



CAMBRIA

November 26, 1996

ENVIRONMENTAL PROTECTION  
SECTION 1:19

Scott Seery  
Alameda County Department  
of Environmental Health  
Hazardous Materials Division  
131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Re: **Third Quarter 1996**  
Shell Service Station  
WIC #204-6852-1404  
~~1704~~ 150th Avenue  
San Leandro, California  
WA Job #81-0422-206

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.

**Third Quarter 1996 Activities**

Blaine Tech Services, Inc. (BTS) of San Jose, California measured ground water depths and collected ground water samples from the site wells. The BTS' report describing these activities and the analytic report for the ground water samples are 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).

The former consultants at this site, Weiss Associates, collected samples to characterize the vadose zone. The results will be submitted in the fourth quarter of 1996.

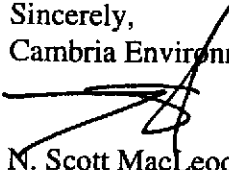
CAMBRIA  
ENVIRONMENTAL  
TECHNOLOGY, INC.  
1144 65TH STREET,  
SUITE B  
OAKLAND,  
CA 94608  
PH: (510) 420-0700  
FAX: (510) 420-9170

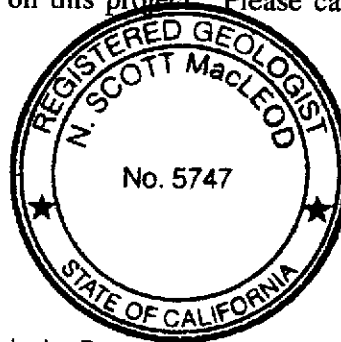
## Anticipated Activities Next Quarter

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

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

Sincerely,  
Cambria Environmental Technology, Inc.

  
N. Scott MacLeod, R.G.  
Principal Geologist



Attachments: A - Blaine Tech Services' Ground Water Monitoring Report

cc: R. Jeff Granberry, Shell Oil Products Company, P.O. Box 4023, Concord, California 94524

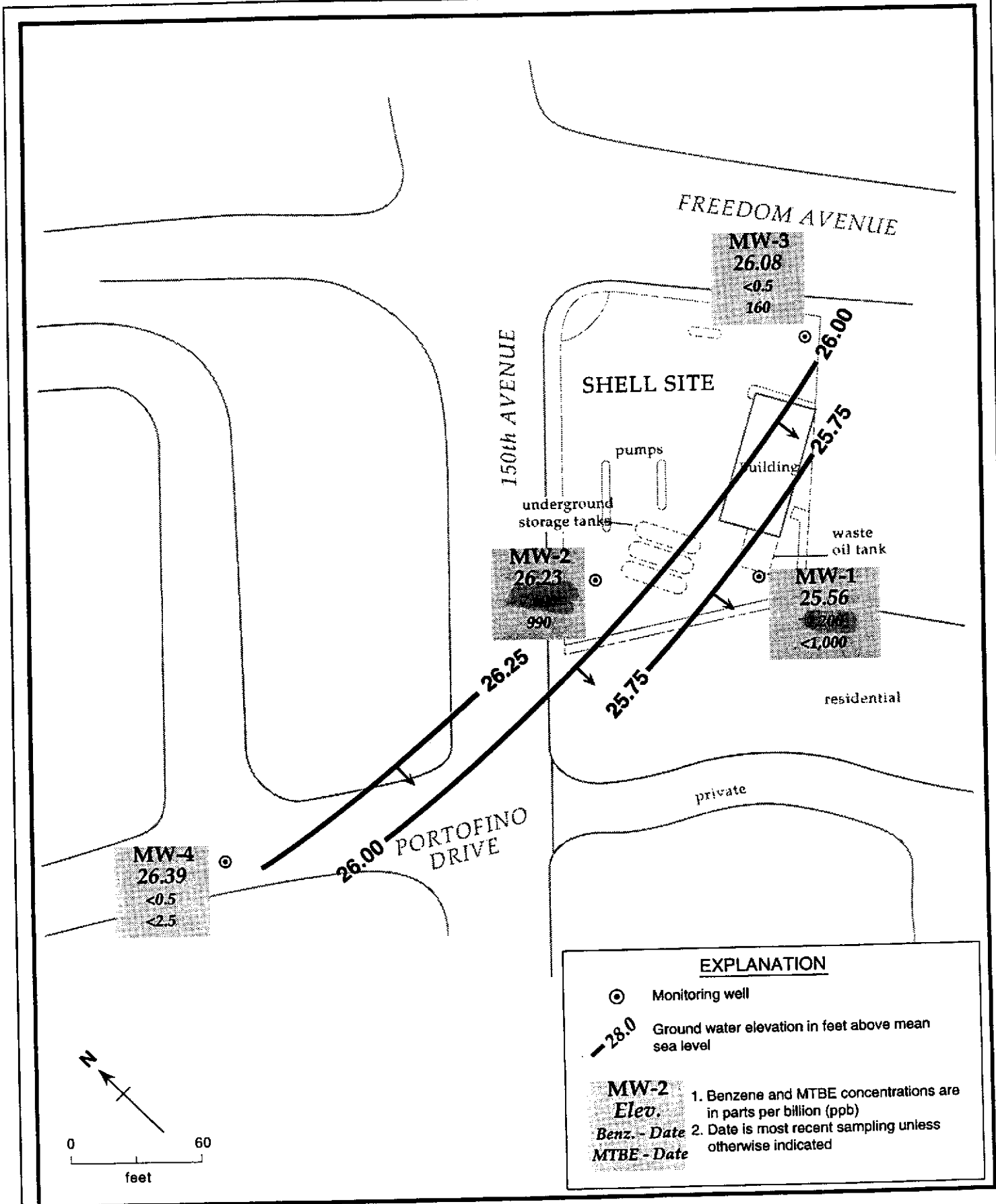


Figure 1 . Monitoring Well Locations, Ground Water Elevation Contours, Benzene and MTBE Concentrations in Ground Water - September 26, 1996 - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California

Table 1. Ground Water Elevations - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
MW-1	03/08/90	49.13	25.29	23.84
	06/12/90		25.85	23.28
	09/13/90		27.49	21.64
	12/18/90		27.41	21.72
	03/07/91		25.79	23.34
	06/07/91		25.64	23.49
	09/17/91		27.54	21.59
	12/09/91		27.81	21.32
	02/13/92		25.57	23.56
	02/24/92		22.83	26.30
	02/27/92		23.09	26.04
	03/01/92		23.26	25.87
	06/03/92		24.64	24.49
	09/01/92		26.74	22.39
	10/06/92		27.18	21.95
	11/11/92		27.99	21.14
	12/04/92		27.14	21.99
	01/22/93		20.09	29.04
	02/10/93		24.26	24.87
	03/03/93		20.50	28.63
	05/11/93		21.70	27.43
	06/17/93		22.42	26.71
	09/10/93		24.11	25.02
	12/13/93		23.73	25.40
	03/03/94		22.08	27.05
	06/06/94		23.10	26.03
	09/12/94		25.19	23.94
	12/19/94		23.06	26.07
	02/28/95		20.90	28.23
	03/24/95		18.28	30.85
06/26/95	20.40	28.73		
09/13/95	22.62	26.51		
12/19/95	22.10	27.03		
06/28/96	21.46	27.67		
	09/26/96		23.57	25.56
MW-2	02/13/92	45.83	22.22	23.61
	02/24/92		19.61	26.22
	02/27/92		19.92	25.91
	03/01/92		21.11	24.72
	06/03/92		21.58	24.25
	09/01/92		23.46	22.37
	10/06/92		23.99	21.84
MW-2	11/11/92		24.25	21.58

Table 1. Ground Water Elevations - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
(cont)	12/04/92		23.89	21.94
	01/22/93		17.03	28.80
	02/10/93		18.08	27.75
	03/03/93		17.28	28.55
	05/11/93		18.41	27.42
	06/17/93		19.06	26.77
	09/10/93		20.88	24.95
	12/13/93		20.42	25.41
	03/03/94		18.48	27.35
	06/06/94		20.26	25.57
	09/12/94		21.80	24.03
	12/19/94		19.66	26.17
	02/28/95		17.51	28.32
	03/24/95		14.88	30.95
	06/26/95		17.58	28.25
	09/13/95		19.28	26.55
	12/19/95		18.61	27.22
	03/06/96		15.41	30.42
	06/28/96		17.84	27.99
	09/26/96		19.61	26.73
MW-3	02/13/92	51.97	27.97	24.00
	02/24/92		25.60	26.37
	02/27/92		25.88	26.09
	03/01/92		26.00	25.97
	06/03/92		27.70	24.27
	09/01/92		29.46	22.51
	10/06/92		30.01	21.96
	11/11/92		30.26	21.71
	12/04/92		29.93	22.04
	01/22/93		22.76	29.21
	02/10/93		21.40	30.57
	03/03/93		23.08	28.89
	05/11/93		24.51	27.46
	06/17/93		25.21	26.76
	09/10/93		26.95	25.02
	12/13/93		26.52	25.45
	03/03/94		24.50	27.47
	06/06/94		26.33	25.64
	09/12/94		27.98	23.99
	12/19/94		25.63	26.34
	02/28/95		23.45	28.52
MW-3	03/24/95		21.07	30.90
(cont)	06/26/95		23.64	28.33

Table 1. Ground Water Elevations - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
	09/13/95		25.40	26.57
	12/19/95		24.53	27.44
	06/28/96		23.95	28.02
	09/26/96		25.89	26.08
MW-4	03/24/95	40.51	9.16	31.35
	06/26/95		12.06	28.45
	09/13/95		13.90	26.61
	12/19/95		12.90	27.61
	03/06/96		9.63	30.88
	06/28/96		12.30	28.21
	09/26/96		14.12	26.39

Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	POG	parts per billion (µg/l)					
						B	E	T	X	1,2-DCA	MTBE
MW-1	03/08/90	25.29	510	120 <sup>a</sup>	<10,000	1.5	<0.5	0.8	5.4	12	---
	06/12/90	25.85	390	100 <sup>a</sup>	<10,000	86	0.7	1.3	6.2	<0.4	---
	09/13/90	27.49	100	130 <sup>a</sup>	<10,000	56	2.4	0.75	2.8	<0.4 <sup>b</sup>	---
	12/18/90	27.41	480	<50 <sup>a</sup>	<10,000	54	3.3	1.7	3.7	5.3	---
	03/07/91	25.79	80	<50 <sup>a</sup>	---	266	1.2	<0.5	<1.5	6.7	---
	06/07/91	25.64	510	<50 <sup>a</sup>	---	130	6.1	3.8	11	7.9	---
	09/17/91	27.54	330	120 <sup>ac</sup>	---	67	3	<0.5	2.2	6	---
	12/09/91	27.81	140 <sup>d</sup>	80	---	<0.5	1.7	<0.5	4.7	5.4	---
	03/01/92	23.36	<50	<50	---	<0.5	<0.5	<0.5	<0.5	3	---
	06/03/92	24.64	1,500	---	---	520	72	180	230	3	---
	09/01/92	26.74	130	---	---	16	1.8	1.4	3.4	1.3 <sup>e</sup>	---
	12/04/92	27.14	150	---	---	360	1.8	0.7	2.1	3.3	---
	03/03/93	20.50	<50	---	---	1.5	<0.5	<0.5	<0.5	0.76	---
	06/17/93	22.42	1,600	---	---	340	120	120	440	3	---
	09/10/93	24.11	2,600	---	---	670	310	340	730	2.3	---
	12/13/93	23.73	11,000	---	---	470	380	320	2,300	6.3	---
	03/03/94	22.08	16,000	---	---	700	480	690	3,200	---	---
	06/06/94	23.10	7,500	---	---	420	200	280	1,000	3.1	---
	09/12/94	25.19	1,200	---	---	110	3.3	21	420	2.6	---
	12/19/94	23.06	4,600	---	---	470	230	330	1,300	3.7	---
	02/28/95	20.90	500	---	---	59	6.8	32	68	5.0	---
	06/26/95	20.40	5,500	---	---	740	300	420	1,800	8.6	---
	09/13/95	22.62	84,000	---	---	1,900	3,000	2,600	14,000	12	---
	12/19/95	22.10	80,000	---	---	660	170	350	18,000	<0.4	---
	03/06/96 <sup>SPH</sup>	---	---	---	---	---	---	---	---	---	---
	06/28/96	21.46	270,000	---	---	2,800	1,000	820	16,000	---	<0.5
	06/28/96 <sup>DUP</sup>	21.46	790,000	---	---	2,200	1,000	780	13,000	---	15,000
	09/26/96	23.57	29,000	---	---	1,100	270	260	1,900	9.8	<1,000
	09/26/96 <sup>DUP</sup>	23.57	25,000	---	---	1,200	240	320	1,900	11	<1,000

change in conc. →

Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California (continued)

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	POG	parts per billion (µg/l)					
						B	E	T	X	1,2-DCA	MTBE
MW-2	02/24/92	19.61	17,000	2,700 <sup>c</sup>	---	6,200	550	1,600	1,900	200	---
	03/01/92	21.11	86,000	1,000 <sup>c</sup>	---	30,000	2,300	34,000	16,000	82	---
	06/03/92	21.58	87,000	---	---	28,000	2,000	18,000	10,000	<50	---
	09/01/92	23.46	110,000	---	---	21,000	1,900	13,000	7,800	83 <sup>h</sup>	---
	12/04/92	23.89	42,000	---	---	15,000	960	2,400	2,900	100	---
	03/03/93	17.28	160,000	---	---	36,000	32,000	3,800	21,000	7.7	---
	03/03/93 <sup>h</sup>	17.28	150,000	---	---	31,000	20,000	3,100	14,000	16	---
	06/17/93	19.06	65,000	---	---	34,000	3,200	15,000	11,000	37	---
	06/17/93 <sup>h</sup>	19.06	62,000	---	---	28,000	2,700	14,000	10,000	36	---
	09/10/93 <sup>f</sup>	20.88	72,000	---	---	24,000	2,300	16,000	11,000	28.0	---
	09/10/93 <sup>dupf</sup>	20.88	71,000	---	---	23,000	2,300	15,000	10,000	27.0	---
	12/13/93	20.42	19,000	---	---	5,400	680	4,900	3,100	<0.5	---
	12/13/93 <sup>dup</sup>		17,000	---	---	6,200	720	5,500	3,500	3.4	---
	03/03/94	18.48	110,000	---	---	21,000	2000	24,000	13,000	---	---
	03/03/94 <sup>dup</sup>	18.48	93,000	---	---	19,000	1,800	22,000	12,000	---	---
	06/06/94	20.26	10,000	---	---	1,900	2,500	3,300	13,000	5.8	---
	06/06/94 <sup>dup</sup>	20.26	99,000	---	---	9,900	2,400	12,000	12,000	5.7	---
	09/12/94	21.80	160,000	---	---	22,000	3,400	33,000	23,000	<0.4	---
	09/12/94 <sup>dup</sup>	21.80	150,000	---	---	23,000	3,500	34,000	23,000	<0.4	---
	12/19/94	19.66	80,000	---	---	17,000	2,300	16,000	14,000	<0.4	---
	12/19/94 <sup>dup</sup>	19.66	100,000	---	---	28,000	3,400	26,000	20,000	<0.4	---
	02/28/95	17.51	100,000	---	---	24,000	2,300	18,000	17,000	<0.4	---
	02/28/95 <sup>dup</sup>	17.51	100,000	---	---	31,000	3,200	21,000	18,000	<0.4	---
	06/26/95	17.58	45,000	---	---	14,000	1,500	12,000	7,500	3.4	---
	06/26/95 <sup>dup</sup>	17.58	68,000	---	---	13,000	1,800	11,000	7,700	---	---
	09/13/95	19.28	110,000	---	---	19,000	2,800	19,000	15,000	7.2	---
	09/13/95 <sup>dup</sup>	19.28	120,000	---	---	20,000	2,900	20,000	15,000	<0.4	---
	12/19/95	18.61	180,000	---	---	18,000	4,100	29,000	24,000	<0.4	---
	12/19/95 <sup>dup</sup>	18.61	160,000	---	---	18,000	3,800	28,000	24,000	<0.4	---
	03/06/96	15.41	120,000	---	---	28,000	3,900	15,000	17,000	<20	---
	06/28/96	17.84	96,000	---	---	20,000	4,100	20,000	22,000	---	2,400
	09/26/96	19.60	87,000	---	---	7,600	2,500	11,000	15,000	56**	990*



Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California (continued)

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	POG	parts per billion (µg/l)					
						B	E	T	X	1,2-DCA	MTBE
MW-3	02/24/92	25.60	4,500	1,300 <sup>c</sup>	---	97	78	<5	18	9.1	---
	03/01/92	26.00	2,200	440	---	69	<0.5	<0.5	<0.5	13	---
	06/03/92	27.70	4,100	---	---	13	44	72	65	16	---
	09/01/92	29.46	1,900	---	---	20	5.5	6.8	<5	19	---
	09/01/92 <sup>dup</sup>	29.46	1,900	---	---	21	3.4	6.6	<5	21	---
	12/04/92	29.93	2,400	---	---	8.2	<5	<5	<5	16	---
	12/04/92 <sup>dup</sup>	29.93	2,100	---	---	11	5.7	<0.5	<0.5	18	---
	03/03/93	23.08	5,100	---	---	63	75	61	150	3.3	---
	06/17/93	25.21	4,000	---	---	94	82	140	150	23	---
	09/10/93	26.95	3,200	---	---	140	12.5	12.5	12.5	20.0	---
	12/13/93	26.52	6,200	---	---	<12.5	<12.5	<12.5	<12.5	13	---
	03/03/94	24.50	4,500	---	---	73	<5	<5	<5	---	---
	06/06/94	26.33	3,200	---	---	<0.5	3.1	<0.5	<0.5	16	---
	09/12/94	27.98	3,900	---	---	<0.5	9.6	<0.5	4.1	7.8	---
	12/19/94	25.63	2,400	---	---	21	4.2	22	2.6	25	---
	02/28/95	23.45	4,000	---	---	58	7.1	<0.5	3.5	18	---
	06/26/95	23.64	3,900	---	---	8.1	12	<0.5	2.4	15	---
	09/13/95	25.40	4,100	---	---	58	5.5	5.5	<0.5	6.7	---
	12/19/95	24.53	3,600	---	---	<0.5	2.1	4.3	1.1	6.6	---
	03/06/96 <sup>SPH</sup>	---	---	---	---	---	---	---	---	---	---
06/28/96	23.95	2,400	---	---	55	<0.5	<0.5	11	---	120	
<b>09/26/96</b>	<b>25.89</b>	<b>2,500</b>	---	---	---	<b>&lt;5.0</b>	<b>&lt;5.0</b>	<b>&lt;5.0</b>	<b>&lt;5.0</b>	<b>25</b>	<b>160</b>
MW-4	03/24/95	9.16	<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.4	---
	06/26/95	12.06	<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.4	---
	09/13/95	13.90	<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.4	---
	12/19/95	12.90	<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.4	---
	03/06/96	9.63	<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.4	---
	06/28/96	12.30	40	---	---	<0.5	.97	.59	3.8	---	26
	<b>09/26/96</b>	<b>14.12</b>	<b>&lt;50</b>	---	---	---	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;2.5</b>
Trip	03/08/90		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
Blank	06/12/90		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---

Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California (continued)

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	POG	parts per billion (µg/l)					
						B	E	T	X	1,2-DCA	MTBE
Trip	12/18/90		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
Blank	03/07/91		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
(cont)	06/07/91		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	09/17/91		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	12/09/91		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	02/24/92		<50	---	---	<0.5	0.6	2.5	2.2	---	---
	03/01/92		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	06/03/92		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	09/01/92		<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	---
	12/04/92		<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.5 <sup>j</sup>	---
	03/03/93		<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	---
	06/17/93		<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	---
	09/10/93		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	12/13/93		<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.5 <sup>k</sup>	---
	03/03/94		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	06/06/94		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	09/12/94		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	12/19/94		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	02/28/95		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	03/24/95		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	06/26/95		<50	---	---	4.1	<0.5	3.0	1.5	---	---
	09/13/95		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	12/19/95		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
Bailer	03/08/90		<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
Blank	09/01/92		<50	---	---	<0.5	<0.5	0.7	<0.5	<0.5	---
	12/04/92		60	---	---	<0.5	<0.5	<0.5	<0.5	<0.5 <sup>j</sup>	---
DHS MCLs		NE	NE	N	1	680	100 <sup>l</sup>	1,750	0.5	---	---

---

Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California (continued)

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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  
POG = Petroleum oil and grease by American Public Health Association Standard Method 503E or 5520F  
MTBE = Methyl t-Butyl Ether by EPA Method 8020  
B = Benzene by EPA Method 8020  
E = Ethylbenzene by EPA Method 8020  
T = Toluene by EPA Method 8020  
X = Xylenes by EPA Method 8020  
1,2-DCA = 1,2-Dichloroethane by EPA Method 8010  
--- = Not analyzed  
<n = Not detected above method detection limit of n ppb  
DHS MCLs = California Department of Health Services maximum contaminant levels for drinking water  
NE = Not established  
SPH = Seperate-phase hydrocarbons present in well

Notes:

a = No total petroleum hydrocarbons as motor oil detected above modified EPA Method 8015 detection limit of 500 ppb  
b = Tetrachloroethene (PCE) detected at 24 ppb by EPA Method 601; DHS MCL for PCE = 5 ppb  
c = Result is due to hydrocarbon compounds lighter than diesel  
d = Result due to a non-gasoline hydrocarbon  
e = In the matrix spike/matrix spike duplicate of sample MW-1, the RPD for Freon 113 and 1,3-dichlorobenzene was greater than 25%  
f = The MW-2 and duplicate samples each contained 1.6 ppb of methylene chloride which is within normal laboratory background levels.  
h = Sample MW-2 was diluted 1:100 for EPA Method 8010 due to the interfering hydrocarbon peaks  
j = The trip and bailer blank samples contained 14 and 10 mg/L 1,3-dichlorobenzene, respectively  
k = 1.4 mg/L Chloroethene detected in equipment blank, trip blank not analyzed  
l = DHS recommended action level for drinking water; MCL not established  
\* = MTBE confirmed by EPA Method 8260  
\*\* = Result should be considered estimated due to being reported under the detection limit of 125 ppb.

**ATTACHMENT A**

**BLAINE TECH SERVICE'S GROUND WATER MONITORING REPORT**



# BLAINE TECH SERVICES INC.

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

October 15, 1996

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

Attn: R. Jeff Granberry

Shell WIC #204-6852-1404  
1784 150th Avenue  
San Leandro, California

3rd Quarter 1996

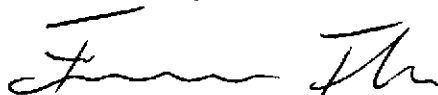
## Quarterly Groundwater Monitoring Report 960926-F-2

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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,



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 *	09/26/96	TOC	FREE PRODUCT	23.56	0.01	--	23.57	44.75
MW-2	09/26/96	TOC	ODOR	NONE	--	--	19.60	44.38
MW-3	09/26/96	TOC	--	NONE	--	--	25.89	41.67
MW-4	09/26/96	TOC	--	NONE	--	--	14.12	24.90

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



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

**CHAIN OF CUSTODY RECORD**

Serial No: 960926-F2

Date: 9/26/16

Page 1 of 1

Site Address: 1784 150th Avenue, San Leandro

WIC#: 204-6852-1404

Shell Engineer: R. Jeff Granberry Phone No.: (510) 675-6188 Fax #: 675-6160

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

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

Commons:

Sampled by: Tim Graf

Printed Name: Tim Graf

**Analysis Required**

LAB: SEQUOIA

CHECK ONE (1) BOX ONLY	CI/DI	TURN AROUND TIME
Quarterly Monitoring <input checked="" type="checkbox"/> 6441		24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/> 6441		48 hours <input type="checkbox"/>
Soil Classfy/Disposal <input type="checkbox"/> 6443		16 days <input checked="" type="checkbox"/> (Normal)
Water Classfy/Disposal <input type="checkbox"/> 6443		Other <input type="checkbox"/>
Soil/Air Rem. of Sys. O & M <input type="checkbox"/> 6452		
Water Rem. of Sys. O & M <input type="checkbox"/> 6453		
Other <input type="checkbox"/>		

NOTE: Haily Lab as soon as Possible at 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	MTBE	EPA 8260	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
MW-1	9/26			W		6						X	X	X					CONFIRM	HIGHEST
MW-2						6						X	X	X					MTBE HIT BY	
MW-3						6						X	X	X					EPA 8260	
MW-4						6						X	X	X						
ES						6						X	X	X						
DUP						6						X	X	X						

Relinquished By (signature): <u>Tim Graf</u>	Printed Name: <u>Tim Graf</u>	Date: <u>9-27-16</u>	Received (signature): <u>Michael...</u>	Printed Name: <u>Michael...</u>	Date: <u>9-27-16</u>
Relinquished By (signature): <u>Michael...</u>	Printed Name: <u>Michael...</u>	Date: <u>10/10</u>	Received (signature): <u>Michael...</u>	Printed Name: <u>Michael...</u>	Date: <u>10/10</u>
Relinquished By (signature): <u>Michael...</u>	Printed Name: <u>Michael...</u>	Date: <u>9-27-16</u>	Received (signature): <u>Michael...</u>	Printed Name: <u>Michael...</u>	Date: <u>13/9</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 Technical Services  
985 Timothy Drive  
San Jose, CA 95133  
Attention: Jim Keller

Project: Shell San Leandro/960926-F2

Enclosed are the results from samples received at Sequoia Analytical on September 27, 1996.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9609H33 -01	LIQUID, MW-1	09/26/96	8010 Halogenated Volatil
9609H33 -01	LIQUID, MW-1	09/26/96	TPGBMW Purgeable TPH/BTEX
9609H33 -02	LIQUID, MW-2	09/26/96	8010 Halogenated Volatil
9609H33 -02	LIQUID, MW-2	09/26/96	MTBEMW Methyl t-Butyl Ethe
9609H33 -02	LIQUID, MW-2	09/26/96	TPGBMW Purgeable TPH/BTEX
9609H33 -03	LIQUID, MW-3	09/26/96	8010 Halogenated Volatil
9609H33 -03	LIQUID, MW-3	09/26/96	TPGBMW Purgeable TPH/BTEX
9609H33 -04	LIQUID, MW-4	09/26/96	8010 Halogenated Volatil
9609H33 -04	LIQUID, MW-4	09/26/96	TPGBMW Purgeable TPH/BTEX
9609H33 -05	LIQUID, EB	09/26/96	8010 Halogenated Volatil
9609H33 -05	LIQUID, EB	09/26/96	TPGBMW Purgeable TPH/BTEX
9609H33 -06	LIQUID, Dup	09/26/96	8010 Halogenated Volatil
9609H33 -06	LIQUID, Dup	09/26/96	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 Fenner  
Project Manager







Blaine Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell San Leandro/960926-F2 Sample Descript: MW-1 Matrix: LIQUID Analysis Method: EPA 8010 Lab Number: 9609H33-01	Sampled: 09/26/96 Received: 09/27/96 Analyzed: 10/05/96 Reported: 10/11/96
--	--	---

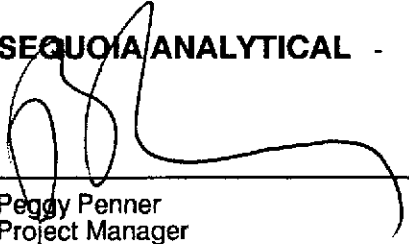
QC Batch Number: GC100496801008A  
 Instrument ID: GCHP08

**Halogenated Volatile Organics (EPA 8010)**

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon Tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
<b>1,2-Dichloroethane</b>	<b>5.0</b>	<b>9.8</b>
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
1-Chloro-2-fluorobenzene	70 130	78

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: Jim Keller	Client Proj. ID: Shell San Leandro/960926-F2 Sample Descript: MW-1 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9609H33-01	Sampled: 09/26/96 Received: 09/27/96 Analyzed: 10/02/96 Reported: 10/11/96
---	--	---

QC Batch Number: GC100296BTEX21A  
 Instrument ID: GCHP21

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	20000	29000
Methyl t-Butyl Ether	1000	N.D.
Benzene	200	1100
Toluene	200	260
Ethyl Benzene	200	270
Xylenes (Total)	200	1900
Chromatogram Pattern:		C6-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
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 San Leandro/960926-F2 Sample Descript: MW-2 Matrix: LIQUID Analysis Method: EPA 8010 Lab Number: 9609H33-02	Sampled: 09/26/96 Received: 09/27/96  Analyzed: 10/05/96 Reported: 11/12/96
--	--	---

QC Batch Number: GC100496801008A  
Instrument ID: GCHP08

**Halogenated Volatile Organics (EPA 8010)**

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	125	N.D.
Bromoform	125	N.D.
Bromomethane	250	N.D.
Carbon Tetrachloride	125	N.D.
Chlorobenzene	125	N.D.
Chloroethane	250	N.D.
2-Chloroethylvinyl ether	250	N.D.
Chloroform	125	N.D.
Chloromethane	250	N.D.
Dibromochloromethane	125	N.D.
1,2-Dichlorobenzene	125	N.D.
1,3-Dichlorobenzene	125	N.D.
1,4-Dichlorobenzene	125	N.D.
1,1-Dichloroethane	125	N.D.
<b>1,2-Dichloroethane</b>	<b>125</b>	<b>56 J</b>
1,1-Dichloroethene	125	N.D.
cis-1,2-Dichloroethene	125	N.D.
trans-1,2-Dichloroethene	125	N.D.
1,2-Dichloropropane	125	N.D.
cis-1,3-Dichloropropene	125	N.D.
trans-1,3-Dichloropropene	125	N.D.
Methylene chloride	1250	N.D.
1,1,2,2-Tetrachloroethane	125	N.D.
Tetrachloroethene	125	N.D.
1,1,1-Trichloroethane	125	N.D.
1,1,2-Trichloroethane	125	N.D.
Trichloroethene	125	N.D.
Trichlorofluoromethane	125	N.D.
Vinyl chloride	250	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
1-Chloro-2-fluorobenzene	70 130	79

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: Jim Keller

Client Proj. ID: Shell San Leandro/960926-F2  
Sample Descript: MW-2  
Matrix: LIQUID  
Analysis Method: EPA 8260  
Lab Number: 9609H33-02

Sampled: 09/26/96  
Received: 09/27/96  
Analyzed: 10/09/96  
Reported: 10/11/96

QC Batch Number: MS100496MTBEF3A  
Instrument ID: F3

**Methyl t-Butyl Ether (MTBE)**

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	150	840
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	76      114	97

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	Client Proj. ID: Shell San Leandro/960926-F2	Sampled: 09/26/96
985 Timothy Drive	Sample Descript: MW-2	Received: 09/27/96
San Jose, CA 95133	Matrix: LIQUID	
Attention: Jim Keller	Analysis Method: 8015Mod/8020	Analyzed: 10/03/96
	Lab Number: 9609H33-02	Reported: 10/11/96

QC Batch Number: GC100396BTEX20A  
Instrument ID: GCHP20

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10000	87000
Methyl t-Butyl Ether	500	990
Benzene	100	7600
Toluene	100	11000
Ethyl Benzene	100	2500
Xylenes (Total)	100	15000
Chromatogram Pattern:		C6-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	106

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 San Leandro/960926-F2 Sample Descript: MW-3 Matrix: LIQUID Analysis Method: EPA 8010 Lab Number: 9609H33-03	Sampled: 09/26/96 Received: 09/27/96 Analyzed: 10/05/96 Reported: 10/11/96
Attention: Jim Keller		

QC Batch Number: GC100496801008A  
Instrument ID: GCHP08

**Halogenated Volatile Organics (EPA 8010)**

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon Tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	1.0	N.D.
2-Chloroethylvinyl ether	1.0	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	0.50	N.D.
1,3-Dichlorobenzene	0.50	N.D.
1,4-Dichlorobenzene	0.50	N.D.
1,1-Dichloroethane	0.50	N.D.
<b>1,2-Dichloroethane</b>	<b>0.50</b>	<b>25</b>
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
1-Chloro-2-fluorobenzene	70 130	86

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	Client Proj. ID: Shell San Leandro/960926-F2	Sampled: 09/26/96
985 Timothy Drive	Sample Descript: MW-3	Received: 09/27/96
San Jose, CA 95133	Matrix: LIQUID	
Attention: Jim Keller	Analysis Method: 8015Mod/8020	Analyzed: 10/02/96
	Lab Number: 9609H33-03	Reported: 10/11/96

QC Batch Number: GC100296BTEX21A  
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	2500
Methyl t-Butyl Ether	25	160
Benzene	5.0	N.D.
Toluene	5.0	N.D.
Ethyl Benzene	5.0	N.D.
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern:		C6-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70      130	116

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: Jim Keller	Client Proj. ID: Shell San Leandro/960926-F2 Sample Descript: MW-4 Matrix: LIQUID Analysis Method: EPA 8010 Lab Number: 9609H33-04	Sampled: 09/26/96 Received: 09/27/96 Analyzed: 10/08/96 Reported: 10/11/96
---	--	---

QC Batch Number: GC100496801008A  
Instrument ID: GCHP08

**Halogenated Volatile Organics (EPA 8010)**

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon Tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	1.0	N.D.
2-Chloroethylvinyl ether	1.0	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	0.50	N.D.
1,3-Dichlorobenzene	0.50	N.D.
1,4-Dichlorobenzene	0.50	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
1-Chloro-2-fluorobenzene	70 130	100

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: Jim Keller	Client Proj. ID: Shell San Leandro/960926-F2 Sample Descript: MW-4 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9609H33-04	Sampled: 09/26/96 Received: 09/27/96 Analyzed: 10/02/96 Reported: 10/11/96
---	--	---

QC Batch Number: GC100296BTEX21A  
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:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	91

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 San Leandro/960926-F2 Sample Descript: EB Matrix: LIQUID Analysis Method: EPA 8010 Lab Number: 9609H33-05	Sampled: 09/26/96 Received: 09/27/96 Analyzed: 10/08/96 Reported: 10/11/96
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QC Batch Number: GC100496801008A  
Instrument ID: GCHP08

**Halogenated Volatile Organics (EPA 8010)**

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon Tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	1.0	N.D.
2-Chloroethylvinyl ether	1.0	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	0.50	N.D.
1,3-Dichlorobenzene	0.50	N.D.
1,4-Dichlorobenzene	0.50	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
1-Chloro-2-fluorobenzene	70 130	92

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 San Leandro/960926-F2 Sample Descript: EB Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9609H33-05	Sampled: 09/26/96 Received: 09/27/96 Analyzed: 10/02/96 Reported: 10/11/96
Attention: Jim Keller		

QC Batch Number: GC100296BTEX21A  
Instrument ID: GCHP21

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

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

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70                      130	89

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Peggy Penner  
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell San Leandro/960926-F2 Sample Descript: Dup Matrix: LIQUID Analysis Method: EPA 8010 Lab Number: 9609H33-06	Sampled: 09/26/96 Received: 09/27/96 Analyzed: 10/08/96 Reported: 10/11/96
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QC Batch Number: GC100496801008A  
Instrument ID: GCHP08

**Halogenated Volatile Organics (EPA 8010)**

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	10	N.D.
Bromoform	10	N.D.
Bromomethane	20	N.D.
Carbon Tetrachloride	10	N.D.
Chlorobenzene	10	N.D.
Chloroethane	20	N.D.
2-Chloroethylvinyl ether	20	N.D.
Chloroform	10	N.D.
Chloromethane	20	N.D.
Dibromochloromethane	10	N.D.
1,2-Dichlorobenzene	10	N.D.
1,3-Dichlorobenzene	10	N.D.
1,4-Dichlorobenzene	10	N.D.
1,1-Dichloroethane	10	N.D.
<b>1,2-Dichloroethane</b>	10	<b>11</b>
1,1-Dichloroethene	10	N.D.
cis-1,2-Dichloroethene	10	N.D.
trans-1,2-Dichloroethene	10	N.D.
1,2-Dichloropropane	10	N.D.
cis-1,3-Dichloropropene	10	N.D.
trans-1,3-Dichloropropene	10	N.D.
Methylene chloride	100	N.D.
1,1,2,2-Tetrachloroethane	10	N.D.
Tetrachloroethene	10	N.D.
1,1,1-Trichloroethane	10	N.D.
1,1,2-Trichloroethane	10	N.D.
Trichloroethene	10	N.D.
Trichlorofluoromethane	10	N.D.
Vinyl chloride	20	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
1-Chloro-2-fluorobenzene	70 130	94

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Peggy Penner  
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell San Leandro/960926-F2 Sample Descript: Dup Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9609H33-06	Sampled: 09/26/96 Received: 09/27/96 Analyzed: 10/02/96 Reported: 10/11/96
Attention: Jim Keller		

QC Batch Number: GC100296BTEX21A  
Instrument ID: GCHP21

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	20000	25000
Methyl t-Butyl Ether	1000	N.D.
Benzene	200	1200
Toluene	200	320
Ethyl Benzene	200	240
Xylenes (Total)	200	1900
Chromatogram Pattern:		C6-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	76

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Peggy Penber  
Project Manager





# Sequoia Analytical

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

Blaine Tech Services, Inc.  
985 Timothy Drive  
San Jose, CA 95133  
Attention: Jim Keller

Client Project ID: Shell, San Leandro / 960926-F2  
Matrix: Liquid

Work Order #: 9609H33 -01, 03-06

Reported: Oct 11, 1996

## QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC100296BTEX21A	GC100296BTEX21A	GC100296BTEX21A	GC100296BTEX21A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	G. Fish	G. Fish	G. Fish	G. Fish
MS/MSD #:	9609G7202	9609G7202	9609G7202	9609G7202
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	10/2/96	10/2/96	10/2/96	10/2/96
Analyzed Date:	10/2/96	10/2/96	10/2/96	10/2/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	10	10	31
MS % Recovery:	110	100	100	103
Dup. Result:	11	10	10	31
MSD % Recov.:	110	100	100	103
RPD:	0.0	0.0	0.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK100296	BLK100296	BLK100296	BLK100296
Prepared Date:	10/2/96	10/2/96	10/2/96	10/2/96
Analyzed Date:	10/2/96	10/2/96	10/2/96	10/2/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	11	10	10	31
LCS % Recov.:	110	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

Reggie 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

9609H33.BLA <1>





Blaine Tech Services, Inc.  
985 Timothy Drive  
San Jose, CA 95133  
Attention: Jim Keller

Client Project ID: Shell, San Leandro / 960926-F2  
Matrix: Liquid

Work Order #: 9609H33-02

Reported: Oct 11, 1996

**QUALITY CONTROL DATA REPORT**

**Analyte:** MTBE  
**QC Batch#:** MS100496MTBEF3A  
**Analy. Method:** EPA 8260  
**Prep. Method:** N/A

**Analyst:** L. Duong  
**MS/MSD #:** 9609F7315  
**Sample Conc.:** 15  
**Prepared Date:** 10/4/96  
**Analyzed Date:** 10/4/96  
**Instrument I.D.#:** MS-F3  
**Conc. Spiked:** 50 µg/L

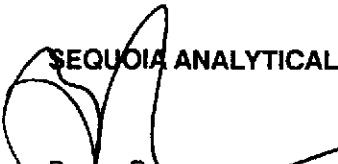
**Result:** 71  
**MS % Recovery:** 112

**Dup. Result:** 72  
**MSD % Recov.:** 114

**RPD:** 1.4  
**RPD Limit:** 0-25

**LCS #:** VDB100996  
**Prepared Date:** -  
**Analyzed Date:** 10/9/96  
**Instrument I.D.#:** F3  
**Conc. Spiked:** 50 µg/L  
**LCS Result:** 51  
**LCS % Recov.:** 102

**MS/MSD** 60-140  
**LCS** 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.





Blaine Tech Services, Inc.  
985 Timothy Drive  
San Jose, CA 95133  
Attention: Jim Keller

Client Project ID: Shell, San Leandro / 960926-F2  
Matrix: Liquid

Work Order #: 9609H33-02

Reported: Oct 11, 1996

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC100396BTEX20A	GC100396BTEX20A	GC100396BTEX20A	GC100396BTEX20A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	G. Fish	G. Fish	G. Fish	G. Fish
MS/MSD #:	9609G8202	9609G8202	9609G8202	9609G8202
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	10/3/96	10/3/96	10/3/96	10/3/96
Analyzed Date:	10/3/96	10/3/96	10/3/96	10/3/96
Instrument I.D.#:	GCHP20	GCHP20	GCHP20	GCHP20
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	9.2	8.8	28
MS % Recovery:	110	92	88	93
Dup. Result:	11	8.9	8.3	26
MSD % Recov.:	110	89	83	87
RPD:	0.0	3.3	5.8	7.4
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK100396	BLK100396	BLK100396	BLK100396
Prepared Date:	10/3/96	10/3/96	10/3/96	10/3/96
Analyzed Date:	10/3/96	10/3/96	10/3/96	10/3/96
Instrument I.D.#:	GCHP20	GCHP20	GCHP20	GCHP20
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	11	9.4	8.9	28
LCS % Recov.:	110	94	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**

Feggy Permer  
Project Manager

**Please Note:**

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

9609H33.BLA <3>







# Sequoia Analytical

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

Blaine Tech Services, Inc.  
 985 Timothy Drive  
 San Jose, CA 95133  
 Attention: Jim Keller

Client Project ID: Shell, San Leandro / 960926-F2  
 Matrix: Liquid

Work Order #: 9609H33-01-03

Reported: Oct 11, 1996

## QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-Benzene
QC Batch#:	GC100496801008A	GC100496801008A	GC100496801008A
Analy. Method:	EPA 8010	EPA 8010	EPA 8010
Prep. Method:	EPA 5030	EPA 5030	EPA 5030

Analyst:	B. Ali	B. Ali	B. Ali
MS/MSD #:	9609H2703	9609H2703	9609H2703
Sample Conc.:	N.D.	1.3	N.D.
Prepared Date:	10/4/96	10/4/96	10/4/96
Analyzed Date:	10/4/96	10/4/96	10/4/96
Instrument I.D.#:	GCHP8	GCHP8	GCHP8
Conc. Spiked:	25 µg/L	25 µg/L	25 µg/L

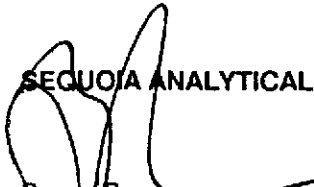
Result:	27	26	25
MS % Recovery:	108	99	100

Dup. Result:	27	25	25
MSD % Recov.:	108	95	100

RPD:	0.0	3.9	0.0
RPD Limit:	0-25	0-25	0-25

LCS #:	BLK100496	BLK100496	BLK100496
Prepared Date:	10/4/96	10/4/96	10/4/96
Analyzed Date:	10/4/96	10/4/96	10/4/96
Instrument I.D.#:	GCHP8	GCHP8	GCHP8
Conc. Spiked:	25 µg/L	25 µg/L	25 µg/L
LCS Result:	24	24	25
LCS % Recov.:	96	96	100

MS/MSD	60-140	60-140	60-140
LCS	65-135	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





Blaine Tech Services, Inc.  
985 Timothy Drive  
San Jose, CA 95133  
Attention: Jim Keller

Client Project ID: Shell, San Leandro / 960926-F2  
Matrix: Liquid

Work Order #: 9609H33-04-06

Reported: Oct 11, 1996

**QUALITY CONTROL DATA REPORT**

Analyte:	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-Benzene
QC Batch#:	GC100496801008A	GC100496801008A	GC100496801008A
Analy. Method:	EPA 8010	EPA 8010	EPA 8010
Prep. Method:	EPA 5030	EPA 5030	EPA 5030

Analyst:	B. Ali	B. Ali	B. Ali
MS/MSD #:	9609H2703	9609H2703	9609H2703
Sample Conc.:	N.D.	1.3	N.D.
Prepared Date:	10/4/96	10/4/96	10/4/96
Analyzed Date:	10/4/96	10/4/96	10/4/96
Instrument I.D.#:	GCHP8	GCHP8	GCHP8
Conc. Spiked:	25 µg/L	25 µg/L	25 µg/L
Result:	27	26	25
MS % Recovery:	108	99	100
Dup. Result:	27	25	25
MSD % Recov.:	108	95	100
RPD:	0.0	3.9	0.0
RPD Limit:	0-25	0-25	0-25

LCS #:	BLK100796	BLK100796	BLK100796
Prepared Date:	10/7/96	10/7/96	10/7/96
Analyzed Date:	10/7/96	10/7/96	10/7/96
Instrument I.D.#:	GCHP8	GCHP8	GCHP8
Conc. Spiked:	25 µg/L	25 µg/L	25 µg/L
LCS Result:	29	29	28
LCS % Recov.:	116	116	112

MS/MSD	60-140	60-140	60-140
LCS	65-135	70-130	70-130
Control Limits			

SEQUOIA ANALYTICAL

Peggy PenHer  
Project Manager

**Please Note:**

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

