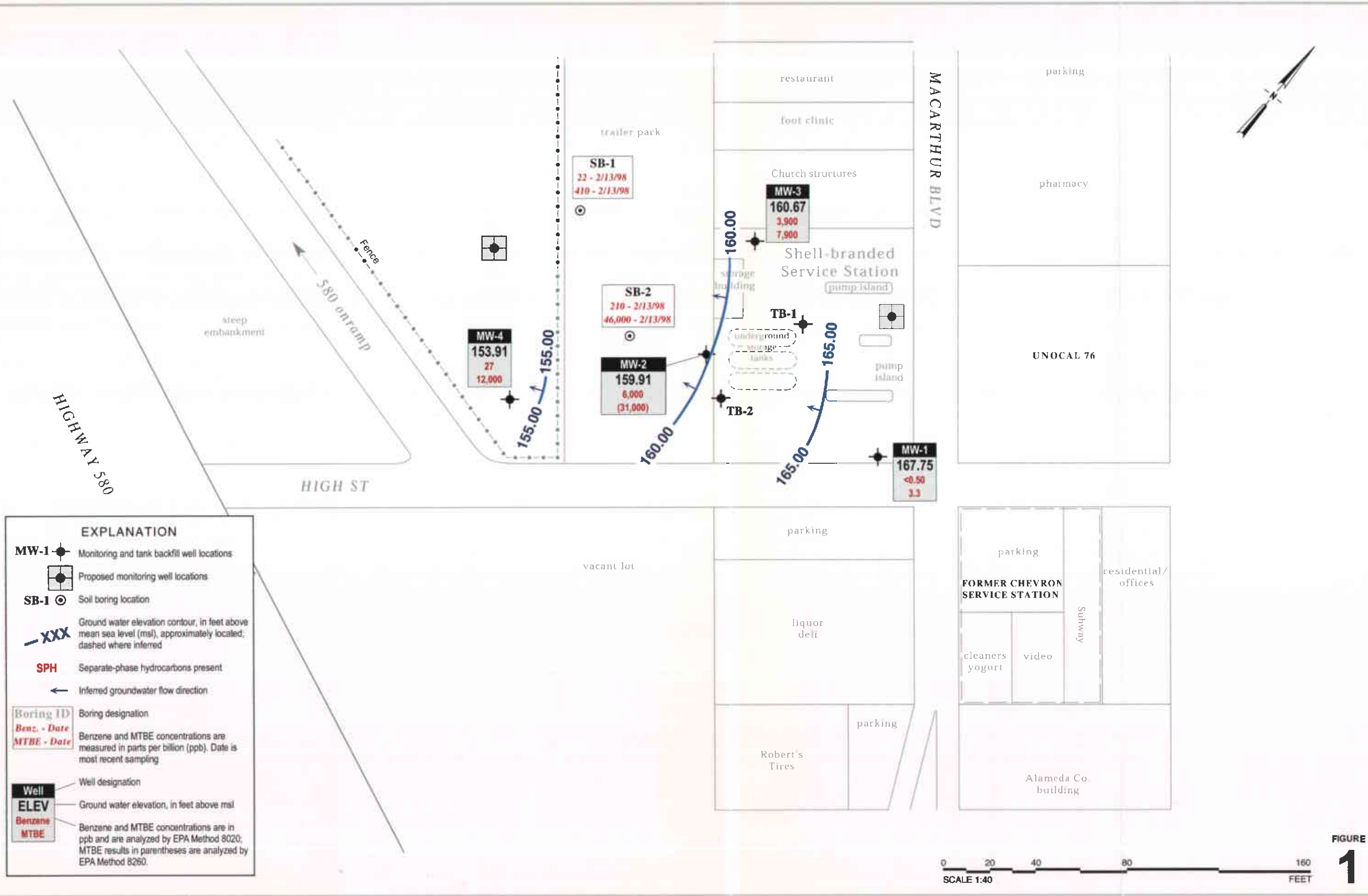
Table: 1 - Bioattenuation Parameters Analytical Data
2 - Groundwater Extraction and Hydrocarbon Removal

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, Equiva Services LLC, P.O. Box 7869, Burbank, California 91501-7869
Roland C. Malone, Jr., PO Box 2099, Houston, TX 77252

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03/09/00



G:\OAK4255\FIGURES\1QM00-MP.A

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

Well ID	Date	Ground Water Depth (ft)	DO	Total Alkalinity	(Concentrations in mg/L)			Notes
					Ferrous Iron	Nitrate as Nitrate	Sulfate	
MW-1	07/17/98	7.28	0.8	460	1.6	<1.0	12	
	07/23/99	8.51	1.0	480	0.790	7.49	28.6	
MW-2	07/17/98	11.75	---	---	---	---	---	SPH
	07/23/99	14.45	1.4	440	26.0	<1.00	3.24	
MW-3	07/17/98	11.51	1.3	860	5.3	<1.0	6.5	
	07/17/98	11.51	1.3	860	5.4	<1.0	5.8	duplicate
	07/23/99	14.95	1.3	920	76.0	<1.00	4.23	
MW-4	07/17/98	6.95	1.4	630	2.8	<1.0	13	
	07/23/99	11.33	0.9	620	46.0	7.41	6.03	

Notes and Abbreviations:

