

C A M B R I A

ENVIRONMENTAL
PROTECTION
March 17, 2000

00 MAR 27 AM 10:47

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

Re: **Fourth Quarter 1999 Monitoring Report**
Former Shell Service Station
1230 14th Street
Oakland, California
Incident #97088250
Cambria Project #242-0233-002



Dear Mr. Seto:

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.

FOURTH QUARTER 1999 ACTIVITIES

Groundwater Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged water levels, measured dissolved oxygen (DO) concentrations, and calculated groundwater elevations. Cambria prepared a groundwater elevation contour map (Figure 1). The Blaine report, with supporting field notes, is included as Attachment A.

ANTICIPATED FUTURE 1999 ACTIVITIES

Groundwater Monitoring: The next monitoring event is scheduled for the first quarter of 2000. At that time, Blaine will gauge water levels, measure DO concentrations, sample selected site wells, and tabulate the data. Cambria will prepare a monitoring report.

Oakland, CA
Sonoma, CA
Portland, OR
Seattle, WA

**Cambria
Environmental
Technology, Inc.**

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

CLOSING

We appreciate the opportunity to work with you on this project. Please call Darryk Ataide at (510) 420-3339 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc



Darryk Ataide, REA I
Project Manager

Ailsa S. Le May, R.G.
Senior Geologist

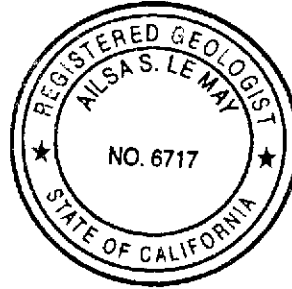
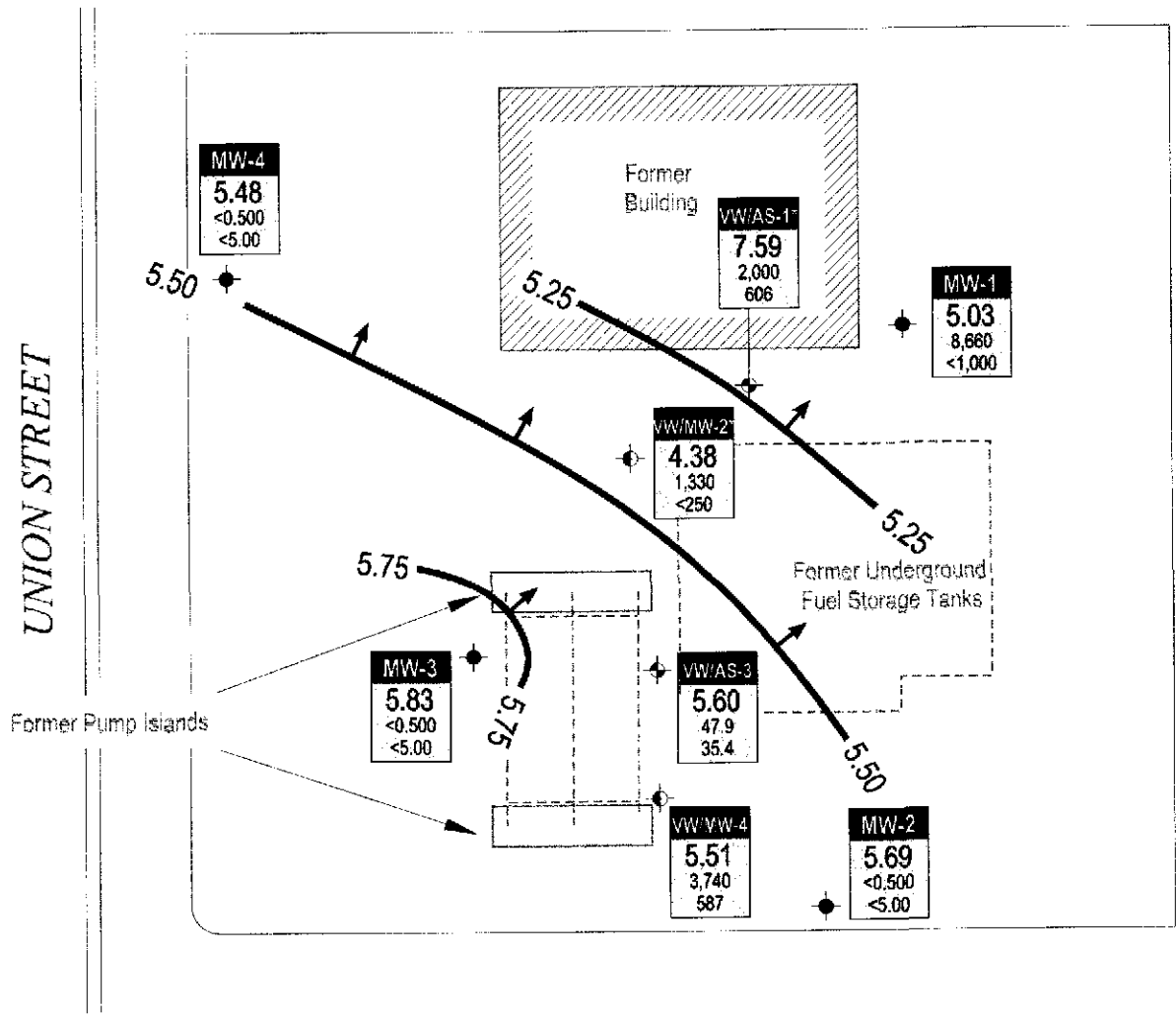


