CAMBRIA

February 23, 1998

3737

Barney Chan
Alameda County Department
of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Re: **Fourth Quarter 1997 Monitoring Report**
Shell Service Station
630 High Street
Oakland, California
WIC #204-5508-5801
Cambria Project #240-0314-497

Dear Mr. Chan:

On behalf of Shell Oil Products Company, Cambria Environmental Technology, Inc. (Cambria) is submitting this status report to satisfy the quarterly reporting requirements prescribed by California Administrative Code Title 23 Waters, Division 3, Chapter 16, Article 5, Section 2652.d.

FOURTH QUARTER 1997 ACTIVITIES

Blaine Tech Services, Inc. (Blaine) of San Jose, California measured ground water depths and collected water samples from the site wells (Figure 1). The Blaine report, describing these sampling activities and presenting the analytic results, is included as Attachment A. Cambria calculated ground water elevations (Table 1), compiled the analytical data (Table 2), and prepared a ground water elevation contour map (Figure 1).

ANTICIPATED FUTURE ACTIVITIES

The next sampling event is scheduled for second quarter 1998. At that time, Blaine will measure water levels, and collect ground water samples from selected site wells. Cambria will submit a report presenting a summary of the sampling activities.

CAMBRIA
ENVIRONMENTAL
TECHNOLOGY, INC.
1144 65TH STREET,
SUITE B
OAKLAND,
CA 94608
PH: (510) 420-0700
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REGULATORY STATUS REVIEW AND RECOMMENDATIONS

The California Regional Water Quality Control Board - San Francisco Bay Region (RWQCB) recently released guidelines for cleanup of low-risk fuel sites. A low-risk ground water site has the following general characteristics:

- The leak has stopped and the hydrocarbon source has been removed;
- Ground water is less than about 50 ft deep;
- The site is adequately characterized;
- The hydrocarbon plume is stable or decreasing;
- No water wells or other sensitive receptors are likely to be impacted;
- No preferential pathways exist at the site;
- The site presents no significant risk to human health;
- The site presents no significant risk to the environment.

Site specific characteristics relevant to each of the RWQCB characteristics are discussed below.

The Leak Has Stopped and the Hydrocarbon Source Removed: The tanks and piping that were the potential source of hydrocarbon release have been removed. Therefore, there is no ongoing hydrocarbon source. No liquid-phase hydrocarbons are currently detected at the site. Therefore, there is no remaining liquid-phase hydrocarbon source at the site.

Ground Water Depth: Ground water at the site has ranged from about 5 to 12 ft deep with the water table generally rising during the wet season and falling during the dry season.

Site Characterization: The extent of hydrocarbons in soil is defined by the existing soil borings and wells. In general, the highest hydrocarbons in soil were detected in the area of the former tanks and pump islands. The extent of total petroleum hydrocarbons as gasoline (TPHg) and benzene in ground water is defined by monitoring wells MW-2, MW-6, MW-7, MW-8, MW-4, MW-10, and MW-9.

Hydrocarbon Plume Is Stable or Decreasing: Hydrocarbon concentrations, where detectable, have remained stable to decreasing.

Drinking Water Wells or Other Sensitive Receptors: The site is located approximately ¼ mile east of the San Leandro Bay. However, the western extent of hydrocarbons is defined by well MW-7, in which no hydrocarbons have been detected in seven years of sampling, so the bay is not likely to be impacted.

Preferential Pathways: No preferential lithologic pathways that would affect down-gradient hydrocarbon migration have been identified at the site. Since ground water is currently generally deeper than about 7 ft, underground utilities are not likely to be preferential ground water flow pathways.

The Site Presents No Significant Risk to Human Health: The low benzene concentrations remaining in soil and ground water do not appear to pose a health risk to any potential receptors.

The Site Presents No Significant Risk to the Environment: There are no identified potential exposure pathways to adversely impact surface water, wetlands or other sensitive receptors. Therefore, there is no risk to the environment.

Based on these criteria, this site appears to be a candidate for case closure as a low risk ground water site. Therefore, we request that you close this site.

CLOSING

We appreciate the opportunity to work with you on this project. Please call if you have any questions or if you need additional data from our files to support case closure.

Sincerely,
Cambria Environmental Technology, Inc.

Maureen D. Feineman
Staff Geologist

N. Scott MacLeod, R.G.
Principal Geologist

Attachments: A - Blaine Quarterly Ground Water Monitoring Report

cc: A. E. (Alex) Perez, Shell Oil Products Company, P.O. Box 8080, Martinez, California 94553

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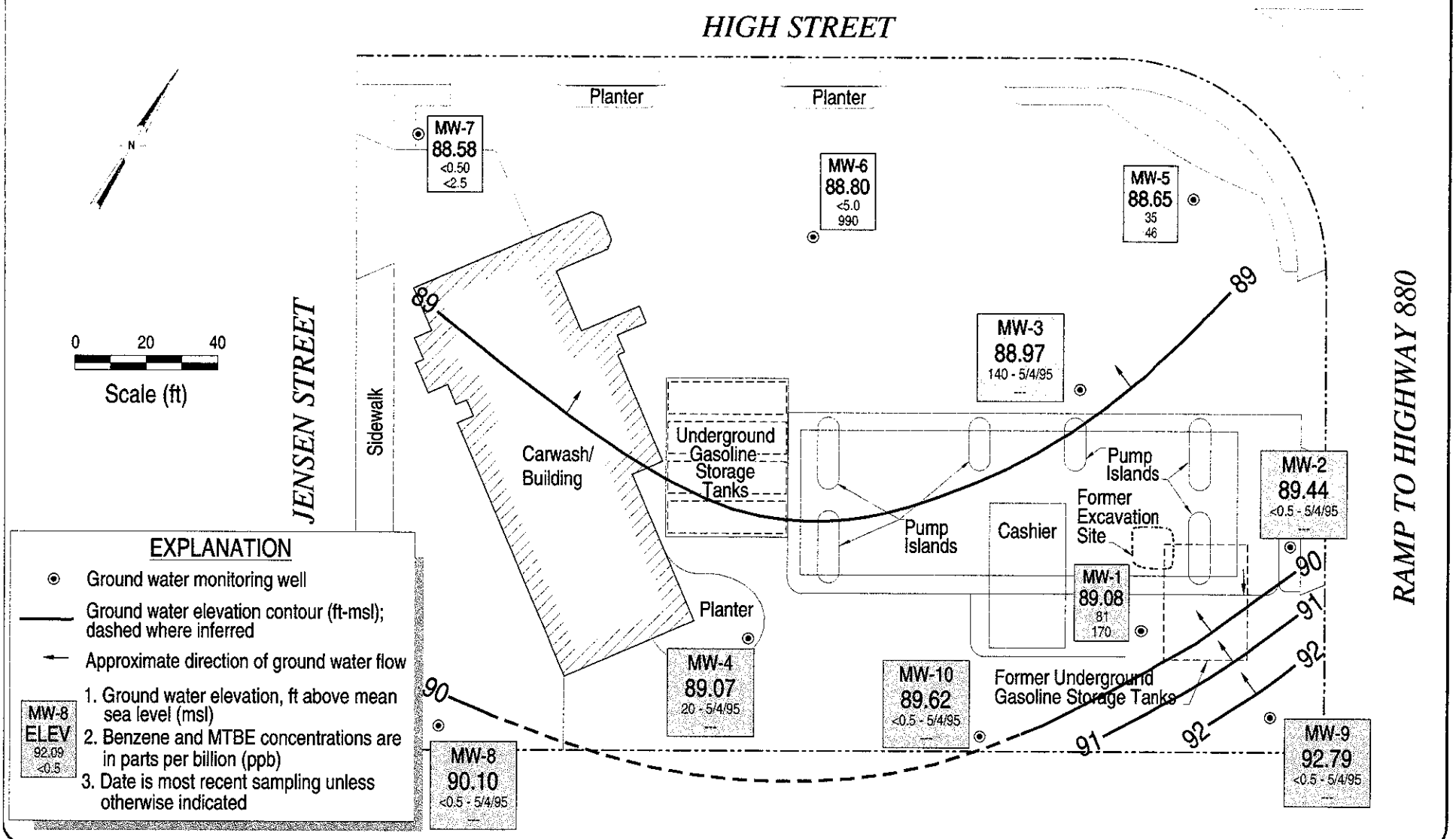

CAMBRIA
Environmental Technology, Inc.

Shell Service Station
630 High Street
Oakland, California

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Ground Water Elevation Contours

November 3, 1997

FIGURE
1

01/15/98

Table 1. **Ground Water Elevations** - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
MW-1	01/29/91	99.35	10.79	88.56
	04/30/91		9.48	89.87
	07/22/91		10.53	88.82
	02/21/92		8.31	91.04
	05/22/92		10.02	89.33
	07/07/92		10.06	89.29
	08/20/92		10.32	89.03
	11/18/92		10.64	88.71
	02/09/93		8.71	90.64
	06/16/93		9.71	89.64
	08/24/93		10.23	89.12
	11/23/93		10.48	88.87
	02/14/94		9.17	90.18
	05/25/94		9.52	89.83
	08/04/94		10.51	88.84
	11/08/94		10.20	89.15
	02/01/95		6.94	92.41
	05/04/95		8.40	90.95
	05/16/97		9.93	89.42
	11/03/97		**10.27**	**89.08**
MW-2	01/29/91	101.15	13.25	87.90
	04/30/91		10.94	90.21
	07/22/91		12.14	89.01
	02/21/92		10.08	91.07
	05/22/92		11.52	89.63
	07/07/92		11.50	89.65
	08/20/92		11.72	89.43
	11/18/92		13.06	88.09
	02/09/93		10.06	91.09
	06/16/93		11.60	89.55
	08/24/93		12.16	88.99
	11/23/93		12.74	88.41
	02/14/94		10.91	90.24
	05/25/94		11.06	90.09
	08/04/94		12.04	89.11
	11/08/94		12.38	88.77
	02/01/95		8.76	92.39
	05/04/95		10.20	90.95
	05/16/97		11.28	89.87
	11/03/97		**11.71**	**89.44**
MW-3	01/29/91	99.49	11.09	88.40
	04/30/91		9.57	89.92
	07/22/91		10.66	88.83
	02/21/92		8.97	90.52
	05/22/92		9.32	90.17
	07/07/92		10.22	89.27
	08/20/92		10.44	89.05
	11/18/92		10.79	88.70

Table 1. **Ground Water Elevations** - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
	02/09/93		9.35	90.14
	06/16/93		9.56	89.93
	08/24/93		10.51	88.98
	11/23/93		10.77	88.72
	02/14/94		9.61	89.88
	05/25/94		10.00	89.49
	08/04/94		10.63	88.86
	11/08/94		11.02	88.47
	02/01/95		8.31	91.18
	05/04/95		8.70	90.79
	05/16/97		10.30	89.19
	11/03/97		**10.52**	**88.97**
MW-4	01/29/91	99.24	10.76	88.48
	04/30/91		9.45	89.79
	07/22/91		10.34	88.90
	02/21/92		7.60	91.64
	05/22/92		9.90	89.34
	07/07/92		10.02	89.22
	08/20/92		10.32	88.92
	11/18/92		10.51	88.73
	02/09/93		8.13	91.11
	06/16/93		9.60	89.64
	08/24/93		10.05	89.19
	11/23/93		10.25	89.99
	02/14/94		8.83	90.41
	05/25/94		9.64	89.60
	08/04/94		10.62	88.62
	11/08/94		9.28	89.96
	02/01/95		6.52	92.72
	05/04/95		8.40	90.84
	05/16/97		9.35	89.89
	11/03/97		**10.17**	**89.07**
MW-5	01/29/91	100.08	11.72	88.36
	04/30/91		10.45	89.63
	07/22/91		11.43	88.65
	02/21/92		9.24	90.84
	05/22/92		10.97	89.11
	07/07/92		10.98	89.10
	08/20/92		11.14	88.94
	11/18/92		11.21	88.87
	02/09/93		10.01	90.07
	06/16/93		11.05	89.03
	08/24/93		11.32	88.76
	11/23/93		11.35	88.73
	02/14/94		10.34	89.74
	05/25/94		10.54	89.54
	08/04/94		11.50	88.58

Table 1. **Ground Water Elevations** - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
	11/08/94		11.24	88.84
	02/01/95		9.05	91.03
	05/04/95		10.35	89.73
	05/16/97		11.21	88.87
	11/03/97		**11.43**	**88.65**
MW-6	01/29/91	98.56	10.23	88.33
	04/30/91		9.15	89.41
	07/22/91		10.10	88.46
	02/21/92		7.15	91.41
	05/22/92		9.55	89.01
	07/07/92		9.53	89.03
	08/20/92		9.84	88.72
	11/18/92		10.03	88.53
	02/09/93		7.91	90.65
	06/16/93		8.74	89.82
	08/24/93		9.66	88.90
	11/23/93		9.86	88.70
	02/14/94		8.27	90.29
	05/25/94		8.89	89.67
	08/04/94		10.10	88.46
	11/08/94		8.98	89.58
	02/01/95		7.07	91.49
	05/04/95		8.56	90.00
	05/16/97		9.57	88.99
	11/03/97		**9.76**	**88.80**
MW-7	01/29/91	97.53	8.91	88.62
	04/30/91		8.38	89.15
	07/22/91		9.13	88.40
	02/21/92		6.87	90.66
	05/22/92		8.08	89.45
	07/07/92		8.82	88.71
	08/20/92		8.89	88.64
	11/18/92		9.54	87.99
	02/09/93		7.84	89.69
	06/16/93		7.80	89.73
	08/24/93		8.51	89.02
	11/23/93		8.70	88.83
	02/14/94		7.52	90.01
	05/25/94		9.04	88.49
	08/04/94		9.80	87.83
	11/08/94		8.45	89.08
	02/01/95		5.51	92.02
	05/04/95		8.34	89.19
	05/16/97		8.80	88.73
	11/03/97		**8.95**	**88.58**

Table 1. **Ground Water Elevations** - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
MW-8	01/29/91	97.13	8.47	88.66
	04/30/91		7.64	89.49
	07/22/91		8.36	88.77
	02/21/92		6.54	90.59
	05/22/92		7.68	89.45
	07/07/92		8.16	88.97
	08/20/92		8.25	88.88
	11/18/92		8.32	88.81
	02/09/93		5.58	91.55
	06/16/93		7.19	89.94
	08/24/93		7.98	89.15
	11/23/93		8.09	89.04
	02/14/94		9.42	87.71
	05/25/94		7.18	89.95
	08/04/94		8.51	88.62
	11/08/94		6.24	90.89
	02/01/95		3.94	93.19
	05/04/95		5.04	92.09
	05/16/97		7.65	89.48
	11/03/97		**7.03**	**90.10**
MW-9	01/29/91	99.72	8.27	91.45
	04/30/91		7.62	92.10
	07/22/91		8.48	91.24
	02/21/92		6.91	92.81
	05/22/92		8.64	91.08
	07/07/92		7.55	92.17
	08/20/92		7.38	92.34
	11/18/92		10.17	89.55
	02/09/93		6.89	92.83
	06/16/93		8.74	90.98
	08/24/93		8.32	91.40
	11/23/93		8.17	91.55
	02/14/94		7.67	92.05
	05/25/94		7.89	91.83
	08/04/94		9.76	89.96
	11/08/94		7.75	91.97
	02/01/95		5.66	94.06
	05/04/95		7.40	92.32
	05/16/97		7.72	92.00
	11/03/97		**6.93**	**92.79**
MW-10	01/29/91	98.99	10.81	88.18
	04/30/91		8.79	90.20
	07/22/91		9.94	89.05
	02/21/92		9.11	89.88
	05/22/92		9.14	89.85
	07/07/92		9.87	89.12
	08/20/92		9.30	89.69

Table 1. **Ground Water Elevations** - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
	11/18/92		10.21	88.78
	02/09/93		7.63	91.36
	06/16/93		8.57	90.42
	08/24/93		9.61	89.38
	11/23/93		10.10	88.89
	02/14/94		9.01	89.98
	05/25/94		8.84	90.15
	08/04/94		9.82	89.17
	11/08/94		9.40	89.59
	02/01/95		6.78	92.21
	05/04/95		7.00	91.99
	05/16/97		8.66	90.33
	11/03/97		**9.37**	**89.62**

Abbreviations:

ft = Feet
msl = Mean sea level

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Table 2. **Analytical Results for Ground Water** - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California

Well ID (Sampling Frequency)	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	B	T	E	X	MTBE	VOCs	DO
			<----------parts per billion (µg/L)---------->									mg/L
MW-1	01/29/91	10.79	11,000	21,000[a]	<500	310	41	500	400	---	---	---
(2nd and 4th Quarters)	04/30/91	9.48	8,300	2,100	<500	250	32	310	300	---	---	---
	07/22/91	10.53	11,000	3,800	<500	310	36	290	280	---	---	---
	02/24/92	8.31	7,300	8,900[b]	800	200	36	340	270	---	---	---
	05/22/92	10.02	7,600	18,000[bc]	---	140	<50	300	140	---	---	---
	07/07/92	10.06	---	---	---	---	---	---	---	---	---	---
	08/20/92	10.32	9,100	5,200[b]	---	530	340	860	540	---	---	---
	11/18/92	10.64	15,000	4,100[b]	---	220	50	790	340	---	---	---
	02/09/93	8.71	7,000	1,200	---	130	23	220	160	---	---	---
	06/16/93	9.71	4,800	---	---	150	31	320	130	---	---	1.73/1.58[m]
	08/24/93	10.23	10,000	---	---	170	27	610	170	---	---	1.49/1.70[m]
	11/23/93	10.48	7,600	---	---	190	<12	430	140	---	---	1.77/2.80[m]
	11/23/93[dup]	10.48	4,800	---	---	190	15	430	130	---	---	1.77/2.80[m]
	02/14/94	9.17	8,000	---	---	150	47	210	68	---	---	6.2/2.5[m]
	02/14/94[dup]	9.17	8,900	---	---	160	45	230	76	---	---	---
	05/25/94	9.52	8,800	---	---	95	<10	210	63	---	---	---
	08/04/94	10.51	6,200	---	---	150	14	350	180	---	---	---
	08/04/94[dup]	10.51	6,200	---	---	170	16	280	160	---	---	---
	11/08/94	10.20	7,600	---	---	190	<10	480	200	---	---	---
	02/01/95	6.94	8,200	---	---	130	21	170	130	---	---	---
	02/01/95[dup]	6.94	7,100	---	---	130	18	170	130	---	---	---
	05/04/95	8.40	7,000	---	---	130	47	190	180	---	---	---
	05/04/95[dup]	8.40	6,800	---	---	130	46	180	180	---	---	---
	05/16/97	9.93	5,600	---	---	57	<10	26	29	84	---	1.5
	05/13/97[dup]	9.93	5,800	---	---	85	<10	26	30	110	---	1.5
	11/03/97	**10.27**	**6,900**	**---**	**---**	**81**	**<10**	**32**	**30**	**170**	**---**	**0.8/0.6[m]**
MW-2	01/29/91	13.25	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
(Sampling	04/30/91	10.94	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
Discontinued)	07/22/91	12.14	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/23/92	10.08	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/22/92	11.52	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/07/92	11.50	---	---	---	---	---	---	---	---	---	---
	08/20/92	11.72	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/18/92	13.06	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/09/93	10.046	95	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	06/16/93	11.60	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	08/24/93	12.16	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/23/93	12.74	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/14/94	10.91	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/25/94	11.06	100	---	---	1.2	4.9	2.3	13	---	---	---

Table 2. **Analytical Results for Ground Water** - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California (continued)

Well ID (Sampling Frequency)	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	B	T	E	X	MTBE	VOCs	DO
			<---parts per billion (µg/L)--->									mg/L
	11/08/94	12.38	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/04/95	10.20	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
MW-3	01/29/91	11.09	2,300	410[a]	<500	17	14.1	10	230	---	---	---
(Sampling	04/30/91	9.57	<50	260	<500	22	4.0	7.0	17	---	---	---
Discontinued)	07/22/91	10.66	2,000	310	<500	51	<0.5	<0.5	<0.5	---	---	---
	02/24/92	8.97	2,800	640[d]	---	15	2.8	<2.5	12	---	---	---
	05/22/92	9.32	3,700	220[bc]	---	27	11	20	110	---	---	---
	07/07/92	10.22	---	---	---	---	---	---	---	---	---	---
	08/20/92	10.44	13,000	340[b]	---	72	85	71	140	---	---	---
	11/18/92	10.79	2,100	430[b]	---	21	3.6	11	13	---	---	---
	02/09/93	9.35	3,300	83	---	21	5.6	6.1	<0.5	---	---	---
	02/02/93[dup]	9.35	3,500	130	---	18	8.8	7.2	<0.5	---	---	---
	06/16/93	9.56	3,500[e]	---	---	66	6	<0.5	<0.5	---	---	---
	08/24/93	10.51	3,400[e]	---	---	110	<5	<5	<5	---	---	---
	11/23/93	10.77	3,000	---	---	36	44	6.9	23	---	f	---
	02/14/94	9.61	4,700[g]	---	---	9.9	5.2	8.8	<5.0	---	---	---
	05/25/94	10.00	1,200	---	---	<10	<10	<10	<10	---	---	---
	08/04/94	10.63	2,600	---	---	29	<5	14	11	---	---	---
	11/08/94	11.02	2,600	---	---	5.5	1.5	1.9	0.9	---	---	---
	11/08/94[dup]	11.02	2,700	---	---	12	5.0	6.8	3.5	---	---	---
	02/01/95	8.31	4,600	---	---	27	1.2	3.2	2.5	---	---	---
	05/04/95	8.70	1,800	---	---	140	11	11	16	---	---	---
MW-4	01/29/91	10.76	2,600	1,300	<500	83	<0.5	<0.5	110	---	---	---
(Sampling	04/30/91	9.45	2,600	750	<500	22	4.0	7.0	17	---	---	---
Discontinued)	07/22/91	10.34	4,300	1,200	<500	120	<0.5	<0.5	10	---	---	---
	02/24/92	7.60	2,000	8,300[b]	---	31	6.3	3.5	6.6	---	---	---
	05/22/92	9.90	3,600	3,400[bc]	---	55	5	3	10	---	---	---
	07/07/92	10.02	---	---	---	---	---	---	---	---	---	---
	08/20/92	10.32	3,100	3,400	---	100	45	14	45	---	---	---
	11/18/92	10.51	2,200	1,400	---	32	12	4.2	24	---	---	---
	02/09/93	8.13	1,500	180	---	1.1	<0.5	<0.5	<0.5	---	---	---
	06/16/93	9.60	1,100	---	---	120	47	5.1	19	---	---	1.86/4.82[m]
	08/24/93	10.05	2,700	---	---	46	11	25	0.97	---	---	1.46/1.27[m]
	11/23/93	10.25	2,500	---	---	23	5.7	3.7	16	---	---	5.29/6.59[m]
	02/14/94	8.83	1,500	---	---	12	7.8	<2.5	<2.5	---	---	2.1/1.9[m]
	05/25/94	9.64	810	---	---	20	<2	<2	4.0	---	---	---
	08/04/94	10.62	2,300	---	---	99	15	6.3	24	---	---	---
	11/08/94	9.28	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/01/95	6.52	960	---	---	5.6	2.2	2.6	2.8	---	---	---
	05/04/95	8.40	960	---	---	20	4.7	3.7	5.6	---	---	---

Table 2. **Analytical Results for Ground Water** - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California (continued)

Well ID (Sampling Frequency)	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	B	T	E	X	MTBE	VOCs	DO
			<----------			parts per billion (µg/L)				---------->		mg/L
MW-5 (2^{nd} and 4^{th} Quarters)	01/29/91	11.72	3,100	720	<500	86	<0.5	24	28	---	---	---
	04/30/91	10.45	<50	90	<500	46	<0.5	9.0	9	---	---	---
	07/22/91	11.43	1,700	300	<500	23	<0.5	6,700	10,000	---	---	---
	02/23/94	9.24	240	180[b]	<0.5	1	<0.5	<0.5	1	---	---	---
	05/22/92	10.97	6,200	7,100[bc]	---	6	95	56	99	---	---	---
	07/07/92	10.98	---	---	---	---	---	---	---	---	---	---
	08/20/92	11.14	7,400	120[b]	---	56	95	91	150	---	---	---
	11/18/92	11.21	3,300	320[b]	---	27	<12.5	20	470	---	---	---
	02/09/93	10.01	160	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	06/16/93	11.05	140	---	---	0.8	<0.5	<0.5	<0.5	---	---	1.53/2.72[m]
	08/24/93	11.32	1,000	---	---	7.9	<1	2.2	<1.5	---	---	2.69/1.41[m]
	11/23/93	11.35	2,000	---	---	67	15	11	33	---	---	8.20/3.09[m]
	02/14/94	10.34	660	---	---	1.3	<0.5	0.5	0.7	---	---	2.0/1.9[m]
	05/25/94	10.54	670	---	---	0.65	<0.5	2.6	<0.5	---	---	---
	08/04/94	11.50	700	---	---	5.0	<0.5	1.2	<0.5	---	---	---
	11/08/94	11.24	810	---	---	4.2	<0.5	1.5	0.8	---	---	---
	02/01/95	9.05	110	---	---	7.0	<0.5	<0.5	<0.5	---	---	---
	05/04/95	10.35	260	---	---	3.1	1.3	2.0	1.5	---	---	---
	05/16/97	11.21	440	---	---	2.4	3.1	1.6	3.3	7.1	---	2.9
	11/03/97	**11.43**	**1,400**	**---**	**---**	**34**	**<2.5**	**2.8**	**4.4**	**33**	**---**	**3.0/1.2[m]**
	11/03/97[dup]	**11.43**	**1,300**	**---**	**---**	**35**	**<2.5**	**<2.5**	**6.8**	**46**	**---**	**3.0/1.2[m]**
MW-6 (2^{nd} and 4^{th} Quarters)	01/29/91	10.23	<50	860	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/30/91	9.15	<50	1,100	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/22/91	10.10	<50	1,200	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/23/92	7.15	<50	60[d]	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/22/92	9.55	<50	650[c]	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/07/92	9.53	---	---	---	---	---	---	---	---	---	---
	08/20/92	9.84	140[e]	510[c]	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/18/92	10.03	200[e]	350	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/09/93	7.91	14,000	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	06/16/93	8.74	5,700[e]	---	---	<0.5	22	<0.5	34	---	---	8.46/9.73[m]
	06/16/93[dup]	8.74	5,600	---	---	<0.5	<0.5	<0.5	<0.5	---	---	8.46/9.73[m]
	08/24/93	9.66	4,300[e]	---	---	<12.5	<12.5	<12.5	<12.5	---	---	2.15/1.52[m]
	08/24/93[dup]	9.66	3,800[e]	---	---	<12.5	<12.5	<12.5	<12.5	---	---	2.15/1.52[m]
	11/23/93	9.86	3,300[e]	---	---	<12	<12	<12	<12	---	nd	3.86/6.75[m]
	02/14/94	8.27	14,000[j]	---	---	<12.5	<12.5	<12.5	<12.5	---	---	2.3/5.2[m]
	05/25/94	8.89	<1,000[j]	---	---	<10	<10	<10	<10	---	---	---
	05/25/94[dup]	8.89	<1,000[j]	---	---	<10	<10	<10	<10	---	---	---
	08/04/94	10.10	250[k]	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/08/94	8.98	4,600[e]	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/01/95	7.07	710	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/04/95	8.56	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---

Table 2. **Analytical Results for Ground Water** - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California (continued)

Well ID (Sampling Frequency)	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	B	T	E	X	MTBE	VOCs	DO
			<----------parts per billion (µg/L)---------->									mg/L
	05/16/97	9.57	<500	---	---	<5.0	<5.0	<5.0	<5.0	1,700	---	6.2
	11/03/97	**9.76**	**<500**	**---**	**---**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**990**	**---**	**1.4/1.0[m]**
MW-7	01/28/91	8.91	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
(2nd and 4th Quarters)	05/01/91	8.38	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/23/91	9.13	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/23/92	6.87	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/22/92	8.08	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/07/92	8.82	---	---	---	---	---	---	---	---	---	---
	08/20/92	8.89	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/18/92	9.54	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/09/93	7.84	72	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	06/16/93	7.80	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	08/24/93	8.51	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/23/93	8.70	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/14/94	7.52	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/25/94	9.04	<50	---	---	<0.5	0.63	<0.5	0.93	---	---	---
	11/08/94	8.45	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/04/95	8.34	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/16/97	8.80	<50	---	---	<0.50	<0.50	<0.50	<0.50	2.7	---	2.8
	11/03/97	**8.95**	**<50**	**---**	**---**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**	**---**	**1.6/1.2[m]**
MW-8	01/28/91	8.47	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
(Sampling	05/01/91	7.64	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
Discontinued)	07/23/91	8.36	<50	<50	600	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/23/92	6.54	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/22/92	7.68	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/07/92	8.16	---	---	---	---	---	---	---	---	---	---
	08/20/92	8.25	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/18/92	8.32	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/09/93	5.58	63	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	06/16/93	7.19	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	08/24/93	7.98	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/23/93	8.09	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/14/94	9.42	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/25/94	7.18	<50	---	---	<0.5	1.1	<0.5	2.5	---	---	---
	11/08/94	6.24	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/04/95	5.04	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
MW-9	01/28/91	8.27	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
(Sampling	05/01/91	7.62	<50	<50	<500	0.6	<0.5	<0.5	1.1	---	---	---
Discontinued)	07/23/91	8.48	<50	<50	800	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/23/92	6.91	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---

Table 2. **Analytical Results for Ground Water** - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California (continued)

Well ID (Sampling Frequency)	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	B	T	E	X	MTBE	VOCs	DO
			<----------parts per billion (µg/L)---------->									mg/L
	05/22/92	8.64	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/07/92	7.55	---	---	---	---	---	---	---	---	---	---
	08/20/92	7.38	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	08/20/92[dup]	7.38	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/18/92	10.17	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/18/92[dup]	10.17	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/09/93	6.89	290	110	---	6	<0.5	<0.5	<0.5	---	---	---
	06/16/93	8.74	90[e]	---	---	<0.5	<0.5	<0.5	<0.5	---	---	1.51/2.17[m]
	08/24/93	8.32	50[e]	---	---	<0.5	<0.5	<0.5	<0.5	---	---	2.86/2.74[m]
	11/23/93	8.17	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	nd	3.41/3.78[m]
	02/14/94	7.67	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	4.6/5.2[m]
	05/25/94	7.89	56	---	---	1.3	4.0	1.4	8.3	---	---	---
	11/08/94	7.75	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/04/95	7.40	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
MW-10 (Sampling Discontinued)	01/28/91	10.81	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/01/91	8.79	<50	460	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/23/91	9.94	<50	<50	900	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/23/92	9.11	<50	120	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/22/92	9.14	<50	310	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/07/92	9.87	---	---	---	---	---	---	---	---	---	---
	08/20/92	9.30	<50	460	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/18/92	10.21	<50	470	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/09/93	7.63	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	06/16/93	8.57	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	08/24/93	9.61	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/23/93	10.10	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/11/94	9.01	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/25/94	8.84	<50	---	---	<0.5	1.1	<0.5	1.4	---	---	---
	11/08/94	9.40	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/04/95	7.00	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
Travel Blank	02/24/92		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/22/92		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	08/20/92		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/18/92		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/09/93		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	06/16/93		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	08/24/93		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/23/93		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/14/94		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/25/94		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	08/04/94		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---

Table 2. **Analytical Results for Ground Water** - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California (continued)

Well ID (Sampling Frequency)	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	B	T	E	X	MTBE	VOCs	DO
			<------------------				parts per billion (µg/L)			----------------->		mg/L
	11/08/94		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/01/95		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
Bailer	08/20/92		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
Blank	11/18/92		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/16/97		<50	---	---	<0.50	<0.50	<0.50	<0.50	<2.5	---	---
MCLs			NE	NE	NE	1	150	700	1,750	NE	---	---

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
TPH-D = Total petroleum hydrocarbons as diesel by Modified EPA Method 8015
TPH-MO = Total petroleum hydrocarbons as motor oil by EPA Method 8015
B = Benzene by EPA Method 8020
E = Ethylbenzene by EPA Method 8020
T = Toluene by EPA Method 8020
X = Xylenes by EPA Method 8020
MTBE = Methyl tert-butyl ether by EPA Method 8020
VOCs = Volatile organic compounds by EPA Method 8240
DO = Dissolved Oxygen
NE = Not established
--- = Not analyzed
<n = Not detected at detection limits of n ppb
MCLs = California Primary maximum contaminant levels for drinking water (22 CCR 64444)
nd = not detected at or above the reporting limit for the analysis as performed
dup = Duplicate sample
µg/L = Micrograms per liter
mg/L = Milligrams per liter

Notes:

a = Compounds detected and calculated as diesel do not match the diesel standard; pattern is characteristic of weathered diesel.
b = Concentration reported as diesel is primarily due to the presence of a lighter petroleum product, possible gasoline or kerosene
c = Concentration reported as diesel is primarily due to a heavier petroleum product, possible motor oil or aged diesel fuel
d = Compounds detected within the diesel range are not characteristics of the standard diesel chromatographic pattern
e = Concentration reported as gasoline is partially or primarily due to the presence of a discrete hydrocarbon peak not indicative of gasoline
f = 26 ppb benzene detected using EPA Method 8240
g = The concentration reported as gasoline for MW-3 is due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline
h = Compounds detected and calculated as diesel appear to be the less volatile constituents of gasoline
i = The concentration reported as gasoline for sample MW-6 is primarily due to the presence of a discrete peak not indicative of gasoline
j = Sample diluted due to high-non hydrocarbon peak.
k = The positive result has an atypical pattern for gasoline analysis
m = Field measurement of dissolved oxygen concentrations before and after well purging

CAMBRIA

ATTACHMENT A

Blaine Quarterly Ground Water Monitoring Report

BLAINE
TECH SERVICES inc

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

December 8, 1997

Shell Oil Company
P.O. Box 8080
Martinez, CA 94553

Attn: Alex Perez

Shell WIC #204-5508-5801
630 High Street
Oakland, California

4th Quarter 1997

Groundwater Monitoring Report 971103-D-3

Blaine Tech Services, Inc. performs environmental sampling and documentation as an independent third party. Copies of our Sampling Report along with the laboratory's Certified Analytical Report are forwarded to the consultant overseeing work at this site. Submission of the assembled documents to interested regulatory agencies will be made by the designated consultant.

Groundwater monitoring at this site was performed in accordance with Standard Operating Procedures provided to the interested regulatory agencies. If you have any questions about the work performed at this site please call me at (408) 573-0555 ext. 201.

Yours truly,

Francis Thie

attachments: Table of Well Gauging Data
Chain of Custody
Field Data Sheets
Certified Analytical Report

cc: Cambria Environmental
1144 65th St., Suite C
Oakland, CA 94608
Attn: Josh Bergstrom

(Any professional evaluations or recommendations will be made by the consultant under separate cover.)

TABLE OF WELL GAUGING DATA

WELL I.D.	DATA COLLECTION DATE	MEASUREMENT REFERENCED TO	QUALITATIVE OBSERVATIONS (sheen)	DEPTH TO FIRST IMMISCIBLES LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLES LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
MW-1	11/03/97	TOC	–	NONE	–	–	10.27	13.75
MW-2	11/03/97	TOC	–	NONE	–	–	11.71	19.20
MW-3	11/03/97	TOC	–	NONE	–	–	10.52	17.25
MW-4	11/03/97	TOC	–	NONE	–	–	10.17	18.33
MW-5*	11/03/97	TOC	–	NONE	–	–	11.43	17.76
MW-6	11/03/97	TOC	–	NONE	–	–	9.76	19.43
MW-7	11/03/97	TOC	–	NONE	–	–	8.95	19.39
MW-8	11/03/97	TOC	–	NONE	–	–	7.03	20.58
MW-9	11/03/97	TOC	–	NONE	–	–	6.93	11.42
MW-10	11/03/97	TOC	–	NONE	–	–	9.37	12.54

* Sample DUP was a duplicate sample taken from well MW-5.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 971103-D3

Date:
Page 1 of 1

Site Address: 630 High St., Oakland, CA

WIC#: 204-5508-5801

Shell Engineer: R. Jeff Granberry — Phone No.: (510) 675-6168 Fax #: 675-6172

Consultant Name & Address: Blaine Tech Services, Inc. 985 Timothy Dr., San Jose, CA 95133

Consultant Contact: Fran Thie — Phone No.: (408) 995-5535 Fax #: 293-8773

Comments:

Sampled by:

Printed Name: Dan Venos

LAB: Sequoia

CHECK ONE (1) BOX ONLY		CT/DT	TURN AROUND TIME	
G.W. Monitoring	X	4441	24 hours	
Site Investigation		4441	48 hours	
Soil Classify/Disposal		4442	15 days	X (Normal)
Water Classify/Disposal		4443	Other	
Soil/Air Rem. or Sys. O & M		4452	NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.	
Water Rem. or Sys. O & M		4453		
Other				

UST AGENCY:

Analysis Required

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	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	MATERIAL DESCRIPTION	SAMPLE CONDITION / COMMENTS
MW-1	11/3			X		3	X		X				X					01	9711287
MW-5							X		X				X					02	
MW-6							X		X				X					03	
MW-7							X		X				X					04	
EB							X		X				X					05	
Dup							X		X				X					06	

	Printed Name:	Date:	Time:	Received (signature):	Printed Name:	Date:	Time:
Relinquished By (signature):		11/4/97	1400		Fulcher	11/4/97	1648
Relinquished By (signature):	Printed Name:	11/4/97		Received (signature):	Printed Name:	Date:	Time:
Relinquished By (signature):	Printed Name:	Date:	Time:	Received (signature):	Printed Name: ABAD	Date: 11/4/97	Time: 1702

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

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112
Attention: Fran Thie

Project: Shell Oakland, 971103-D3

Enclosed are the results from samples received at Sequoia Analytical on November 4, 1997. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9711287 -01	LIQUID, MW-1	11/03/97	TPGM2W Purgeable TPH/BTEX
9711287 -02	LIQUID, MW-5	11/03/97	TPGM2W Purgeable TPH/BTEX
9711287 -03	LIQUID, MW-6	11/03/97	TPGM2W Purgeable TPH/BTEX
9711287 -04	LIQUID, MW-7	11/03/97	TPGM2W Purgeable TPH/BTEX
9711287 -05	LIQUID, EB	11/03/97	TPGM2W Purgeable TPH/BTEX
9711287 -06	LIQUID, DUP	11/03/97	TPGM2W Purgeable TPH/BTEX

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Shell Oakland, 971103-D3
Sample Descript: MW-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9711287-01

Sampled: 11/03/97
Received: 11/04/97

Analyzed: 11/18/97
Reported: 12/01/97

QC Batch Number: GC111897BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	6900
Methyl t-Butyl Ether	50	170
Benzene	10	81
Toluene	10	N.D.
Ethyl Benzene	10	32
Xylenes (Total)	10	30
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	108

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Shell Oakland, 971103-D3
Sample Descript: MW-5
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9711287-02

Sampled: 11/03/97
Received: 11/04/97

Analyzed: 11/17/97
Reported: 12/01/97

QC Batch Number: GC111797BTEX03A
nstrument ID: GCHP3

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**250**	**1400**
Methyl t-Butyl Ether	**12**	**33**
Benzene	**2.5**	**34**
Toluene	2.5	N.D.
Ethyl Benzene	**2.5**	**2.8**
Xylenes (Total)	**2.5**	**4.4**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	110

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Shell Oakland, 971103-D3
Sample Descript: MW-6
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9711287-03

Sampled: 11/03/97
Received: 11/04/97

Analyzed: 11/18/97
Reported: 12/01/97

QC Batch Number: GC111897BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	N.D.
Methyl t-Butyl Ether	**25**	**990**
Benzene	5.0	N.D.
Toluene	5.0	N.D.
Ethyl Benzene	5.0	N.D.
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	85

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services	Client Proj. ID: Shell Oakland, 971103-D3	Sampled: 11/03/97
1680 Rogers Avenue	Sample Descript: MW-7	Received: 11/04/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 11/17/97
Attention: Fran Thie	Lab Number: 9711287-04	Reported: 12/01/97

QC Batch Number: GC111797BTEX21A
nstrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	94

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Shell Oakland, 971103-D3
Sample Descript: EB
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9711287-05

Sampled: 11/03/97
Received: 11/04/97

Analyzed: 11/17/97
Reported: 12/01/97

QC Batch Number: GC111797BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	89

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Shell Oakland, 971103-D3
Sample Descript: DUP
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9711287-06

Sampled: 11/03/97
Received: 11/04/97

Analyzed: 11/17/97
Reported: 12/01/97

QC Batch Number: GC111797BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**250**	**1300**
Methyl t-Butyl Ether	**12**	**46**
Benzene	**2.5**	**35**
Toluene	2.5	N.D.
Ethyl Benzene	2.5	N.D.
Xylenes (Total)	**2.5**	**6.8**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	101

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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Project Manager

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Blaine Tech Services, Inc.
1680 Rogers Ave.
San Jose, CA 95112
Attention: Fran Thie

Client Project ID: Shell Oakland, 971103-D3
Matrix: Liquid
Work Order #: 9711287 -01, 03
Reported: Dec 2, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC111897BTEX02A	GC111897BTEX02A	GC111897BTEX02A	GC111897BTEX02A	GC111897BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab
MS/MSD #:	971189004	971189004	971189004	971189004	971189004
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/18/97	11/18/97	11/18/97	11/18/97	11/18/97
Analyzed Date:	11/18/97	11/18/97	11/18/97	11/18/97	11/18/97
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	10	9.8	9.9	30	69
MS % Recovery:	100	98	99	100	115
Dup. Result:	10	9.9	10	30	71
MSD % Recov.:	100	99	100	100	118
RPD:	0.0	1.0	1.0	0.0	2.9
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	BLK111897	BLK111897	BLK111897	BLK111897	BLK111897
Prepared Date:	11/18/97	11/18/97	11/18/97	11/18/97	11/18/97
Analyzed Date:	11/18/97	11/18/97	11/18/97	11/18/97	11/18/97
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	9.7	9.4	9.6	29	66
LCS % Recov.:	97	94	96	97	110
MS/MSD Control Limits	60-140	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Sequoia Analytical

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Blaine Tech Services, Inc.
1680 Rogers Ave.
San Jose, CA 95112
Attention: Fran Thie

Client Project ID: Shell Oakland, 971103-D3
Matrix: Liquid
Work Order #: 9711287-02
Reported: Dec 2, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC111797BTEX03A	GC111797BTEX03A	GC111797BTEX03A	GC111797BTEX03A	GC111797BTEX03A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab
MS/MSD #:	971161104	971161104	971161104	971161104	971161104
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/17/97	11/17/97	11/17/97	11/17/97	11/17/97
Analyzed Date:	11/17/97	11/17/97	11/17/97	11/17/97	11/17/97
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	8.0	7.8	7.8	22	64
MS % Recovery:	80	78	78	73	107
Dup. Result:	7.0	6.8	6.8	19	56
MSD % Recov.:	70	68	68	63	93
RPD:	13	14	14	15	13
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	BLK111797	BLK111797	BLK111797	BLK111797	BLK111797
Prepared Date:	11/17/97	11/17/97	11/17/97	11/17/97	11/17/97
Analyzed Date:	11/17/97	11/17/97	11/17/97	11/17/97	11/17/97
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	9.4	9.2	9.2	26	75
LCS % Recov.:	94	92	92	87	125
MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130	70-130
Control Limits					

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

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Blaine Tech Services, Inc.
1680 Rogers Ave.
San Jose, CA 95112
Attention: Fran Thie

Client Project ID: Shell Oakland, 971103-D3
Matrix: Liquid

Work Order #: 9711287-04-06

Reported: Dec 2, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC111797BTEX21A	GC111797BTEX21A	GC111797BTEX21A	GC111797BTEX21A	GC111797BTEX21A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab
MS/MSD #:	971161104	971161104	971161104	971161104	971161104
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/17/97	11/17/97	11/17/97	11/17/97	11/17/97
Analyzed Date:	11/17/97	11/17/97	11/17/97	11/17/97	11/17/97
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	10	10	10	30	53
MS % Recovery:	100	100	100	100	88
Dup. Result:	10	10	10	30	57
MSD % Recov.:	100	100	100	100	95
RPD:	0.0	0.0	0.0	0.0	7.3
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	BLK111797	BLK111797	BLK111797	BLK111797	BLK111797
Prepared Date:	11/17/97	11/17/97	11/17/97	11/17/97	11/17/97
Analyzed Date:	11/17/97	11/17/97	11/17/97	11/17/97	11/17/97
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	10	10	10	29	51
LCS % Recov.:	100	100	100	97	85
MS/MSD Control Limits	60-140	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note:
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** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

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Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112
Attention: Fran Thie

Client Proj. ID: Shell Oakland, 971103-D3

Lab Proj. ID: 9711287

Received: 11/04/97

Reported: 12/01/97

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of VI pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

TPPH Note: Samples 9711287-01 and -03 were both initially analyzed within hold time. However, due to multiple dilutions required on these samples they had to be re-analyzed past hold time. Therefore the results should be considered estimates.

SEQUOIA ANALYTICAL

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