DO = Dissolved oxygen

ft = Feet

mg/L = Milligrams per liter

SPH = Separate-phase hydrocarbons in well; not sampled

--- = Not analyzed

<n = Below detection limit of n mg/L

Total alkalinity by EPA Method 310.2, concentrations in mg CaCO₃/L

Ferrous iron by EPA Method 200.7

Nitrate as nitrate and sulfate by EPA Method 300.0

TABLE 2

PETROLEUM HYDROCARBON MASS REMOVAL

Shell-branded Service Station

4255 MacArthur Boulevard

Oakland, California

Incident #98995758

SAP #135701

Calc off by 1000

Date	Well Number	Volume Groundwater Extracted (gallons)	Sample Date	TPPH (ug/L)	TPPH Removed (pounds)	Benzene (ug/L)	Benzene Removed (pounds)	MTBE (ug/L)	MTBE Removed (pounds)
23-Apr-99	MW-2	200	13-Apr-98	180,000	0.0003	2,800	0.00000	71,000	0.000
23-Apr-99	TB-2	4,800	24-Aug-99	6,240	0.0002	400	0.00002	86,100	0.003
24-May-99	MW-2	200	13-Apr-98	180,000	0.0003	2,800	0.00000	71,000	0.000
24-May-99	TB-2	4,800	24-Aug-99	6,240	0.0002	400	0.00002	86,100	0.003
28-Jun-99	MW-2	200	13-Apr-98	180,000	0.0003	2,800	0.00000	71,000	0.000
28-Jun-99	TB-2	4,800	24-Aug-99	6,240	0.0002	400	0.00002	86,100	0.003
30-Jul-99	MW-2	200	13-Apr-98	180,000	0.0003	2,800	0.00000	71,000	0.000
30-Jul-99	TB-2	4,800	24-Aug-99	6,240	0.0002	400	0.00002	86,100	0.003
24-Aug-99	MW-2	100	13-Apr-98	180,000	0.0002	2,800	0.00000	71,000	0.000
24-Aug-99	TB-2	2,400	24-Aug-99	6,240	0.0001	400	0.00001	86,100	0.002
29-Oct-99	MW-2	100	13-Apr-98	180,000	0.0002	2,800	0.00000	71,000	0.000
29-Oct-99	TB-2	2,255	29-Oct-99	7,460	0.0001	656	0.00001	442	0.000
30-Nov-99	MW-2	100	13-Apr-98	180,000	0.0002	2,800	0.00000	71,000	0.000
30-Nov-99	TB-2	3,800	29-Oct-99	7,460	0.0002	656	0.00002	442	0.000
02-Feb-00	MW-2	200	17-Jan-00	46,000	0.00008	6,000	0.00001	31,000	0.0005
02-Feb-00	TB-2	4,500	31-Jan-00	2,070	0.00008	108	0.00004	6550	0.0003
Total Gallons Extracted:		28,955	Total Pounds Removed:		0.0032		0.00013		0.017

Notes:

- 1) Mass removal calculations for MW-2 based on last available quarterly ground water data collected in April 1998. *← not accurate*
Calculations for backfill well TB-2 based on grab ground water sample collected during vacuum truck dewatering. *← results?*
- 2) MTBE concentrations based on results by EPA Method 8020.
- 3) Ground water extracted by vacuum trucks provided by ECI. Water disposed of at Martinez Refinery.
- 4) Mass removed = Volume extracted (gallons) x Concentration (ug/L) x (1 g/1e9 ug) x (1 pound/453.6 g) x (3.785 L/1 gallon) = *

eg $\frac{4800}{6.2 \times 10^{-3}} \times \frac{6240 \times 10^{-6} \times 3.785}{454} = 5 \times 10^{-5}$

\uparrow
S/B $1e6$

2.5×10^{-2}

$5 \times 10^3 \times 6 \times 10^{-3} \times 10^{-2} \approx 3 \times 10^{-1} = .3$

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

February 21, 2000

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

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

Monitoring performed on January 17, 2000

Groundwater Monitoring Report **000117-Y-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/jh

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
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-1	11/17/93	410	21	11	7.9	47	NA	NA	175.79	8.59	NA	167.20	NA	NA	NA
MW-1	1/20/94	1,200	180	19	48	47	NA	NA	175.79	8.22	NA	167.57	NA	NA	NA
MW-1	4/25/94	3,100	610	<10	130	27	NA	NA	175.79	7.63	NA	168.16	NA	NA	NA
MW-1	7/7/94	2,400	1,000	10	250	20	NA	NA	175.79	8.31	NA	167.48	NA	NA	NA
MW-1	10/27/94	2,200	500	3.1	72	1.8	NA	NA	175.79	8.84	NA	166.95	NA	NA	NA
MW-1	11/17/94	NA	NA	NA	NA	NA	NA	NA	175.79	7.60	NA	168.19	NA	NA	NA
MW-1	11/28/94	NA	NA	NA	NA	NA	NA	NA	175.79	7.56	NA	168.23	NA	NA	NA
MW-1	1/13/95	570	75	2.5	6.7	11	NA	NA	175.79	7.11	NA	168.68	NA	NA	NA
MW-1	4/12/95	1,800	480	<5.0	79	<5.0	NA	NA	175.79	7.08	NA	168.71	NA	NA	NA
MW-1	7/25/95	120	15	1.1	2.1	2.9	NA	NA	175.79	7.73	NA	168.06	NA	NA	NA
MW-1 (D)	7/25/95	300	88	2.4	11	6.5	NA	NA	175.79	7.73	NA	168.06	NA	NA	NA
MW-1	10/18/95	130	9.5	0.8	1.3	1.7	NA	NA	175.79	8.42	NA	167.37	NA	NA	NA
MW-1 (D)	10/18/95	120	11	0.8	1.4	1.8	NA	NA	175.79	8.42	NA	167.37	NA	NA	NA
MW-1	1/17/96	250	22	0.9	1.6	2.3	NA	NA	175.79	7.83	NA	167.96	NA	NA	NA
MW-1	4/25/96	<50	4.6	<0.5	<0.5	0.6	500b	NA	175.79	7.35	NA	168.44	NA	NA	NA
MW-1	7/17/96	<250	15	<2.5	<2.5	<2.5	540	NA	175.79	7.70	NA	168.09	NA	NA	NA
MW-1	10/1/96	1,200	500	12	57	82	1,900	NA	175.79	8.07	NA	167.72	NA	NA	NA
MW-1	1/22/97	640	170	4.3	33	33	1,200	NA	175.79	7.21	NA	168.58	NA	NA	NA
MW-1	4/8/97	<200	34	<2.0	3.3	4.3	950	NA	175.79	7.75	NA	168.04	NA	NA	NA
MW-1 (D)	4/8/97	<200	66	<2.0	6.4	8	740	NA	175.79	7.75	NA	168.04	NA	NA	NA
MW-1	7/8/97	190	49	1.2	5.8	8.6	560	NA	175.79	8.01	NA	167.78	NA	NA	NA
MW-1	10/8/97	<100	7	<1.0	<1.0	<1.0	620	NA	175.79	8.10	NA	167.69	NA	NA	NA
MW-1	1/9/98	970	390	12	48	71	1,200	NA	175.79	7.14	NA	168.65	NA	NA	NA
MW-1	4/13/98	<50	136	<0.50	1.5	1.8	170	NA	175.79	6.78	NA	169.01	NA	NA	NA
MW-1	7/17/98	2,500	750	11	88	67	150	NA	175.79	7.28	NA	168.51	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	10/2/98	8,000	970	36	270	440	35	NA	175.79	7.77	NA	168.02	NA	NA	NA
MW-1	2/3/99	210	56	0.82	<0.50	3.2	220	NA	175.79	7.45	NA	168.34	NA	1.4	NA
MW-1	4/29/99	<50	4.5	<0.50	0.56	<0.50	140	196	175.79	7.58	NA	168.21	NA	1.2	140
MW-1	7/23/99	<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	11/1/99	<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	1/17/00	<50	<0.50	<0.50	<0.50	<0.50	3.3	NA	175.79	8.04	NA	167.75	NA	16.9	64