Figure: 1 - Groundwater Elevation Contour Map

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, Equiva Services LLC, P.O. Box 7869, Burbank, California 91501-7869
Tom Saberi, 1045 Airport Boulevard, Suite 12, South San Francisco, CA 94080

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EXPLANATION

- MW-1 ● Monitoring well location
 - VW/AS-1 ◆ Combination air sparge/soil vapor extraction well
 - VW/MW-2 ◆ Combination soil vapor extraction well/monitoring well
 - NS Not sampled
 - * Data anomalous, well not contoured
 - Ground water flow direction
 - XX.XX Ground water elevation contour, in feet above mean sea level (msl), approximately located; dashed where inferred
- | | |
|-----------------|--|
| Well | Well designation |
| ELEV | Ground water elevation, in feet above msl |
| Benzene
MTBE | Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8020 |

14TH STREET

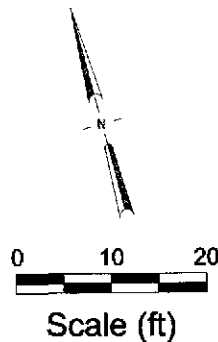


FIGURE
1

Former Shell Service Station
1230 14th Street
Oakland, California
Incident #97088250



C A M B R I A

**Ground Water Elevation
Contour Map**

December 27, 1999

S:\OAK\1230\FIGURE\CM199-MP.DWG

ATTACHMENT A

Blaine Ground Water Monitoring Report
and Field Notes



1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
(408) 573-7771 FAX
(408) 573-0555 PHONE

February 25, 2000

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

Fourth Quarter 1999 Groundwater Monitoring at
Shell-branded Service Station
1230 14th Street
Oakland, CA

Monitoring performed on December 27, 1999

Groundwater Monitoring Report 991227-U-2

This report covers the routine monitoring of groundwater wells at this Shell-branded facility. In accordance with standard procedures that conform to Regional Water Quality Control Board requirements, routine field data collection includes depth to water, total well depth, thickness of any separate immiscible layer, water column volume, appropriate 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.

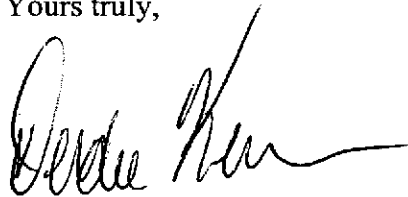
Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL CONCENTRATIONS**. The full analytical report for the most recent samples and the field data sheets are attached to this report.

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/ew

attachments: Cumulative Table of WELL CONCENTRATIONS
Certified Analytical Report
Field Data Sheets

cc: Anni Kreml
Cambria Environmental Technology, Inc.
1144 65th Street, Ste. C
Oakland, CA 94608-2411

WELL CONCENTRATIONS
Shell-branded Service Station
1230 14th Street
Oakland, CA
Wic #204-5508-3103

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-1	3/25/96	37,000	7,400	1,500	720	3,300	<500	NA	18.58	9.53	9.05	NA
MW-1	6/21/96	35,000	9,900	460	340	3,500	890	NA	18.58	10.72	7.86	NA
MW-1	9/26/96	19,000	8,200	510	780	790	<250	NA	18.58	12.88	5.70	NA
MW-1	12/19/96	27,000	120	1,200	1,400	2,800	<100	NA	18.58	12.59	5.99	NA
MW-1	12/19/96	32,000	12,000	1,300	1,600	3,100	830	NA	18.58	12.59	5.99	NA
MW-1	3/25/97	39,000	13,000	1,600	840	3,100	730	NA	18.58	11.10	7.48	1.2
MW-1	6/26/97	NA	NA	NA	NA	NA	NA	NA	18.58	12.42	6.16	NA
MW-1	9/26/97	NA	NA	NA	NA	NA	NA	NA	18.58	13.31	5.27	0.8
MW-1	12/5/97	NA	NA	NA	NA	NA	NA	NA	18.58	12.65	5.93	0.3
MW-1	2/19/98	16,000	5,500	450	500	800	<500	NA	18.58	6.46	12.12	2.4
MW-1	6/8/98	NA	NA	NA	NA	NA	NA	NA	18.58	6.62	11.96	1.2
MW-1	8/25/98	NA	NA	NA	NA	NA	NA	NA	18.58	11.83	6.75	2.8
MW-1	12/28/98	NA	NA	NA	NA	NA	NA	NA	18.58	12.01	6.57	2.6
MW-1	3/26/99	NA	NA	NA	NA	NA	NA	NA	18.58	9.15	9.43	2.2
MW-1	6/30/99	NA	NA	NA	NA	NA	NA	NA	18.58	11.22	7.36	3.8
MW-1	9/30/99	NA	NA	NA	NA	NA	NA	NA	18.58	11.89	6.69	3.0
MW-1	12/27/99	34,800	8,660	953	956	2,770	<1,000	NA	18.58	13.55	5.03	2.4/2.1
MW-2	3/25/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	8.19	9.71	NA
MW-2	6/21/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	9.94	7.96	NA
MW-2	9/26/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	12.15	5.75	NA
MW-2	12/19/96	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	17.90	11.70	6.20	NA
MW-2	3/25/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	9.25	8.65	1.8
MW-2	6/26/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	11.36	6.54	2.4
MW-2	9/26/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	12.56	5.34	1.1
MW-2	9/26/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	12.56	5.34	1.1
MW-2	12/5/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	11.15	6.75	0.7
MW-2	2/19/98	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	5.61	12.29	2.7

