CAMBRIA

ENVIRONMENTAL PROTECTION

00 MAR 10 PM 3:58

February 29, 2000

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

LOP3673

Re: **Fourth Quarter 1999 Monitoring Report**
Shell-branded Service Station
230 West MacArthur Boulevard
Oakland, California
Incident# 98995741
Cambria Project# 242-0902-002

Dear Ms. Hugo:

On behalf of Equiva Services LLC, Cambria Environmental Technology, Inc. (Cambria) is submitting this ground water monitoring report in accordance with the reporting requirements of 23 CCR 2652d.

FOURTH QUARTER 1999 ACTIVITIES

Ground Water Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California measured ground water depths in the site wells and collected a water sample from well MW-4. Blaine calculated ground water elevations and compiled the analytical data. Cambria prepared a ground water elevation contour map (Figure 1). The Blaine report, presenting the laboratory report, is included as Attachment A.

ANTICIPATED FUTURE ACTIVITIES

Ground Water Monitoring: The next sampling event is scheduled for the fourth quarter of 2000. At that time, Blaine will gauge all wells, sample well MW-4, 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 Ailsa Le May at (510) 420-3344 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc

Anni Kreml
Senior Staff Scientist

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

REGISTERED GEOLOGIST
AILSA S. LE MAY
NO. 6717
STATE OF CALIFORNIA

Figure 1: Ground Water Elevation Contour Map
Attachment: A - Blaine Ground Water Monitoring Report

cc: Karen Petryna, Equiva Services LLC, P.O. Box 7869, Burbank, California 91501-7869

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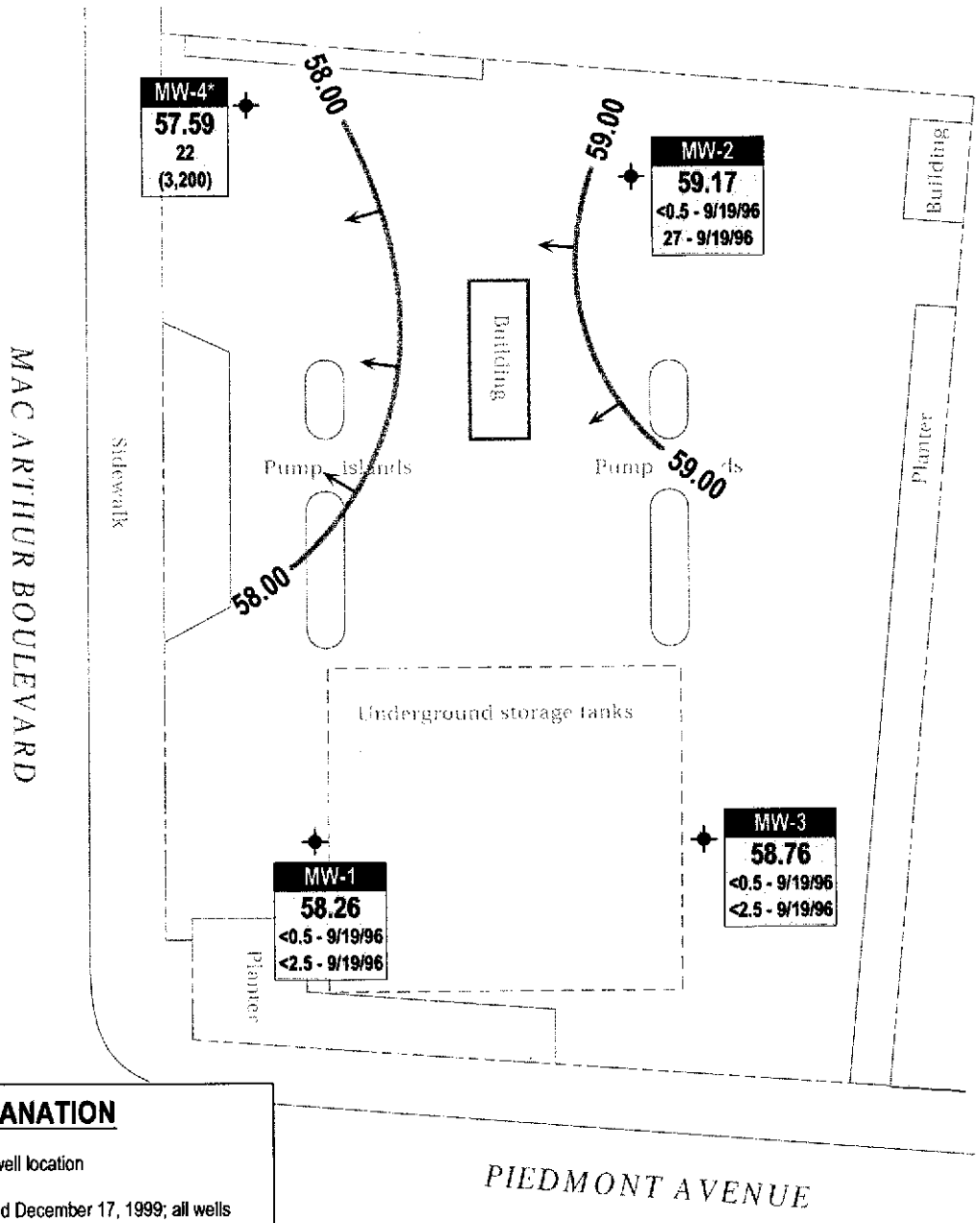

EXPLANATION

- MW-1 ✦ — Monitoring well location
- * — Well sampled December 17, 1999; all wells gauged December 23, 1999
- → — Ground water flow direction
- XX.XX — Ground water elevation contour, in feet above mean sea level (msl), approximately located; dashed where inferred

Well
ELEV
Benzene
MTBE

- Well designation
- Ground water elevation, in feet above msl
- Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8020; MTBE results in parentheses are analyzed by EPA Method 8260.

N

0 15 30
Scale (ft)

FIGURE
1

G:\OAK230\FIGURES\4QM99-MP.AI

Shell-branded Service Station
230 West MacArthur Boulevard
Oakland, California
Incident #98995741

CAMBRIA

Ground Water Elevation Contour Map

December 17 and 23, 1999

ATTACHMENT A

Blaine Ground Water Monitoring Report

BLAINE
TECH SERVICES inc.

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

January 21, 2000

Karen Petryna
Equiva Services LLC
P.O. Box 7869
Burbank, CA 92510-7869

Fourth Quarter 1999 Groundwater Monitoring at
Shell-branded Service Station
230 West MacArthur Blvd.
Oakland, CA

Monitoring performed on December 17 and 23, 1999

Groundwater Monitoring Report **991217-Z-1**

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, apprioriate calculated purge volume (if applicable), elapsed evacuation time (if applicable), total volume of water removed (if applicable), and standard water parameter instrument readings. Sample material is collected, contained, stored, and transported to the laboratory in conformance with EPA standards. Purgewater (if applicable) is, likewise, collected and transported to the Martinez Refining Company.

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

At a minimum, Blaine Tech Services, Inc. field personnel are certified on completion of a forty hour Hazardous Materials and Emergency Response training course per 29 CFR 1910.120. Field personnel are also enrolled in annual eight-hour refresher courses.

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

Please call if you have any questions.

Yours truly,

Deidre Kerwin
Operations Manager

DK/ld

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-based Service Station
230 West MacArthur Boulevard
Oakland, CA
Wic #204-5508-0703

Well ID	Date	TPHg (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)
MW-1	07/14/1988	ND	ND	ND	ND	ND	NA	NA	73.89	13.30	60.59
MW-1	10/04/1988	ND	8	4.3	ND	9	NA	NA	73.89	13.65	60.24
MW-1	11/10/1988	ND	ND	ND	ND	ND	NA	NA	73.89	13.55	60.34
MW-1	12/09/1988	ND	ND	ND	ND	ND	NA	NA	73.89	13.22	60.67
MW-1	01/10/1989	ND	ND	ND	ND	NA	NA	NA	73.89	12.86	61.03
MW-1	01/20/1989	ND	ND	NA	NA	ND	NA	NA	73.89	12.91	60.98
MW-1	02/06/1989	ND	ND	ND	ND	ND	NA	NA	73.89	12.94	60.95
MW-1	03/10/1989	ND	ND	ND	ND	ND	NA	NA	73.89	12.59	61.30
MW-1	06/06/1989	ND	ND	ND	ND	ND	NA	NA	73.89	14.05	59.84
MW-1	09/07/1989	ND	ND	ND	ND	ND	NA	NA	73.89	14.92	58.97
MW-1	12/18/1989	ND	ND	ND	ND	ND	NA	NA	73.89	14.88	59.01
MW-1	03/08/1990	ND	ND	ND	ND	ND	NA	NA	73.89	14.08	59.81
MW-1	06/07/1990	ND	ND	ND	ND	ND	NA	NA	73.89	13.89	60.00
MW-1	09/05/1990	ND	ND	ND	ND	ND	NA	NA	73.89	14.83	59.06
MW-1	12/03/1990	ND	ND	ND	ND	ND	NA	NA	73.89	15.05	58.84
MW-1	03/01/1991	ND	ND	ND	ND	ND	NA	NA	73.89	14.34	59.55
MW-1	06/03/1991	ND	ND	ND	ND	ND	NA	NA	73.89	14.16	59.73
MW-1	09/04/1991	ND	ND	ND	ND	ND	NA	NA	73.89	14.60	59.29
MW-1	03/13/1992	ND	ND	ND	ND	ND	NA	NA	73.89	13.40	60.49
MW-1	06/03/1992	ND	ND	ND	ND	ND	NA	NA	73.89	13.76	60.13
MW-1	08/19/1992	87	ND	ND	ND	ND	NA	NA	73.89	14.57	59.32
MW-1	11/16/1992	ND	ND	ND	ND	ND	NA	NA	73.89	14.78	59.11
MW-1	02/18/1993	59a	ND	ND	ND	ND	NA	NA	73.89	12.14	61.75
MW-1	06/01/1993	ND	ND	ND	ND	ND	NA	NA	73.89	13.30	60.59

WELL CONCENTRATIONS
Shell-based Service Station
230 West MacArthur Boulevard
Oakland, CA
Wic #204-5508-0703

Well ID	Date	TPHg (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)
MW-1	08/30/1993	ND	ND	ND	ND	ND	NA	NA	73.89	14.32	59.57
MW-1	12/13/1993	ND	ND	ND	ND	ND	NA	NA	73.89	14.06	59.83
MW-1	03/03/1994	100	ND	ND	ND	ND	NA	NA	73.89	13.12	60.77
MW-1	06/06/1994	ND	ND	ND	ND	ND	NA	NA	73.89	14.20	59.69
MW-1	09/12/1994	ND	ND	ND	ND	ND	NA	NA	73.89	15.72	58.17
MW-1	12/15/1994	ND	ND	ND	ND	ND	NA	NA	73.89	12.98	60.91
MW-1	3/13/1995 b	60	4.7	9.8	ND	2.9	NA	NA	73.89	11.74	62.15
MW-1	04/21/1995	ND	ND	ND	ND	ND	NA	NA	73.89	NA	NA
MW-1	06/26/1995	ND	ND	ND	ND	ND	NA	NA	73.89	13.00	60.89
MW-1	09/12/1995	ND	ND	ND	ND	ND	NA	NA	73.89	14.14	59.75
MW-1	03/21/1996	<50	<0.5	<0.5	<0.5	<0.5	ND	NA	73.89	11.03	62.86
MW-1	06/28/1996	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	73.89	13.53	60.36
MW-1	09/19/1996	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	73.89	14.33	59.56
MW-1	12/19/1996	NA	NA	NA	NA	NA	NA	NA	73.89	13.20	60.69
MW-1	12/05/1997	NA	NA	NA	NA	NA	NA	NA	73.89	12.39	61.50
MW-1	12/24/1998	NA	NA	NA	NA	NA	NA	NA	73.89	13.59	60.30
MW-1	12/28/1999	NA	NA	NA	NA	NA	NA	NA	73.89	15.63	58.26
MW-2	07/14/1988	ND	7.9	2.6	1.1	4	NA	NA	75.24	15.18	60.06
MW-2	10/04/1988	90	ND	1.3	2.3	12	NA	NA	75.24	15.30	59.94
MW-2	11/10/1988	ND	ND	ND	ND	2	NA	NA	75.24	15.17	60.07
MW-2	12/09/1988	ND	ND	0.6	ND	3	NA	NA	75.24	14.82	60.42
MW-2	01/20/1989	ND	ND	ND	ND	ND	NA	NA	75.24	14.54	60.70
MW-2	02/06/1989	NA	ND	ND	ND	ND	NA	NA	75.24	14.59	60.65
MW-2	03/10/1989	ND	ND	ND	ND	ND	NA	NA	75.24	14.88	60.36

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MW-2	06/06/1989	ND	ND	0.5	ND	ND	NA	NA	75.24	15.30	59.94
MW-2	09/07/1989	ND	ND	ND	ND	ND	NA	NA	75.24	16.76	58.48
MW-2	12/18/1989	ND	ND	ND	ND	ND	NA	NA	75.24	16.65	58.59
MW-2	03/08/1990	ND	ND	ND	ND	ND	NA	NA	75.24	15.92	59.32
MW-2	06/07/1990	ND	ND	ND	ND	ND	NA	NA	75.24	16.10	59.14
MW-2	09/05/1990	ND	ND	ND	ND	ND	NA	NA	75.24	16.61	58.63
MW-2	12/03/1990	ND	ND	ND	ND	ND	NA	NA	75.24	17.06	58.18
MW-2	03/01/1991	ND	ND	ND	ND	ND	NA	NA	75.24	16.62	58.62
MW-2	06/03/1991	ND	ND	ND	ND	ND	NA	NA	75.24	16.65	58.59
MW-2	09/04/1991	ND	ND	ND	ND	ND	NA	NA	75.24	16.57	58.67
MW-2	03/13/1992	ND	ND	ND	ND	ND	NA	NA	75.24	14.66	60.58
MW-2	06/03/1992	ND	ND	ND	ND	ND	NA	NA	75.24	15.90	59.34
MW-2	08/19/1992	67	ND	ND	ND	ND	NA	NA	75.24	16.72	58.52
MW-2	11/16/1992	50	ND	ND	ND	1.2	NA	NA	75.24	16.66	58.58
MW-2	02/18/1993	52a	ND	ND	ND	ND	NA	NA	75.24	13.88	61.36
MW-2 (D)	02/18/1993	52a	ND	ND	ND	ND	NA	NA	75.24	13.88	61.36
MW-2	06/01/1993	ND	ND	ND	ND	ND	NA	NA	75.24	14.74	60.50
MW-2	08/30/1993	70a	ND	ND	ND	ND	NA	NA	75.24	15.85	59.39
MW-2	12/13/1993	68a	ND	ND	ND	ND	NA	NA	75.24	15.83	59.41
MW-2	03/03/1994	280a	ND	ND	ND	ND	NA	NA	75.24	14.80	60.44
MW-2	06/06/1994	ND	ND	ND	ND	ND	NA	NA	75.24	16.65	58.59
MW-2	09/12/1994	ND	ND	ND	ND	ND	NA	NA	75.24	16.72	58.52
MW-2	12/15/1994	230a	ND	ND	ND	ND	NA	NA	75.24	15.25	59.99
MW-2	03/13/1995	ND	2.9	6.3	ND	2.7	NA	NA	75.24	15.32	59.92
MW-2	04/21/1995	ND	ND	ND	ND	ND	NA	NA	75.24	NA	NA

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MW-2	06/26/1995	ND	ND	ND	ND	ND	NA	NA	75.24	14.65	60.59
MW-2	09/12/1995	ND	ND	ND	ND	ND	NA	NA	75.24	15.78	59.46
MW-2	03/21/1996	<50	<0.5	<0.5	<0.5	<0.5	ND	NA	75.24	12.72	62.52
MW-2	06/28/1996	<50	<0.5	<0.5	<0.5	<0.5	160	NA	75.24	14.95	60.29
MW-2	09/19/1996	<50	<0.5	<0.5	<0.5	<0.5	27	NA	75.24	15.64	59.60
MW-2	12/19/1996	NA	NA	NA	NA	NA	NA	NA	75.24	14.47	60.77
MW-2	12/05/1997	NA	NA	NA	NA	NA	NA	NA	75.24	14.22	61.02
MW-2	12/24/1998	NA	NA	NA	NA	NA	NA	NA	75.24	14.97	60.27
MW-2	12/23/1999	NA	NA	NA	NA	NA	NA	NA	75.24	15.07	59.17
MW-3	07/14/1988	ND	ND	ND	ND	ND	NA	NA	74.68	14.05	60.63
MW-3	10/04/1988	ND	ND	ND	ND	5	NA	NA	74.68	14.60	60.08
MW-3	11/10/1988	ND	ND	ND	ND	ND	NA	NA	74.68	14.35	60.33
MW-3	12/09/1988	ND	ND	ND	ND	ND	NA	NA	74.68	14.04	60.64
MW-3	01/10/1989	ND	ND	ND	ND	NA	NA	NA	74.68	13.70	60.98
MW-3	01/20/1989	NA	NA	ND	ND	ND	NA	NA	74.68	13.72	60.96
MW-3	02/06/1989	70	ND	ND	ND	ND	NA	NA	74.68	13.75	60.93
MW-3	03/10/1989	150	ND	ND	ND	ND	NA	NA	74.68	13.42	61.26
MW-3	06/06/1989	ND	ND	ND	ND	ND	NA	NA	74.68	14.52	60.16
MW-3	09/07/1989	ND	0.65	ND	ND	ND	NA	NA	74.68	15.52	59.16
MW-3	12/18/1989	46	1.3	ND	0.44	0.66	NA	NA	74.68	19.59	55.09
MW-3	03/08/1990	ND	ND	ND	ND	ND	NA	NA	74.68	14.72	59.96
MW-3	06/07/1990	ND	ND	ND	ND	ND	NA	NA	74.68	14.65	60.03
MW-3	09/05/1990	ND	ND	ND	ND	ND	NA	NA	74.68	15.51	59.17
MW-3	12/03/1990	ND	ND	ND	ND	ND	NA	NA	74.68	14.85	59.83

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Shell-based Service Station
230 West MacArthur Boulevard
Oakland, CA
Wic #204-5508-0703

Well ID	Date	TPHg (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)
MW-3	03/01/1991	1.9	59	ND	22	ND	NA	NA	74.68	14.92	59.76
MW-3	06/03/1991	ND	ND	ND	ND	ND	NA	NA	74.68	14.75	59.93
MW-3	09/04/1991	ND	ND	ND	ND	ND	NA	NA	74.68	15.14	59.54
MW-3	03/13/1992	ND	ND	ND	ND	ND	NA	NA	74.68	13.50	61.18
MW-3	06/03/1992	ND	ND	ND	ND	ND	NA	NA	74.68	14.39	60.29
MW-3	08/19/1992	92	ND	ND	ND	ND	NA	NA	74.68	15.08	59.60
MW-3 (D)	08/19/1992	76	ND	ND	ND	ND	NA	NA	74.68	15.08	59.60
MW-3	11/16/1992	200a	ND	ND	ND	ND	NA	NA	74.68	15.43	59.25
MW-3 (D)	11/16/1992	140a	ND	ND	ND	ND	NA	NA	74.68	15.43	59.25
MW-3	02/18/1993	680a	ND	ND	ND	ND	NA	NA	74.68	12.96	61.72
MW-3	06/01/1993	160a	ND	ND	ND	ND	NA	NA	74.68	13.98	60.70
MW-3 (D)	06/01/1993	150a	ND	ND	ND	ND	NA	NA	74.68	13.98	60.70
MW-3	08/30/1993	110a	ND	ND	ND	ND	NA	NA	74.68	14.82	59.86
MW-3	12/13/1993	140a	ND	ND	ND	ND	NA	NA	74.68	14.70	59.98
MW-3 (D)	12/13/1993	110a	ND	ND	ND	ND	NA	NA	74.68	14.70	59.98
MW-3	03/03/1994	61a	ND	ND	ND	ND	NA	NA	74.68	13.92	60.76
MW-3	06/06/1994	ND	ND	ND	ND	ND	NA	NA	74.68	14.73	59.95
MW-3	09/12/1994	ND	ND	ND	ND	ND	NA	NA	74.68	15.42	59.26
MW-3	12/15/1994	ND	ND	0.9	ND	0.6	NA	NA	74.68	13.80	60.88
MW-3	03/13/1995	100a	7.9	17	0.7	6.1	NA	NA	74.68	12.41	62.27
MW-3	04/21/1995	60	0.9	1.1	ND	1	NA	NA	74.68	NA	NA
MW-3	06/26/1995	ND	ND	ND	ND	ND	NA	NA	74.68	13.79	60.89
MW-3	09/12/1995 b	ND	ND	ND	ND	ND	NA	NA	74.68	14.77	59.91
MW-3	03/21/1996	<50	<0.5	<0.5	<0.5	<0.5	17	NA	74.68	11.80	62.88
MW-3	06/28/1996	<50	<0.5	<0.5	<0.5	<0.5	<0.5	NA	74.68	14.19	60.49

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Well ID	Date	TPHg (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)
MW-3	09/19/1996	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	74.68	14.85	59.83
MW-3	12/19/1996	NA	NA	NA	NA	NA	NA	NA	74.68	13.61	61.07
MW-3	12/05/1997	NA	NA	NA	NA	NA	NA	NA	74.68	13.16	61.52
MW-3	12/24/1998	NA	NA	NA	NA	NA	NA	NA	74.68	14.08	60.60
MW-3	12/23/1999	NA	NA	NA	NA	NA	NA	NA	74.68	15.92	58.76
MW-4	01/23/1990	1,600	100	10	30	20	NA	NA	73.83	14.68	59.15
MW-4	03/08/1990	4,200	260	18	88	39	NA	NA	73.83	14.38	59.45
MW-4	06/07/1990	2,000	150	6.9	14	17	NA	NA	73.83	14.27	59.56
MW-4	09/05/1990	1,700	130	10	7.2	19	NA	NA	73.83	15.40	58.43
MW-4	12/03/1990	2,600	108	41	17	59	NA	NA	73.83	15.90	57.93
MW-4	06/03/1991	2,800	160	15	8.8	32	NA	NA	73.83	14.60	59.23
MW-4	09/04/1991	Sheen	NA	NA	NA	NA	NA	NA	73.83	15.25	58.58
MW-4	03/13/1992	2,700	180	70	5.9	29	NA	NA	73.83	12.72	61.11
MW-4	06/03/1992	1,700	190	ND	30	23	NA	NA	73.83	14.33	59.50
MW-4	08/19/1992	170	4.2	ND	0.6	1	NA	NA	73.83	15.18	58.65
MW-4	11/16/1992	2,600	92	49	50	81	NA	NA	73.83	15.39	58.44
MW-4	02/18/1993	7,400	120	38	51	87	NA	NA	73.83	12.62	61.21
MW-4	06/01/1993	7,000	1,800	1,700	1,600	1,700	NA	NA	73.83	13.68	60.15
MW-4	08/30/1993	2,100	80	11	ND	11	NA	NA	73.83	14.83	59.00
MW-4 (D)	08/30/1993	2,100	77	5.6	ND	5.5	NA	NA	73.83	14.83	59.00
MW-4	12/13/1993	2,000a	20	ND	21	52	NA	NA	73.83	14.50	59.33
MW-4	03/03/1994	3,500	150	86	85	90	NA	NA	73.83	13.48	60.35
MW-4 (D)	03/03/1994	3,200	130	73	74	76	NA	NA	73.83	13.48	60.35
MW-4	06/06/1994	590	25	ND	ND	ND	NA	NA	73.83	14.26	59.57

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Well ID	Date	TPHg (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)
MW-4 (D)	06/06/1994	400	16	ND	ND	ND	NA	NA	73.83	14.26	59.57
MW-4	[illegible]/1994	1,800	42	ND	3.7	4.7	NA	NA	73.83	15.42	58.41
MW-4 (D)	[illegible]/1994	2,000	40	ND	5.7	8	NA	NA	73.83	15.42	58.41
MW-4	12/15/1994	2,900	78	14	94	17	NA	NA	73.83	13.43	60.40
MW-4 (D)	12/15/1994	2,900	90	7	96	18	NA	NA	73.83	13.43	60.40
MW-4	03/13/1995	2,700	240	24	99	34	NA	NA	73.83	12.13	61.70
MW-4 (D)	03/13/1995	2,500	300	24	140	28	NA	NA	73.83	12.13	61.70
MW-4	06/25/1995	2,100	87	10	67	25	NA	NA	73.83	13.26	60.57
MW-4 (D)	06/25/1995	2,300	92	12	74	26	NA	NA	73.83	13.26	60.57
MW-4	09/12/1995 b	1,300	33	13	9.3	15	NA	NA	73.83	14.64	59.19
MW-4 (D)	09/12/1995 b	1,500	2.1	16	11	17	NA	NA	73.83	14.64	59.19
MW-4	03/21/1996	2,100	50	3.2	40	5.4	ND	NA	73.83	11.55	62.28
MW-4 (D)	03/21/1996	1,700	24	<0.5	39	7.2	740	NA	73.83	11.55	62.28
MW-4	06/28/1996	1,300	61	6.2	53	11	1,000	NA	73.83	13.86	59.97
MW-4 (D)	06/28/1996	1,200	29	6.2	50	8.3	1,000	NA	73.83	13.86	59.97
MW-4	09/19/1996	820	12	<2.5	2.8	4.3	720	NA	73.83	14.72	59.11
MW-4 (D)	09/19/1996	580	9.6	<2.5	<2.5	<2.5	760	1,200	73.83	14.72	59.11
MW-4	12/19/1996	1,200	28	<5.0	<5.0	<5.0	<25	NA	73.83	13.06	60.77
MW-4	12/05/1997	1,900	36	9	16	18	630	NA	73.83	12.89	60.94
MW-4	12/24/1998	1,100	23	5.3	38	7.9	1,100	NA	73.83	13.92	59.91
MW-4	12/17/1999	1,100	<2.2	2.1	13	11	1,300	1,200	73.83	14.28	59.55
MW-4	12/23/1999	NA	NA	NA	NA	NA	NA	NA	73.83	16.24	57.59

WELL CONCENTRATIONS
Shell-based Service Station
230 West MacArthur Boulevard
Oakland, CA
Wic #204-5508-0703

Well ID	Date	TPHg (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)

Abbreviations:

TPHg = 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

GW = Groundwater

ug/L = parts per billion

msl = Mean sea level

ft = Feet

<n = Below detection limit

D = Duplicate sample

ND = Not detected at or above the quantitative limit.

NA = Not applicable

Notes:

a = Chromatogram pattern indicates the presence of an unidentified hydrocarbon.

b = The laboratory noted the sample was analyzed after the method specified holding time.

Columbia Analytical Services INC.
An Employee-Owned Company

January 7, 2000 Service Request No.: S9904030

Ms. Leah Davis
BLAINE TECHNICAL SERVICES, INC.
1680 Rogers Ave.
San Jose, CA 95112-1105

RE: 230 W. MacCarthur Ave, Oakland, CA

Dear Ms. Davis:

Enclosed are the results of the sample(s) submitted to our laboratory on December 20, 1999. All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply to the sample(s) analyzed. Columbia Analytical Services is not responsible for use of less than the complete report. Signature of this CAS Analytical Report confirms that pages 2 through 12, following, have been thoroughly reviewed and approved for release.

Columbia Analytical Services is certified for environmental analyses by the California Department of Health Services (certificate number: 2352, expiration: January 31, 2001).

If you have any questions, please call me at (408) 748-9700.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lori Tyler
Project Chemist

COLUMBIA ANALYTICAL SERVICES, Inc.
Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Equiva Services LLC	**Service Request:**	S9904030
Project:	230 W. MacCarthur Ave, Oakland, CA/98995741 (INCIDENT#)SAP#1350	**Date Collected:**	12/17/99
Sample Matrix:	Water	**Date Received:**	12/20/99

EPA Method 8260
Volatile Organic Compounds

Sample Name:	MW-4	Units:	ug/L (ppb)
Lab Code:	S9904030-001	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Methyl *tert*-Butyl Ether	EPA 5030A	8260	0.5	100	NA	12/29/99	3200	

Approved By: Lori Zyl Date: 1-7-00

1S44/021397p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Equiva Services LLC	**Service Request:**	S9904030
Project:	230 W. MacCarthur Ave, Oakland, CA/98995741 (INCIDENT#)SAP#1350	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

EPA Method 8260
Volatile Organic Compounds

Sample Name:	Method Blank (MS02)	Units:	ug/L (ppb)
Lab Code:	S991229-WB1	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Methyl *tert*-Butyl Ether	EPA 5030A	8260	0.5	1	NA	12/29/99	ND	

Approved By: _____ Date: 1-7-00

1S44/021397p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Equiva Services LLC	**Service Request:**	S9904030
Project:	230 W. MacCarthur Ave, Oakland, CA/98995741 (INCIDENT#)SAP#1350076	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

EPA Method 8260
Volatile Organic Compounds

Sample Name:	Method Blank (MS02)	Units:	ug/L (ppb)
Lab Code:	S991224-WB1	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Methyl *tert*-Butyl Ether	EPA 5030A	8260	0.5	1	NA	12/24/99	ND	

Approved By: _____ Date: 1-7-00

1S44/021397p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Equiva Services LLC	**Service Request:**	S9904030
Project:	230 W. MacCarthur Ave, Oakland, CA/98995741 (INCIDENT#)SAP#135676	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	NA

Surrogate Recovery Summary
Volatile Organic Compounds

Prep Method:	EPA 5030A	Units:	PERCENT
Analysis Method:	8260	Basis:	NA

Sample Name	Lab Code	Test Notes	Percent Recovery		
			Dibromofluoromethane	Toluene-D8	4-Bromofluorobenzene
MW-4	S9904030-001		115	105	94
Method Blank	S991229-WB1		107	103	94
Method Blank	S991224-WB1		103	102	96
BATCH QC	S9903966-008MS		112	103	98
BATCH QC	S9903966-008DMS		114	98	95
CAS Acceptance Limits:			57-167	62-138	62-140

Approved By: Lori Zyl Date: 1-7-00

SUR3/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Equiva Services LLC	**Service Request:**	S9904030
Project:	230 W. MacCarthur Ave, Oakland, CA/98995741 (INCIDENT#)SAP#135676	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	12/24/99

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	BATCH QC	Units:	ug/L (ppb)
Lab Code:	S9903966-008MS, S9903966-008DMS	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
1,1-Dichloroethene	EPA 5030A	8260	0.5	10	10	ND	9.4	11	94	110	62-145	16	
Benzene	EPA 5030A	8260	0.5	10	10	ND	11	11	110	110	77-127	<1	
Trichloroethene	EPA 5030A	8260	0.5	10	10	ND	10	9.9	100	99	71-119	1	
Toluene	EPA 5030A	8260	0.5	10	10	ND	9.7	10	97	100	76-124	3	
Chlorobenzene	EPA 5030A	8260	0.5	10	10	ND	9.8	10	98	100	75-127	2	

Approved By: Lori Jp Date: 1-7-00

DMS/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Equiva Services LLC	**Service Request:**	S9904030
Project:	230 W. MacCarthur Ave, Oakland, CA/98995741 (INCIDENT#)SAP#135676	**Date Collected:**	12/17/99
Sample Matrix:	Water	**Date Received:**	12/20/99

BTEX, MTBE and TPH as Gasoline

Sample Name:	MW-4	Units:	ug/L (ppb)
Lab Code:	S9904030-001	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	12/27/99	1100	
Benzene	EPA 5030	8021B	0.5	1	NA	12/27/99	22	
Toluene	EPA 5030	8021B	0.5	1	NA	12/27/99	21	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	12/27/99	13	
Xylenes, Total	EPA 5030	8021B	1	1	NA	12/27/99	11	
Methyl *tert*-Butyl Ether	EPA 5030	8021B	3	200	NA	12/27/99	3800	

Approved By: _____ Date: 1-7-00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Equiva Services LLC	**Service Request:**	S9904030
Project:	230 W. MacCarthur Ave, Oakland, CA/98995741 (INCIDENT#)SAP#135676	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

BTEX, MTBE and TPH as Gasoline

Sample Name:	Method Blank	Units:	ug/L (ppb)
Lab Code:	S991226-WB3	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	12/26/99	ND	
Benzene	EPA 5030	8021B	0.5	1	NA	12/26/99	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	12/26/99	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	12/26/99	ND	
Xylenes, Total	EPA 5030	8021B	1	1	NA	12/26/99	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8021B	3	1	NA	12/26/99	ND	

Approved By: _____ Date: 1-7-00

1822/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Equiva Services LLC	**Service Request:**	S9904030
Project:	230 W. MacCarthur Ave, Oakland, CA/98995741 (INCIDENT#)SAP#135676	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

BTEX, MTBE and TPH as Gasoline

Sample Name:	Method Blank	Units:	ug/L (ppb)
Lab Code:	S991227-WB1	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	12/27/99	ND	
Benzene	EPA 5030	8021B	0.5	1	NA	12/27/99	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	12/27/99	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	12/27/99	ND	
Xylenes, Total	EPA 5030	8021B	1	1	NA	12/27/99	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8021B	3	1	NA	12/27/99	ND	

Approved By: _____ Date: 1-7-00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Equiva Services LLC	**Service Request:**	S9904030
Project:	230 W. MacCarthur Ave, Oakland, CA/98995741 (INCIDENT#)SAP#135676	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	NA

Surrogate Recovery Summary
BTEX, MTBE and TPH as Gasoline

Prep Method:	EPA 5030	Units:	PERCENT
Analysis Method:	8021B CA/LUFT	Basis:	NA

Sample Name	Lab Code	Test Notes	Percent Recovery a,a,a-Trifluorotoluene	Percent Recovery a,a,a-Trifluorotoluene
MW-4	S9904030-001		130	198 S1
Lab Control Sample	S991226-LCS		112	127
Dup Lab Control Sample	S991226-DLCS		109	129
Method Blank	S991226-WB3		113	101
Method Blank	S991227-WB1		110	102
	CAS Acceptance Limits:		70-130	70-130

S1 Surrogate recovery out of control limits due to matrix interference.

Approved By: Rai Jh Date: 1-7-00

SUR2/020397p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Equiva Services LLC	**Service Request:**	S9904030
Project:	230 W. MacCarthur Ave, Oakland, CA/98995741 (INCIDENT#)SAP#135676	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	12/26/99

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary
BTEX and TPH as Gasoline

Sample Name:	Dup Lab Control Sample	Units:	ug/L (ppb)
Lab Code:	S991226-LCS, S991226-DLCS	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	True Value LCS	True Value DLCS	Result LCS	Result DLCS	Percent Recovery LCS	Percent Recovery DLCS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Benzene	EPA 5030	8021B	25	25	25	25	100	100	75-135	<1	
Toluene	EPA 5030	8021B	25	25	25	26	100	104	73-136	4	
Ethylbenzene	EPA 5030	8021B	25	25	25	26	100	104	69-142	4	
Gasoline	EPA 5030	CA/LUFT	500	500	460	460	92	92	75-135	<1	

Approved By: _____ Date: 1-7-00

DLCS/020597p

BLAINE
TECH SERVICES, INC.

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

CHAIN OF CUSTODY

CLIENT: Equiva - Karen Petryna

SITE: 230 W. Macarthur Avenue
Oakland, CA

99121-21

LAB: COLUMBIA | DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ LIA ☐ OTHER ☐ RWQCB REGION

5990 4030

SPECIAL INSTRUCTIONS

Send invoice to Equiva
135676
Incident # 98995741
Send report to Blaine Tech Services, Inc.
ATTN: Leah Davis

SAMPLE I.D.	DATE	TIME	MATRIX S=SOIL W=H_2O	CONTAINERS TOTAL	CONTAINERS per.	C = COMPOSITE ALL CONTAINERS	CONDUCT ANALYSIS TO DETECT: TPH - gas, BTEX	MTBE by 8020	MTBE by 8260	TPH - diesel	Oxygenates by 8260	EPA 8010			ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
1) MW-4	12/17	906	H2O	3	HCl		X	X										
															CONFIRM MTBE BY EPA 8260			
																Due:	1/5/00	
																R11/D3-C		R11/D2

SAMPLING COMPLETED: DATE 12/17 | TIME 906
SAMPLING PERFORMED BY: Brian Freitas

RESULTS NEEDED NO LATER THAN

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Brian Freitas	12/20/99	11:40		12/20/99	11:00

SHIPPED VIA | DATE SENT | TIME SENT | COOLER #