MW-2	11/17/93	31,000	9,400	4,600	1,000	3,900	NA	NA	170.91	12.31	NA	158.60	NA	NA	NA
MW-2	1/20/94	40,000	6,900	5,600	780	4,100	NA	NA	170.91	11.48	NA	159.43	NA	NA	NA
MW-2 (D)	1/20/94	41,000	7,200	6,200	900	4,800	NA	NA	170.91	11.48	NA	159.43	NA	NA	NA
MW-2	4/25/94	60,000	9,300	6,100	1,400	6,200	NA	NA	170.91	10.84	NA	160.07	NA	NA	NA
MW-2	7/7/94	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)	7/7/94	53,000	13,000	6,600	2,000	8,400	NA	NA	170.91	11.89	NA	159.02	NA	NA	NA
MW-2	10/27/94	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)	10/27/94	390,000	8,800	7,000	1,700	11,000	NA	NA	170.91	12.89	NA	158.02	NA	NA	NA
MW-2	11/17/94	NA	NA	NA	NA	NA	NA	NA	170.91	9.11	NA	161.80	NA	NA	NA
MW-2	11/28/94	NA	NA	NA	NA	NA	NA	NA	170.91	9.22	NA	161.69	NA	NA	NA
MW-2	1/13/95	75,000	5,900	12,000	3,100	17,000	NA	NA	170.91	8.10	NA	162.81	NA	NA	NA
MW-2	4/12/95	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)	4/12/95	80,000	4,200	9,300	2,500	12,000	NA	NA	170.91	10.12	NA	160.79	NA	NA	NA
MW-2	7/25/95	NA	NA	NA	NA	NA	NA	NA	170.91	11.53	NA	159.80	0.52	NA	NA
MW-2	10/18/95	NA	NA	NA	NA	NA	NA	NA	170.91	14.02	NA	156.99	0.13	NA	NA
MW-2	1/17/96	NA	NA	NA	NA	NA	NA	NA	170.91	10.27	NA	160.78	0.17	NA	NA
MW-2	4/25/96	NA	NA	NA	NA	NA	NA	NA	170.91	11.68	NA	159.25	0.03	NA	NA
MW-2	7/17/96	NA	NA	NA	NA	NA	NA	NA	170.91	12.78	NA	158.81	0.48	NA	NA
MW-2	10/1/96	NA	NA	NA	NA	NA	NA	NA	170.91	14.21	NA	156.70	0.28	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	1/22/97	NA	NA	NA	NA	NA	NA	NA	170.91	10.92	NA	160.08	0.11	NA	NA
MW-2	4/8/97	NA	NA	NA	NA	NA	NA	NA	170.91	14.12	NA	156.95	0.20	NA	NA
MW-2	7/8/97	NA	NA	NA	NA	NA	NA	NA	170.91	14.98	NA	156.08	0.19	NA	NA
MW-2	10/8/97	NA	NA	NA	NA	NA	NA	NA	170.91	12.97	NA	157.98	0.05	NA	NA
MW-2	1/8/98	NA	NA	NA	NA	NA	NA	NA	170.91	12.54	NA	158.43	0.08	NA	NA
MW-2	4/13/98	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	7/17/98	NA	NA	NA	NA	NA	NA	NA	170.91	11.75	NA	159.24	0.10	NA	NA
MW-2	10/2/98	NA	NA	NA	NA	NA	NA	NA	170.91	16.78	NA	154.22	0.11	NA	NA
MW-2	2/3/99	NA	NA	NA	NA	NA	NA	NA	170.91	9.90	9.82	161.07	0.08	NA	NA
MW-2	4/29/99	NA	NA	NA	NA	NA	NA	NA	170.91	9.86	9.81	161.09	0.05	NA	NA
MW-2	7/23/99	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	11/1/99	NA	NA	NA	NA	NA	NA	NA	170.91	11.84	11.81	159.09	0.03	NA	NA
MW-2	1/17/00	46,000	6,000	2,400	1,500	6,500	50,000	31,000	170.91	11.00	NA	159.91	NA	1.3	-54