WELL CONCENTRATIONS
Shell-branded Service Station
1230 14th Street
Oakland, CA
Wic #204-5508-3103

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-2	6/8/98	<50	<0.30	<0.30	<0.30	<0.60	<10	NA	17.90	5.58	12.32	3.2
MW-2	8/25/98	NA	NA	NA	NA	NA	NA	NA	17.90	10.67	7.23	1.7
MW-2	12/28/98	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	17.90	11.65	6.25	0.4/0.8
MW-2	3/26/99	NA	NA	NA	NA	NA	NA	NA	17.90	8.60	9.30	0.7
MW-2	6/30/99	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	17.90	10.30	7.60	2.3
MW-2	9/30/99	NA	NA	NA	NA	NA	NA	NA	17.90	10.77	7.13	1.9
MW-2	12/27/99	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	17.90	12.21	5.69	0.7/0.7
MW-3	3/25/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	8.47	9.71	NA
MW-3	6/21/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	10.40	7.78	NA
MW-3	9/26/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	12.45	5.73	NA
MW-3	12/19/96	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	18.18	12.14	6.02	NA
MW-3	3/25/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	9.54	8.64	2.2
MW-3	6/26/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	11.66	6.52	3.6
MW-3	9/26/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	12.85	5.33	1.1
MW-3	12/5/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	11.44	6.74	0.6
MW-3	2/19/98	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	6.78	11.40	3.6
MW-3	6/8/98	<50	<0.30	<0.30	<0.30	<0.60	<10	NA	18.18	6.82	11.36	3.8
MW-3	6/8/98	<50	<0.30	<0.30	<0.30	<0.60	<10	NA	18.18	6.82	11.36	3.8
MW-3	8/25/98	NA	NA	NA	NA	NA	NA	NA	18.18	11.09	7.09	1.2
MW-3	12/28/98	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	18.18	11.84	6.34	0.9/0.6
MW-3	3/26/99	NA	NA	NA	NA	NA	NA	NA	18.18	8.57	9.61	0.8
MW-3	6/30/99	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	18.18	10.61	7.57	4.8
MW-3	9/30/99	NA	NA	NA	NA	NA	NA	NA	18.18	11.53	6.65	1.4
MW-3	12/27/99	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	18.18	12.35	5.85	1.4/2.5
MW-4	3/25/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	9.20	8.81	NA
MW-4	6/21/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	10.25	7.76	NA

WELL CONCENTRATIONS
Shell-branded Service Station
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Oakland, CA
Wic #204-5508-3103

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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MW-4	9/26/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	12.29	5.72	NA
MW-4	12/19/96	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	18.01	12.47	5.54	NA
MW-4	3/25/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	9.44	8.57	1.8
MW-4	6/26/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	11.57	6.44	6.2
MW-4 (D)	6/26/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	11.57	6.44	6.2
MW-4	9/26/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	12.75	5.26	2.1
MW-4	12/5/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	11.37	6.64	1.0
MW-4 (D)	12/5/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	11.37	6.64	1.0
MW-4	2/19/98	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	5.59	12.42	6.5
MW-4	6/8/98	<50	<0.30	<0.30	<0.30	<0.60	<10	NA	18.01	5.65	12.36	2.6
MW-4	8/25/98	NA	NA	NA	NA	NA	NA	NA	18.01	10.98	7.03	2.4
MW-4	12/28/98	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	18.01	11.83	6.18	1.3/1.2
MW-4	3/26/99	NA	NA	NA	NA	NA	NA	NA	18.01	8.40	9.61	1.9
MW-4	6/30/99	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	18.01	10.53	7.48	7.6
MW-4	9/30/99	NA	NA	NA	NA	NA	NA	NA	18.01	11.03	6.98	2.6
MW-4	12/27/99	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	18.01	12.53	5.48	1.9/0.8

VW/MW-2	3/25/96	13,000	900	920	180	1,500	<250	NA	18.30	9.04	9.26	NA
VW/MW-2	6/21/96	27,000	4,100	1,100	1,400	3,200	700	NA	18.30	10.48	7.82	NA
VW/MW-2	9/26/96	27,000	5,300	1,900	980	2,200	<500	NA	18.30	12.52	5.78	NA
VW/MW-2 (D)	9/26/96	29,000	5,800	2,200	1,100	2,500	<250	NA	18.30	12.52	5.78	NA
VW/MW-2	12/19/96	50,000	6,200	5,100	1,700	5,600	590	NA	18.30	12.42	5.88	NA
VW/MW-2	3/25/97	210	5.6	<0.50	0.52	<0.50	14	NA	18.30	9.83	8.47	2.0
VW/MW-2 (D)	3/25/97	250	1.7	0.58	0.51	<0.50	4.7	NA	18.30	9.83	8.47	2.0
VW/MW-2	6/26/97	NA	NA	NA	NA	NA	NA	NA	18.30	12.43	5.87	NA
VW/MW-2	9/26/97	NA	NA	NA	NA	NA	NA	NA	18.30	12.98	5.32	0.9
VW/MW-2	12/5/97	NA	NA	NA	NA	NA	NA	NA	18.30	12.20	6.10	0.4
VW/MW-2	2/19/98	<50	1.5	<0.50	<0.50	0.71	<2.5	NA	18.30	5.83	12.47	3.6

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Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
VW/MW-2	6/8/98	NA	NA	NA	NA	NA	NA	NA	18.30	5.80	12.50	1.0
VW/MW-2	8/25/98	NA	NA	NA	NA	NA	NA	NA	18.30	11.72	6.58	4.8
VW/MW-2	12/28/98	NA	NA	NA	NA	NA	NA	NA	18.30	11.69	6.61	2.7
VW/MW-2	3/26/99	NA	NA	NA	NA	NA	NA	NA	18.30	8.75	9.55	2.8
VW/MW-2	6/30/99	NA	NA	NA	NA	NA	NA	NA	18.30	10.72	7.58	4.7
VW/MW-2	9/30/99	NA	NA	NA	NA	NA	NA	NA	18.30	12.24	6.06	4.9
VW/MW-2	12/27/99	13,500	1,330	1,310	490	1,400	<250	NA	18.30	13.92	4.38	2.1/1.9

VW/MW-4	3/25/96	83,000	6,500	7,000	2,000	11,000	<250	NA	18.14	8.45	9.69	NA
VW/MW-4 (D)	3/25/96	84,000	6,400	7,000	2,100	12,000	<250	NA	18.14	8.45	9.69	NA
VW/MW-4	6/21/96	110,000	14,000	15,000	3,700	17,000	1,700	NA	18.14	10.38	7.76	NA
VW/MW-4 (D)	6/21/96	100,000	12,000	12,000	2,900	13,000	<1,000	NA	18.14	10.38	7.76	NA
VW/MW-4	9/26/96	52,000	13,000	2,700	2,100	3,200	<500	NA	18.14	12.43	5.71	NA
VW/MW-4	12/19/96	75,000	15,000	6,600	3,000	7,600	<1,250	NA	18.14	11.87	6.27	NA
VW/MW-4	3/25/97	56,000	4,700	1,500	2,500	6,300	580	NA	18.14	9.60	8.54	2.4
VW/MW-4	6/26/97	NA	NA	NA	NA	NA	NA	NA	18.14	12.36	5.78	NA
VW/MW-4	9/26/97	NA	NA	NA	NA	NA	NA	NA	18.14	12.82	5.32	0.4
VW/MW-4	12/5/97	NA	NA	NA	NA	NA	NA	NA	18.14	12.15	5.99	0.3
VW/MW-4	3/19/98	4,100	320	40	44	520	<50	NA	18.14	5.85	12.29	1.8
VW/MW-4 (D)	3/19/98	4,300	340	44	47	540	<50	NA	18.14	5.85	12.29	1.8
VW/MW-4	6/8/98	NA	NA	NA	NA	NA	NA	NA	18.14	5.87	12.27	1.8
VW/MW-4	8/25/98	NA	NA	NA	NA	NA	NA	NA	18.14	10.96	7.18	2.5
VW/MW-4	12/28/98	NA	NA	NA	NA	NA	NA	NA	18.14	11.28	6.86	0.9
VW/MW-4	3/26/99	NA	NA	NA	NA	NA	NA	NA	18.14	8.45	9.69	1.9
VW/MW-4	6/30/99	NA	NA	NA	NA	NA	NA	NA	18.14	9.70	8.44	3.6
VW/MW-4	9/30/99	NA	NA	NA	NA	NA	NA	NA	18.14	11.78	6.36	2.6
VW/MW-4	12/27/99	33,900	3,740	2,000	1,130	15,090	587	NA	18.14	12.63	5.51	0.4/0.2

WELL CONCENTRATIONS
Shell-branded Service Station
1230 14th Street
Oakland, CA
Wic #204-5508-3103

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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VW/AS-1	3/25/96	NA	NA	NA	NA	NA	NA	NA	18.60	8.98	9.62	NA
VW/AS-1	6/21/96	NA	NA	NA	NA	NA	NA	NA	18.60	10.95	7.65	NA
VW/AS-1	9/26/96	NA	NA	NA	NA	NA	NA	NA	18.60	12.98	5.62	NA
VW/AS-1	12/19/96	NA	NA	NA	NA	NA	NA	NA	18.60	12.67	5.93	NA
VW/AS-1	3/25/97	NA	NA	NA	NA	NA	NA	NA	18.60	10.12	8.48	NA
VW/AS-1	6/26/97	NA	NA	NA	NA	NA	NA	NA	18.60	12.34	6.26	NA
VW/AS-1	9/26/97	NA	NA	NA	NA	NA	NA	NA	18.60	13.40	5.20	NA
VW/AS-1	12/5/97	NA	NA	NA	NA	NA	NA	NA	18.60	11.96	6.64	5.2
VW/AS-1	2/19/98	NA	NA	NA	NA	NA	NA	NA	18.60	6.22	12.38	1.3
VW/AS-1	6/8/98	NA	NA	NA	NA	NA	NA	NA	18.60	6.20	12.40	1.0
VW/AS-1	8/25/98	NA	NA	NA	NA	NA	NA	NA	18.60	11.59	7.01	1.6
VW/AS-1	12/28/98	NA	NA	NA	NA	NA	NA	NA	18.60	11.74	6.86	1.3
VW/AS-1	3/26/99	NA	NA	NA	NA	NA	NA	NA	18.60	9.20	9.40	1.3
VW/AS-1	6/30/99	NA	NA	NA	NA	NA	NA	NA	18.60	11.08	7.52	2.1
VW/AS-1	9/30/99	NA	NA	NA	NA	NA	NA	NA	18.60	11.94	6.66	1.9
VW/AS-1	12/27/99	8,940	2,000	95.7	1,200	570	606	NA	18.60	11.01	7.59	1.6/1.8

VW/AS-3	3/25/96	NA	NA	NA	NA	NA	NA	NA	18.17	8.50	9.67	NA
VW/AS-3	6/21/96	NA	NA	NA	NA	NA	NA	NA	18.17	10.42	7.75	NA
VW/AS-3	9/26/96	NA	NA	NA	NA	NA	NA	NA	18.17	12.49	5.68	NA
VW/AS-3	12/19/96	NA	NA	NA	NA	NA	NA	NA	18.17	12.28	5.89	NA
VW/AS-3	3/25/97	NA	NA	NA	NA	NA	NA	NA	18.17	9.61	8.56	NA
VW/AS-3	6/26/97	NA	NA	NA	NA	NA	NA	NA	18.17	11.80	6.37	NA
VW/AS-3	9/26/97	NA	NA	NA	NA	NA	NA	NA	18.17	12.89	5.28	NA
VW/AS-3	12/5/97	NA	NA	NA	NA	NA	NA	NA	18.17	11.38	6.79	1.8
VW/AS-3	2/19/98	NA	NA	NA	NA	NA	NA	NA	18.17	6.24	11.93	1.3
VW/AS-3	6/8/98	NA	NA	NA	NA	NA	NA	NA	18.17	6.25	11.92	1.2
VW/AS-3	8/25/98	NA	NA	NA	NA	NA	NA	NA	18.17	11.43	6.74	1.3

WELL CONCENTRATIONS
Shell-branded Service Station
1230 14th Street
Oakland, CA
Wic #204-5508-3103

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
VW/AS-3	12/28/98	NA	NA	NA	NA	NA	NA	NA	18.17	11.63	6.54	1.7
VW/AS-3	3/26/99	NA	NA	NA	NA	NA	NA	NA	18.17	8.92	9.25	1.5
VW/AS-3	6/30/99	NA	NA	NA	NA	NA	NA	NA	18.17	10.71	7.46	2.5
VW/AS-3	9/30/99	NA	NA	NA	NA	NA	NA	NA	18.17	11.78	6.39	1.5
VW/AS-3	12/27/99	488	47.9	2.60	16.9	8.50	35.4	NA	18.17	12.57	5.60	1.5/2.1

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 by EPA Method 8020

TOC = Top of Casing Elevation

GW = Groundwater

DO = Dissolved Oxygen

ug/L = parts per billion

msl = Mean sea level

ft = Feet

<n = Below detection limit

D = Duplicate sample

n/n = Pre-purge/Post-purge DO Readings



Sequoia Analytical

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

January 17, 2000

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

RE: Equiva 1230 14th Street, Oakland/M912959

Dear Leah Davis

Enclosed are the results of analyses for sample(s) received by the laboratory on December 28, 1999. If you have any questions concerning this report, please feel free to contact me.
Report revised and reissued due to a correction in sample Ids for M912959-07 and -08.

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: 1230 14th St.
Project Manager: Leah Davis

Sampled: 12/27/99
Received: 12/28/99
Reported: 1/17/00

ANALYTICAL REPORT FOR M912959

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-1	M912959-01	Water	12/27/99
MW-2	M912959-02	Water	12/27/99
MW-3	M912959-03	Water	12/27/99
MW-4	M912959-04	Water	12/27/99
VW/AS-1	M912959-05	Water	12/27/99
VW/AS-3	M912959-06	Water	12/27/99
VW/MW-2	M912959-07	Water	12/27/99
VW/MW-4	M912959-08	Water	12/27/99





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 1230 14th St. Project Manager: Leah Davis	Sampled: 12/27/99 Received: 12/28/99 Reported: 1/17/00
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**Conventional Chemistry Parameters by APHA/EPA Methods
Sequoia Analytical - Morgan Hill**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
<u>MW-1</u> TRPH	0010056	1/3/00	1/5/00	<u>M912959-01</u> SM 5520B/F	5.00	ND	<u>Water</u> mg/l	
<u>MW-2</u> TRPH	0010056	1/3/00	1/5/00	<u>M912959-02</u> SM 5520B/F	5.00	ND	<u>Water</u> mg/l	
<u>MW-3</u> TRPH	0010126	1/5/00	1/6/00	<u>M912959-03</u> SM 5520B/F	5.00	ND	<u>Water</u> mg/l	
<u>MW-4</u> TRPH	0010126	1/5/00	1/6/00	<u>M912959-04</u> SM 5520B/F	5.00	ND	<u>Water</u> mg/l	
<u>VW/AS-1</u> TRPH	0010126	1/5/00	1/6/00	<u>M912959-05</u> SM 5520B/F	5.00	ND	<u>Water</u> mg/l	
<u>VW/AS-3</u> TRPH	0010126	1/5/00	1/6/00	<u>M912959-06</u> SM 5520B/F	5.00	ND	<u>Water</u> mg/l	
<u>VW/MW-2</u> TRPH	0010126	1/5/00	1/6/00	<u>M912959-07</u> SM 5520B/F	5.00	ND	<u>Water</u> mg/l	
<u>VW/MW-4</u> TRPH	0010126	1/5/00	1/6/00	<u>M912959-08</u> SM 5520B/F	5.00	ND	<u>Water</u> mg/l	





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 1230 14th St. Project Manager: Leah Davis	Sampled: 12/27/99 Received: 12/28/99 Reported: 1/17/00
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control
Sequoia Analytical - San Carlos**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Blank (continued)										
0010021-BLK1										
Methyl tert-butyl ether	1/5/00			ND	ug/l	5.00				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.3	"	70.0-130	103			
LCS										
0010021-BS1										
Benzene	1/5/00	10.0		9.79	ug/l	70.0-130	97.9			
Toluene	"	10.0		9.45	"	70.0-130	94.5			
Ethylbenzene	"	10.0		9.47	"	70.0-130	94.7			
Xylenes (total)	"	30.0		28.2	"	70.0-130	94.0			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.0	"	70.0-130	100			
LCS										
0010021-BS2										
Purgeable Hydrocarbons as Gasoline	1/5/00	250		241	ug/l	70.0-130	96.4			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		11.6	"	70.0-130	116			
Matrix Spike										
0010021-MS1 L912255-07										
Benzene	1/5/00	10.0	ND	8.29	ug/l	60.0-140	82.9			
Toluene	"	10.0	ND	7.96	"	60.0-140	79.6			
Ethylbenzene	"	10.0	ND	8.03	"	60.0-140	80.3			
Xylenes (total)	"	30.0	ND	23.7	"	60.0-140	79.0			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.31	"	70.0-130	93.1			
Matrix Spike Dup										
0010021-MSD1 L912255-07										
Benzene	1/5/00	10.0	ND	11.0	ug/l	60.0-140	110	25.0	28.1	
Toluene	"	10.0	ND	10.6	"	60.0-140	106	25.0	28.4	
Ethylbenzene	"	10.0	ND	10.7	"	60.0-140	107	25.0	28.5	
Xylenes (total)	"	30.0	ND	31.8	"	60.0-140	106	25.0	29.2	
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.5	"	70.0-130	105			
Batch: 0010030										
Date Prepared: 1/6/00										
Extraction Method: EPA 5030B [P/T]										
Blank										
0010030-BLK1										
Purgeable Hydrocarbons as Gasoline	1/6/00			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	"	5.00				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.8	"	70.0-130	108			
LCS										
0010030-BS1										
Benzene	1/6/00	10.0		9.81	ug/l	70.0-130	98.1			
Toluene	"	10.0		9.64	"	70.0-130	96.4			





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

Project: Equiva
Project Number: 1230 14th St.
Project Manager: Leah Davis

Sampled: 12/27/99
Received: 12/28/99
Reported: 1/17/00

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
LCS (continued)										
0010030-BS1										
Ethylbenzene	1/6/00	10.0		9.93	ug/l	70.0-130	99.3			
Xylenes (total)	"	30.0		29.5	"	70.0-130	98.3			
Surrogate: <i>a,a,a-Trifluorotoluene</i>	"	10.0		10.6	"	70.0-130	106			
LCS										
0010030-BS2										
Purgeable Hydrocarbons as Gasoline	1/6/00	250		275	ug/l	70.0-130	110			
Surrogate: <i>a,a,a-Trifluorotoluene</i>	"	10.0		10.8	"	70.0-130	108			
Matrix Spike										
0010030-MS1 L912242-07										
Purgeable Hydrocarbons as Gasoline	1/6/00	250	ND	268	ug/l	60.0-140	107			
Surrogate: <i>a,a,a-Trifluorotoluene</i>	"	10.0		10.4	"	70.0-130	104			
Matrix Spike Dup										
0010030-MSD1 L912242-07										
Purgeable Hydrocarbons as Gasoline	1/6/00	250	ND	251	ug/l	60.0-140	100	25.0	6.76	
Surrogate: <i>a,a,a-Trifluorotoluene</i>	"	10.0		8.90	"	70.0-130	89.0			
Batch: 0010031										
Date Prepared: 1/6/00										
Extraction Method: EPA 5030B (P/T)										
Blank										
0010031-BLK1										
Purgeable Hydrocarbons as Gasoline	1/6/00			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	"	5.00				
Surrogate: <i>a,a,a-Trifluorotoluene</i>	"	10.0		10.8	"	70.0-130	108			
LCS										
0010031-BS1										
Benzene	1/6/00	10.0		10.6	ug/l	70.0-130	106			
Toluene	"	10.0		10.6	"	70.0-130	106			
Ethylbenzene	"	10.0		10.4	"	70.0-130	104			
Xylenes (total)	"	30.0		31.0	"	70.0-130	103			
Surrogate: <i>a,a,a-Trifluorotoluene</i>	"	10.0		10.8	"	70.0-130	108			
LCS										
0010031-BS2										
Purgeable Hydrocarbons as Gasoline	1/6/00	250		273	ug/l	70.0-130	109			
Surrogate: <i>a,a,a-Trifluorotoluene</i>	"	10.0		11.2	"	70.0-130	112			
Matrix Spike										
0010031-MS1 L912220-03										
Purgeable Hydrocarbons as Gasoline	1/6/00	250	ND	271	ug/l	60.0-140	108			
Surrogate: <i>a,a,a-Trifluorotoluene</i>	"	10.0		11.8	"	70.0-130	118			





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 1230 14th St. Project Manager: Leah Davis	Sampled: 12/27/99 Received: 12/28/99 Reported: 1/17/00
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Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS-LUFT/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Matrix Spike Dup										
	<u>0010031-MSD1</u>	<u>L912220-03</u>								
Purgeable Hydrocarbons as Gasoline	1/6/00	250	ND	255	ug/l	60.0-140	102	25.0	5.71	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	10.0		11.4	"	70.0-130	114			





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 1230 14th St. Project Manager: Leah Davis	Sampled: 12/27/99 Received: 12/28/99 Reported: 1/17/00
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Notes and Definitions

#	Note
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- D Data reported from a dilution.
- 1 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.

1680 ROGERS AVENUE
 SAN JOSE, CALIFORNIA 95112-1105
 FAX (408) 573-7771
 PHONE (408) 573-0555

CONDUCT ANALYSIS TO DETECT

LAB Seymour DHS # _____
 ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS
 SET BY CALIFORNIA DHS AND

EPA RWQCB REGION _____
 LIA
 OTHER

CHAIN OF CUSTODY

CLIENT Equiva - Karen Petryna
 SITE 1230 14th Street
Oakland, CA

M 9 12959

C = COMPOSITE ALL CONTAINERS

TPH - gas, BTEX
 MTBE by 8020
 MTBE by 8260
 TPH - diesel
 Oxygenates by 8260
 1,2-DCA & EDB by 8010
 TOG

SPECIAL INSTRUCTIONS

Send invoice to Equiva
 Incident # 97088250-991227-02
 Send report to Blaine Tech Services
 Attn: Ann Pember

12 29 5 25

SAMPLE I.D.	DATE	TIME	MATRIX S = SOIL W = H2O	CONTAINERS TOTAL	C = COMPOSITE ALL CONTAINERS	TPH - gas, BTEX	MTBE by 8020	MTBE by 8260	TPH - diesel	Oxygenates by 8260	1,2-DCA & EDB by 8010	TOG	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-1	12-27-99	15:08	W	5		X	X					X				01
MW-2		12:45														02
MW-3		15:08														03
MW-4		14:06														04
VW/AS-1		11:37														05
VW/AS-3		12:19														06
VW/MW-2		13:35														07
VW/MW-4		14:39														08

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY	RESULTS NEEDED NO LATER THAN	
	12-27-99	15:08	Sanjiv		
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
<i>[Signature]</i>	12/28/99	16:18	<i>[Signature]</i>	12/28	16:08
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
<i>[Signature]</i>			TJT (MH)	12-28-99	17:25
SHIPPED VIA	DATE SENT	TIME SENT	COOLER #		

WELL GAUGING DATA

Project # 991227-62 Date 12-27-99 Client 204-5508-3103

Site 1230 14th St. Oakland, Ca

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC
MW-2	2					13.55	20.57	TOC
MW-2	2					12.21	21.44	
MW-3	2					12.35	18.47	
MW-4	2					12.53	19.51	
VW/AS-2	1					11.01	18.75	
VW/AS-3	1					12.57	13.43	
VW/MW-2	2					13.92	20.42	
VW/MW-4						12.63	18.26	

EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>991227-42</u>	Site: <u>204-5508-3103</u>
Sampler: <u>Sanjiv</u>	Date: <u>12-27-99</u>
Well I.D.: <u>MW-1</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth: <u>20.57</u>	Depth to Water: <u>13.55</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC 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: _____

$1.1 \text{ (Gals.)} \times 3 = 3.3 \text{ Gals.}$
 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
15:05	63.7	7.3	1774	>200	1	clear
15:06	64.0	7.3	1792	>200	2	
15:07	63.6	7.2	1761	>200	3.5	HCl Rx with H ₂ O causing it to fizz
						possible bubbles in sample

Did well dewater? Yes No Gallons actually evacuated: 3.5

Sampling Time: 15:08 Sampling Date: 12-27-99

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

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

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>2.4</u> mg/L	Post-purge:	<u>2.1</u> mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

EQUIVA WELL MONITORING DATA SHEET

BTS #: 991227-U2	Site: 204-5508-3103
Sampler: Sanjiv	Date: 12-27-99
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8
Total Well Depth: 21.44	Depth to Water: 12.21
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) 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: _____

$1.47 \text{ (Gals.)} \times 3 = 4.4 \text{ Gals.}$
 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
12:37	66.8	7.4	878	>200	2	
12:38	67.2	7.3	861	>200	3	
12:40	67.7	7.3	854	>200	4.5	

Did well dewater? Yes No Gallons actually evacuated: 4.5

Sampling Time: 12:45 Sampling Date: 12-27-99

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

Analyzed for: (TPH-G) (BTEX) MTBE TPH-D Other: TOG

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Other: TOG

D.O. (if req'd): Pre-purge: 0.7 mg/L Post-purge: 0.7 mg/L

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

EQUIVA WELL MONITORING DATA SHEET

BTS #: 991227-42	Site: 204-5508-3103
Sampler: Sanjiv	Date: 12-27-99
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8
Total Well Depth: 18.47	Depth to Water: 12.35
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC 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: _____

1.97	(Gals.) X	3	=	2.9	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
13:05	66.0	7.2	1223	> 200	1	
13:06	66.5	7.0	1205	> 200	2	
13:07	65.8	6.9	1194	> 200	3	

Did well dewater? Yes No Gallons actually evacuated: 3

Sampling Time: 13:08 Sampling Date: 12-27-99

Sample I.D.: MW-3 Laboratory: Sequoia Columbia Other _____

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

EB I.D. (if applicable): @ _____ Time Duplicate I.D. (if applicable): _____

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

D.O. (if req'd):	Pre-purge: 1.4 mg/L	Post-purge: 2.6 2.5 mg/L
O.R.P. (if req'd):	Pre-purge: mV	Post-purge: mV

EQUIVA WELL MONITORING DATA SHEET

BTS #: 991227-42	Site: 204-5508-3103
Sampler: Sanjiv	Date: 12-27-99
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8
Total Well Depth: 19.51	Depth to Water: 12.53
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC 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: _____

1.1 (Gals.) X 3 = 3.3 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
14:03	68.3	8.3	488	>200	1	
14:04	68.4	7.7	557	>200	2	
14:05	68.4	7.3	541	>200	3.5	

Did well dewater? Yes No Gallons actually evacuated: 4

Sampling Time: 14:06 Sampling Date: 12-27-99

Sample I.D.: MW-4 Laboratory: Sequoia Columbia Other _____

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

D.O. (if req'd):	Pre-purge: 1.9 mg/L	Post-purge: 0.8 mg/L
O.R.P. (if req'd):	Pre-purge: mV	Post-purge: mV

EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>991227-02</u>	Site: <u>204-5508-3103</u>
Sampler: <u>Sanjiv</u>	Date: <u>12-27-99</u>
Well I.D.: <u>VW/AS-1</u>	Well Diameter: 2 3 4 6 8 <u>1</u>
Total Well Depth: <u>18.75</u>	Depth to Water: <u>11.01</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: _____

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

30 (Gals.) X 3 = 90 Gals.
 1 Case Volume Specified Volumes Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
11:30	64.3	7.7	1357	>200	0.30	Hick Rx
11:33	65.0	7.2	1377	>200	0.75	H ₂ O → fizzing
11:35	64.6	7.0	1351	>200	1.0	possible
						bubbles
						in vials

Did well dewater? Yes No Gallons actually evacuated: 1

Sampling Time: 11:37 Sampling Date: 12-27-99

Sample I.D.: VW/AS-1 Laboratory: Sequoia Columbia Other _____

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

EB I.D. (if applicable): _____ @ _____ Time Duplicate I.D. (if applicable): _____

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

D.O. (if req'd):	Pre-purge:	<u>1.6</u> mg/L	Post-purge:	<u>1.8</u> mg/L
	O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:

EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>991227-42</u>	Site: <u>204-5508-3102</u>
Sampler: <u>Sanjiv</u>	Date: <u>12-27-99</u>
Well I.D.: <u>VW/AS-3</u>	Well Diameter: 2 3 4 6 8 <u>1</u>
Total Well Depth: <u>13.43</u>	Depth to Water: <u>12.57</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC 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: _____

1.03 (Gals.) X 3 = .1 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
12:00	68.4	6.9	1268	>200	1	
12:01	67.4	6.8	1856	>200	1.2	
12:02	65.5	7.0	1973	>200	1.3	
12:15						

Did well dewater? Yes No Gallons actually evacuated: .5

Sampling Time: 12:15 Sampling Date: 12-27-99

Sample I.D.: VW/AS-3 Laboratory: Sequoia Columbia Other _____

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

E. D. (if applicable): _____ @ _____ Time Duplicate I.D. (if applicable): _____

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

D.O. (if req'd): Pre-purge: 1.5 mg/L Post-purge: 2.1 mg/L

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

EQUIVA WELL MONITORING DATA SHEET

BTS #: 991227-112	Site: 204-5508-3103
Sampler: Sanjiv	Date: 12-27-99
Well I.D.: VW/MW-2	Well Diameter: (2) 3 4 6 8
Total Well Depth: 20.42	Depth to Water: 13.92
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) 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: _____

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

1.04 (Gals.) X	3	=	3.1	Gals.
1 Case Volume	Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
13:32	65.7	7.1	1386	>200	1	oder
13:33	66.3	7.3	1401	>200	2	
13:34	67.1	7.7	1398	>200	3	

Did well dewater? Yes No Gallons actually evacuated: 3

Sampling Time: 13:35 Sampling Date: 12-27-99

Sample I.D.: VW/MW-2 Laboratory: (Sequoia) Columbia Other _____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Other: TOC

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:	2.1 mg/L	Post-purge:	1.9 mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

EQUIVA WELL MONITORING DATA SHEET

BTS #: 991227-U2	Site: 204-5508-3103
Sampler: Sanjiv	Date: 12-27-99
Well I.D.: VW/MW-4	Well Diameter: ② 3 4 6 8
Total Well Depth: 18.26	Depth to Water: 12.63
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC 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: _____

.90 (Gals.) X 3 = 2.7 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
14:32	66.7	7.0	1691	7900	1	HCl Rx with
14:33	66.2	7.3	1738	7200	2	H ₂ O causing
14:34	65.6	7.3	1763	7200	3	it to fizz
						possible
						bubbles in
						sample

Did well dewater? Yes No Gallons actually evacuated: 3

Sampling Time: 14:35 Sampling Date: 12-27-99

Sample I.D.: VW-MW-4 Laboratory: Sequoia Columbia Other _____

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

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:	0.4 mg/L	Post-purge:	0.2 mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV