CAMBRIA

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March 10, 1998

Susan Hugo
Alameda County
Environmental Health Department
1131 Harbor Bay Parkway
Alameda, California 94502

Re: **Fourth Quarter 1997 Quarterly Monitoring Report**
Shell Service Station
230 West MacArthur Boulevard
Oakland, California
WIC #204-5508-0703
Cambria Project #24-314-497

Dear Ms. Hugo:

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 in the site wells and collected a water sample from well MW-4 (Figure 1). The Blaine report, describing these sampling activities and presenting the analytical 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 fourth quarter 1998. At that time, Cambria will submit a report presenting a summary of activities at the site.

CAMBRIA
ENVIRONMENTAL
TECHNOLOGY, INC.
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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, piping, and dispensers that were the potential source of hydrocarbon release were upgraded on February 18, 1998, and secondary containment was added. Cambria detected no field indication of hydrocarbons in the soil beneath the dispensers at that time. Therefore, there is no ongoing potential hydrocarbon source. No liquid-phase hydrocarbons have been detected at the site in six years. Therefore, there is no remaining liquid-phase hydrocarbon source at the site.

Site Characterization: The extent of hydrocarbons in soil is defined by the existing wells (Attachment B). The extent of total petroleum hydrocarbons as gasoline (TPHg) and benzene in ground water is defined by monitoring wells MW-1, MW-2, and MW-3 (Table 2).

Ground Water Depth: Ground water at the site has ranged from about 11 to 20 ft deep with the water table generally rising during the wet season and falling during the dry season.

Hydrocarbon Plume Is Stable or Decreasing: Hydrocarbon concentrations, where detectable, have remained stable in the site wells for nine years of monitoring.

Drinking Water Wells or Other Sensitive Receptors: The site is located approximately 1 mile northeast of Lake Merritt. However, the historic ground water flow direction at the site is to the northwest, and the southwestern extent of hydrocarbons is defined by well MW-1. No elevated hydrocarbon concentrations have been detected in nine years of sampling, so the Lake 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 11 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 are near or below the conservative Tier 1 Risk-Based Corrective Action (RBCA) values and do not 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.

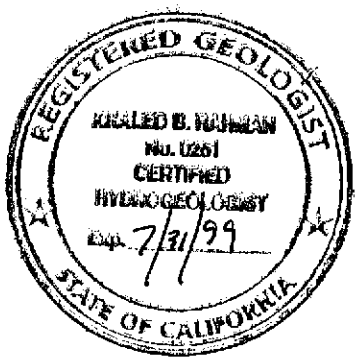
Sincerely,
Cambria Environmental Technology, Inc.

Maureen Feineman

Maureen D. Feineman
Staff Geologist

Khaled Rahman

Khaled B. Rahman, R.G., C.H.G.
Senior Geologist



Attachments: A - Blaine Quarterly Ground Water Monitoring Report
B - Previous Consultant's Soil Analyses Data Table

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

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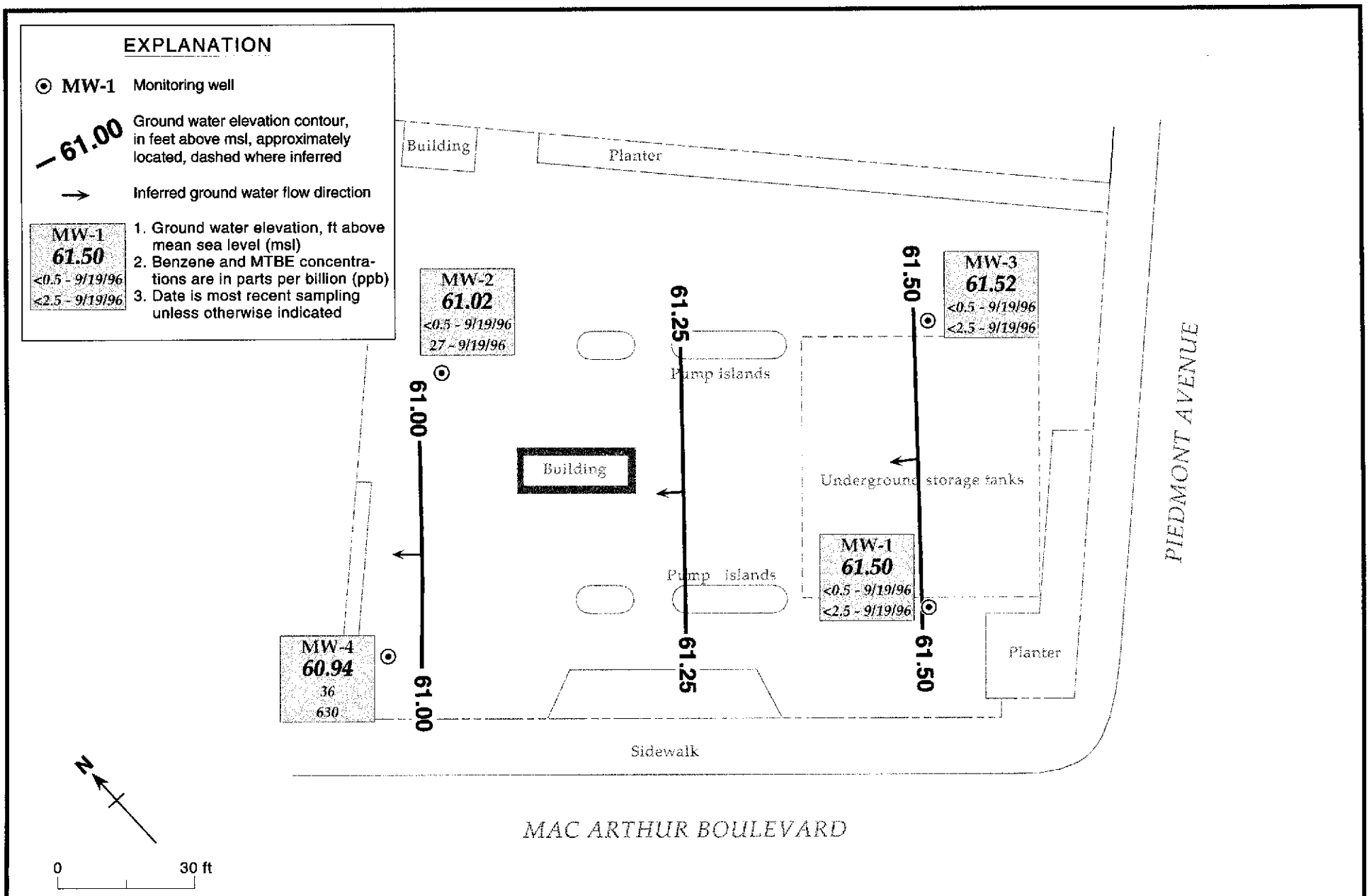

Figure 1. Ground Water Elevation Contours - December 5, 1997 - Shell Service Station, 230 West MacArthur Boulevard, Oakland, California

Table 1. **Ground Water Elevation Data** - Shell Service Station WIC # 204-5508-0703, 230 West MacArthur Boulevard, Oakland, California

Well Number	Date Sampled	TOC Elevation (ft above msl)	Depth to Water (ft below TOC)	Ground Water Elevation (ft above msl)
MW-1	07/14/88	73.89	13.30	60.59
	10/04/88		13.65	60.24
	11/10/88		13.55	60.34
	12/09/88		13.22	60.67
	01/10/89		12.86	61.03
	01/20/89		12.91	60.98
	02/06/89		12.94	60.95
	03/10/89		12.59	61.30
	06/06/89		14.05	59.84
	09/07/89		14.92	58.97
	12/18/89		14.88	59.01
	03/08/90		14.08	59.81
	06/07/90		13.89	60.00
	09/05/90		14.83	59.06
	12/03/90		15.05	58.84
	03/01/91		14.34	59.55
	06/03/91		14.16	59.73
	09/04/91		14.60	59.29
	03/13/92		13.40	60.49
	06/03/92		13.76	60.13
	08/19/92		14.57	59.32
	11/16/92		14.78	59.11
	02/18/93		12.14	61.75
	06/01/93		13.30	60.59
	08/30/93		14.32	59.57
	12/13/93		14.06	59.83
	03/03/94		13.12	60.77
	06/06/94		14.20	59.69
	09/12/94		15.72	58.17
	12/15/94		12.98	60.91
	03/13/95		11.74	62.15
	06/26/95		13.00	60.89
	09/12/95		14.14	59.75
	03/21/96		11.03	62.86
	06/28/96		13.53	60.36
	09/19/96		14.33	59.56
	12/19/96		13.20	60.69
	12/05/97		**12.39**	**61.50**
MW-2	07/14/88	75.24	15.18	60.06
	10/04/88		15.30	59.94
	11/10/88		15.17	60.07
	12/09/88		14.82	60.42
	01/20/89		14.54	60.70
	02/06/89		14.59	60.65
	03/10/89		14.88	60.36
	06/06/89		15.30	59.94

Table 1. **Ground Water Elevation Data** - Shell Service Station WIC # 204-5508-0703, 230 West MacArthur Boulevard, Oakland, California (continued)

Well Number	Date Sampled	TOC Elevation (ft above msl)	Depth to Water (ft below TOC)	Ground Water Elevation (ft above msl)
	09/07/89		16.76	58.48
	12/18/89		16.65	58.59
	03/08/90		15.92	59.32
	06/07/90		16.10	59.14
	09/05/90		16.61	58.63
	12/03/90		17.06	58.18
	03/01/91		16.62	58.62
	06/03/91		16.65	58.59
	09/04/91		16.57	58.67
	03/13/92		14.66	60.58
	06/03/92		15.90	59.34
	08/19/92		16.72	58.52
	11/16/92		16.66	58.58
	02/18/93		13.88	61.36
	06/01/93		14.74	60.50
	08/30/93		15.85	59.39
	12/13/93		15.83	59.41
	03/03/94		14.80	60.44
	06/06/94		16.65	58.59
	09/12/94		16.72	58.52
	12/15/94		15.25	59.99
	03/13/95		15.32	59.92
	06/26/95		14.65	60.59
	09/12/95		15.78	59.46
	03/21/96		12.72	62.52
	06/28/96		14.95	60.29
	09/19/96		15.64	59.60
	12/19/96		14.47	60.77
	12/05/97		**14.22**	**61.02**
MW-3	07/14/88	74.68	14.05	60.63
	10/04/88		14.60	60.08
	11/10/88		14.35	60.33
	12/09/88		14.04	60.64
	01/10/89		13.70	60.98
	01/20/89		13.72	60.96
	02/06/89		13.75	60.93
	03/10/89		13.42	61.26
	06/06/89		14.52	60.16
	09/07/89		15.52	59.16
	12/18/89		19.59	55.09
	03/08/90		14.72	59.96
	06/07/90		14.65	60.03
	09/05/90		15.51	59.17
	12/03/90		14.85	59.83
	03/01/91		14.92	59.76
	06/03/91		14.75	59.93

Table 1. **Ground Water Elevation Data** - Shell Service Station WIC # 204-5508-0703, 230 West MacArthur Boulevard, Oakland, California (continued)

Well Number	Date Sampled	TOC Elevation (ft above msl)	Depth to Water (ft below TOC)	Ground Water Elevation (ft above msl)
	09/04/91		15.14	59.54
	03/13/92		13.50	61.18
	06/03/92		14.39	60.29
	08/19/92		15.08	59.60
	11/16/92		15.43	59.25
	02/18/93		12.96	61.72
	06/01/93		13.98	60.70
	08/30/93		14.82	59.86
	12/13/93		14.70	59.98
	03/03/94		13.92	60.76
	06/06/94		14.73	59.95
	09/12/94		15.42	59.26
	12/15/94		13.80	60.88
	03/13/95		12.41	62.27
	06/26/95		13.79	60.89
	09/12/95		14.77	59.91
	03/21/96		11.80	62.88
	06/28/96		14.19	60.49
	09/19/96		14.85	59.83
	12/19/96		13.61	61.07
	12/05/97		**13.16**	**61.52**
MW-4	01/23/90	73.83	14.68	59.15
	03/08/90		14.38	59.45
	06/07/90		14.27	59.56
	09/05/90		15.40	58.43
	12/03/90		15.90	57.93
	06/03/91		14.60	59.23
	09/04/91		15.25	58.58
	03/13/92		12.72	61.11
	06/03/92		14.33	59.50
	08/19/92		15.18	58.65
	11/16/92		15.39	58.44
	02/18/93		12.62	61.21
	06/01/93		13.68	60.15
	08/30/93		14.83	59.00
	12/13/93		14.50	59.33
	03/03/94		13.48	60.35
	06/06/94		14.26	59.57
	09/12/94		15.42	58.41
	12/15/94		13.43	60.40
	03/13/95		12.13	61.70
	06/25/95		13.26	60.57
	09/12/95		14.64	59.19
	03/21/96		11.55	62.28
	06/28/96		13.86	59.97
	09/19/96		14.72	59.11

Table 1. **Ground Water Elevation Data** - Shell Service Station WIC # 204-5508-0703, 230 West MacArthur Boulevard, Oakland, California (continued)

Well Number	Date Sampled	TOC Elevation (ft above msl)	Depth to Water (ft below TOC)	Ground Water Elevation (ft above msl)
	12/19/96		13.06	60.77
	12/05/97		**12.89**	**60.94**

Abbreviations:

ft = Feet
msl = Mean sea level
TOC = Top of casing

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Table 2. **Ground Water Analytical Data** - Shell Service Station WIC # 204-5508-0703, 230 West MacArthur Boulevard, Oakland, California

Well Number	Date Sampled	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
		← parts per billion (µg/L) →					
MW-1	07/14/88	ND	ND	ND	ND	ND	---
	10/04/88	ND	8	4.3	ND	9	---
	11/10/88	ND	ND	ND	ND	ND	---
	12/09/88	ND	ND	ND	ND	ND	---
	01/10/89	ND	ND	ND	ND	---	---
	01/20/89	ND	ND	---	---	ND	---
	02/06/89	ND	ND	ND	ND	ND	---
	03/10/89	ND	ND	ND	ND	ND	---
	06/06/89	ND	ND	ND	ND	ND	---
	09/07/89	ND	ND	ND	ND	ND	---
	12/18/89	ND	ND	ND	ND	ND	---
	03/08/90	ND	ND	ND	ND	ND	---
	06/07/90	ND	ND	ND	ND	ND	---
	09/05/90	ND	ND	ND	ND	ND	---
	12/03/90	ND	ND	ND	ND	ND	---
	03/01/91	ND	ND	ND	ND	ND	---
	06/03/91	ND	ND	ND	ND	ND	---
	09/04/91	ND	ND	ND	ND	ND	---
	03/13/92	ND	ND	ND	ND	ND	---
	06/03/92	ND	ND	ND	ND	ND	---
	08/19/92	87	ND	ND	ND	ND	---
	11/16/92	ND	ND	ND	ND	ND	---
	02/18/93	59[a]	ND	ND	ND	ND	---
	06/01/93	ND	ND	ND	ND	ND	---
	08/30/93	ND	ND	ND	ND	ND	---
	12/13/93	ND	ND	ND	ND	ND	---
	03/03/94	100	ND	ND	ND	ND	---
	06/06/94	ND	ND	ND	ND	ND	---
	09/12/94	ND	ND	ND	ND	ND	---
	12/15/94	ND	ND	ND	ND	ND	---
	03/13/95[d]	60	4.7	9.8	ND	2.9	---
	04/21/95	ND	ND	ND	ND	ND	---
	06/26/95	ND	ND	ND	ND	ND	---
	09/12/95	ND	ND	ND	ND	ND	---
	03/21/96	<50	<0.5	<0.5	<0.5	<0.5	ND
	06/28/96	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	09/19/96	<50	<0.5	<0.5	<0.5	<0.5	<2.5
MW-2	07/14/88	ND	7.9	2.6	1.1	4	---
	10/04/88	90	ND	1.3	2.3	12	---
	11/10/88	ND	ND	ND	ND	2	---
	12/09/88	ND	ND	0.6	ND	3	---
	01/20/89	ND	ND	ND	ND	ND	---
	02/06/89	---	ND	ND	ND	ND	---
	03/10/89	ND	ND	ND	ND	ND	---

Table 2. **Ground Water Analytical Data** - Shell Service Station WIC # 204-5508-0703, 230 West MacArthur Boulevard, Oakland, California (continued)

Well Number	Date Sampled	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
		← parts per billion (µg/L) →					
	06/06/89	ND	ND	0.5	ND	ND	---
	09/07/89	ND	ND	ND	ND	ND	---
	12/18/89	ND	ND	ND	ND	ND	---
	03/08/90	ND	ND	ND	ND	ND	---
	06/07/90	ND	ND	ND	ND	ND	---
	09/05/90	ND	ND	ND	ND	ND	---
	12/03/90	ND	ND	ND	ND	ND	---
	03/01/91	ND	ND	ND	ND	ND	---
	06/03/91	ND	ND	ND	ND	ND	---
	09/04/91	ND	ND	ND	ND	ND	---
	03/13/92	ND	ND	ND	ND	ND	---
	06/03/92	ND	ND	ND	ND	ND	---
	08/19/92	67	ND	ND	ND	ND	---
	11/16/92	50	ND	ND	ND	1.2	---
	02/18/93	52[a]	ND	ND	ND	ND	---
	02/18/93[dup]	52[a]	ND	ND	ND	ND	---
	06/01/93	ND	ND	ND	ND	ND	---
	08/30/93	70[a]	ND	ND	ND	ND	---
	12/13/93	68[a]	ND	ND	ND	ND	---
	03/03/94	280[a]	ND	ND	ND	ND	---
	06/06/94	ND	ND	ND	ND	ND	---
	09/12/94	ND	ND	ND	ND	ND	---
	12/15/94	230[a]	ND	ND	ND	ND	---
	03/13/95	ND	2.9	6.3	ND	2.7	---
	04/21/95	ND	ND	ND	ND	ND	---
	06/26/95	ND	ND	ND	ND	ND	---
	09/12/95	ND	ND	ND	ND	ND	---
	03/21/96	<50	<0.5	<0.5	<0.5	<0.5	ND
	06/28/96	<50	<0.5	<0.5	<0.5	<0.5	160
	09/19/96	<50	<0.5	<0.5	<0.5	<0.5	27
MW-3	07/14/88	ND	ND	ND	ND	ND	---
	10/04/88	ND	ND	ND	ND	5	---
	11/10/88	ND	ND	ND	ND	ND	---
	12/09/88	ND	ND	ND	ND	ND	---
	01/10/89	ND	ND	ND	ND	---	---
	01/20/89	---	---	ND	ND	ND	---
	02/06/89	70	ND	ND	ND	ND	---
	03/10/89	150	ND	ND	ND	ND	---
	06/06/89	ND	ND	ND	ND	ND	---
	09/07/89	ND	0.65	ND	ND	ND	---
	12/06/89	46	1.3	ND	0.44	0.66	---
	03/08/90	ND	ND	ND	ND	ND	---
	06/07/90	ND	ND	ND	ND	ND	---
	09/05/91	ND	ND	ND	ND	ND	---

Table 2. **Ground Water Analytical Data** - Shell Service Station WIC # 204-5508-0703, 230 West MacArthur Boulevard, Oakland, California (continued)

Well Number	Date Sampled	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
		← parts per billion (µg/L) →					
	12/03/90	ND	ND	ND	ND	ND	---
	03/01/91	1.9	59	ND	22	ND	---
	06/03/91	ND	ND	ND	ND	ND	---
	09/04/91	ND	ND	ND	ND	ND	---
	03/13/92	ND	ND	ND	ND	ND	---
	06/03/92	ND	ND	ND	ND	ND	---
	08/19/92	92	ND	ND	ND	ND	---
	08/19/92[dup]	76	ND	ND	ND	ND	---
	11/16/92	200[a]	ND	ND	ND	ND	---
	11/16/92[dup]	140[a]	ND	ND	ND	ND	---
	02/18/93	680[a]	ND	ND	ND	ND	---
	06/01/93	160[a]	ND	ND	ND	ND	---
	06/01/93[dup]	150[a]	ND	ND	ND	ND	---
	08/30/93	110[a]	ND	ND	ND	ND	---
	12/13/93	140[a]	ND	ND	ND	ND	---
	12/13/93[dup]	110[a]	ND	ND	ND	ND	---
	03/03/94	61[a]	ND	ND	ND	ND	---
	06/06/94	ND	ND	ND	ND	ND	---
	09/12/94	ND	ND	ND	ND	ND	---
	12/15/94	ND	ND	0.9	ND	0.6	---
	03/13/95	100[b]	7.9	17	0.7	6.1	---
	04/21/95	60	0.9	1.1	ND	1.0	---
	06/26/95	ND	ND	ND	ND	ND	---
	09/12/95[d]	ND	ND	ND	ND	ND	---
	03/21/96	<50	<0.5	<0.5	<0.5	<0.5	17
	06/28/96	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	09/19/96	<50	<0.5	<0.5	<0.5	<0.5	<2.5
MW-4	01/23/90	1,600	100	10	30	20	---
	03/08/90	4,200	260	18	88	39	---
	06/07/90	2,000	150	6.9	14	17	---
	09/05/90	1,700	130	10	7.2	19	---
	12/03/90	2,600	108	41	17	59	---
	06/03/91	2,800	160	15	8.8	32	---
	09/04/91	← Separate-Phase Hydrocarbon Sheen →					
	03/13/92	2,700	180	70	5.9	29	---
	06/03/92	1,700	190	ND	30	23	---
	08/19/92	170	4.2	ND	0.6	1.0	---
	11/16/92	2,600	92	49	50	81	---
	02/18/93	7,400	120	38	51	87	---
	06/01/93	7,000	1,800	1,700	1,600	1,700	---
	08/30/93	2,100	80	11	ND	11	---
	08/30/93[dup]	2,100	77	5.6	ND	5.5	---
	12/13/93	2,000[a]	20	ND	21	52	---
	03/03/94	3,500	150	86	85	90	---

Table 2. **Ground Water Analytical Data** - Shell Service Station WIC # 204-5508-0703, 230 West MacArthur Boulevard, Oakland, California (continued)

Well Number	Date Sampled	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
		← parts per billion (µg/L) →					
	03/03/94[dup]	3,200	130	73	74	76	---
	06/06/94	590	25	ND	ND	ND	---
	06/06/94[dup]	400	16	ND	ND	ND	---
	09/12/94	1,800	42	ND	3.7	4.7	---
	09/12/94[dup]	2,000	40	ND	5.7	8.0	---
	12/15/94	2,900	78	14	94	17	---
	12/15/94[dup]	2,900	90	7	96	18	---
	03/13/95[c]	2,700	240	24	99	34	---
	03/13/95[dup,c]	2,500	300	24	140	28	---
	06/26/95	2,100	87	10	67	25	---
	06/26/95[dup]	2,300	92	12	74	26	---
	09/12/95[d]	1,300	33	13	9.3	15	---
	09/12/95[dup,d]	1,500	2.1	16	11	17	---
	03/21/96	2,100	50	3.2	40	5.4	ND
	03/21/96[dup]	1,700	24	<0.5	39	7.2	740
	06/28/96	1,300	61	6.2	53	11	1,000
	06/28/96[dup]	1,200	29	6.2	50	8.3	1,000
	09/19/96	820	12	<2.5	2.8	4.3	720
	09/19/96[dup]	580	9.6	<2.5	<2.5	<2.5	760(1,200)
	12/19/96	1,200	28	<5.0	<5.0	<5.0	<25
	12/05/97	**1,900**	**36**	**9.0**	**16**	**18**	**630**
MCLs		NE	1	150	700	1,750	NE

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
MTBE = Methyl-tertiary-butyl-ether by EPA Method 8020. Result in parentheses indicates MTBE confirmed by EPA Method 8260
µg/L = Micrograms per liter
dup = Duplicate sample
--- = Data not available/Not analyzed
<n = Not detected at n µg/L
--- = Not analyzed
ND = Not detected (see certified analytical reports for detection limits)
MCLs = California primary maximum contaminant level for drinking water (22 CCR 64444)
NE = Not established

Notes:

a = The concentration reported as gasoline is primarily due to the presence of a discrete hydrocarbon peak not indicative of gasoline
b = The laboratory noted result to have an atypical gasoline pattern
c = The laboratory noted sample was analyzed within hold time but further dilution was required and done out of hold time. The laboratory suggests these to be minimum concentrations
d = The laboratory noted the sample was analyzed after the method specified holding time

Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8020

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

January 8,1998

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

Attn: Alex Perez

Shell WIC #204-5508-0703
230 West MacArthur Blvd.
Oakland, California

4th Quarter 1997

Groundwater Monitoring Report 971205-D-2

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 Technology, Inc.
1144 65th Street, 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	12/05/97	TOC	–	NONE	–	–	12.39	29.28
MW-2	12/05/97	TOC	–	NONE	–	–	14.22	27.57
MW-3	12/05/97	TOC	–	NONE	–	–	13.16	28.05
MW-4	12/05/97	TOC	–	NONE	–	–	12.89	24.00

9717650

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 971205-D2

Date:
Page 1 of 1

Site Address: 230 W. MacArthur Blvd., Oakland, CA

WIC#: 204-5508-0703

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

Consultant Name & Address: Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112

Consultant Contact: Fran Thie — Phone No.: (408) 573-0555 Fax #: 573-7771

Comments:

Sampled by:

Printed Name: Daniel Vener

LAB: Sequoia

CHECK ONE (1) BOX ONLY		CT/DT
G.W. Monitoring	X	4461
Site Investigation		4441
Soil Classify/Disposal		4442
Water Classify/Disposal		4443
Soil/Air Rem. or Sys. O & M		4452
Water Rem. or Sys. O & M		4453
Other		

TURN AROUND TIME: 24 hours ☐ 48 hours ☐ 15 days ☒ (Normal) Other ☐

NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.

DE 8 1 29

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-4	12/5	1		X		3						X								

Relinquished By (signature):	Printed Name:	Date: 12/8 Time: 12:45	Received (signature):	Printed Name: Ray Scrogsin	Date: 12/8/97 Time: 12:45
Relinquished By (signature):	Printed Name: R. Scrogsin	Date: 12/8 Time:	Received (signature):	Printed Name:	Date: Time:
Relinquished By (signature):	Printed Name:	Date: Time:	Received (signature):	Printed Name: Cherie Cook	Date: 12/8/97 Time: 1329

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/971205-D2

Enclosed are the results from samples received at Sequoia Analytical on December 8, 1997. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9712650 -01	LIQUID, MW-4	12/05/97	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

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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/971205-D2	Sampled: 12/05/97
1680 Rogers Avenue	Sample Descript: MW-4	Received: 12/08/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 12/11/97
Attention: Fran Thie	Lab Number: 9712650-01	Reported: 12/17/97

QC Batch Number: GC121197BTEX02A
Instrument ID: GCHP2

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**500**	**1900**
Methyl t-Butyl Ether	**25**	**630**
Benzene	**5.0**	**36**
Toluene	**5.0**	**9.0**
Ethyl Benzene	**5.0**	**16**
Xylenes (Total)	**5.0**	**18**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	120

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

SEQUOIA ANALYTICAL - ELAP #1271

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

Client Project ID: Shell Oakland / 971205-D2
Matrix: Liquid
Work Order #: 9712650 -01
Reported: Dec 29, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC121197802002A	GC121197802002A	GC121197802002A	GC121197802002A	GC121197802002A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8021
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	K. Nill	K. Nill	K. Nill	K. Nill	K. Nill
MS/MSD #:	7120673	7120673	7120673	7120673	7120673
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/11/97	12/11/97	12/11/97	12/11/97	12/11/97
Analyzed Date:	12/11/97	12/11/97	12/11/97	12/11/97	12/11/97
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	280 µg/L
Result:	18	19	20	60	292
MS % Recovery:	90	95	100	100	104
Dup. Result:	20	20	20	66	268
MSD % Recov.:	100	100	100	110	96
RPD:	11	5.1	0.0	9.5	8.6
RPD Limit:	0-20	0-20	0-20	0-20	0-50
LCS #:	LCS121197	LCS121197	LCS121197	LCS121197	LCS121197
Prepared Date:	12/11/97	12/11/97	12/11/97	12/11/97	12/11/97
Analyzed Date:	12/11/97	12/11/97	12/11/97	12/11/97	12/11/97
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	280 µg/L
LCS Result:	18	19	20	60	318
LCS % Recov.:	90	95	100	100	114
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
Elap #1271

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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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	Client Proj. ID: Shell Oakland/971205-D2 Lab Proj. ID: 9712650	Received: 12/08/97 Reported: 12/17/97

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 4 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

ATTACHMENT B

Previous Consultant's Soil Analyses Data Table

TABLE 1
SOIL ANALYSES DATA

1847; Shell Oil
230 MacArthur Blvd., Oakland

SAMPLE NUMBER	TPHG (ppm)	BENZENE (ppm)	TOLUENE (ppm)	XYLENES (ppm)	ETHYLBENZENE (ppm)	Total Lead (ppm)
MW1-2	BDL	BDL	11.6	BDL	BDL	NA
MW1-3	BDL	BDL	12.9	5.1	BDL	8.3
MW1-4	BDL	BDL	23.	BDL	BDL	NA
MW2-1	BDL	BDL	16.1	BDL	BDL	NA
MW2-2	BDL	BDL	9.3	BDL	BDL	NA
MW2-3	BDL	BDL	10.	BDL	BDL	NA
MW3-1	BDL	BDL	388.	411.	BDL	11
MW3-2	278	BDL	36.7	BDL	BDL	NA
MW3-3	BDL	BDL	30.4	BDL	7.6	NA

TPHG = Total Petroleum Hydrocarbons as Gasoline
ppm = parts-per-million
BDL = Below Detection Limit
NA = Not Analyzed

Note: For detection limits, refer to laboratory reports