MW-3	11/17/93	18,000	5,400	660	720	2,200	NA	NA	174.61	15.40	NA	159.21	NA	NA	NA
MW-3	1/20/94	55,000	13,000	2,600	2,200	6,500	NA	NA	174.61	14.61	NA	160.00	NA	NA	NA
MW-3	4/25/94	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)	4/25/94	78,000	12,000	1,900	2,600	7,300	NA	NA	174.61	13.12	NA	161.49	NA	NA	NA
MW-3	7/7/94	NA	NA	NA	NA	NA	NA	NA	174.61	14.54	NA	160.07	0.02	NA	NA
MW-3	10/27/94	NA	NA	NA	NA	NA	NA	NA	174.61	15.62	NA	159.03	0.05	NA	NA
MW-3	11/17/94	NA	NA	NA	NA	NA	NA	NA	174.61	13.83	NA	160.78	NA	NA	NA
MW-3	11/28/94	NA	NA	NA	NA	NA	NA	NA	174.61	14.02	NA	160.59	NA	NA	NA
MW-3	1/13/95	180,000	3,200	2,700	1,700	5,200	NA	NA	174.61	12.13	NA	162.48	NA	NA	NA
MW-3 (D)	1/13/95	23,000	4,000	690	960	3,000	NA	NA	174.61	12.13	NA	162.48	NA	NA	NA
MW-3	4/12/95	56,000	8,700	1,500	2,100	6,300	NA	NA	174.61	12.96	NA	161.65	NA	NA	NA
MW-3	7/25/95	NA	NA	NA	NA	NA	NA	NA	174.61	14.28	NA	160.38	0.06	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	10/18/95	NA	NA	NA	NA	NA	NA	NA	174.61	15.88	NA	158.77	0.05	NA	NA
MW-3	1/17/96	NA	NA	NA	NA	NA	NA	NA	174.61	13.86	NA	160.94	0.24	NA	NA
MW-3	4/25/96	NA	NA	NA	NA	NA	NA	NA	174.61	13.82	NA	160.81	0.02	NA	NA
MW-3	7/17/96	NA	NA	NA	NA	NA	NA	NA	174.61	16.11	NA	158.52	0.03	NA	NA
MW-3	10/1/96	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)	10/1/96	47,000	7,100	530	1,700	4,000	2,900	NA	174.61	16.56	NA	158.05	NA	NA	NA
MW-3	1/22/97	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)	1/22/97	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	4/8/97	NA	NA	NA	NA	NA	NA	NA	174.61	17.09	NA	157.54	0.03	NA	NA
MW-3	7/8/97	56,000	8,800	580	2,000	4,900	2,800	NA	174.61	15.85	NA	158.76	NA	NA	NA
MW-3	10/8/97	48,000	8,000	590	1,700	3,400	5,100	NA	174.61	16.22	NA	158.39	NA	NA	NA
MW-3	1/8/98	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)	1/8/98	48,000	8,100	750	2,000	4,100	5,800	NA	174.61	13.80	NA	160.81	NA	NA	NA
MW-3	4/13/98	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)	4/13/98	36,000	7,300	660	1,600	3,700	4,000	NA	174.61	12.97	NA	161.64	NA	NA	NA
MW-3	7/17/98	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)	7/17/98	76,000	12,000	700	2,600	8,000	3,000	NA	174.61	11.51	NA	163.10	NA	NA	NA
MW-3	10/2/98	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)	10/2/98	59,000	9,400	460	2,000	4,900	4,700	NA	174.61	16.50	NA	158.11	NA	NA	NA
MW-3	2/3/99	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	4/29/99	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	7/23/99	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	11/1/99	20,000	4,190	294	1,060	1,740	5,540	8,590	174.61	14.66	NA	159.95	NA	0.6	-110
MW-3	1/17/00	17,000	3,900	89	1,100	1,200	7,900	NA	174.61	13.94	NA	160.67	NA	1.3	-40
MW-4	11/17/94	NA	NA	NA	NA	NA	NA	NA	164.06	6.62	NA	157.44	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-4	11/28/94	2,900	200	17	76	260	NA	NA	164.06	6.11	NA	157.95	NA	NA	NA
MW-4	1/13/95	1,900	130	5.6	13	40	NA	NA	164.06	6.05	NA	158.01	NA	NA	NA
MW-4	4/12/95	680	150	<2.0	10	13	NA	NA	164.06	6.31	NA	157.75	NA	NA	NA
MW-4	7/25/95	340	100	0.8	8.8	3	NA	NA	164.06	7.36	NA	156.70	NA	NA	NA
MW-4	10/18/95	150	31	<0.5	3.5	0.8	NA	NA	164.06	8.54	NA	155.52	NA	NA	NA
MW-4	1/17/96	290	14	<0.5	1.8	0.8	NA	NA	164.06	8.48	NA	155.58	NA	NA	NA
MW-4	4/25/96	<500	65	<5	<5	<5	1,700	NA	164.06	7.40	NA	156.66	NA	NA	NA
MW-4 (D)	4/25/96	<500	66	<5	8.7	<5	1,500	NA	164.06	7.40	NA	156.66	NA	NA	NA
MW-4	7/17/96	<500	84	<5.0	6.5	<5.0	1,500	NA	164.06	7.75	NA	156.31	NA	NA	NA
MW-4 (D)	7/17/96	<500	54	<5.0	<5.0	<5.0	1,700	2,100	164.06	7.75	NA	156.31	NA	NA	NA
MW-4	10/1/96	<500	1.9	<5.0	<5.0	<5.0	3,000	NA	164.06	8.82	NA	155.24	NA	NA	NA
MW-4	1/22/97	580	130	<2.5	18	5.2	1,200	NA	164.06	7.51	NA	156.55	NA	NA	NA
MW-4	4/8/97	770	200	7	26	55	1,500	8	164.06	7.18	NA	156.88	NA	NA	NA
MW-4	7/8/97	570	78	<5.0	14	11	1,200	NA	164.06	9.00	NA	155.06	NA	NA	NA
MW-4 (D)	7/8/97	640	81	<5.0	16	19	1,600	NA	164.06	9.00	NA	155.06	NA	NA	NA
MW-4	10/8/97	<500	40	<5.0	7.4	5.4	1,400	NA	164.06	8.97	NA	155.09	NA	NA	NA
MW-4 (D)	10/8/97	<500	36	<5.0	5.9	<5.0	1,400	NA	164.06	8.97	NA	155.09	NA	NA	NA
MW-4	1/8/98	<1,000	55	<10	13	<10	2,000	NA	164.06	7.90	NA	156.16	NA	NA	NA
MW-4	4/13/98	350	110	2.4	20	26	<2.5	NA	164.06	7.35	NA	156.71	NA	NA	NA
MW-4	7/17/98	210	66	0.78	5.4	9.8	1,700	NA	164.06	6.95	NA	157.11	NA	NA	NA
MW-4	10/2/98	<50	0.69	<0.50	<0.50	<0.50	2,900	NA	164.06	7.35	NA	156.71	NA	NA	NA
MW-4	2/3/99	560	120	2.5	29	34	6,800	NA	164.06	7.71	NA	156.35	NA	0.9	NA
MW-4	4/29/99	390	80	1.9	13	19	7,000	8,360	164.06	7.83	NA	156.23	NA	1.1	-125
MW-4	7/23/99	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	11/1/99	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	1/17/00	160	27	<0.50	12	6.3	12,000	NA	164.06	10.15	NA	153.91	NA	3.9	-17

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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TB-1	4/29/99	NA	NA	NA	NA	NA	NA	NA	NA	6.00	NA	NA	NA	3.8	-132
TB-1	11/1/99	NA	NA	NA	NA	NA	NA	NA	NA	12.65	NA	NA	NA	0.2	-165
TB-1	1/17/00	NA	NA	NA	NA	NA	NA	NA	NA	7.72	NA	NA	NA	0.8	-178

TB-2	4/29/99	NA	NA	NA	NA	NA	NA	NA	NA	4.76	NA	NA	NA	4.2	-108
TB-2	11/1/99	NA	NA	NA	NA	NA	NA	NA	NA	11.33	NA	NA	NA	0.5	-148
TB-2	1/17/00	NA	NA	NA	NA	NA	NA	NA	NA	9.79	NA	NA	NA	0.7	-162

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

ORP = Oxidation Reduction Potential

mV = millivolts



February 4, 2000

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

RE: Equiva 4255 McArthur Blvd., Oakland

Dear Leah Davis

Enclosed are the results of analyses for sample(s) received by the laboratory on January 18, 2000.
If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kayvan Kimyai
Project Manager D.M.

CA ELAP Certificate Number 1210





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 4255 MacArthur Blvd., Oakland Project Manager: Leah Davis	Sampled: 1/17/00 Received: 1/18/00 Reported: 2/4/00 09:35
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ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-1	M001545-01	Water	1/17/00
MW-2	M001545-02	Water	1/17/00
MW-3	M001545-03	Water	1/17/00
MW-4	M001545-04	Water	1/17/00





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 4255 MacArthur Blvd., Oakland Project Manager: Leah Davis	Sampled: 1/17/00 Received: 1/18/00 Reported: 2/4/00 09:35
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT
Sequoia Analytical - Walnut Creek**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
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<u>MW-1</u>				<u>M001545-01</u>			<u>Water</u>	
Purgeable Hydrocarbons	0A26002	1/26/00	1/26/00	EPA 8015M/8020	50	ND	ug/l	
Benzene	"	"	"	EPA 8015M/8020	0.50	ND	"	
Toluene	"	"	"	EPA 8015M/8020	0.50	ND	"	
Ethylbenzene	"	"	"	EPA 8015M/8020	0.50	ND	"	
Xylenes (total)	"	"	"	EPA 8015M/8020	0.50	ND	"	
Methyl tert-butyl ether	"	"	"	EPA 8015M/8020	2.5	3.3	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70-130		110	%	

<u>MW-2</u>				<u>M001545-02</u>			<u>Water</u>	<u>P-01</u>
Purgeable Hydrocarbons	0A27002	1/27/00	1/27/00	EPA 8015M/8020	20000	46000	ug/l	
Benzene	"	"	"	EPA 8015M/8020	200	6000	"	
Toluene	"	"	"	EPA 8015M/8020	200	2400	"	
Ethylbenzene	"	"	"	EPA 8015M/8020	200	1500	"	
Xylenes (total)	"	"	"	EPA 8015M/8020	200	5500	"	
Methyl tert-butyl ether	"	"	"	EPA 8015M/8020	1000	50000	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70-130		115	%	31000 (8260)

<u>MW-3</u>				<u>M001545-03</u>			<u>Water</u>	<u>P-01</u>
Purgeable Hydrocarbons	0A26002	1/26/00	1/26/00	EPA 8015M/8020	1000	17000	ug/l	
Benzene	"	"	"	EPA 8015M/8020	10	3900	"	
Toluene	"	"	"	EPA 8015M/8020	10	89	"	
Ethylbenzene	"	"	"	EPA 8015M/8020	10	1100	"	
Xylenes (total)	"	"	"	EPA 8015M/8020	10	1200	"	
Methyl tert-butyl ether	"	"	"	EPA 8015M/8020	50	7900	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70-130		100	%	

<u>MW-4</u>				<u>M001545-04</u>			<u>Water</u>	<u>P-01</u>
Purgeable Hydrocarbons	0A26002	1/26/00	1/26/00	EPA 8015M/8020	50	160	ug/l	
Benzene	"	"	"	EPA 8015M/8020	0.50	27	"	
Toluene	"	"	"	EPA 8015M/8020	0.50	ND	"	
Ethylbenzene	"	"	"	EPA 8015M/8020	0.50	12	"	
Xylenes (total)	"	"	"	EPA 8015M/8020	0.50	6.3	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70-130		110	%	
Methyl tert-butyl ether	"	"	1/28/00	EPA 8015M/8020	1000	12000	ug/l	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70-130		113	%	





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 4255 MacArthur Blvd., Oakland Project Manager: Leah Davis	Sampled: 1/17/00 Received: 1/18/00 Reported: 2/4/00 09:35
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**MTBE Confirmation by EPA Method 8260A
Sequoia Analytical - Walnut Creek**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
MW-2				M001545-02			Water	
Methyl tert-butyl ether	0A31012	1/28/00	1/31/00	EPA 8260A	2000	31000	ug/l	
<i>Surrogate: Dibromofluoromethane</i>	"	"	"	50-150		100	%	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	"	"	"	50-150		110	"	





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 4255 MacArthur Blvd., Oakland Project Manager: Leah Davis	Sampled: 1/17/00 Received: 1/18/00 Reported: 2/4/00 09:35
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Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control
Sequoia Analytical - Walnut Creek

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0A26002			Date Prepared: 1/26/00			Extraction Method: EPA 5030B [P/T]				
Blank			0A26002-BLK1							
Purgeable Hydrocarbons	1/26/00			ND	ug/l	50				
Benzene	"			ND	"	0.50				
Toluene	"			ND	"	0.50				
Ethylbenzene	"			ND	"	0.50				
Xylenes (total)	"			ND	"	0.50				
Methyl tert-butyl ether	"			ND	"	2.5				
Surrogate: a,a,a-Trifluorotoluene	"	30.0		34.8	"	70-130	116			
LCS			0A26002-BS1							
Benzene	1/26/00	20.0		22.8	ug/l	70-130	114			
Toluene	"	20.0		22.7	"	70-130	114			
Ethylbenzene	"	20.0		22.7	"	70-130	114			
Xylenes (total)	"	60.0		69.3	"	70-130	116			
Surrogate: a,a,a-Trifluorotoluene	"	30.0		30.5	"	70-130	102			
Matrix Spike			0A26002-MS1 M001545-01							
Benzene	1/26/00	20.0	ND	21.2	ug/l	70-130	106			
Toluene	"	20.0	ND	21.2	"	70-130	106			
Ethylbenzene	"	20.0	ND	21.4	"	70-130	107			
Xylenes (total)	"	60.0	ND	64.5	"	70-130	108			
Surrogate: a,a,a-Trifluorotoluene	"	30.0		29.6	"	70-130	98.7			
Matrix Spike Dup			0A26002-MSD1 M001545-01							
Benzene	1/26/00	20.0	ND	23.0	ug/l	70-130	115	20	8.14	
Toluene	"	20.0	ND	22.7	"	70-130	114	20	6.83	
Ethylbenzene	"	20.0	ND	22.2	"	70-130	111	20	3.67	
Xylenes (total)	"	60.0	ND	66.9	"	70-130	112	20	3.65	
Surrogate: a,a,a-Trifluorotoluene	"	30.0		31.1	"	70-130	104			
Batch: 0A27002			Date Prepared: 1/27/00			Extraction Method: EPA 5030B [P/T]				
Blank			0A27002-BLK1							
Purgeable Hydrocarbons	1/27/00			ND	ug/l	50				
Benzene	"			ND	"	0.50				
Toluene	"			ND	"	0.50				
Ethylbenzene	"			ND	"	0.50				
Xylenes (total)	"			ND	"	0.50				
Methyl tert-butyl ether	"			ND	"	2.5				





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 4255 MacArthur Blvd., Oakland Project Manager: Leah Davis	Sampled: 1/17/00 Received: 1/18/00 Reported: 2/4/00 09:35
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Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control
Sequoia Analytical - Walnut Creek

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Blank (continued)										
0A27002-BLK1										
<i>Surrogate: a,a,a-Trifluorotoluene</i>	1/27/00	30.0		34.3	ug/l	70-130	114			
LCS										
0A27002-BS1										
Benzene	1/27/00	20.0		21.2	ug/l	70-130	106			
Toluene	"	20.0		21.4	"	70-130	107			
Ethylbenzene	"	20.0		22.3	"	70-130	111			
Xylenes (total)	"	60.0		67.7	"	70-130	113			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	30.0		30.2	"	70-130	101			
Matrix Spike										
0A27002-MS1 W001511-02										
Benzene	1/27/00	20.0	ND	22.8	ug/l	70-130	114			
Toluene	"	20.0	ND	22.0	"	70-130	110			
Ethylbenzene	"	20.0	ND	23.6	"	70-130	118			
Xylenes (total)	"	60.0	ND	71.1	"	70-130	118			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	30.0		32.0	"	70-130	107			
Matrix Spike Dup										
0A27002-MSD1 W001511-02										
Benzene	1/27/00	20.0	ND	23.0	ug/l	70-130	115	20	0.873	
Toluene	"	20.0	ND	23.7	"	70-130	119	20	7.44	
Ethylbenzene	"	20.0	ND	23.1	"	70-130	116	20	2.14	
Xylenes (total)	"	60.0	ND	68.8	"	70-130	115	20	3.29	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	30.0		31.9	"	70-130	106			





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 4255 MacArthur Blvd., Oakland Project Manager: Leah Davis	Sampled: 1/17/00 Received: 1/18/00 Reported: 2/4/00 09:35
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**MTBE Confirmation by EPA Method 8260A/Quality Control
Sequoia Analytical - Walnut Creek**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0A31012		Date Prepared: 1/28/00			Extraction Method: EPA 5030B (P/T)					
Blank		0A31012-BLK1								
Methyl tert-butyl ether	1/28/00			ND	ug/l	2.0				
Surrogate: Dibromofluoromethane	"	50.0		48.0	"	50-150	96.0			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		49.0	"	50-150	98.0			
Blank		0A31012-BLK2								
Methyl tert-butyl ether	1/31/00			ND	ug/l	2.0				
Surrogate: Dibromofluoromethane	"	50.0		54.0	"	50-150	108			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		57.0	"	50-150	114			
LCS		0A31012-BS1								
Methyl tert-butyl ether	1/28/00	50.0		51.1	ug/l	70-130	102			
Surrogate: Dibromofluoromethane	"	50.0		52.0	"	50-150	104			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		54.0	"	50-150	108			
LCS		0A31012-BS2								
Methyl tert-butyl ether	1/31/00	50.0		47.0	ug/l	70-130	94.0			
Surrogate: Dibromofluoromethane	"	50.0		51.0	"	50-150	102			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		54.0	"	50-150	108			





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 4255 MacArthur Blvd., Oakland Project Manager: Leah Davis	Sampled: 1/17/00 Received: 1/18/00 Reported: 2/4/00 09:35
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Notes and Definitions

#	Note
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- P-01 Chromatogram Pattern: Gasoline C6-C12
- 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
- Recov. Recovery
- RPD Relative Percent Difference



BLAINE

TECH SERVICES INC.

1880 ROGERS AVENUE
 SAN JOSE, CALIFORNIA 95112-1105
 FAX (408) 573-7771
 PHONE (408) 573-0555

CHAIN OF CUSTODY

CLIENT
 Equiva - Karen Petryna

SITE
 4255 McArthur Blvd,
 Oakland, CA

CONDUCT ANALYSIS TO DETECT						
TPH - Gas, BTEX	MTBE by 8020	MTBE by 8260	TPH-diesel	Oxygenates by 8260	1,2-DCA & EDB by 8010	
X	X					
X	X					
X	X					
X	X					

C = COMPOSITE ALL CONTAINERS

LAB SEQUOIA _____ DHS # _____

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND

EPA RWQCB REGION _____

LIA

OTHER

SPECIAL INSTRUCTIONS

Send invoice to Equiva

Incident # 98995758

Send report to Blaine Tech Services

Attn: Ann Pember

SAMPLE I.D.		MATRIX S = SOIL W = H2O	CONTAINERS	
			TOTAL	
mw-1	1/17/00	W	3	
mw-2				
mw-3				
mw-4				

MOISTURE

* CONFIRM HIGHEST MTBE X 8260

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY	RESULTS NEEDED NO LATER THAN	
	1/17/00	1405	LEON G.		
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
	1/18/00	9:30		1/18/00	9:30
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
	1/18/00		BW (KHL)	1/18/00	10:45
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
SHIPPED VIA	DATE SENT	TIME SENT	COOLER #		

WELL GAUGING DATA

Project # 000117-YZ Date 1-17-00 Client ERVEVA

Site 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	DO / ORP
3	MW-1	4	ORC				8.04	23.32	TOC	
5	MW-2	4	SKIMMER			200ml	11.00	19.55		
4	MW-3	4	ORC				13.94	21.82		
6	MW-4	2	ORC				10.15	30.50		
1	TB-1	4	ORC				7.72	13.43		0.8 / -178
2	TB-2	4					9.79	12.92		0.7 / -162

EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>000117-42</u>	Site: <u>204-5510-0600</u>
Sampler: <u>LEON G.</u>	Date: <u>1-17-00</u>
Well I.D.: <u>mw-1</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth: <u>23.32</u>	Depth to Water: <u>8.04</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Purge Method:

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

Sampling Method:

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

9.9 (Gals.) X 3 = 29.7 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>1206</u>	<u>65.7</u>	<u>8.9</u> <input checked="" type="checkbox"/>	<u>1137</u>	<u>156</u>	<u>10</u>	
					<u>20</u>	
<u>1317</u>	<u>DTW = 12.13</u>				<u>30</u>	

Did well dewater? Yes No Gallons actually evacuated: 30-17

Sampling Time: 1316 Sampling Date: 1-17-00

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):	Pre-purge:	<u>16.9</u> <input checked="" type="checkbox"/> ^{mg/L}	Post-purge:	
O.R.P. (if req'd):	Pre-purge:	<u>64</u> mV	Post-purge:	

EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>000117-42</u>	Site: <u>204-5510-0600</u>
Sampler: <u>Leon G.</u>	Date: <u>1-17-00</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>19.55</u>	Depth to Water: <u>11.00</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Purge Method:

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

Sampling Method:

Bailer

- Disposable Bailer
 Extraction Port
 Dedicated Tubing
 Other: _____

<u>5.5</u> (Gals.) X	<u>3</u>	<u>= 16.5</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
1311	66.0	6.6	886	87	6	
1315	67.5	6.7	885	98	1211	
1335	OTW = 14.22				17	
SKIMMER CONTAINED ~ 200 ML OF FP						
NO FP DETECTED W/FP PROBE						

Did well dewater? Yes No Gallons actually evacuated: 14

Sampling Time: 1334 Sampling Date: 1-17-00

Sample I.D.: MW-2 Laboratory: Sequoia Columbia Other _____

Analyzed for: PH-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: <u>1.3</u> mg/L	Post-purge: _____ mg/L
O.R.P. (if req'd):	Pre-purge: <u>- .54</u> mV	Post-purge: _____ mV

EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>000117-42</u>	Site: <u>204-5510-0600</u>
Sampler: <u>LEON G.</u>	Date: <u>1-17-00</u>
Well I.D.: <u>mw-3</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth: <u>21.82</u>	Depth to Water: <u>13.94</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(VVC)</u> Grade	D.O. Meter (if req'd): YSI HACH

Purge Method:

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

Sampling Method:

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

<u>5.1</u> (Gals.) X	<u>3</u>	=	<u>15.3</u> Gals.
I 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
1239	67.1	6.9	1631	140	5	ODOR
1320	OTW = 15.01				10	HEAVY SHEEN
OTW					15	
NO FP DETECTED W/ IP PROBE						

Did well dewater? <input checked="" type="radio"/> Yes <input type="radio"/> No	Gallons actually evacuated: <u>7</u>	
Sampling Time: <u>1503 1323</u>	Sampling Date: <u>1-17-00</u>	
Sample I.D.: <u>mw-3</u>	Laboratory: <u>(Sequoia)</u> Columbia Other _____	
Analyzed for: <input checked="" type="checkbox"/> TPH-G <input checked="" type="checkbox"/> BTEX <input checked="" type="checkbox"/> MTBE <input type="checkbox"/> 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: <u>1.3</u> mg/L	Post-purge: _____ mg/L
O.R.P. (if req'd):	Pre-purge: <u>-40</u> mV	Post-purge: _____ mV

EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>000117-42</u>	Site: <u>204-5510-0600</u>
Sampler: <u>LEON G</u>	Date: <u>1-17-00</u>
Well I.D.: <u>MW-4</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth: <u>30.50</u>	Depth to Water: <u>10.15</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

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

Waterra
 Peristaltic
 Extraction Pump
 Other _____

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

$$3.2 \text{ (Gals.)} \times 3 = 9.6 \text{ Gals.}$$
 I 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
1354	64.0	6.8	1205	7200	3	
1358	65.0	6.8	1199	7200	6	
1402	65.1	6.8	1202	7200	10	

Did well dewater? Yes No Gallons actually evacuated: 10

Sampling Time: 1405 Sampling Date: 1-17-00

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):	Pre-purge: <u>3.94.3</u> mg/L	Post-purge: _____ mg/L
O.R.P. (if req'd):	Pre-purge: <u>-17</u> mV	Post-purge: _____ mV

ATTACHMENT B

Analytical Results for Ground Water Extraction Event



Sequoia Analytical

1455 McDowell Blvd. North, Ste. D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342

February 14, 2000

Anni Kremi
Cambria Environmental - Oakland
1144 65th St., Suite C
Oakland, CA 94608

RE: Equiva/P002083

Dear Anni Kremi

Enclosed are the results of analyses for sample(s) received by the laboratory on February 2, 2000. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Marvin Heskett
Project Manager

CA ELAP Certificate Number 2374





Cambria Environmental - Oakland 1144 65th St., Suite C Oakland, CA 94608	Project: Equiva Project Number: 4255 MacArthur Blvd., Oakland Project Manager: Anni Kreml	Sampled: 1/31/00 Received: 2/2/00 Reported: 2/14/00
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ANALYTICAL REPORT FOR P002083

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
TB-2	P002083-01	Water	1/31/00





Cambria Environmental - Oakland 1144 65th St., Suite C Oakland, CA 94608	Project: Equiva	Sampled: 1/31/00
	Project Number: 4255 MacArthur Blvd., Oakland	Received: 2/2/00
	Project Manager: Anni Kreml	Reported: 2/14/00

**Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
TB-2				P002083-01				Water
Gasoline	0020225	2/9/00	2/9/00		50.0	2070	ug/l	
Benzene	"	"	"		0.500	108	"	
Toluene	"	"	"		0.500	16.1	"	
Ethylbenzene	"	"	"		0.500	34.1	"	
Xylenes (total)	"	"	"		0.500	173	"	
Methyl tert-butyl ether	"	"	2/10/00		50.0	6550	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	2/9/00	65.0-135		91.0	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		107	"	





Cambria Environmental - Oakland 1144 65th St., Suite C Oakland, CA 94608	Project: Equiva Project Number: 4255 MacArthur Blvd., Oakland Project Manager: Anni Kreml	Sampled: 1/31/00 Received: 2/2/00 Reported: 2/14/00
--	---	---

**Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control
Sequoia Analytical - Petaluma**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0020225		Date Prepared: 2/9/00			Extraction Method: EPA 5030 waters					
Blank		0020225-BLK1								
Gasoline	2/9/00			ND	ug/l	50.0				
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	"	300		286	"	65.0-135	95.3			
Surrogate: 4-Bromofluorobenzene	"	300		329	"	65.0-135	110			
LCS		0020225-BS1								
Gasoline	2/9/00	1000		966	ug/l	65.0-135	96.6			
Surrogate: 4-Bromofluorobenzene	"	300		330	"	65.0-135	110			
Matrix Spike		0020225-MS1		P002146-01						
Gasoline	2/9/00	1000	ND	981	ug/l	65.0-135	98.1			
Surrogate: 4-Bromofluorobenzene	"	300		342	"	65.0-135	114			
Matrix Spike Dup		0020225-MSD1		P002146-01						
Gasoline	2/9/00	1000	ND	988	ug/l	65.0-135	98.8	20.0	0.711	
Surrogate: 4-Bromofluorobenzene	"	300		332	"	65.0-135	111			





Cambria Environmental - Oakland 1144 65th St., Suite C Oakland, CA 94608	Project: Equiva Project Number: 4255 MacArthur Blvd., Oakland Project Manager: Anni Kreml	Sampled: 1/31/00 Received: 2/2/00 Reported: 2/14/00
--	---	---

Notes and Definitions

#	Note
---	------

- 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
- Recov. Recovery
- RPD Relative Percent Difference





SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: _____

Date: 1-31-00

Page 1 of 1

Site Address: 4255 MacArthur Blvd, Oakland.

Analysis Required

LAB: SEQUOIA Petaluma

INCIDENT # 98995758

Shell Engineer: Karen Petryna Phone No.: 559-645-9306
Fax #: 645-5643

Consultant Name & Address: CAMBRIA
1144 65th St., Suite C, Oakland, CA 94608

Consultant Contact: Anni Kraml Phone No.: 510-420-3335
Fax #: 420-9170

Comments:

Sampled by: BRIAN BUSCH

Printed Name:

Sample ID	Date	Sludge	Soil	Water	Air	No. of conls.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020 + MTBE	Asbestos	Container Size	Preparation Used	Composite Y/N
TB-2	<u>1-31-00</u>			X		<u>3</u>			<u>0002083-01</u>			X		<u>40 ml</u>	<u>HCl</u>	<u>no</u>

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring <input type="checkbox"/>	4461	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	4442	15 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input checked="" type="checkbox"/>		

NOTE: Notify Lab as soon as possible of 24/48 hrs. LAT.

UST AGENCY: _____

MATERIAL DESCRIPTION

SAMPLE CONDITION/ COMMENTS

groundwater

COOLER CUSTODY SEALS INTACT NOT INTACT
COOLER TEMPERATURE 6 °C

Relinquished By (signature): Brian Busch

Printed Name: BRIAN BUSCH

Date: _____
Time: _____

Received (signature): N. Main

Printed Name: Main

Date: 2/2/00
Time: 12:00

Relinquished By (signature): N. Main

Printed Name: _____

Date: 2/6/00
Time: 14:00

Received (signature): N. Main

Printed Name: _____

Date: 2/2
Time: 14:00

Relinquished By (signature): _____

Printed Name: _____

Date: _____
Time: _____

Received (signature): _____

Printed Name: _____

Date: _____
Time: _____

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS