

July 25, 1997

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

Re: **Second Quarter 1997 Monitoring Report**
Shell Service Station
630 High Street
Oakland, California
WIC #204-5508-5801
Cambria Project #240-314-297

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.

Second 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 analytic data (Table 2), and prepared a ground water elevation contour map (Figure 1).

CAMBRIA

ENVIRONMENTAL

TECHNOLOGY, INC.

1144 65TH STREET,

SUITE B

OAKLAND,

CA 94608

PH: (510) 420-0700

FAX: (510) 420-9170

Anticipated Future Activities

The next sampling event is scheduled for fourth quarter 1997. 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.

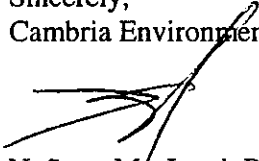
Barney Chan
July 25, 1997

CAMBRIA

Closing

We appreciate the opportunity to work with you on this project. Please call if you have any questions.

Sincerely,
Cambria Environmental Technology, Inc.



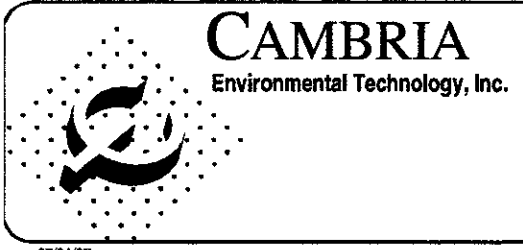
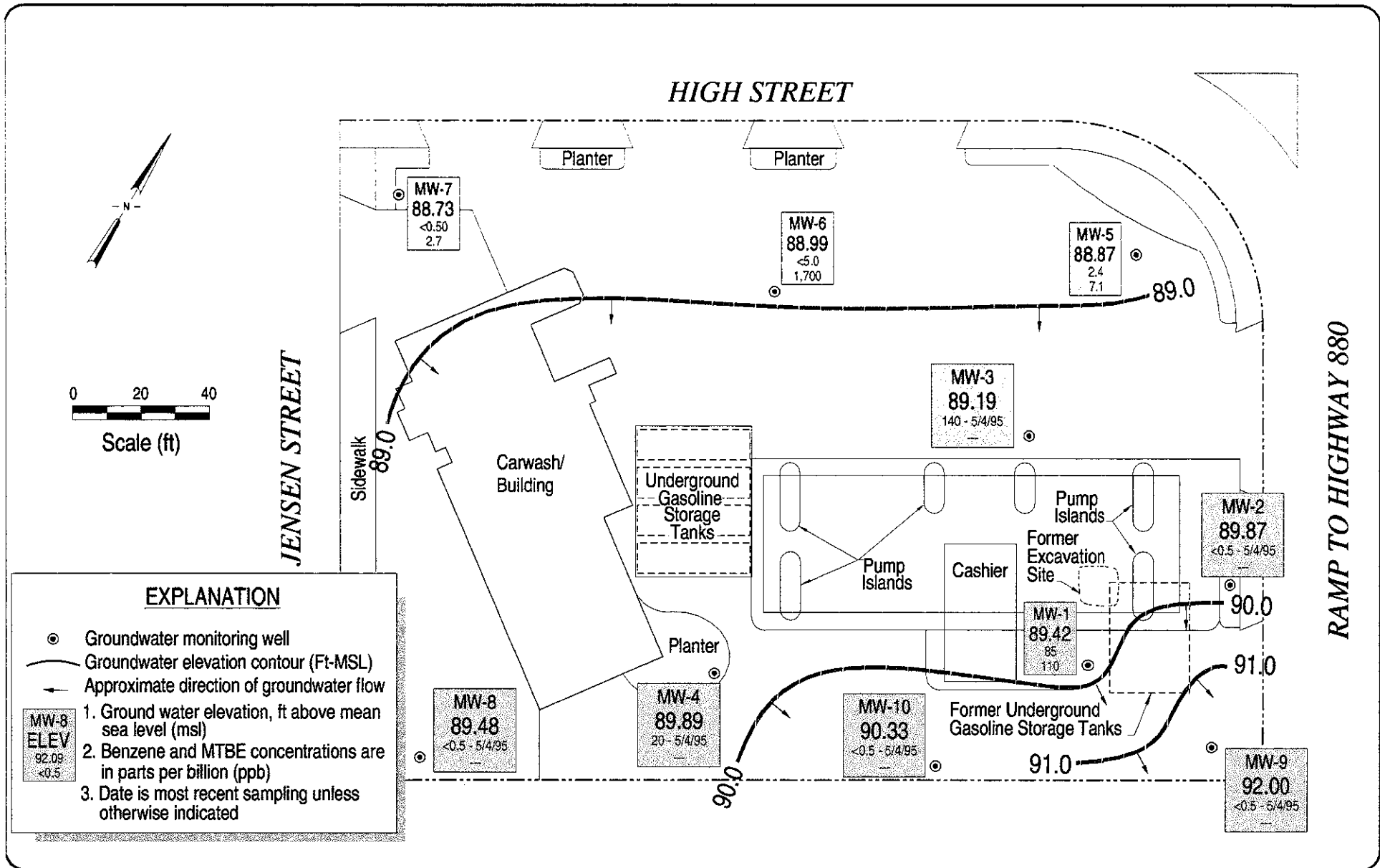
N. Scott MacLeod, R.G.
Principal Geologist



Attachments: A - Blaine Quarterly Ground Water Monitoring Report

cc: A. E. (Alex) Perez, Shell Oil Products Company, P.O. Box 4023, Concord, California
94524

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Shell Service Station
630 High Street
Oakland, California

Ground Water Elevation Contours
May 16, 1997

FIGURE
1

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
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		

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)
	05/04/95		10.20	90.95
	05/16/97		11.28	89.87
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
	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
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

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)
	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
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
	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
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

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)
	11/23/93		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
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
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

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		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
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
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

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)
	07/07/92		9.87	89.12
	08/20/92		9.30	89.69
	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

Abbreviations:

ft = Feet

msl = Mean sea level

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

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	parts per billion (µg/L)				MTBE	VOCs	DO mg/L
						B	T	E	X			
MW-1 2 nd and 4 th Quarters	01/29/91	10.79	11,000	21,000 ^a	<500	310	41	500	400	---	---	---
	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 ^{dnp}	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 ^{dnp}	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 ^{dnp}	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 ^{dnp}	6.94	7,100	---	---	130	18	170	130	---	---	---	
05/04/95	8.40	7,000	---	---	130	47	190	180	---	---	---	
05/04/95 ^{dnp}	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 ^{dnp}	9.93	5,800	---	---	85	<10	26	30	110	---	1.5	
MW-2 Sampling Discontinued	01/29/91	13.25	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/30/91	10.94	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	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	---	---	---
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	---	---	---	

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

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	parts per billion (µg/L)				MTBE	VOCs	DO mg/L
						B	T	E	X			
MW-3 Sampling Discontinued	01/29/91	11.09	2,300	410 ^a	<500	17	14.1	10	230	--	--	--
	04/30/91	9.57	<50	260	<500	22	4.0	7.0	17	--	--	--
	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 ^{amp}	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 ^{amp}	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 Sampling Discontinued	01/29/91	10.76	2,600	1,300	<500	83	<0.5	<0.5	110	--	--	--
	04/30/91	9.45	2,600	750	<500	22	4.0	7.0	17	--	--	--
	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 and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	B	T E X				MTBE	VOCs	DO mg/L
							parts per billion (µg/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	
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 ^e	—	<0.5	<0.5	<0.5	<0.5	—	—	—	
	07/07/92	9.53	—	—	—	—	—	—	—	—	—	—	
	08/20/92	9.84	140 ^e	510 ^e	—	<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 ^{dnp}	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 ^{dnp}	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 ⁱ	—	—	<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 ^{dnp}	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	—	—	—		
05/16/97	9.57	<500	—	—	<5.0	<5.0	<5.0	<5.0	1,700	—	6.2		

Table 2.

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

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	parts per billion (ug/L)				MTBE	VOCs	DO mg/L
						B	T	E	X			
MW-7 2 nd and 4 th Quarters	01/28/91	8.91	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	--	--	--
	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	
MW-8 Sampling Discontinued	01/28/91	8.47	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	--	--	--
	05/01/91	7.64	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	--	--	--
	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 Sampling Discontinued	01/28/91	8.27	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	--	--	--
	05/01/91	7.62	<50	<50	<500	0.6	<0.5	<0.5	1.1	--	--	--
	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	--	--	--
	05/22/92	8.64	<50	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
07/07/92	7.55	--	--	--	--	--	--	--	--	--	--	

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

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	← parts per billion (µg/L) →				MTBE	VOCs	DO mg/L
						B	T	E	X			
	08/20/92	7.38	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	08/20/92 ^{dmp}	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 ^{dmp}	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 ^f	---	---	<0.5	<0.5	<0.5	<0.5	---	---	1.51/2.17 ^m
	08/24/93	8.32	50 ^f	---	---	<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	01/28/91	10.81	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
Sampling	05/01/91	8.79	<50	460	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
Discontinued	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	02/24/92		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---	---
Blank	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 and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	parts per billion (µg/L)				MTBE	VOCs	DO mg/L
						B	T	E	X			
	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	<50	<0.50	<0.50	<2.5	---	---
MCLs			NE	NE	NE	1	700	150	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

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



June 3, 1997

Shell Oil Company
P.O. Box 5278
Concord, CA 94520-9998

Attn: Alex Perez

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

2nd Quarter 1997

Quarterly Groundwater Monitoring Report 970516-L-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
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 *	5/16/97	TOC	-	NONE	-	-	9.93	13.85
MW-2	5/16/97	TOC	-	NONE	-	-	11.28	19.12
MW-3	5/16/97	TOC	-	NONE	-	-	10.30	17.30
MW-4	5/16/97	TOC	-	NONE	-	-	9.35	18.40
MW-5	5/16/97	TOC	-	NONE	-	-	11.21	17.82
MW-6	5/16/97	TOC	-	NONE	-	-	9.57	19.40
MW-7	5/16/97	TOC	-	NONE	-	-	8.80	19.35
MW-8	5/16/97	TOC	-	NONE	-	-	7.65	20.60
MW-9	5/16/97	TOC	-	NONE	-	-	7.72	11.50
MW-10	5/16/97	TOC	-	NONE	-	-	8.66	12.55

* Sample DUP was a duplicate sample taken from well MW-1.



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 970516L2

Date: 5-16-97
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: [Signature]

Printed Name: LAD GILCHRIST

Analysis Required

LAB: SEQUOIA

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

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

9705A08

UST AGENCY: _____

Sample ID	Date	Sludge	Soil	Water	Air	No. of conds.	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	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS	
MW-1	5/16			X		3						X							
MW-5	1			X		3						X							
MW-6	1			X		3						X							
MW-7	1			X		3						X							
DVP	1			X		3						X							
EB	1			X		3						X							

Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>LAD GILCHRIST</u>	Date: <u>5/19/97</u> Time: <u>1055</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>JOHN HOWE</u>	Date: <u>5/19/97</u> Time: <u>1055</u>
Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>JOHN HOWE</u>	Date: <u>5/19/97</u> Time: <u>1215</u>	Received (signature): <u>[Signature]</u>	Printed Name: _____	Date: _____ Time: _____
Relinquished By (signature): <u>[Signature]</u>	Printed Name: _____	Date: _____ Time: _____	Received (signature): <u>[Signature]</u>	Printed Name: <u>LD Carreras</u>	Date: <u>5-19-97</u> Time: <u>1215</u>

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



Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834

(415) 364-9600
(510) 988-9600
(916) 921-9600

FAX (415) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100

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

Project: Shell Oakland/970516-L2

Enclosed are the results from samples received at Sequoia Analytical on May 19, 1997.
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9705A08 -01	LIQUID, MW-1	05/16/97	TPGBMW Purgeable TPH/BTEX
9705A08 -02	LIQUID, MW-5	05/16/97	TPGBMW Purgeable TPH/BTEX
9705A08 -03	LIQUID, MW-6	05/16/97	TPGBMW Purgeable TPH/BTEX
9705A08 -04	LIQUID, MW-7	05/16/97	TPGBMW Purgeable TPH/BTEX
9705A08 -05	LIQUID, DUP	05/16/97	TPGBMW Purgeable TPH/BTEX
9705A08 -06	LIQUID, EB	05/16/97	TPGBMW 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





Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Client Proj. ID: Shell Oakland/970516-L2
Sample Descript: MW-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9705A08-01

Sampled: 05/16/97
Received: 05/19/97
Analyzed: 05/27/97
Reported: 05/29/97

Attention: Fran Thie

QC Batch Number: GC052797BTEX02A
Instrument ID: GCHP02

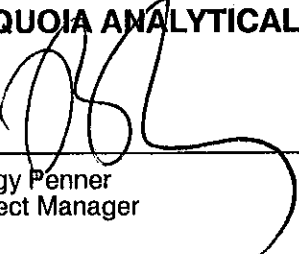
Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	5600
Methyl t-Butyl Ether	50	84
Benzene	10	57
Toluene	10	N.D.
Ethyl Benzene	10	26
Xylenes (Total)	10	29
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	129

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112 Attention: Fran Thie	Client Proj. ID: Shell Oakland/970516-L2 Sample Descript: MW-5 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9705A08-02	Sampled: 05/16/97 Received: 05/19/97 Analyzed: 05/27/97 Reported: 05/29/97
--	--	---

QC Batch Number: GC052797BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	125	440
Methyl t-Butyl Ether	6.2	7.1
Benzene	1.2	2.4
Toluene	1.2	1.6
Ethyl Benzene	1.2	3.1
Xylenes (Total)	1.2	3.3
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	107

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Shell Oakland/970516-L2 Sample Descript: MW-6 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9705A08-03	Sampled: 05/16/97 Received: 05/19/97 Analyzed: 05/22/97 Reported: 05/29/97
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QC Batch Number: GC052297BTEX21A
Instrument ID: GCHP21

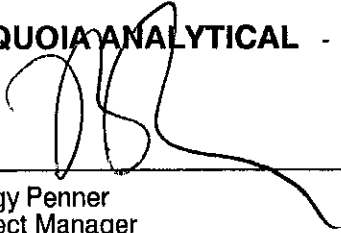
Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	N.D.
Methyl t-Butyl Ether	25	1700
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	104

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Shell Oakland/970516-L2 Sample Descript: MW-7 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9705A08-04	Sampled: 05/16/97 Received: 05/19/97 Analyzed: 05/22/97 Reported: 05/29/97
--	--	---

QC Batch Number: GC052297BTEX21A
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	2.7
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	102

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Shell Oakland/970516-L2 Sample Descript: DUP Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9705A08-05	Sampled: 05/16/97 Received: 05/19/97 Analyzed: 05/27/97 Reported: 05/29/97
--	---	---

QC Batch Number: GC052797BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	5800
Methyl t-Butyl Ether	50	110
Benzene	10	85
Toluene	10	N.D.
Ethyl Benzene	10	26
Xylenes (Total)	10	30
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	127

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Perner
Project Manager





Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Client Proj. ID: Shell Oakland/970516-L2
Sample Descript: EB
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9705A08-06

Sampled: 05/16/97
Received: 05/19/97
Analyzed: 05/22/97
Reported: 05/29/97

Attention: Fran Thle

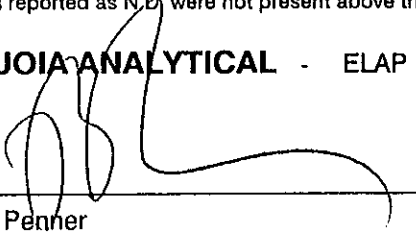
QC Batch Number: GC052297BTEX21A
Instrument ID: GCHP21

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	96

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Sequoia
Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834

(415) 364-9600
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(916) 921-9600

FAX (415) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100

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

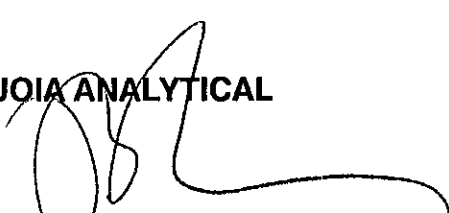
Client Proj. ID: Shell Oakland/970516-L2
Lab Proj. ID: 9705A08

Received: 05/19/97
Reported: 05/29/97

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 10 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





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

Client Project ID: Shell Oakland / 970516-L2
 Matrix: Liquid

Work Order #: 9705A08 -01-02, 05

Reported: May 30, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC052797BTEX02A	GC052797BTEX02A	GC052797BTEX02A	GC052797BTEX02A	GC052797BTEX02A
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:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:	9705B1704	9705B1704	9705B1704	9705B1704	9705B1704
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/27/97	5/27/97	5/27/97	5/27/97	5/27/97
Analyzed Date:	5/27/97	5/27/97	5/27/97	5/27/97	5/27/97
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:	8.7	8.9	8.5	28	67
MS % Recovery:	87	89	85	93	112
Dup. Result:	9.0	8.9	8.9	29	69
MSD % Recov.:	90	89	89	97	115
RPD:	3.4	0.0	4.6	3.5	2.9
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK052797	BLK052797	BLK052797	BLK052797	BLK052797
Prepared Date:	5/27/97	5/27/97	5/27/97	5/27/97	5/27/97
Analyzed Date:	5/27/97	5/27/97	5/27/97	5/27/97	5/27/97
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:	8.9	9.0	8.8	28	63
LCS % Recov.:	89	90	88	93	105

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

Reggy 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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Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8

Redwood City, CA 94063 (415) 364-9600
Walnut Creek, CA 94598 (510) 988-9600
Sacramento, CA 95834 (916) 921-9600

FAX (415) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100

ENVIRONMENTAL
PROTECTION

97 AUG -5 PM 2:39

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

Client Project ID: Shell Oakland / 970516-L2
Matrix: Liquid

Work Order #: 9705A08-03-04, 06

Reported: May 30, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC052297BTEX21A	GC052297BTEX21A	GC052297BTEX21A	GC052297BTEX21A	GC052297BTEX21A
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:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:	970551906	970551906	970551906	970551906	970551906
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/22/97	5/22/97	5/22/97	5/22/97	5/22/97
Analyzed Date:	5/22/97	5/22/97	5/22/97	5/22/97	5/22/97
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:	8.7	8.9	9.0	27	59
MS % Recovery:	87	89	90	90	98
Dup. Result:	8.9	8.9	9.0	27	59
MSD % Recov.:	89	89	90	90	98
RPD:	2.3	0.0	0.0	0.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK052297	BLK052297	BLK052297	BLK052297	BLK052297
Prepared Date:	5/22/97	5/22/97	5/22/97	5/22/97	5/22/97
Analyzed Date:	5/22/97	5/22/97	5/22/97	5/22/97	5/22/97
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:	8.8	8.9	9.0	27	59
LCS % Recov.:	88	89	90	90	98

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

Reggy 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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