



CAMBRIA

ENVIRONMENTAL
PROTECTION

97 APR -2 PM 2: 20

March 24, 1997

Scott Seery
Alameda Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Fourth Quarter 1996 Quarterly Monitoring Report**
Shell Service Station
6039 College Avenue
Oakland, California
WIC #204-5508-3301

Dear Mr. Seery:

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 1996 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 compiled the ground water elevation and analytic data (Tables 1 and 2) and prepared a map showing ground water elevations and analytic data (Figure 1). Separate-phase hydrocarbon (SPH) removal data is included in Table 3.

As we discussed in our December 17, 1996 meeting, we re-sampled wells MW-1, MW-2, and MW-4 on January 8, 1997. The samples were analyzed for TPHg, BTEX, and MTBE. Hydrocarbons were not detected in the samples from MW-1 and MW-2. 24,000 ppb MTBE were detected in the MW-4 sample.

Weiss Associates, the former consultant, submitted a Corrective Action Plan and Risk-Based Corrective Action Addendum.

CAMBRIA
ENVIRONMENTAL
TECHNOLOGY, INC.
1144 65TH STREET,
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OAKLAND,
CA 94608
PH: (510) 420-0700
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Scott Seery
March 24, 1997


CAMBRIA

ANTICIPATED FIRST QUARTER 1997 ACTIVITIES

Cambria will submit a report presenting a summary of activities for the upcoming quarter.

We appreciate this 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
Tom Callaghan, San Francisco Bay Regional Water Quality Control Board, 2101 Webster
Street, Oakland, CA 94612

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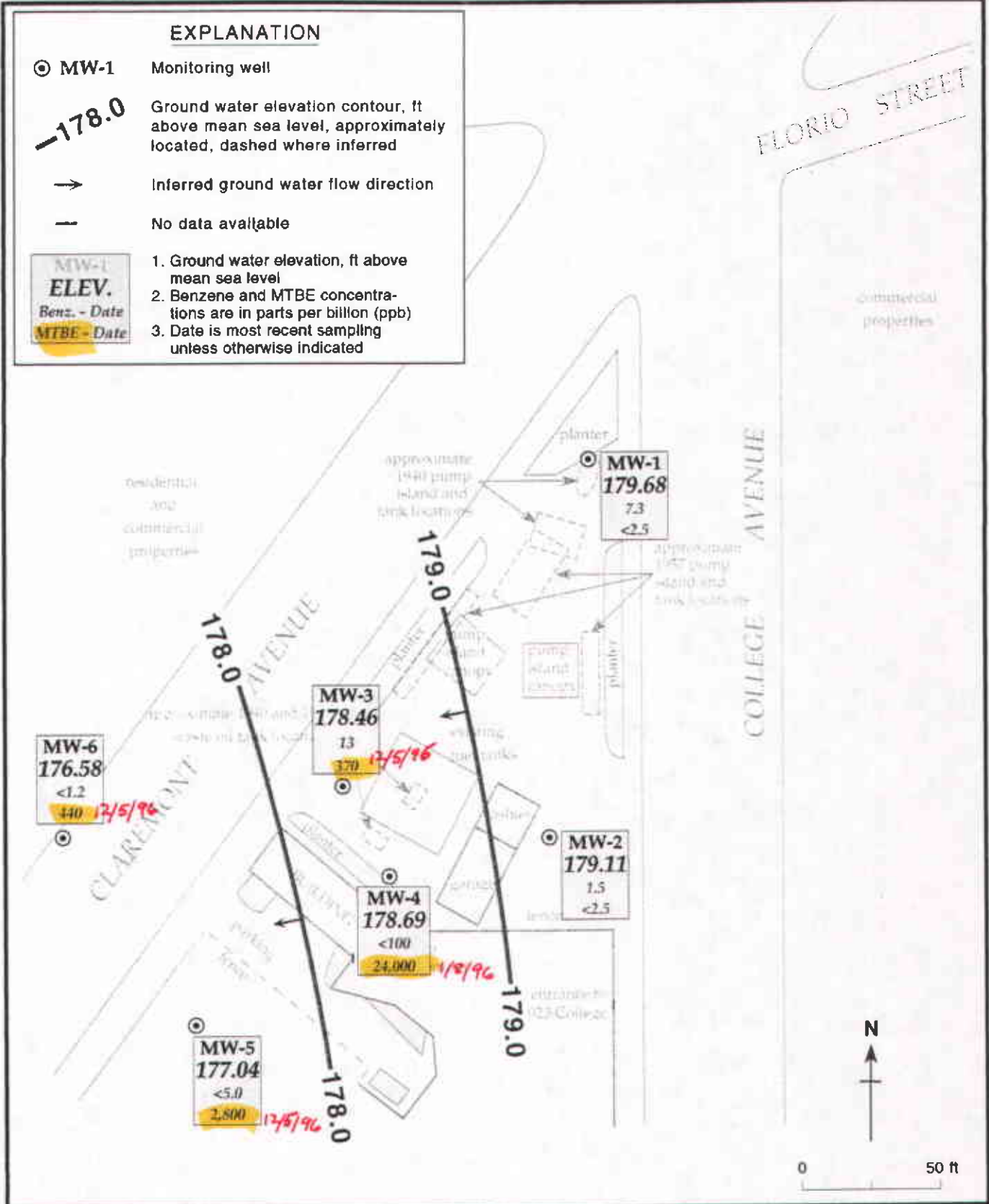


Figure 1. Ground Water Elevation Contours - December 5, 1996 - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California

**Table 1. Ground Water Elevations - Shell Service Station WIC #204-5508-3301,
6039 College Avenue, Oakland, California**

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft above msl) ^a
MW-1	02/15/90	195.89	17.73		178.16
	04/19/90		18.51		177.38
	05/14/90		18.92		176.97
	06/21/90		18.21		177.68
	09/12/90		19.81		176.08
	11/27/90		20.39		175.50
	03/08/91		16.85		179.04
	06/03/91		17.82		178.07
	08/30/91		19.87		176.02
	11/22/91		20.58		175.31
	03/18/92		13.55		182.34
	05/28/92		17.08		178.81
	08/19/92		19.07		176.82
	11/17/92		20.11		175.78
	02/12/93		12.10		183.79
	06/10/93		14.87		181.02
	08/18/93		16.90		178.99
	11/19/93		19.72		176.17
	02/28/94		15.08		180.81
	05/04/94		17.20		178.69
	08/10/94		18.76		177.13
	11/08/94		16.00		179.89
	02/01/95		10.18		185.71
	05/10/95		11.88		184.01
	08/24/95		15.60		180.29
	11/10/95		18.24		177.65
02/24/96	9.88		186.01		
05/22/96	12.24		183.65		
08/19/96	15.86		180.03		
	12/05/96		16.21		179.68
MW-2	02/15/90	194.27	16.90		177.37
	04/19/90		17.69		176.58
	05/14/90		18.01		176.26
	06/21/90		17.39		176.88
	09/12/90		19.00		175.27
	11/27/90		19.44		174.83
	03/08/91		15.96		178.31
	06/03/91		17.00		177.27
	08/30/91		18.95		175.32
	11/22/91		19.55		174.72
	03/18/92		12.91		181.36
	05/28/92		16.25		178.02
	08/19/92		18.21		176.06

Table 1. Ground Water Elevations - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft above msl) ^a
	11/17/92		19.15		175.12
	02/12/93		11.60		182.67
	06/10/93		14.14		180.13
	08/18/93		16.10		178.17
	11/19/93		18.77		175.50
	02/28/94		14.35		179.92
	05/04/94		16.34		177.93
	08/10/94		15.79		178.48
	11/08/94		15.04		179.23
	02/01/95		10.08		184.19
	05/10/95		11.68		182.59
	08/24/95		14.94		179.33
	11/10/95		13.36		180.91
	02/24/96		9.90		184.37
	05/22/96		11.80		182.47
	08/19/96		15.08		179.19
	12/05/96		15.16		179.11
MW-3	02/15/90	192.52	15.81		176.71
	04/19/90		16.57		175.95
	05/14/90		16.97		175.55
	06/21/90		16.27		176.25
	09/12/90		18.78		173.74
	11/27/90		18.27		174.25
	03/08/91		14.86		177.66
	06/03/91		15.84		176.68
	08/30/91		17.79		174.73
	11/22/91		18.40		174.12
	03/18/92		12.03		180.49
	05/28/92		15.16		177.36
	08/19/92		17.03		175.49
	11/17/92		17.94		174.58
	02/12/93		9.16		183.36
	06/10/93		13.20		179.32
	08/18/93		14.93		177.59
	11/19/93		17.58		174.94
	02/28/94		13.30		179.22
	05/04/94		15.25		177.27
	08/10/94		16.63		175.89
	11/08/94		13.88		178.64
	02/01/95		9.25		183.27
	05/10/95		10.76		181.74
	08/24/95		13.90		178.62
	11/10/95		16.20		176.32

Table 1. Ground Water Elevations - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft above msl) ^a
	02/24/96		8.93		183.59
	05/22/96		10.86		181.66
	08/19/96		13.97		178.55
	12/05/96		14.06		178.46
MW-4	02/15/90	193.37	16.73		176.65
	04/19/90		17.48		175.89
	05/14/90		17.88		175.49
	06/21/90		17.18		176.19
	09/12/90		17.85		175.52
	11/27/90		19.16		174.21
	03/08/91		15.77		177.60
	06/03/91		16.77		176.60
	08/30/91		18.71		174.66
	11/22/91		---		---
	03/18/92 ^a		13.15	0.24	180.41
	05/28/92 ^a		16.22	0.12	177.25
	08/19/92 ^a		18.05	0.09	175.39
	11/17/92		18.89		174.48
	02/12/93		11.78	<0.01	181.59
	06/10/93		14.20		179.17
	08/18/93		15.95	0.01	177.43
	11/19/93		18.48	0.01	174.90
	02/28/94		14.60	<0.01	178.77
	05/04/94		16.15	<0.01	177.22
	08/10/94		17.58	0.02	175.81
	11/08/94		15.05	0.05	178.36
	02/01/95		10.71	0.04	182.69
	05/10/95		11.90	0.06	181.52
	08/24/95		14.97	0.02	178.42
	11/10/95		17.27	---	176.10
	02/24/96		10.44	0.03	182.95
	05/22/96		11.88	0.03	181.51
	08/19/96		15.23	0.02	178.16
	12/05/96		14.70	0.02	178.69
MW-5	08/30/91	190.35	16.74		173.61
	11/22/91		17.27		173.08
	03/18/92		11.28		179.07
	05/28/92 ^b		---		---
	08/19/92		15.99		174.36
	11/17/92		16.84		173.51
	02/12/93		10.30		180.05
	06/10/93		12.36		177.99

Table 1. Ground Water Elevations - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft above msl) ^a
	08/18/93		14.02		176.33
	11/19/93		16.50		173.85
	02/28/94		12.55		177.80
	05/04/94		14.27		176.08
	08/10/94		15.60		174.75
	11/08/94		12.85		177.50
	02/01/95		8.98		181.37
	05/10/95		10.16		180.19
	08/24/95		12.98		177.37
	11/10/95		15.12		175.23
	02/24/96 ^b		---		---
	05/22/96		10.10		180.25
	08/19/96		13.09		177.26
	12/05/96		13.31		177.04
MW-6	09/21/93	189.05	14.64		174.41
	11/19/93		---		---
	02/28/94		12.18		176.87
	05/04/94		13.62		175.43
	08/10/94		14.98		174.07
	11/08/94		12.20		176.85
	02/01/95		8.70		180.35
	05/10/95		9.86		179.19
	08/24/95		12.46		176.59
	11/10/95		14.56		174.49
	02/24/96 ^b		---		---
	05/22/96		10.23		178.82
	08/19/96		12.61		176.44
	12/05/96		12.47		176.58

Notes:

- a = When separate-phase hydrocarbons are present, ground water elevation is corrected by the relation: Corrected ground water elevation = (Top-of-Casing Elevation) - (depth to water) + (0.8 x separate-phase hydrocarbon thickness)
- b = Well inaccessible
- = Data not available

Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California

Well/ Boring ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	POG	MTBE	B	E	T	X	SVOC ^s	DO (mg/L)
			←————— parts per billion (µg/L) —————→										
MW-1	02/13/90	17.73	95	650	770	---	---	ND	0.37	0.67	3.2	---	---
	05/14/90	18.92	95	ND	770	---	---	0.70	0.71	0.57	3.5	---	---
	09/12/90	19.81	ND	84	ND	---	---	ND	ND	ND	ND	---	---
	11/27/90	20.39	---	---	---	---	---	---	---	---	---	---	---
	03/08/91	16.85	ND	50	ND	---	---	ND	ND	ND	ND	---	---
	06/03/91	17.82	ND	ND	ND	---	---	ND	ND	ND	ND	---	---
	08/30/91	19.87	16.85	520	ND	---	---	ND	ND	ND	ND	---	---
	11/22/91	20.58	<50	<50	<500	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	03/18/92	13.55	<30	<50	---	---	---	<0.3	<0.3	<0.3	<0.3	---	---
	05/28/92	17.08	<50	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	08/19/92	19.07	<50	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/17/92	20.11	<50	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	02/12/93	12.10	<50	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	06/10/93	14.87	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	06/10/93 ^{dup}	14.87	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	08/18/93	16.90	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/19/93	19.72	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	02/18/94	15.08	<50	---	---	---	---	<0.5	<0.5	<0.5	1.7	---	---
	05/04/94	17.20	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	08/10/94	18.76	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	08/10/94 ^{dup}	18.76	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/08/94	16.00	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	02/01/95	10.18	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	05/10/95	11.88	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	08/24/95	15.60	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/10/95	18.24	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	02/24/96	9.88	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	05/22/96	12.24	<50	---	---	---	<2.5	<0.5	<0.5	<0.5	<0.5	---	---
	08/19/96	15.86	<50	---	---	---	<2.5	<0.5	<0.5	<0.5	<0.5	---	---
	12/05/96	16.21	160	---	---	---	<2.5	7.3	5.5	8.2	23	---	8.6
	01/08/97	---	<50	---	---	---	<2.5	<0.5	<0.5	<0.5	<0.5	---	---

Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California (continued)

Well/ Boring ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	POG	MTBE	B	E	T	X	SVOC ^s	DO (mg/L)
			←————— parts per billion (µg/L) —————→										
MW-2	02/13/90	16.90	ND	560	ND	---	---	ND	ND	ND	ND	---	---
	05/14/90	18.01	ND	ND	ND	---	---	ND	ND	ND	ND	---	---
	09/12/90	19.00	ND	ND	ND	---	---	ND	ND	ND	ND	---	---
	11/27/90	19.44	ND	ND	ND	---	---	ND	ND	ND	ND	---	---
	03/08/91	15.96	ND	ND	ND	---	---	ND	ND	ND	ND	---	---
	06/03/91	17.00	ND	ND	ND	---	---	ND	ND	ND	ND	---	---
	08/30/91	18.95	ND	ND	ND	---	---	ND	ND	ND	ND	---	---
	11/22/91	19.55	<50	<50	<500	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	03/18/92	12.91	<30	---	---	---	---	<0.3	<0.3	<0.3	<0.3	---	---
	05/28/92	16.25	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	08/19/92	18.21	<50	---	---	---	---	<0.5	1.2	2	1.9	---	---
	11/17/92	19.15	<50	---	---	---	---	<0.5	1.2	2	1.9	---	---
	02/12/93 ^{dup}	11.60	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	02/12/93	11.60	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	06/10/93	14.14	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	08/18/93	16.10	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	08/18/93 ^{dup}	16.10	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/19/93	18.77	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	02/18/94	14.55	<50	---	---	---	---	<0.5	<0.5	<0.5	1.6	---	---
	05/04/94	16.34	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	08/10/94	15.79	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/08/94	15.04	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	02/01/95	10.08	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	05/10/95	11.68	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	08/24/95	14.94	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/10/95	13.36	<50	---	---	---	---	1.7	1.4	0.8	4.9	---	---
	02/24/96	9.90	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	02/24/96 ^{dup}	9.90	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	05/22/96	11.80	<50	---	---	---	<2.5	<0.5	<0.5	<0.5	<0.5	---	---
	08/19/96	15.08	<50	---	---	---	<2.5	<0.5	<0.5	<0.5	<0.5	---	---
	08/19/96 ^{dup}	15.08	<50	---	---	---	<2.5	<0.5	<0.5	<0.5	<0.5	---	---
	12/05/96	15.16	<50	---	---	---	<2.5	1.5	1.2	1.6	5.2	---	7.0
	01/08/97	---	<50	---	---	---	<2.5	<0.5	<0.5	<0.5	<0.5	---	---

Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California (continued)

Well/ Boring ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	POG	MTBE	B	E	T	X	SVOC ^s	DO (mg/L)
			←————— parts per billion (µg/L) —————→										
MW-3	02/13/90	15.81	4,700	3,100	3,000	---	---	320	110	29	33	---	---
	02/13/90 ^{dup}	15.81	4,600	4,500	8,300	---	---	380	160	8.6	57	---	---
	05/14/90	16.97	1,400	620	40,000	---	---	130	40	8.6	17	---	---
	05/14/90 ^{dup}	16.97	8,200	660	10,000	---	---	120	38	31	13	---	---
	09/12/90	18.78	2,000	1,500	19,000	---	---	58	16	5.8	15	---	---
	11/27/90	18.27	540	240	460	---	---	18	8.7	1.5	2.5	---	---
	03/08/91	14.86	3,400	2,100	ND	---	---	630	270	33	18	---	---
	06/03/91	15.84	1,700	690 ^a	ND	---	---	260	98	13	24	---	---
	08/30/91	17.79	870	370 ^b	500	---	---	44	10	6.1	2.9	---	---
	11/22/91	18.40	310	140	500	---	---	18	3.3	1.2	2.9	---	---
	03/18/92	12.03	67,100	1,900	20,000	---	---	620	220	28	38	---	---
	05/28/92	15.16	2,300	1,100 ^c	4,600	---	---	200	71	9	17	---	---
	08/19/92	17.03	5,700	1,000 ^c	1,800	---	---	71	52	77	130	---	---
	11/17/92	17.94	3,600	160 ^c	1,200	---	---	16	24	8.6	50	---	---
	02/12/93	9.16	4,700	560 ^c	<50	---	---	820	130	58	77	---	---
	06/10/93	13.20	2,200	---	940 ^d	---	---	310	89	23	23	---	---
	08/18/93	14.93	260	---	460 ^d	---	---	27	7.0	2.0	2.2	---	---
	11/19/93	17.58	1,500 ^e	---	960 ^d	<5,000	---	24	37	54	17	---	---
	02/18/94	13.30	2,700	---	1,600	<5,000	---	65	16	5.2	6.3	---	---
	02/18/94 ^{dup}		3,100	---	2,200	<5,000	---	82	19	6.7	7.9	---	---
	05/04/94	15.25	780	---	710	<5,000	---	120	21	7.5	6.9	f	---
	05/04/94 ^{dup}	15.25	920	---	1,600	<5,000	---	120	22	7.7	7.1	g	---
	08/10/94	16.63	920	---	<500	<5,000	---	20	3.0	2.3	2.2	r	---
	11/08/94	13.88	1,300	---	1,300	---	---	180	7.0	16	12	---	---
	11/08/94 ^{dup}	13.88	1,200	---	730	---	---	170	7.2	15	11	---	---
	02/01/95	9.25	1,400	---	900 ^s	---	---	210	11	8.5	8.7	t	---
	05/10/95	10.76	460	---	---	<5,000	---	97	1.0	10	19	r	---
	08/24/95	13.90	640	---	---	<5,000	---	68	14	21	19	u	---
	11/10/95	16.20	350	---	---	<5,000	---	15	1.2	2.3	2.5	---	---
	02/24/96	8.93	3,300	---	---	<5,000	---	240	38	53	55	---	---
	05/22/96	10.86	1,300	---	---	<5,000	3,500	110	<10	15	<10	v	---
	08/19/96	13.97	350	---	---	9,200	340	15	3.4	3.3	3.3	x	---
	12/05/96	14.06	290	---	---	---	---	12	5.4	7.6	16	x	8.4

Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California (continued)

Well/ Boring ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	POG	MTBE	B	E	T	X	SVOC ^s	DO (mg/L)
			←————— parts per billion (µg/L) —————→										
	12/05/96^{dup}	14.06	290	---	---	---	360	13	5.8	7.6	17	x	8.4
MW-4	02/13/90	16.73	ND	1,200	3,000	---	---	ND	ND	ND	ND	---	---
	05/14/90	17.88	650	350	12,000	---	---	160	1.9	7	3.1	---	---
	09/12/90	17.85	440	260	2,600	---	---	91	0.75	1.1	0.79	---	---
	09/12/90 ^{dup}	17.85	520	1,100	16,000	---	---	85	0.71	0.71	0.81	---	---
	11/27/90	19.16	470	2,400	1,000	---	---	64	0.80	1.2	2.7	---	---
	03/08/91	15.77	1,100	2,600	15,000	---	---	330	88	3.5	5.8	---	---
	06/03/91	16.77	670 ^h	1,100 ⁱ	ND	---	---	240	1.6	2.3	2.3	---	---
	08/30/91	18.71	570	280 ⁱ	2,000	---	---	64	0.9	1.8	0.9	---	---
	11/22/91 ^{SPH}	---	---	---	---	---	---	---	---	---	---	---	---
	03/18/92 ^{SPH}	13.15	---	---	---	---	---	---	---	---	---	---	---
	05/28/92 ^{SPH}	16.22	---	---	---	---	---	---	---	---	---	---	---
	08/19/92 ^{SPH}	18.05	---	---	---	---	---	---	---	---	---	---	---
	11/17/92 ^{SPH}	18.89	---	---	---	---	---	---	---	---	---	---	---
	02/12/93 ^{SPH}	11.78	---	---	---	---	---	---	---	---	---	---	---
	06/10/93	14.20	---	---	---	---	---	---	---	---	---	---	---
	08/18/93 ^{SPH}	15.95	---	---	---	---	---	---	---	---	---	---	---
	11/19/93 ^{SPH}	18.48	---	---	---	---	---	---	---	---	---	---	---
	02/28/94 ^{SPH}	14.60	---	---	---	---	---	---	---	---	---	---	---
	05/04/94 ^{SPH}	16.15	---	---	---	---	---	---	---	---	---	---	---
	08/10/94 ^{SPH}	17.58	---	---	---	---	---	---	---	---	---	---	---
	11/08/94 ^{SPH}	15.05	---	---	---	---	---	---	---	---	---	---	---
	02/01/95 ^{SPH}	10.71	---	---	---	---	---	---	---	---	---	---	---
	05/10/95	11.90	---	---	---	---	---	---	---	---	---	---	---
	08/24/95	14.97	---	---	---	---	---	---	---	---	---	---	---
	11/10/95	17.27	4,700	---	---	29,000	---	100	23	22	38	---	---
	02/24/96	10.44	---	---	---	---	---	---	---	---	---	---	---
	08/19/96 ^{SPH}	15.23	---	---	---	---	---	---	---	---	---	---	---
	12/05/96^{SPH}	14.07	---	---	---	---	---	---	---	---	---	---	---
	01/08/96	---	<10,000	---	---	---	---	<100	<100	<100	<100	---	---

97

Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California (continued)

Well/ Boring ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	POG	MTBE	B	E	T	X	SVOC ^s	DO (mg/L)
			←————— parts per billion (µg/L) —————→										
MW-5	08/30/91	16.74	ND	80	ND	---	---	ND	ND	ND	ND	---	---
	11/22/91	17.27	<50	<50	<500	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	03/18/92	11.28	<30	<50	---	---	---	<0.3	<0.3	<0.3	<0.3	---	---
	05/28/92 ^j	---	---	---	---	---	---	---	---	---	---	---	---
	08/19/92	15.99	<50	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/17/92	16.84	<50	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	02/12/93	10.30	<50	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	06/10/93	12.36	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	08/18/93	14.02	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/19/93	16.50	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/19/93 ^{dup}	16.50	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	02/18/94	12.55	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	05/04/94	14.27	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	08/10/94	15.60	70 ^o	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/08/94	12.85	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	02/01/95	8.98	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	05/10/95	10.16	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	05/10/95 ^{dup}	10.16	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	08/24/95	12.98	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/10/95	15.12	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
02/24/96 ^j	---	---	---	---	---	---	---	---	---	---	---	---	
05/22/96	10.10	<2,000	---	---	---	---	9,800	<20	<20	<20	<20	---	---
08/19/96	13.09	<2,500	---	---	---	---	13,000	<25	<25	<25	<25	---	---
12/05/96	13.31	<500	---	---	---	---	---	<5.0	<5.0	<5.0	<5.0	---	4.0
MW-6	09/21/93	14.64	<50	<50	---	<5,000	---	<0.5	<0.5	<0.5	<0.5	<10-50	---
	11/19/93 ^k	---	---	---	---	---	---	---	---	---	---	---	---
	02/28/94	12.18	98 ^l	---	---	<5,000	---	<0.5	<0.5	<0.5	<0.5	---	---
	05/04/94	13.62	<50	---	---	<5,000	---	<0.5	<0.5	<0.5	<0.5	<2-10	---
	08/10/94	14.98	80 ^o	---	---	<5,000	---	<0.5	<0.5	<0.5	<0.5	r	---
	11/08/94 ^j	12.20	---	---	---	---	---	---	---	---	---	---	---
02/01/95	8.70	120	---	---	---	---	3.5	3.4	21	22	---	---	

Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California (continued)

Well/ Boring ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	POG	MTBE	B	E	T	X	SVOC ^s	DO (mg/L)
			← parts per billion (µg/L) →										
	02/01/95 ^{dup}	8.70	110	---	---	---	---	0.6	0.5	0.6	0.9	---	---
	05/10/95	9.86	---	---	---	---	---	---	---	---	---	---	---
	08/24/95	12.46	80	---	---	---	---	<0.5	1.8	<0.5	2.4	---	---
	08/24/95 ^{dup}	12.46	70	---	---	---	---	<0.5	1.2	<0.5	1.3	---	---
	11/10/95	14.56	<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/10/95	14.56	60	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	02/24/96 ^j	---	---	---	---	---	---	---	---	---	---	---	---
	05/22/96	10.23	<50	---	---	---	290	<0.5	<0.5	<0.5	<0.5	---	---
	08/19/96	12.61	<1,250	---	---	---	1,100	<12	<12	<12	<12	---	---
	12/05/96	12.47	<125	---	---	---	---	<1.2	<1.2	<1.2	<1.2	---	3.6
BH-A	09/09/93	16.50	4,900	2,900 ^c	---	<5,000	---	18	54	<5	11	m	---
BH-B	09/09/93	15.85	<50	150	---	<5,000	---	<0.5	<0.5	<0.5	<0.5	ND	---
BH-C ⁿ	09/10/93	15.80	640 ^o	100	---	<5,000	---	3.5	0.6	<0.5	<0.5	ND	---
BH-D ⁿ	09/10/93	14.2	24,000 ^o	25,000 ^c	---	20,000	---	720	44	86	11	p	---
Bailer	08/19/92		<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
Blank	11/17/92		<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
Trip	02/13/90		ND	---	---	---	---	ND	ND	ND	ND	---	---
Blank	05/14/90		ND	---	---	---	---	ND	ND	ND	ND	---	---
	09/12/90		ND	---	---	---	---	ND	ND	ND	ND	---	---
	03/08/91		ND	---	---	---	---	ND	ND	ND	ND	---	---
	06/03/91		ND	---	---	---	---	ND	ND	ND	ND	---	---
	08/30/91		ND	---	---	---	---	ND	ND	ND	ND	---	---
	03/18/92		<30	<50	---	---	---	<0.3	<0.3	<0.3	<0.3	---	---
	05/28/92		<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	08/19/92		<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/17/92		<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	02/12/93		<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	06/10/93		<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---

Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California (continued)

Well/ Boring ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	POG	MTBE	B	E	T	X	SVOC ^s	DO (mg/L)
			←————— parts per billion (µg/L) —————→										
	11/19/93		<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	02/28/94		<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	05/04/94		<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	08/10/94		<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/08/94		<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	02/01/95		<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	05/10/95		<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	08/24/95		<50	---	---	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/10/95		<50	---	---	---	---	<0.5	<0.5	0.7	<0.5	---	---
DTSC MCL			NE	NE	NE	---	---	1	680	100 ^d	1,750	---	---

Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California (continued)

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
 POG = Petroleum Oil & Grease by EPA Method 5520B/F
 SVOCs = Semivolatile organic compounds by EPA Method 8270
 NE = Not established
 DTSC MCLs = California Department of Toxic Substances Control Maximum Contaminant Levels drinking water
 --- = Not analyzed or measured
 <n = Not detected at detection limits of n ppb
 ND = Not detected, detection limit not known
 SPH = Separate-phase hydrocarbons in well, not sampled
 dup = Duplicate sample

Notes:

a = Positive results for diesel appear to be less volatile constituents of gasoline
 b = Positive results for diesel has a typical diesel pattern
 c = Concentration reported as diesel is primarily due to the presence of a lighter petroleum product, possibly gasoline or kerosene
 d = Concentration reported as motor oil is due to the presence of a combination of motor oil and a lighter petroleum product of hydrocarbon range C6-C12, possibly gasoline
 e = Concentration reported as gasoline is due to the presence of gasoline and a discrete peak not indicative of gasoline
 f = Compounds are within chromatographic range of gasoline but are not characteristic of the standard gasoline pattern
 g = Results include compounds apparently due to gasoline as well as those due to diesel
 h = 6.5 ppb Naphthalene detected
 i = 11.0 ppb Naphthalene detected
 j = Well inaccessible and not sampled
 k = Well inadvertently not sampled
 l = The concentration reported as gasoline is primarily due to the presence of a discrete peak not indicative of gasoline
 m = 13 ppb-methylnaphthalene and 23 ppb naphthalene detected
 n = Due to chain of custody mis-communication analyses run after holding time expiration
 o = The positive result has an atypical pattern for gasoline analysis
 p = 75 ppb 2-methylnaphthalene and 18 ppb naphthalene detected
 q = DTSC recommended action level; MCL not established
 r = Not detected at detection limits between 10 and 50 ppb
 s = Concentration reported as motor oil is due to the presence of heavier and lighter petroleum products.
 t = 27 ppb Naphthalene detected
 u = 12 ppb Naphthalene detected
 v = 37 ppb Napthalene, 8.4 ppb 2methylnaphthalene detected.
 w = 37 ppb Napthalene, 7.8 ppb 2methylnaphthalene detected.
 x = No SVOC's Detected

**Table 3. Separate-Phase Hydrocarbon Removal - Shell Service Station
WIC #204-5508-3301, 6039 College Avenue, Oakland, California**

Well ID	Date	Separate-Phase Hydrocarbon Thickness (ft)	Separate-Phase Hydrocarbons Removed (lbs)	Cumulative Hydrocarbons Removed (lbs)
MW-4 ^a	01/15/92	---	3.12	3.12
	02/15/92	---	3.12	6.24
	03/18/92	0.24	---	6.24
	04/29/92	---	1.50	7.74
	05/28/92	0.12	0.18	7.92
	08/19/92	0.09	0.96	8.86
	11/17/92	---	0.96	9.82
	02/12/93	<0.01	---	9.82
	06/10/93	0.02	0.06	9.88
	08/18/93	0.01	0.06	9.94
	11/19/93	0.01	0.06	10.00
	02/28/94	0.01	0.06	10.06
	05/04/94	0.00	0.06	10.12
	08/10/94	0.02	0.06	10.18
	11/10/94	0.05	0.08	10.26
	02/01/95	0.04	0.06	10.32
	05/10/95	0.06	0.16	10.48
	08/24/95	0.02	---	10.48
	11/10/95	<0.01	---	10.48
	02/24/96	0.03	0.44	10.92
	05/22/96	0.03	---	10.92
	08/19/96	0.02	---	10.92
	12/05/96	0.02	---	10.92

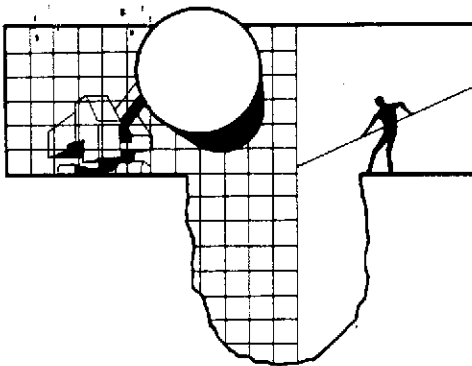
Notes:

- a = Petrotrap separate-phase hydrocarbon skimmer installed in well
- = Not measured or no hydrocarbons removed

CAMBRIA

ATTACHMENT A

Blaine Quarterly Ground Water Monitoring Report



BLAINE TECH SERVICES INC.

985 TIMOTHY DRIVE
SAN JOSE, CA 95133
(408) 995-5535
FAX (408) 293-8773

December 23, 1996

Shell Oil Company
P.O. Box 4023
Concord, CA 94524

Attn: R. Jeff Granberry

Shell WIC #204-5508-3301
6039 College Avenue
Oakland, California

4th Quarter 1996

Quarterly Groundwater Monitoring Report 961205-F-1

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) 995-5535 ext. 201.

Yours truly,

A handwritten signature in black ink, appearing to read "Francis Thie", is written over a horizontal line.

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: Scott MacLeod

(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	12/5/96	TOC	--	NONE	--	--	16.21	24.10
MW-2	12/5/96	TOC	--	NONE	--	--	15.16	24.17
MW-3 *	12/5/96	TOC	ODOR	NONE	--	--	14.06	24.74
MW-4	12/5/96	TOC	FREE PRODUCT	14.68	0.02	--	14.70	--
MW-5	12/5/96	TOC	--	NONE	--	--	13.31	28.82
MW-6	12/5/96	TOC	--	NONE	--	--	12.47	24.02
T-1	12/5/96	TOC	DRY	NONE	--	--	--	4.13
T-2	12/5/96	TOC	DRY	NONE	--	--	--	8.09

* Sample DUP was a duplicate sample taken from well MW-3.



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 961205-F1

Date: 12/5/96

Page 1 of 1

Silo Address: 6039 College Ave., Oakland

WIC#: 204-5508-3301

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

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

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

Comments:

Sampled by: TC

Printed Name: Tim GRAF

Analysis Required

LAB: SEQUOIA

CHECK ONE (1) BOX ONLY	CI/DI	TURN AROUND TIME
Quantity Monitoring <input checked="" type="checkbox"/>	6441	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	6441	24 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	6441	5 DAY <input checked="" type="checkbox"/>
Water Classify/Disposal <input type="checkbox"/>	6443	Other <input type="checkbox"/>
Soil/Air Rem. of Sys. O & M <input type="checkbox"/>	6442	
Water Rem. of Sys. O & M <input type="checkbox"/>	6443	
Other <input type="checkbox"/>		

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

	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	EPA 8270	Asbestos OIL & GREASE	Container Size	Preparation Used	Composite Y/N

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.
<u>MW-1</u>	<u>12/5</u>			<u>W</u>		<u>3</u>
<u>MW-2</u>	<u>1</u>			<u>1</u>		<u>3</u>
<u>MW-3</u>	<u>1</u>			<u>1</u>		<u>7</u>
<u>MW-5</u>	<u>1</u>			<u>1</u>		<u>3</u>
<u>MW-6</u>	<u>1</u>			<u>1</u>		<u>3</u>
<u>EB</u>	<u>1</u>			<u>1</u>		<u>3</u>
<u>DUP</u>	<u>6</u>			<u>1</u>		<u>7</u>

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
	<u>9612330</u>
	<u>5 DAY TAT</u>
	<u>ALL SAMPLES</u>

Relinquished By (signature): [Signature]
Relinquished By (signature): [Signature]
Relinquished By (signature): [Signature]

Printed Name: Tim GRAF
Printed Name: [Blank]
Printed Name: [Blank]

Date: 12/6/96
Time: 12:05
Date: 12/6/96
Time: [Blank]
Date: [Blank]
Time: [Blank]

Received (signature): [Signature]
Received (signature): [Signature]
Received (signature): [Signature]

Printed Name: FUTCHER
Printed Name: [Blank]
Printed Name: Rich Herling

Date: 12/6/96
Time: 12:05
Date: [Blank]
Time: [Blank]
Date: 12/6/96
Time: 1333

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



Sequoia Analytical

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FAX (916) 921-0100

Blaine Technical Services
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Project: Shell Oakland/961205-F1

Enclosed are the results from samples received at Sequoia Analytical on December 6, 1996.
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9612330 -01	LIQUID, MW-1	12/05/96	TPGBMW Purgeable TPH/BTEX
9612330 -02	LIQUID, MW-2	12/05/96	TPGBMW Purgeable TPH/BTEX
9612330 -03	LIQUID, MW-3	12/05/96	TPGBMW-Purgeable TPH/BTEX
9612330 -03	LIQUID, MW-3	12/05/96	8270 SemiVolatile Organi
9612330 -03	LIQUID, MW-3	12/05/96	TRPH (SM 5520 B&F)
9612330 -04	LIQUID, MW-5	12/05/96	TPGBMW Purgeable TPH/BTEX
9612330 -05	LIQUID, MW-6	12/05/96	TPGBMW Purgeable TPH/BTEX
9612330 -06	LIQUID, EB	12/05/96	TPGBMW Purgeable TPH/BTEX
9612330 -07	LIQUID, DUP	12/05/96	TPGBMW Purgeable TPH/BTEX
9612330 -07	LIQUID, DUP	12/05/96	8270 SemiVolatile Organi
9612330 -07	LIQUID, DUP	12/05/96	TRPH (SM 5520 B&F)

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 Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell Oakland/961205-F1 Lab Proj. ID: 9612330	Sampled: 12/05/96 Received: 12/06/96 Analyzed: see below Reported: 12/11/96
Attention: Fran Thie		

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9612330-03 Sample Desc: LIQUID,MW-3				
TRPH (SM 5520 B&F)	mg/L	12/10/96	5.0	6.1
Lab No: 9612330-07 Sample Desc: LIQUID,DUP				
TRPH (SM 5520 B&F)	mg/L	12/10/96	5.0	7.4

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: MW-1 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9612330-01	Sampled: 12/05/96 Received: 12/06/96 Analyzed: 12/07/96 Reported: 12/11/96
--	--	---

QC Batch Number: GC120796BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	160
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	7.3
Toluene	0.50	8.2
Ethyl Benzene	0.50	5.5
Xylenes (Total)	0.50	23
Chromatogram Pattern:		C6-C12

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



Blaine Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: MW-2 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9612330-02	Sampled: 12/05/96 Received: 12/06/96 Analyzed: 12/07/96 Reported: 12/11/96
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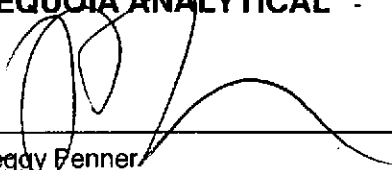
QC Batch Number: GC120796BTEX06A
Instrument ID: GCHP06

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	1.5
Toluene	0.50	1.6
Ethyl Benzene	0.50	1.2
Xylenes (Total)	0.50	5.2
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 Fenner
Project Manager



Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: MW-3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9612330-03	Sampled: 12/05/96 Received: 12/06/96 Analyzed: 12/07/96 Reported: 12/11/96
--	--	---

QC Batch Number: GC120796BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	290
Methyl t-Butyl Ether	2.5	370
Benzene	0.50	12
Toluene	0.50	7.6
Ethyl Benzene	0.50	5.4
Xylenes (Total)	0.50	16
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	141 Q

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: MW-3 Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9612330-03	Sampled: 12/05/96 Received: 12/06/96 Extracted: 12/09/96 Analyzed: 12/10/96 Reported: 12/11/96
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QC Batch Number: MS1206968270EXA
Instrument ID: H5

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acenaphthene	5.0	N.D.
Acenaphthylene	5.0	N.D.
Anthracene	5.0	N.D.
Benzoic Acid	10	N.D.
Benzo(a)anthracene	5.0	N.D.
Benzo(b)fluoranthene	5.0	N.D.
Benzo(k)fluoranthene	5.0	N.D.
Benzo(g,h,i)perylene	5.0	N.D.
Benzo(a)pyrene	5.0	N.D.
Benzyl alcohol	5.0	N.D.
Bis(2-chloroethoxy)methane	5.0	N.D.
Bis(2-chloroethyl)ether	5.0	N.D.
Bis(2-chloroisopropyl)ether	5.0	N.D.
Bis(2-ethylhexyl)phthalate	10	N.D.
4-Bromophenyl phenyl ether	5.0	N.D.
Butyl benzyl phthalate	5.0	N.D.
4-Chloroaniline	10	N.D.
2-Chloronaphthalene	5.0	N.D.
4-Chloro-3-methylphenol	5.0	N.D.
2-Chlorophenol	5.0	N.D.
4-Chlorophenyl phenyl ether	5.0	N.D.
Chrysene	5.0	N.D.
Dibenzo(a,h)anthracene	5.0	N.D.
Dibenzofuran	5.0	N.D.
Di-n-butyl phthalate	10	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
3,3-Dichlorobenzidine	10	N.D.
2,4-Dichlorophenol	5.0	N.D.
Diethyl phthalate	5.0	N.D.
2,4-Dimethylphenol	5.0	N.D.
Dimethyl phthalate	5.0	N.D.
4,6-Dinitro-2-methylphenol	10	N.D.
2,4-Dinitrophenol	10	N.D.
2,4-Dinitrotoluene	5.0	N.D.
2,6-Dinitrotoluene	5.0	N.D.



Sequoia Analytical

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Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: MW-3 Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9612330-03	Sampled: 12/05/96 Received: 12/06/96 Extracted: 12/09/96 Analyzed: 12/10/96 Reported: 12/11/96
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QC Batch Number: MS1206968270EXA
Instrument ID: H5

Analyte	Detection Limit ug/L	Sample Results ug/L
Di-n-octyl phthalate	5.0	N.D.
Fluoranthene	5.0	N.D.
Fluorene	5.0	N.D.
Hexachlorobenzene	5.0	N.D.
Hexachlorobutadiene	5.0	N.D.
Hexachlorocyclopentadiene	10	N.D.
Hexachloroethane	5.0	N.D.
Indeno(1,2,3-cd)pyrene	5.0	N.D.
Isophorone	5.0	N.D.
2-Methylnaphthalene	5.0	N.D.
2-Methylphenol	5.0	N.D.
4-Methylphenol	5.0	N.D.
Naphthalene	5.0	N.D.
2-Nitroaniline	10	N.D.
3-Nitroaniline	10	N.D.
4-Nitroaniline	10	N.D.
Nitrobenzene	5.0	N.D.
2-Nitrophenol	5.0	N.D.
4-Nitrophenol	10	N.D.
n-Nitrosodiphenylamine	5.0	N.D.
n-Nitroso-di-n-propylamine	5.0	N.D.
Pentachlorophenol	10	N.D.
Phenanthrene	5.0	N.D.
Phenol	5.0	N.D.
Pyrene	5.0	N.D.
1,2,4-Trichlorobenzene	5.0	N.D.
2,4,5-Trichlorophenol	10	N.D.
2,4,6-Trichlorophenol	5.0	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	21	110	39
Phenol-d5	10	110	27
Nitrobenzene-d5	35	114	90
2-Fluorobiphenyl	43	116	87
2,4,6-Tribromophenol	10	123	75
p-Terphenyl-d14	33	141	89

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Fenner
Project Manager



Blaine Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: MW-5 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9612330-04	Sampled: 12/05/96 Received: 12/06/96 Analyzed: 12/09/96 Reported: 12/11/96
Attention: Fran Thie		

QC Batch Number: GC120996BTEX07A
Instrument ID: GCHP07

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	2800
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	99

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Technical Services
985 Timothy Drive
San Jose, CA 95133

Client Proj. ID: Shell Oakland/961205-F1
Sample Descript: MW-6
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9612330-05

Sampled: 12/05/96
Received: 12/06/96
Analyzed: 12/09/96
Reported: 12/11/96

Attention: Fran Thie

QC Batch Number: GC120996BTEX07A

Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	125	N.D.
Methyl t-Butyl Ether	6.2	440
Benzene	1.2	N.D.
Toluene	1.2	N.D.
Ethyl Benzene	1.2	N.D.
Xylenes (Total)	1.2	N.D.
Chromatogram Pattern:		
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 Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: EB Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9612330-06	Sampled: 12/05/96 Received: 12/06/96 Analyzed: 12/07/96 Reported: 12/11/96
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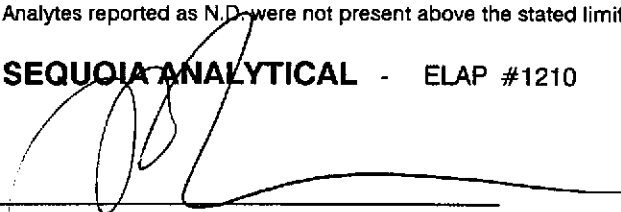
QC Batch Number: GC120796BTEX06A
Instrument ID: GCHP06

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	85

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: DUP Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9612330-07	Sampled: 12/05/96 Received: 12/06/96 Analyzed: 12/07/96 Reported: 12/11/96
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QC Batch Number: GC120796BTEX06A
 Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	290
Methyl t-Butyl Ether	2.5	360
Benzene	0.50	13
Toluene	0.50	7.6
Ethyl Benzene	0.50	5.8
Xylenes (Total)	0.50	17
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	141 Q

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

SEQUOIA ANALYTICAL - ELAP #1210


 Peggy Penner
 Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: DUP Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9612330-07	Sampled: 12/05/96 Received: 12/06/96 Extracted: 12/09/96 Analyzed: 12/10/96 Reported: 12/11/96
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QC Batch Number: MS1206968270EXA
Instrument ID: H5

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acenaphthene	5.0	N.D.
Acenaphthylene	5.0	N.D.
Anthracene	5.0	N.D.
Benzoic Acid	10	N.D.
Benzo(a)anthracene	5.0	N.D.
Benzo(b)fluoranthene	5.0	N.D.
Benzo(k)fluoranthene	5.0	N.D.
Benzo(g,h,i)perylene	5.0	N.D.
Benzo(a)pyrene	5.0	N.D.
Benzyl alcohol	5.0	N.D.
Bis(2-chloroethoxy)methane	5.0	N.D.
Bis(2-chloroethyl)ether	5.0	N.D.
Bis(2-chloroisopropyl)ether	5.0	N.D.
Bis(2-ethylhexyl)phthalate	10	N.D.
4-Bromophenyl phenyl ether	5.0	N.D.
Butyl benzyl phthalate	5.0	N.D.
4-Chloroaniline	10	N.D.
2-Chloronaphthalene	5.0	N.D.
4-Chloro-3-methylphenol	5.0	N.D.
2-Chlorophenol	5.0	N.D.
4-Chlorophenyl phenyl ether	5.0	N.D.
Chrysene	5.0	N.D.
Dibenzo(a,h)anthracene	5.0	N.D.
Dibenzofuran	5.0	N.D.
Di-n-butyl phthalate	10	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
3,3-Dichlorobenzidine	10	N.D.
2,4-Dichlorophenol	5.0	N.D.
Diethyl phthalate	5.0	N.D.
2,4-Dimethylphenol	5.0	N.D.
Dimethyl phthalate	5.0	N.D.
4,6-Dinitro-2-methylphenol	10	N.D.
2,4-Dinitrophenol	10	N.D.
2,4-Dinitrotoluene	5.0	N.D.
2,6-Dinitrotoluene	5.0	N.D.





Sequoia Analytical

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

Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: DUP Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9612330-07	Sampled: 12/05/96 Received: 12/06/96 Extracted: 12/09/96 Analyzed: 12/10/96 Reported: 12/11/96
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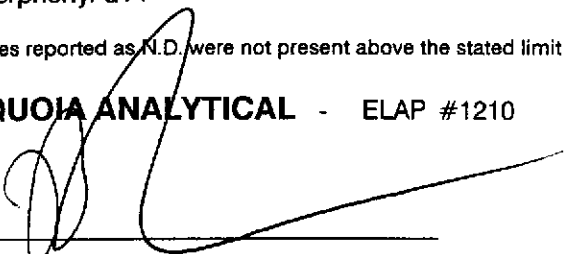
QC Batch Number: MS1206968270EXA
Instrument ID: H5

Analyte	Detection Limit ug/L	Sample Results ug/L
Di-n-octyl phthalate	5.0	N.D.
Fluoranthene	5.0	N.D.
Fluorene	5.0	N.D.
Hexachlorobenzene	5.0	N.D.
Hexachlorobutadiene	5.0	N.D.
Hexachlorocyclopentadiene	10	N.D.
Hexachloroethane	5.0	N.D.
Indeno(1,2,3-cd)pyrene	5.0	N.D.
Isophorone	5.0	N.D.
2-Methylnaphthalene	5.0	N.D.
2-Methylphenol	5.0	N.D.
4-Methylphenol	5.0	N.D.
Naphthalene	5.0	N.D.
2-Nitroaniline	10	N.D.
3-Nitroaniline	10	N.D.
4-Nitroaniline	10	N.D.
Nitrobenzene	5.0	N.D.
2-Nitrophenol	5.0	N.D.
4-Nitrophenol	10	N.D.
n-Nitrosodiphenylamine	5.0	N.D.
n-Nitroso-di-n-propylamine	5.0	N.D.
Pentachlorophenol	10	N.D.
Phenanthrene	5.0	N.D.
Phenol	5.0	N.D.
Pyrene	5.0	N.D.
1,2,4-Trichlorobenzene	5.0	N.D.
2,4,5-Trichlorophenol	10	N.D.
2,4,6-Trichlorophenol	5.0	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	21	110	45
Phenol-d5	10	110	33
Nitrobenzene-d5	35	114	89
2-Fluorobiphenyl	43	116	82
2,4,6-Tribromophenol	10	123	74
p-Terphenyl-d14	33	141	88

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

SEQUOIA ANALYTICAL - ELAP #1210


 Peggy Penner
 Project Manager



Blaine Technical Services
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Proj. ID: Shell Oakland/961205-F1
Lab Proj. ID: 9612330

Received: 12/06/96
Reported: 12/11/96

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 14 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.
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Project ID: Shell Oakland / 961205-F1
Matrix: Liquid

Work Order #: 9612330 -03, 07

Reported: Dec 11, 1996

QUALITY CONTROL DATA REPORT

Analyte: Total Recoverable
Petroleum Hydrocarb.
QC Batch#: OP1203965520EXA
Analy. Method: SM 5520 BF
Prep. Method: EPA 3510

Analyst: J. Aquino
MS/MSD #: BLK120396
Sample Conc.: N.D.
Prepared Date: 12/3/96
Analyzed Date: 12/4/96
Instrument I.D.#: MANUAL
Conc. Spiked: 10 mg/L

Result: 9.0
MS % Recovery: 90

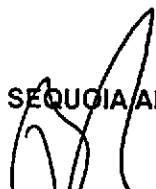
Dup. Result: 9.6
MSD % Recov.: 96

RPD: 6.5
RPD Limit: 0-30

LCS #: BLK120996
Prepared Date: 12/9/96
Analyzed Date: 12/10/96
Instrument I.D.#: MANUAL
Conc. Spiked: 10 mg/L

LCS Result: 8.8
LCS % Recov.: 88

MS/MSD	60-140
LCS	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

9612330.BLA <1>





Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Project ID: Shell Oakland / 961205-F1
Matrix: Liquid

Work Order #: 9612330-01-03, 06-07

Reported: Dec 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC120796BTEX06A	GC120796BTEX06A	GC120796BTEX06A	GC120796BTEX06A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	J. Heider	J. Heider	J. Heider	J. Heider
MS/MSD #:	961210801	961210801	961210801	961210801
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/7/96	12/7/96	12/7/96	12/7/96
Analyzed Date:	12/7/96	12/7/96	12/7/96	12/7/96
Instrument I.D.#:	GCHP6	GCHP6	GCHP6	GCHP6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.3	8.6	9.6	28
MS % Recovery:	93	86	96	93
Dup. Result:	11	10	11	33
MSD % Recov.:	110	110	110	110
RPD:	17	15	14	16
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK120796	BLK120796	BLK120796	BLK120796
Prepared Date:	12/7/96	12/7/96	12/7/96	12/7/96
Analyzed Date:	12/7/96	12/7/96	12/7/96	12/7/96
Instrument I.D.#:	GCHP6	GCHP6	GCHP6	GCHP6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	8.3	8.8	8.9	28
LCS % Recov.:	83	88	89	93

MS/MSD	60-140	60-140	60-140	60-140
LCS	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

9612330.BLA <2>





Blaine Tech Services, Inc. Client Project ID: Shell Oakland / 961205-F1
 985 Timothy Drive Matrix: Liquid
 San Jose, CA 95133 Work Order #: 9612330-04-05 Reported: Dec 11, 1996
 Attention: Fran Thie

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC120996BTEX07A	GC120996BTEX07A	GC120996BTEX07A	GC120996BTEX07A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	961218002	961218002	961218002	961218002
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/9/96	12/9/96	12/9/96	12/9/96
Analyzed Date:	12/9/96	12/9/96	12/9/96	12/9/96
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	9.7	9.7	29
MS % Recovery:	100	97	97	97
Dup. Result:	12	11	11	33
MSD % Recov.:	120	110	110	110
RPD:	18	13	13	13
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK120996	BLK120996	BLK120996	BLK120996
Prepared Date:	12/9/96	12/9/96	12/9/96	12/9/96
Analyzed Date:	12/9/96	12/9/96	12/9/96	12/9/96
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	10	10	31
LCS % Recov.:	100	100	100	103

MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130
Control Limits				

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

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9612330.BLA <3>





Blaine Tech Services, Inc. Client Project ID: Shell Oakland / 961205-F1
 985 Timothy Drive Matrix: Liquid
 San Jose, CA 95133
 Attention: Fran Thie Work Order #: 9612330-03, 07 Reported: Dec 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Phenol	2-Chlorophenol	1,4-Dichloro-benzene	N-Nitroso-Di-N-propylamine
QC Batch#:	MS1206968270EXA	MS1206968270EXA	MS1206968270EXA	MS1206968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3510	EPA 3510	EPA 3510	EPA 3510

Analyst:	E. Manuel	E. Manuel	E. Manuel	E. Manuel
MS/MSD #:	961209104	961209104	961209104	961209104
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/6/96	12/6/96	12/6/96	12/6/96
Analyzed Date:	12/7/96	12/7/96	12/7/96	12/7/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L	200 µg/L
Result:	76	149	135	158
MS % Recovery:	38	75	68	79
Dup. Result:	81	168	140	164
MSD % Recov.:	41	84	70	82
RPD:	6.4	12	3.6	3.7
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	WB120996	WB120996	WB120996	WB120996
Prepared Date:	12/9/96	12/9/96	12/9/96	12/9/96
Analyzed Date:	12/10/96	12/10/96	12/10/96	12/10/96
Instrument I.D.#:	H5	H5	H5	H5
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L	200 µg/L
LCS Result:	54	135	139	158
LCS % Recov.:	27	68	70	79

MS/MSD LCS Control Limits	12-110	27-123	36-97	41-116
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SEQUOIA ANALYTICAL

Peggy Fenner
Project Manager

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Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Project ID: Shell Oakland / 961205-F1
Matrix: Liquid

Work Order #: 9612330-03, 07

Reported: Dec 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,2,4-Trichloro-benzene	4-Chloro-3-Methylphenol	Acenaphthene	4-Nitrophenol
QC Batch#:	MS1206968270EXA	MS1206968270EXA	MS1206968270EXA	MS1206968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3510	EPA 3510	EPA 3510	EPA 3510

Analyst:	E. Manuel	E. Manuel	E. Manuel	E. Manuel
MS/MSD #:	961209104	961209104	961209104	961209104
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/6/96	12/6/96	12/6/96	12/6/96
Analyzed Date:	12/7/96	12/7/96	12/7/96	12/7/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L	200 µg/L
Result:	156	151	155	60
MS % Recovery:	78	76	78	30
Dup. Result:	163	154	155	71
MSD % Recov.:	82	77	78	36
RPD:	4.4	2.0	0.0	17
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	WB120996	WB120996	WB120996	WB120996
Prepared Date:	12/9/96	12/9/96	12/9/96	12/9/96
Analyzed Date:	12/10/96	12/10/96	12/10/96	12/10/96
Instrument I.D.#:	H5	H5	H5	H5
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L	200 µg/L
LCS Result:	154	148	146	51
LCS % Recov.:	77	74	73	26

MS/MSD LCS Control Limits	39-98	23-97	46-118	10 to 80
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SEQUOIA ANALYTICAL

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Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Project ID: Shell Oakland / 961205-F1
Matrix: Liquid

Work Order #: 9612330-03, 07

Reported: Dec 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
QC Batch#:	MS1206968270EXA	MS1206968270EXA	MS1206968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3510	EPA 3510	EPA 3510

Analyst:	E. Manuel	E. Manuel	E. Manuel
MS/MSD #:	961209104	961209104	961209104
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	12/6/96	12/6/96	12/6/96
Analyzed Date:	12/7/96	12/7/96	12/7/96
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L
Result:	162	153	152
MS % Recovery:	81	77	76
Dup. Result:	166	163	162
MSD % Recov.:	83	82	81
RPD:	2.4	6.3	6.4
RPD Limit:	0-30	0-30	0-30

LCS #:	WB120996	WB120996	WB120996
Prepared Date:	12/9/96	12/9/96	12/9/96
Analyzed Date:	12/10/96	12/10/96	12/10/96
Instrument I.D.#:	H5	H5	H5
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L
LCS Result:	140	165	160
LCS % Recov.:	70	83	80

MS/MSD LCS Control Limits	24-96	9-103	26-127
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SEQUOIA ANALYTICAL

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Sequoia Analytical

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Blaine Technical Services
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Project: Shell Oakland/961205-F1

Enclosed are the results from samples received at Sequoia Analytical on December 6, 1996.
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9612330 -01	LIQUID, MW-1	12/05/96	TPGBMW Purgeable TPH/BTEX
9612330 -02	LIQUID, MW-2	12/05/96	TPGBMW Purgeable TPH/BTEX
9612330 -03	LIQUID, MW-3	12/05/96	TPGBMW Purgeable TPH/BTEX
9612330 -03	LIQUID, MW-3	12/05/96	8270 SemiVolatile Organi
9612330 -03	LIQUID, MW-3	12/05/96	TRPH (SM 5520 B&F)
9612330 -04	LIQUID, MW-5	12/05/96	TPGBMW Purgeable TPH/BTEX
9612330 -05	LIQUID, MW-6	12/05/96	TPGBMW Purgeable TPH/BTEX
9612330 -06	LIQUID, EB	12/05/96	TPGBMW Purgeable TPH/BTEX
9612330 -07	LIQUID, DUP	12/05/96	TPGBMW Purgeable TPH/BTEX
9612330 -07	LIQUID, DUP	12/05/96	8270 SemiVolatile Organi
9612330 -07	LIQUID, DUP	12/05/96	TRPH (SM 5520 B&F)

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





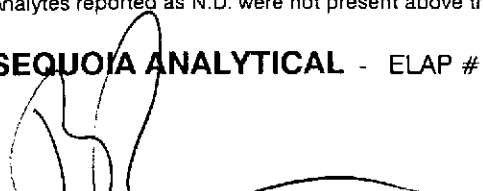
Blaine Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell Oakland/961205-F1 Lab Proj. ID: 9612330	Sampled: 12/05/96 Received: 12/06/96 Analyzed: see below Reported: 12/11/96
Attention: Fran Thie		

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9612330-03 Sample Desc: LIQUID,MW-3				
TRPH (SM 5520 B&F)	mg/L	12/10/96	5.0	6.1
Lab No: 9612330-07 Sample Desc: LIQUID,DUP				
TRPH (SM 5520 B&F)	mg/L	12/10/96	5.0	7.4

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

SEQUOIA ANALYTICAL - ELAP #1210



Peggy Penner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: MW-1 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9612330-01	Sampled: 12/05/96 Received: 12/06/96 Analyzed: 12/07/96 Reported: 12/11/96
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QC Batch Number: GC120796BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	160
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	7.3
Toluene	0.50	8.2
Ethyl Benzene	0.50	5.5
Xylenes (Total)	0.50	23
Chromatogram Pattern:		C6-C12
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 Fenner
Project Manager



Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: MW-2 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9612330-02	Sampled: 12/05/96 Received: 12/06/96 Analyzed: 12/07/96 Reported: 12/11/96
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QC Batch Number: GC120796BTEX06A
Instrument ID: GCHP06

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	1.5
Toluene	0.50	1.6
Ethyl Benzene	0.50	1.2
Xylenes (Total)	0.50	5.2
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 Fenner
Project Manager



Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: MW-3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9612330-03	Sampled: 12/05/96 Received: 12/06/96 Analyzed: 12/07/96 Reported: 12/11/96
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QC Batch Number: GC120796BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	290
Methyl t-Butyl Ether	2.5	370
Benzene	0.50	12
Toluene	0.50	7.6
Ethyl Benzene	0.50	5.4
Xylenes (Total)	0.50	16
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	141 Q

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: MW-3 Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9612330-03	Sampled: 12/05/96 Received: 12/06/96 Extracted: 12/09/96 Analyzed: 12/10/96 Reported: 12/11/96
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QC Batch Number: MS1206968270EXA
Instrument ID: H5

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acenaphthene	5.0	N.D.
Acenaphthylene	5.0	N.D.
Anthracene	5.0	N.D.
Benzoic Acid	10	N.D.
Benzo(a)anthracene	5.0	N.D.
Benzo(b)fluoranthene	5.0	N.D.
Benzo(k)fluoranthene	5.0	N.D.
Benzo(g,h,i)perylene	5.0	N.D.
Benzo(a)pyrene	5.0	N.D.
Benzyl alcohol	5.0	N.D.
Bis(2-chloroethoxy)methane	5.0	N.D.
Bis(2-chloroethyl)ether	5.0	N.D.
Bis(2-chloroisopropyl)ether	5.0	N.D.
Bis(2-ethylhexyl)phthalate	10	N.D.
4-Bromophenyl phenyl ether	5.0	N.D.
Butyl benzyl phthalate	5.0	N.D.
4-Chloroaniline	10	N.D.
2-Chloronaphthalene	5.0	N.D.
4-Chloro-3-methylphenol	5.0	N.D.
2-Chlorophenol	5.0	N.D.
4-Chlorophenyl phenyl ether	5.0	N.D.
Chrysene	5.0	N.D.
Dibenzo(a,h)anthracene	5.0	N.D.
Dibenzofuran	5.0	N.D.
Di-n-butyl phthalate	10	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
3,3-Dichlorobenzidine	10	N.D.
2,4-Dichlorophenol	5.0	N.D.
Diethyl phthalate	5.0	N.D.
2,4-Dimethylphenol	5.0	N.D.
Dimethyl phthalate	5.0	N.D.
4,6-Dinitro-2-methylphenol	10	N.D.
2,4-Dinitrophenol	10	N.D.
2,4-Dinitrotoluene	5.0	N.D.
2,6-Dinitrotoluene	5.0	N.D.





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Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: MW-3 Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9612330-03	Sampled: 12/05/96 Received: 12/06/96 Extracted: 12/09/96 Analyzed: 12/10/96 Reported: 12/11/96
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QC Batch Number: MS1206968270EXA
Instrument ID: H5

Analyte	Detection Limit ug/L	Sample Results ug/L
Di-n-octyl phthalate	5.0	N.D.
Fluoranthene	5.0	N.D.
Fluorene	5.0	N.D.
Hexachlorobenzene	5.0	N.D.
Hexachlorobutadiene	5.0	N.D.
Hexachlorocyclopentadiene	10	N.D.
Hexachloroethane	5.0	N.D.
Indeno(1,2,3-cd)pyrene	5.0	N.D.
Isophorone	5.0	N.D.
2-Methylnaphthalene	5.0	N.D.
2-Methylphenol	5.0	N.D.
4-Methylphenol	5.0	N.D.
Naphthalene	5.0	N.D.
2-Nitroaniline	10	N.D.
3-Nitroaniline	10	N.D.
4-Nitroaniline	10	N.D.
Nitrobenzene	5.0	N.D.
2-Nitrophenol	5.0	N.D.
4-Nitrophenol	10	N.D.
n-Nitrosodiphenylamine	5.0	N.D.
n-Nitroso-di-n-propylamine	5.0	N.D.
Pentachlorophenol	10	N.D.
Phenanthrene	5.0	N.D.
Phenol	5.0	N.D.
Pyrene	5.0	N.D.
1,2,4-Trichlorobenzene	5.0	N.D.
2,4,5-Trichlorophenol	10	N.D.
2,4,6-Trichlorophenol	5.0	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	21	110	39
Phenol-d5	10	110	27
Nitrobenzene-d5	35	114	90
2-Fluorobiphenyl	43	116	87
2,4,6-Tribromophenol	10	123	75
p-Terphenyl-d14	33	141	89

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: MW-5 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9612330-04	Sampled: 12/05/96 Received: 12/06/96 Analyzed: 12/09/96 Reported: 12/11/96
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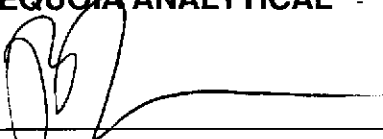
QC Batch Number: GC120996BTEX07A
Instrument ID: GCHP07

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	2800
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	99

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

SEQUOIA ANALYTICAL - ELAP #1210



Peggy Penner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: MW-6 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9612330-05	Sampled: 12/05/96 Received: 12/06/96 Analyzed: 12/09/96 Reported: 12/11/96
Attention: Fran Thie		

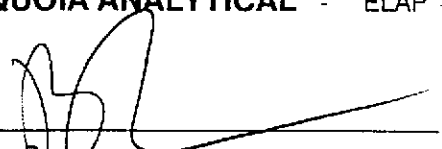
QC Batch Number: GC120996BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	125	N.D.
Methyl t-Butyl Ether	6.2	440
Benzene	1.2	N.D.
Toluene	1.2	N.D.
Ethyl Benzene	1.2	N.D.
Xylenes (Total)	1.2	N.D.
Chromatogram Pattern:		
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 Renner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: EB Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9612330-06	Sampled: 12/05/96 Received: 12/06/96 Analyzed: 12/07/96 Reported: 12/11/96
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QC Batch Number: GC120796BTEX06A
Instrument ID: GCHP06

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	85

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: DUP Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9612330-07	Sampled: 12/05/96 Received: 12/06/96 Analyzed: 12/07/96 Reported: 12/11/96
Attention: Fran Thie		

QC Batch Number: GC120796BTEX06A
Instrument ID: GCHP06

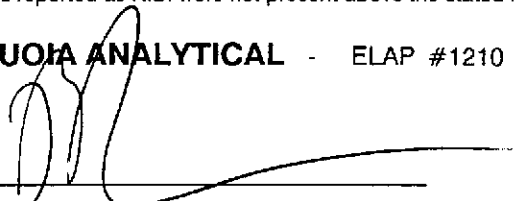
Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	290
Methyl t-Butyl Ether	2.5	360
Benzene	0.50	13
Toluene	0.50	7.6
Ethyl Benzene	0.50	5.8
Xylenes (Total)	0.50	17
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	141 Q

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Renner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: DUP Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9612330-07	Sampled: 12/05/96 Received: 12/06/96 Extracted: 12/09/96 Analyzed: 12/10/96 Reported: 12/11/96
Attention: Fran Thie		

QC Batch Number: MS1206968270EXA
Instrument ID: H5

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acenaphthene	5.0	N.D.
Acenaphthylene	5.0	N.D.
Anthracene	5.0	N.D.
Benzoic Acid	10	N.D.
Benzo(a)anthracene	5.0	N.D.
Benzo(b)fluoranthene	5.0	N.D.
Benzo(k)fluoranthene	5.0	N.D.
Benzo(g,h,i)perylene	5.0	N.D.
Benzo(a)pyrene	5.0	N.D.
Benzyl alcohol	5.0	N.D.
Bis(2-chloroethoxy)methane	5.0	N.D.
Bis(2-chloroethyl)ether	5.0	N.D.
Bis(2-chloroisopropyl)ether	5.0	N.D.
Bis(2-ethylhexyl)phthalate	10	N.D.
4-Bromophenyl phenyl ether	5.0	N.D.
Butyl benzyl phthalate	5.0	N.D.
4-Chloroaniline	10	N.D.
2-Chloronaphthalene	5.0	N.D.
4-Chloro-3-methylphenol	5.0	N.D.
2-Chlorophenol	5.0	N.D.
4-Chlorophenyl phenyl ether	5.0	N.D.
Chrysene	5.0	N.D.
Dibenzo(a,h)anthracene	5.0	N.D.
Dibenzofuran	5.0	N.D.
Di-n-butyl phthalate	10	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
3,3-Dichlorobenzidine	10	N.D.
2,4-Dichlorophenol	5.0	N.D.
Diethyl phthalate	5.0	N.D.
2,4-Dimethylphenol	5.0	N.D.
Dimethyl phthalate	5.0	N.D.
4,6-Dinitro-2-methylphenol	10	N.D.
2,4-Dinitrophenol	10	N.D.
2,4-Dinitrotoluene	5.0	N.D.
2,6-Dinitrotoluene	5.0	N.D.





Sequoia Analytical

680 Chesapeake Drive	Redwood City, CA 94063	(415) 364-9600	FAX (415) 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 Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell Oakland/961205-F1 Sample Descript: DUP Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9612330-07	Sampled: 12/05/96 Received: 12/06/96 Extracted: 12/09/96 Analyzed: 12/10/96 Reported: 12/11/96
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QC Batch Number: MS1206968270EXA
Instrument ID: H5

Analyte	Detection Limit ug/L	Sample Results ug/L
Di-n-octyl phthalate	5.0	N.D.
Fluoranthene	5.0	N.D.
Fluorene	5.0	N.D.
Hexachlorobenzene	5.0	N.D.
Hexachlorobutadiene	5.0	N.D.
Hexachlorocyclopentadiene	10	N.D.
Hexachloroethane	5.0	N.D.
Indeno(1,2,3-cd)pyrene	5.0	N.D.
Isophorone	5.0	N.D.
2-Methylnaphthalene	5.0	N.D.
2-Methylphenol	5.0	N.D.
4-Methylphenol	5.0	N.D.
Naphthalene	5.0	N.D.
2-Nitroaniline	10	N.D.
3-Nitroaniline	10	N.D.
4-Nitroaniline	10	N.D.
Nitrobenzene	5.0	N.D.
2-Nitrophenol	5.0	N.D.
4-Nitrophenol	10	N.D.
n-Nitrosodiphenylamine	5.0	N.D.
n-Nitroso-di-n-propylamine	5.0	N.D.
Pentachlorophenol	10	N.D.
Phenanthrene	5.0	N.D.
Phenol	5.0	N.D.
Pyrene	5.0	N.D.
1,2,4-Trichlorobenzene	5.0	N.D.
2,4,5-Trichlorophenol	10	N.D.
2,4,6-Trichlorophenol	5.0	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	21	110	45
Phenol-d5	10	110	33
Nitrobenzene-d5	35	114	89
2-Fluorobiphenyl	43	116	82
2,4,6-Tribromophenol	10	123	74
p-Terphenyl-d14	33	141	88

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Fenner
Project Manager



Sequoia
Analytical

680 Chesapeake Drive
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819 Striker Avenue, Suite 8

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

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(916) 921-9600

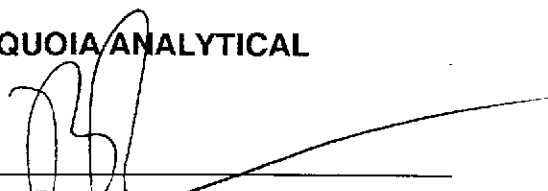
FAX (415) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100

Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961205-F1 Lab Proj. ID: 9612330	Received: 12/06/96 Reported: 12/11/96
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LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 14 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.
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Project ID: Shell Oakland / 961205-F1
Matrix: Liquid

Work Order #: 9612330 -03, 07

Reported: Dec 11, 1996

QUALITY CONTROL DATA REPORT

Analyte: Total Recoverable
Petroleum Hydrocarb.
QC Batch#: OP1203965520EXA
Analy. Method: SM 5520 BF
Prep. Method: EPA 3510

Analyst: J. Aquino
MS/MSD #: BLK120396
Sample Conc.: N.D.
Prepared Date: 12/3/96
Analyzed Date: 12/4/96
Instrument I.D.#: MANUAL
Conc. Spiked: 10 mg/L

Result: 9.0
MS % Recovery: 90

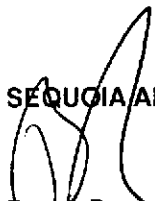
Dup. Result: 9.6
MSD % Recov.: 96

RPD: 6.5
RPD Limit: 0-30

LCS #: BLK120996
Prepared Date: 12/9/96
Analyzed Date: 12/10/96
Instrument I.D.#: MANUAL
Conc. Spiked: 10 mg/L

LCS Result: 8.8
LCS % Recov.: 88

MS/MSD 60-140
LCS 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

9612330.BLA <1>





Sequoia Analytical

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FAX (510) 988-9673
FAX (916) 921-0100

Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Project ID: Shell Oakland / 961205-F1
Matrix: Liquid

Work Order #: 9612330-01-03, 06-07

Reported: Dec 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC120796BTEX06A	GC120796BTEX06A	GC120796BTEX06A	GC120796BTEX06A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	J. Heider	J. Heider	J. Heider	J. Heider
MS/MSD #:	961210801	961210801	961210801	961210801
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/7/96	12/7/96	12/7/96	12/7/96
Analyzed Date:	12/7/96	12/7/96	12/7/96	12/7/96
Instrument I.D.#:	GCHP6	GCHP6	GCHP6	GCHP6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.3	8.6	9.6	28
MS % Recovery:	93	86	96	93
Dup. Result:	11	10	11	33
MSD % Recov.:	110	110	110	110
RPD:	17	15	14	16
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK120796	BLK120796	BLK120796	BLK120796
Prepared Date:	12/7/96	12/7/96	12/7/96	12/7/96
Analyzed Date:	12/7/96	12/7/96	12/7/96	12/7/96
Instrument I.D.#:	GCHP6	GCHP6	GCHP6	GCHP6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	8.3	8.8	8.9	28
LCS % Recov.:	83	88	89	93

MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130
Control Limits				

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note:

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

9612330.BLA <2>





Blaine Tech Services, Inc. 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Project ID: Shell Oakland / 961205-F1 Matrix: Liquid Work Order #: 9612330-04-05	Reported: Dec 11, 1996
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QUALITY CONTROL DATA REPORT

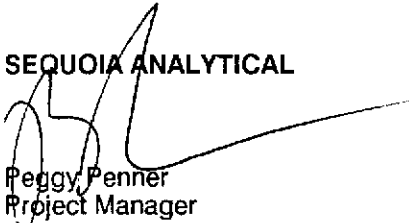
Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC120996BTEX07A	GC120996BTEX07A	GC120996BTEX07A	GC120996BTEX07A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	961218002	961218002	961218002	961218002
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/9/96	12/9/96	12/9/96	12/9/96
Analyzed Date:	12/9/96	12/9/96	12/9/96	12/9/96
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	9.7	9.7	29
MS % Recovery:	100	97	97	97
Dup. Result:	12	11	11	33
MSD % Recov.:	120	110	110	110
RPD:	18	13	13	13
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK120996	BLK120996	BLK120996	BLK120996
Prepared Date:	12/9/96	12/9/96	12/9/96	12/9/96
Analyzed Date:	12/9/96	12/9/96	12/9/96	12/9/96
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	10	10	31
LCS % Recov.:	100	100	100	103

MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130
Control Limits				

SEQUOIA ANALYTICAL



Peggy Penner
Project Manager

Please Note:

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Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Project ID: Shell Oakland / 961205-F1
Matrix: Liquid

Work Order #: 9612330-03, 07

Reported: Dec 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Phenol	2-Chlorophenol	1,4-Dichloro-benzene	N-Nitroso-Di-N-propylamine
QC Batch#:	MS1206968270EXA	MS1206968270EXA	MS1206968270EXA	MS1206968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3510	EPA 3510	EPA 3510	EPA 3510

Analyst:	E. Manuel	E. Manuel	E. Manuel	E. Manuel
MS/MSD #:	961209104	961209104	961209104	961209104
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/6/96	12/6/96	12/6/96	12/6/96
Analyzed Date:	12/7/96	12/7/96	12/7/96	12/7/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L	200 µg/L
Result:	76	149	135	158
MS % Recovery:	38	75	68	79
Dup. Result:	81	168	140	164
MSD % Recov.:	41	84	70	82
RPD:	6.4	12	3.6	3.7
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	WB120996	WB120996	WB120996	WB120996
Prepared Date:	12/9/96	12/9/96	12/9/96	12/9/96
Analyzed Date:	12/10/96	12/10/96	12/10/96	12/10/96
Instrument I.D.#:	H5	H5	H5	H5
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L	200 µg/L
LCS Result:	54	135	139	158
LCS % Recov.:	27	68	70	79

MS/MSD LCS Control Limits	12-110	27-123	36-97	41-116
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SEQUOIA ANALYTICAL

Peggy Fenner
Project Manager

Please Note:

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





Blaine Tech Services, Inc. Client Project ID: Shell Oakland / 961205-F1
 985 Timothy Drive Matrix: Liquid
 San Jose, CA 95133
 Attention: Fran Thie Work Order #: 9612330-03, 07 Reported: Dec 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,2,4-Trichloro-benzene	4-Chloro-3-Methylphenol	Acenaphthene	4-Nitrophenol
QC Batch#:	MS1206968270EXA	MS1206968270EXA	MS1206968270EXA	MS1206968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3510	EPA 3510	EPA 3510	EPA 3510

Analyst:	E. Manuel	E. Manuel	E. Manuel	E. Manuel
MS/MSD #:	961209104	961209104	961209104	961209104
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/6/96	12/6/96	12/6/96	12/6/96
Analyzed Date:	12/7/96	12/7/96	12/7/96	12/7/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L	200 µg/L
Result:	156	151	155	60
MS % Recovery:	78	76	78	30
Dup. Result:	163	154	155	71
MSD % Recov.:	82	77	78	36
RPD:	4.4	2.0	0.0	17
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	WB120996	WB120996	WB120996	WB120996
Prepared Date:	12/9/96	12/9/96	12/9/96	12/9/96
Analyzed Date:	12/10/96	12/10/96	12/10/96	12/10/96
Instrument I.D.#:	H5	H5	H5	H5
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L	200 µg/L
LCS Result:	154	148	146	51
LCS % Recov.:	77	74	73	26

MS/MSD LCS Control Limits	39-98	23-97	46-118	10 to 80
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SEQUOIA ANALYTICAL

 Peggy Penner
 Project Manager

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Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Project ID: Shell Oakland / 961205-F1
Matrix: Liquid

Work Order #: 9612330-03, 07

Reported: Dec 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	2,4-Dinitro- toluene	Pentachloro- phenol	Pyrene
QC Batch#:	MS1206968270EXA	MS1206968270EXA	MS1206968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3510	EPA 3510	EPA 3510

Analyst:	E. Manuel	E. Manuel	E. Manuel
MS/MSD #:	961209104	961209104	961209104
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	12/6/96	12/6/96	12/6/96
Analyzed Date:	12/7/96	12/7/96	12/7/96
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L

Result:	162	153	152
MS % Recovery:	81	77	76

Dup. Result:	166	163	162
MSD % Recov.:	83	82	81

RPD:	2.4	6.3	6.4
RPD Limit:	0-30	0-30	0-30

LCS #:	WB120996	WB120996	WB120996
Prepared Date:	12/9/96	12/9/96	12/9/96
Analyzed Date:	12/10/96	12/10/96	12/10/96
Instrument I.D.#:	H5	H5	H5
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L
LCS Result:	140	165	160
LCS % Recov.:	70	83	80

MS/MSD LCS Control Limits	24-96	9-103	26-127
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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





SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 961205-F1

Date: 12/5/96

Page 1 of 1

Site Address: 6039 College Ave., Oakland

WIC#: 204-5508-3301

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

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

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

Comments:

Sampled by: TG

Printed Name: Tim GRAF

Analysis Required

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	MTSE	EPA 8270	Asbestos OIL + GREASE	Container Size	Preparation Used	Composite Y/N
					X	X					
					X	X					
					X	X	X	X			
					X	X					
					X	X					
					X	X					
					X	X	X	X			

LAB: SEQUOIA

CHECK ONE (1) BOX ONLY	C1/D1	TURN AROUND TIME
Quarterly Monitoring <input checked="" type="checkbox"/>	6461	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	6461	48 hours <input type="checkbox"/>
Soil Classfy/Disposal <input type="checkbox"/>	6461	5 DAY <input checked="" type="checkbox"/>
Water Classfy/Disposal <input type="checkbox"/>	6463	14 days <input type="checkbox"/>
Water Rem. of Sys. O & M <input type="checkbox"/>	6462	Other <input type="checkbox"/>
Water Rem. of Sys. O & M <input type="checkbox"/>	6463	
Other <input type="checkbox"/>		

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

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	MTSE	EPA 8270	Asbestos OIL + GREASE	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS	
MW-1	12/5			W		3						X	X								
MW-2	1					3						X	X								5 DAY TAT
MW-3	1					7						X	X	X	X						ALL SAMPLES
MW-5	1					3						X	X								
MW-6	1					3						X	X								
EB3	1					3						X	X								
DUP	6					7						X	X	X	X						

9612330
SAMPLE CONDITION/ COMMENTS

Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>Tim GRAF</u>	Date: <u>12/6/96</u>	Time: <u>12:05</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>FUTCHER</u>	Date: <u>12/6/96</u>	Time: <u>12:05</u>
Relinquished By (signature): <u>[Signature]</u>	Printed Name:	Date: <u>12/6/96</u>	Time:	Received (signature):	Printed Name:	Date:	Time:
Relinquished By (signature):	Printed Name:	Date:	Time:	Received (signature): <u>[Signature]</u>	Printed Name: <u>Rich Herling</u>	Date: <u>12/6/96</u>	Time: <u>1333</u>

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

REC-0 133



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
 Serial No: 970108-A3

Date: 1-8-97
 Page 1 of 1

Site Address: 6039 College Ave., Oakland

WIC#: 204-5508-3301 9701432

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

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

Consultant Contact:
Fran Thie Phone No.: (408)
295-5535
 Fax #: 293-8773

Comments:

Sampled by: RANDY VALENTINE

Printed Name:

Analysis Required

LAB: SEQUOIA

CHECK ONE (OR BOX ONE)	C300	TEST APPROX TIME
Clarity Method	<input checked="" type="checkbox"/> 1401	24 hours <input type="checkbox"/>
Site Investigation	<input type="checkbox"/> 1401	48 hours <input type="checkbox"/>
Soil Clarity/Dispersion	<input type="checkbox"/> 1402	14 days <input type="checkbox"/>
Water Clarity/Dispersion	<input type="checkbox"/> 1403	Other <input checked="" type="checkbox"/> <u>1 week</u>
Volatile Comp. or Sp. O & M	<input type="checkbox"/> 1404	NOTE: Fully test on 2000 Ltr. IAL
Water Comp. or Sp. O & M	<input type="checkbox"/> 1405	
GC/MS	<input type="checkbox"/>	

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 per TAE	Asbestos	Container Size	Preparation Used	Composite Y/N

Sample ID	Date	Sudge	Soil	Water	Air	No. of conis.	MATERIAL DESCRIPTION	SAMPLE CONDITION / COMMENTS
MW-1	1/8			X		3		
MW-2				X		3		
MW-4				X		3		

Released By (Signature): <u>[Signature]</u>	Printed Name: <u>RANDY VALENTINE</u>	Date: <u>1/8/97</u>	Received (Signature): <u>[Signature]</u>	Printed Name: <u>SILVERMAN</u>	Date: <u>1/13/97</u>
Released By (Signature): <u>[Signature]</u>	Printed Name: <u>SILVERMAN</u>	Date: <u>1/13/97</u>	Received (Signature): <u>[Signature]</u>	Printed Name: <u>[Signature]</u>	Date: <u>1/13/97</u>
Released By (Signature): <u>[Signature]</u>	Printed Name: <u>[Signature]</u>	Date: <u>1/13/97</u>	Received (Signature): <u>[Signature]</u>	Printed Name: <u>Rob Harding</u>	Date: <u>1/13/97</u>

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

JAN 16 '97 (THU) 09:07 BLAINE TECH SERVICES 408 573 7771

P.5

JAN 16 '97 08:31AM SEQUOIA ANALYTICAL

JAN 16 '97 (THU) 08:58 COMMUNICATION No. 54 PAGE 5



**Sequoia
Analytical**

680 Chesapeake Drive
404 N. Wiget Lane
819 Stricker 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) 364-9218
FAX (510) 988-9679
FAX (916) 921-0100

Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112 Attention: Fran Thie	Client Proj. ID: Shell Oakland/970106-A3 Sample Descript: MW-1 Metro: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9701498-01	Sampled: 01/08/97 Received: 01/08/97 Analyzed: 01/11/97 Reported: 01/15/97
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QC Batch Number: GC011067AT EX17B
Instrument ID: GCHP17

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:		N.D.
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	80

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Renner
Peggy Renner
Project Manager



**Sequoia
Analytical**

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

Redwood City, CA 94063
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(510) 988-9600
(916) 921-9600

FAX (415) 364-9293
FAX (510) 988-9673
FAX (916) 921-0100

Blaine Tech Services
1880 Rogers Avenue
San Jose, CA 95112

Client Proj. ID: Shell Oakland/870108-A3
Sample Descript: MW-2
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 8701432-02

Sampled: 01/08/97
Received: 01/09/97
Analyzed: 01/11/97
Reported: 01/15/97

Attention: Fran Thie

GC Batch Number: GC011097BTX17B
Instrument ID: GCHP17

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:		N.D.
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	87

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Pinner
Project Manager



Sequoia Analytical

680 Cherokee Drive
404 N. Wigeo Lane
819 Striker Avenue, Suite 8

Redwood City, CA 94061
Walnut Creek, CA 94598
Sacramento, CA 95834

(415) 864-9600
(916) 988-9600
(916) 921-9600

FAX (415) 864-9283
FAX (916) 988-9673
FAX (916) 921-0100

Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112 Attention: Fran Thie	Client Proj. ID: Shell Oakland/B70108-A3 Sample Descript: MW-4 Matrix: LIQUID Analysis Method: 8016Mod/8020 Lab Number: 8701432-03	Sampled: 01/08/97 Received: 01/08/97 Analyzed: 01/14/97 Reported: 01/16/97
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GC Batch Number: GC011497BTX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10000	
Methyl t-Butyl Ether	800	N.D.
Benzene	100	24000
Toluene	100	N.D.
Ethyl Benzene	100	N.D.
Xylenes (Total)	100	N.D.
Chromatogram Pattern:	100	N.D.
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
		84

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Denner
Project Manager

