CAMBRIA

November 7, 1996

Jennifer Eberle
Alameda County Department
of Environmental Health
Hazardous Materials Division
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Re: **Third Quarter 1996**
ACDEH STID #1107
Shell Service Station
WIC #204-6001-0109
29 Wildwood Avenue
Piedmont, California

Dear Ms. Eberle:

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.

Activities This Quarter

Blaine Tech Services, Inc. (BTS) of San Jose, California measured ground water depths and collected water samples from the site wells (Figure 2). The BTS report, describing these sampling activities and presenting the analytic results is included as Attachment A.

Cambria Environmental Technology, Inc. (Cambria) calculated ground water elevations (Table 1), compiled the analytic data (Table 2) and prepared a ground water elevation contour map (Figure 2)

CAMBRIA
ENVIRONMENTAL
TECHNOLOGY, INC.
1144 65TH STREET,
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OAKLAND,
CA 94608
PH: (510) 420-0700
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Anticipated Activities Next Quarter:

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

Discussion

Since hydrocarbon concentrations are stable in the two source area wells (MW-2 and MW-3) and have not varied significantly in several years, we recommend further sampling frequency reductions. The recommended reductions and the justifications are presented in Table 3. As indicated in the Table 3, we recommend installing oxygen releasing compounds (ORCs) in select wells to accelerate the natural attenuation process in the hydrocarbon source area. The combination of the ORCs and the reduced sampling frequency will result in considerable savings to the State and will help reduce hydrocarbon concentrations in ground water. We will implement this plan unless directed otherwise by your office.

We appreciate the opportunity to work with you again 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 Tech's Ground Water Monitoring Report
B - Sampling Frequency Modifications

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

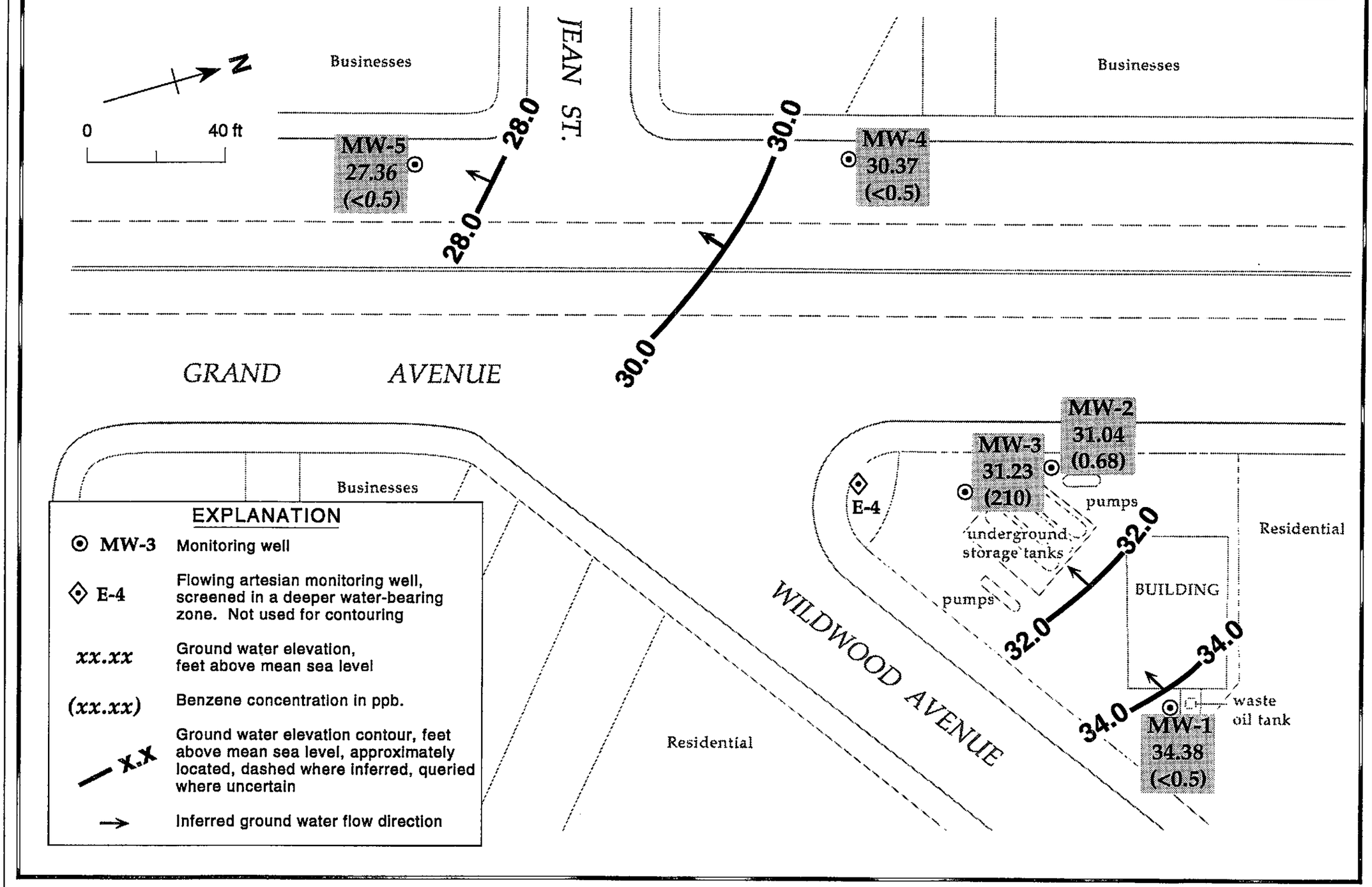

Figure 1. Monitoring Well Locations, Ground Water Elevation Contours, and benzene concentrations in ground water - July 12, 1996 - Shell Service Station, WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California.

Table 1. Ground Water Elevations - Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
MW-1	07/12/89	37.96	2.76	35.20
	01/30/90		3.10	34.86
	04/27/90		3.24	34.72
	07/31/90		4.26	33.70
	10/30/90		4.25	33.71
	01/31/91		3.66	34.30
	04/30/91		3.46	34.50
	07/30/91		4.14	33.82
	10/29/91		3.96	34.00
	01/20/92		3.59	34.37
	04/14/92		3.18	31.71
	07/21/92		4.17	33.79
	10/02/92		4.29	33.67
	01/20/93		2.32	35.64
	05/03/93		3.50	34.46
	06/28/93		3.76	34.20
	07/21/93		4.09	33.87
	10/19/93		3.58	34.38
	01/20/94		---	---
	04/12/94		3.60	34.36
	07/20/94		4.10	33.86
	10/06/94		4.30	33.66
	01/20/95		2.94	35.02
	07/06/95		3.68	34.28
	01/24/96		2.12	35.84
	07/12/96		**3.58**	**34.38**
MW-2	07/12/89	34.89	3.66	31.23
	01/30/90		3.49	31.40
	04/27/90		3.79	31.10
	07/31/90		4.03	30.86
	10/30/90		4.21	30.68
	01/31/91		4.09	30.80
	04/30/91		3.95	30.94
	07/30/91		4.07	30.82
	10/29/91		4.11	30.78
	01/20/92		3.86	31.03
	04/14/92		3.66	34.30
	07/21/92		3.92	30.97
	10/02/92		4.45	30.44
	01/20/93		3.74	31.15
	05/03/93		3.77	31.12
	06/28/93		3.96	30.93
	07/21/93		4.39	30.50

Table 1. Ground Water Elevations - Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
	10/19/93		3.92	30.97
	01/20/94		4.45	30.44
	04/12/94		4.72	30.17
	07/20/94		5.32	29.57
	10/06/94		4.03	30.86
	01/20/95		3.89	31.00
	07/06/95		8.84	26.05
	01/24/96		3.80	31.09
	07/12/96		**3.85**	**31.04**
MW-3	07/12/89	35.00	3.83	31.17
	01/30/90		3.24	31.76
	04/27/90		4.02	30.98
	07/31/90		4.31	30.69
	10/30/90		4.52	30.48
	01/31/91		4.33	30.67
	04/30/91		3.79	31.21
	07/30/91		4.37	30.63
	10/29/91		4.00	31.00
	01/20/92		3.87	31.13
	04/14/92		3.15	31.85
	07/21/92		4.17	30.83
	10/02/92		4.43	30.57
	01/20/93		2.20	32.80
	05/03/93		3.50	31.50
	06/28/93		4.08	30.92
	07/21/93		4.12	30.88
	10/19/93		4.20	30.80
	01/20/94		4.08	30.92
	04/12/94		3.70	31.30
	07/20/94		4.26	30.74
	10/06/94		4.31	30.69
	01/20/95		3.00	32.00
	07/06/95		3.75	31.25
	01/24/96		3.26	31.74
	07/12/96		**3.77**	**31.23**
MW-4	01/30/90	33.73	4.50	29.23
	04/27/90		3.62	30.11
	07/31/90		4.19	29.54
	10/30/90		4.19	29.54
	01/31/91		4.49	29.24
	04/30/91		4.02	29.71
	07/30/91		4.39	29.34

Table 1. Ground Water Elevations - Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
	10/29/91		3.75	29.98
	01/20/92		3.94	29.79
	04/14/92		3.71	30.02
	07/21/92		4.02	29.71
	10/02/92		4.13	29.60
	01/20/93		3.10	30.63
	05/03/93		3.70	30.03
	06/28/93		3.81	29.92
	07/21/93		3.81	29.92
	10/19/93		3.94	29.79
	01/20/94		4.00	29.73
	04/12/94		4.01	29.72
	07/20/94		3.91	29.82
	10/06/94		3.99	29.74
	01/20/95		3.56	30.17
	07/06/95		3.85	29.88
	01/24/96		2.56	31.17
	07/12/96		**3.36**	**30.37**
MW-5	01/30/90	31.38	7.12	24.26
	04/27/90		4.19	27.19
	07/31/90		4.09	27.29
	10/30/90		4.39	26.99
	01/31/91		4.49	26.89
	04/30/91		4.27	27.11
	07/30/91		4.32	27.06
	10/29/91		3.79	27.59
	01/20/92		4.09	27.29
	04/14/92		4.12	27.26
	07/21/92		4.13	27.25
	10/02/92		4.30	27.08
	01/20/93		3.12	28.26
	05/03/93		4.07	27.31
	06/28/93		4.08	27.30
	07/21/93		4.05	27.33
	10/19/93		4.20	27.18
	01/20/94		4.40	26.98
	04/12/94		4.18	27.20
	07/20/94		4.06	27.32
	10/06/94		4.01	27.37
	01/20/95		3.49	27.89
	07/06/95		4.06	27.32
	01/24/96		2.90	28.48
	07/12/96		**4.02**	**27.36**

Table 1. Ground Water Elevations - Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
E-4	07/12/89	34.63	a	>39.13
(Well destroyed	01/30/90		b	>34.63
on 6/16/95)	04/27/90		b	>34.63
	07/31/90		b	>34.63
	10/30/90		b	>34.63
	01/31/91		b	>34.63
	04/30/91		b	>34.63
	07/30/91		b	>34.63
	10/29/91		b	>34.63
	01/20/92		b	>34.63
	04/14/92		b	>34.63
	07/21/92		b	>34.63
	10/02/92		b	>34.63
	01/20/93		b	>34.63
	05/03/93		b	>34.63
	06/28/93		b	>34.63
	07/21/93		b	>34.63
	10/19/93		b	>34.63
	01/20/94		b	>34.63
	04/12/94		b	>34.63
	07/20/94		b	>34.63
	10/06/94		b	>34.63
	01/20/95		b	>34.63

Notes:

a = Well E-4 is a flowing artesian well. The potentiometric surface was greater than 4.5 ft above the top of the well casing.
b = Well E-4 potentiometric surface was higher than the top of the well casing.

Table 2. Analytic Results for Ground Water, Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	B	E	T	X	Dissolved Oxygen[a]	MTBE
			← parts per billion (µg/L) →						
MW-1 (1st and 3rd Quarters)	07/12/89	2.76	<50	<0.5	<1	<1	<3	---	---
	01/30/90	3.10	<50	<0.5	<0.5	<0.5	<0.5	---	---
	04/27/90	3.24	<50	<0.5	<0.5	<0.5	<0.5	---	---
	07/31/90	4.26	<50	<0.5	<0.5	<0.5	<0.5	---	---
	10/30/90	4.25	<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/31/91	3.66	<50	<0.5	<0.5	<0.5	<0.5	---	---
	04/30/91	3.46	<50	0.8	0.6	<0.5	1.2	---	---
	07/30/91	4.14	<50	<0.5	<0.5	<0.5	<0.5	---	---
	10/29/91	3.96	<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/20/92	3.59	<30	<0.3	<0.3	<0.3	<0.3	---	---
	04/14/92	3.18	<50	<0.5	<0.5	<0.5	<0.5	---	---
	07/21/92	4.17	<50	<0.5	<0.5	<0.5	<0.5	---	---
	10/02/92	4.29	<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/20/93	2.32	<50	<0.5	<0.5	<0.5	<0.5	---	---
	05/04/93	3.50	<50	<0.5	<0.5	<0.5	<0.5	1,930	---
	07/21/93	4.09	<50	<0.5	<0.5	<0.5	<0.5	4,640	---
	10/19/93	3.58	50	<0.5	<0.5	<0.5	<0.5	4,310	---
	01/20/94[b]	---	---	---	---	---	---	---	---
	04/12/94	3.60	<50	<0.5	<0.5	<0.5	<0.5	7,460	---
	07/20/94	4.10	<50	<0.5	<0.5	<0.5	<0.5	3,200	---
	10/06/94	4.30	<50	<0.5	<0.5	<0.5	<0.5	3,200	---
	01/20/95	2.94	<50	<0.5	<0.5	<0.5	<0.5	10,600	---
	07/06/95	3.68	<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/24/96	2.12	<50	<0.5	<0.5	<0.5	<0.5	---	---
	07/12/96	**3.58**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**2,700**	**<2.5**
MW-2 (1st and 3rd Quarters)	07/12/89	3.66	60	2.7	<1	<1	<3	---	---
	01/30/90	3.49	<50	6.6	0.54	<0.5	0.93	---	---
	04/27/90	3.79	60	2.1	<0.5	<0.5	<0.5	---	---
	07/31/90	4.03	70	1.5	<0.5	<0.5	<0.5	---	---

Table 2. Analytic Results for Ground Water, Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	B	E	T	X	Dissolved Oxygen[a]	MTBE
			← parts per billion (µg/L) →						
	10/30/90	4.21	70	<0.5	<0.5	0.7	1.6	---	---
	01/31/91	4.09	80	<0.5	0.9	<0.5	1.9	---	---
	04/30/91	3.95	100	5.9	0.7	0.6	2.0	---	---
	07/30/91	4.07	<50	<0.5	<0.5	<0.7	<0.5	---	---
	10/29/91	4.11	<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/20/92	3.86	<30	0.84	<0.41	<0.3	<0.48	---	---
	04/14/92	3.66	70	16	3.1	<0.5	2.1	---	---
	07/21/92	3.92	<50	<0.5	<0.5	<0.5	<0.5	---	---
	10/02/92	4.45	<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/20/93	3.74	<50	3.8	0.52	<0.5	<0.5	---	---
	05/04/93	3.77	680[d]	2.8	<0.5	<0.5	<0.5	900	---
	07/21/93	4.39	<50	8.0	1.8	1.2	7.9	5,880	---
	10/19/93	3.92	<50	<0.5	<0.5	<0.5	<0.5	5,700	---
	01/20/94	4.45	<50	1.5	<0.5	<0.5	<0.5	3,200	---
	04/12/94	4.72	<50	2.9	<0.5	<0.5	<0.5	11,380	---
	07/20/94	5.32	<50	<0.5	<0.5	<0.5	<0.5	2,400	---
	10/06/94	4.03	<50	<0.5	<0.5	<0.5	<0.5	2,900	---
	01/20/95	3.89	290	28	<0.5	<0.5	<0.5	4,600	---
	07/06/95	3.84	120	3.0	<0.5	<0.5	<0.5	---	---
	01/24/96	3.80	70	3.1	0.8	<0.5	1.5	---	---
	01/24/96[dup]	3.80	70	3.2	0.7	0.5	1.5	---	---
	07/12/96	**3.85**	**<50**	**0.68**	**<0.5**	**<0.5**	**<0.5**	**3,800**	**270**
MW-3 (1st and 3rd Quarters)	07/12/89	3.83	3,900	380	99	41	30	---	---
	01/30/90	3.24	5,500	440	79	35	130	---	---
	04/27/90	4.02	4,500	310	37	26	110	---	---
	07/31/90	4.31	3,500	210	8.4	17	62	---	---
	10/30/90	4.52	2,300	610	<0.5	<0.5	28	---	---
	01/31/91	4.33	4,100	300	19	20	81	---	---
	04/30/91	3.79	3,800	370	8.6	19	60	---	---

Table 2. Analytic Results for Ground Water, Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	B	E	T	X	Dissolved Oxygen[a]	MTBE
			← parts per billion (µg/L) →						
	07/30/91	4.37	3,300	160	15	13	87	---	---
	10/29/91	4.00	1,000	35	2.9	2.8	8.1	---	---
	01/20/92	3.87	6,900	380	47	18	48	---	---
	04/14/92	3.15	6,000	480	41	38	55	---	---
	07/21/92	4.17	3,700	330	30	13	23	---	---
	10/02/92	4.43	4,200	260	13	10	12	---	---
	01/20/93	2.20	4,200	360	32	15	26	---	---
	01/20/93[dup]	2.20	3,900	370	32	15	26	---	---
	05/04/93	3.50	12,000	290	120	520	620	630	---
	07/21/93	4.12	2,000	170	<10	12	11	4,340	---
	07/21/93[dup]	4.12	2,000	170	<10	10	14	---	---
	10/19/93	4.20	2,000	240	<0.5	<0.5	<0.5	5,740	---
	01/20/94	4.08	4,200	280	<10	<10	<10	4,100	---
	01/20/94[dup]	4.08	3,800	250	<10	<10	<10	4,100	---
	04/12/94	3.70	4,700	380	<10	<10	<10	10,620	---
	04/12/94[dup]	3.70	3,400	370	<25	<25	<25	---	---
	07/20/94	4.26	5,100	320	15	77	34	2,300	---
	07/20/94[dup]	4.26	4,400	250	13	14	32	---	---
	10/06/94	4.31	4,300	280	4.0	9.7	15	2,300	---
	01/20/95	3.00	4,600	180	16	18	10	11,100	---
	01/20/95[dup]	3.00	4,300	170	15	12	7.2	---	---
	07/06/95	3.75	3,900	310	7.6	<0.5	13	---	---
	07/06/95[dul]	3.75	4,100	330	7.9	<0.5	2.4	---	---
	01/24/96	3.26	5,000	210	14	14	12	---	---
	07/12/96	**3.77**	**2,700**	**210**	**<0.5**	**<0.5**	**<0.5**	**2,400**	**3,600**
	07/12/96[dup]	**3.77**	**2,800**	**210**	**<0.5**	**<0.5**	**<0.5**	**2,400**	**3,400**
MW-4 (1st and 3rd Quarters)	01/31/90	4.50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	04/27/90	3.62	130[c]	<0.5	<0.5	<0.5	<0.5	---	---
	07/31/90	4.19	<50	<0.5	<0.5	<0.5	<0.5	---	---

Table 2. Analytic Results for Ground Water, Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	B	E	T	X	Dissolved Oxygen[a]	MTBE
			<---------- parts per billion (µg/L) ----------						
	10/30/90	4.19	<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/31/91	4.49	50[c]	<0.5	<0.5	<0.5	<0.5	---	---
	04/30/91	4.02	<50	<0.5	<0.5	<0.5	<0.5	---	---
	07/30/91	4.39	<50	<0.5	<0.5	<0.5	<0.5	---	---
	10/29/91	3.75	<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/20/92	3.94	<30	<0.3	<0.3	<0.3	<0.3	---	---
	04/14/92	3.71	<50	<0.5	<0.5	<0.5	<0.5	---	---
	07/21/92	4.02	<50	<0.5	<0.5	<0.5	<0.5	---	---
	10/02/92	4.13	<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/20/93	3.10	<50	<0.5	<0.5	<0.5	<0.5	---	---
	05/04/93	3.70	<50	<0.5	<0.5	<0.5	<0.5	1,740	---
	07/21/93	3.81	<50	0.56	<0.5	<0.5	<0.5	4,510	---
	10/10/93	3.94	<50	<0.5	<0.5	<0.5	<0.5	5,750	---
	01/20/94	4.00	<50	0.71	<0.5	<0.5	<0.5	4,400	---
	04/12/94	4.01	<50	<0.5	<0.5	<0.5	<0.5	7,290	---
	07/20/94	3.91	160	<0.5	<0.5	<0.5	<0.5	6,400	---
	10/11/94	3.99	410	<0.5	<0.5	<0.5	<0.5	5,000	---
	01/20/95	3.56	<50	<0.5	<0.5	<0.5	<0.5	4,900	---
	07/06/95	3.85	<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/24/96	2.56	<50	<0.5	0.6	<0.5	1.8	---	---
	07/12/96	**3.36**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**2,700**	**-[b]**
MW-5 (1st and 3rd Quarters)	01/31/90	7.12	<50	<0.5	<0.5	<0.5	<0.5	---	---
	04/27/90	4.19	210c	<0.5	<0.5	<0.5	<0.5	---	---
	07/31/90	4.09	90	<0.5	<0.5	<0.5	<0.5	---	---
	10/30/90	4.39	100	0.8	0.6	0.7	1.4	---	---
	01/31/91	4.49	80c	<0.5	<0.5	<0.5	<0.5	---	---
	04/30/91	4.27	90	<0.5	<0.5	<0.5	<0.5	---	---
	07/30/91	4.37	90	<0.5	<0.5	<0.5	<0.5	---	---
	10/29/91	3.79	<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/20/92	4.09	<30	<0.3	<0.3	<0.3	<0.3	---	---

Table 2. Analytic Results for Ground Water, Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	B	E	T	X	Dissolved Oxygen[a]	MTBE
			← parts per billion (µg/L) →						
	04/14/92	4.12	<50c	<0.5	<0.5	<0.5	<0.5	---	---
	07/21/92	4.13	74c	<0.5	<0.5	<0.5	<0.5	---	---
	10/02/92	4.30	76c	<0.5	<0.5	<0.5	<0.5	---	---
	01/20/93	3.12	72c	<0.5	<0.5	<0.5	<0.5	---	---
	05/04/93	4.07	70c	<0.5	<0.5	<0.5	<0.5	1,620	---
	05/04/93[dup]	4.07	80c	<0.5	<0.5	<0.5	<0.5	---	---
	07/21/93	4.05	<50	<0.5	<0.5	<0.5	<0.5	3,460	---
	10/19/93	4.20	51	<0.5	<0.5	<0.5	<0.5	3,820	---
	01/20/94	4.40	90	<0.5	<0.5	<0.5	<0.5	4,200	---
	04/12/94	4.18	67	<0.5	<0.5	<0.5	<0.5	---	---
	07/20/94	4.06	<50	<0.5	<0.5	<0.5	<0.5	3,200	---
	10/06/94	4.01	80	<0.5	<0.5	<0.5	<0.5	2,100	---
	10/06/94[dup]	4.01	60	<0.5	<0.5	<0.5	<0.5	---	---
	01/20/95	3.49	<50	<0.5	<0.5	<0.5	<0.5	3,200	---
	07/06/95	4.06	<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/24/96	2.90	70	<0.5	0.8	<0.5	2.9	---	---
	07/12/96	**4.02**	**62**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**1,900**	**--[f]**
E-4 (well destroyed on 6/16/95)	07/12/89	d	<50	<0.5	<1	<1	<3	---	---
	01/31/90	d	<50	<0.5	<0.5	<0.5	<0.5	---	---
	04/27/90	d	120[e]	<0.5	<0.5	<0.5	<0.5	---	---
	07/31/90	d	<50	<0.5	<0.5	<0.5	<0.5	---	---
	10/30/90	d	<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/31/91	d	<50	<0.5	<0.5	<0.5	<0.5	---	---
	04/30/91	d	<50	<0.5	<0.5	<0.5	<0.5	---	---
	07/30/91	d	<50	<0.5	<0.5	0.6	<0.5	---	---
	10/29/91	d	<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/20/92	d	<30	<0.3	<0.3	<0.3	<0.3	---	---
	04/14/92	d	<50	<0.5	<0.5	<0.5	<0.5	---	---
	07/21/92	d	<50	<0.5	<0.5	<0.5	<0.5	---	---

Table 2. Analytic Results for Ground Water, Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	B	E	T	X	Dissolved Oxygen[a]	MTBE
			← parts per billion (µg/L) →						
	10/02/92	d	<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/20/93	d	<50	<0.5	<0.5	<0.5	<0.5	---	---
	05/04/93	d	<50	<0.5	<0.5	<0.5	<0.5	630	---
	07/21/93	d	<50	5.4	1.0	0.72	4.4	5,440	---
	10/19/93	d	<50	<0.5	<0.5	<0.5	<0.5	5,630	---
	01/20/94	d	<50	<0.5	<0.5	<0.5	<0.5	---	---
	04/12/94	d	<50	<0.5	<0.5	<0.5	<0.5	9,410	---
	07/20/94	d	<50	<0.5	<0.5	<0.5	<0.5	2,000	---
	10/06/94	d	<50	<0.5	<0.5	<0.5	<0.5	1,300	---
	01/20/95	d	<50	<0.5	<0.5	<0.5	<0.5	3,700	---
Trip Blank	07/12/89		<50	<0.5	<1	<1	<3	---	---
	01/31/90		<50	<0.5	<.5	<0.5	<0.5	---	---
	04/27/90		<50	<0.5	<0.5	<0.5	<0.5	---	---
	07/31/90		<50	<0.5	<0.5	<0.5	<0.5	---	---
	10/30/90		<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/31/91		<50	<0.5	<0.5	<0.5	<0.5	---	---
	04/30/91		<50	<0.5	<0.5	<0.5	<0.5	---	---
	07/30/91		<50	<0.5	<0.5	<0.5	<0.5	---	---
	10/29/91		<50	<0.5	<0.5	<0.5	<0.5	---	---
	10/02/92		<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/20/93		<50	<0.5	<0.5	<0.5	<0.5	---	---
	05/03/93		<50	<0.5	<0.5	<0.5	<0.5	---	---
	07/21/93		<50	<0.5	<0.5	<0.5	<0.5	---	---
	10/19/93		<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/20/94		<50	<0.5	<0.5	<0.5	<0.5	---	---
	04/12/94		<50	<0.5	<0.5	0.71	<0.5	---	---
	07/20/94		<50	<0.5	<0.5	<0.5	<0.5	---	---
	10/06/94		<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/20/95		<50	<0.5	<0.5	<0.5	<0.5	---	---

Table 2. Analytic Results for Ground Water, Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	B	E	T	X	Dissolved Oxygen[a]	MTBE
			← parts per billion (µg/L) →						
	07/06/95		<50	<0.5	<0.5	<0.5	<0.5	---	---
Bailer	04/27/90		110[c]	<0.5	<0.5	<0.5	<0.5	---	---
Blank	01/31/91		<5	<0.5	<0.5	<0.5	<0.5	---	---
	10/02/92		ND	ND	ND	ND	ND	---	---

DTSC MCLs			NE	1	680	100[f]	1,750	NA	---

Table 2. Analytic Results for Ground Water, Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Abbreviations:

TPH-G = Total Petroleum Hydrocarbons as Gasoline by Modified EPA Method 8015
B = Benzene by EPA Method 602 or 8020
E = Ethylbenzene by EPA Method 602 or 8020
T = Toluene by EPA Method 602 or 8020
X = Xylenes by EPA Method 602 or 8020
HVOCs = Halogenated volatile organic compounds by EPA Method 601 or 624
--- = Not analyzed
NE = Not established
DTSC MCLs = California Department of Toxic Substances Control Maximum Contaminant Levels for drinking water
<n = Not detected above detection limit of **n** ppb

Notes:

a = Field measurement of dissolved oxygen concentration (ppb)
b = Well inaccessible, not sampled
c = Chromatogram contained discrete peaks; not representative of gasoline
d = Artesian well; potentiometric surface above top-of-casing elevation
e = Researched on later date due to inaccessibility from parked car
f = DTSC recommended action level for drinking water; MCL not established
g = According to the lab, due to coelution with early eluters no result could be determained for MTBE.

TABLE 3. Proposed Well Sampling Frequency Modifications
Shell Service Station WIC # 204-6001-0109
29 Wildwood, Piedmont California

Monitoring Well ID	Current Sampling Frequency	Proposed Sampling Frequency	Justification	Additional Recommendation
MW-1	Semi-annually (1st and 3rd Quarters)	Discontinue Sampling	Clean up gradient well - no hydrocarbon concentrations over DTSC MCLs ever detected	Install ORCs to oxygenate ground water in down gradient hydrocarbon source area. Change ORCs annually.
MW-2	Semi-annually (1st and 3rd Quarters)	Annually (4th Quarter)	Low, stable hydrocarbon concentrations for 8 years.	Install ORCs in well after 4th quarter sampling event to oxygenate source area during wet season. Change ORCs annually.
MW-3	Semi-annually (1st and 3rd Quarters)	Annually (4th Quarter)	Stable hydrocarbon concentrations for 8 years.	Install ORCs in well after 4th quarter sampling event to oxygenate source area during wet season. Change ORCs annually.
MW-4	Semi-annually (1st and 3rd Quarters)	Annually (4th Quarter)	Clean down gradient well - no hydrocarbon concentrations over DTSC MCLs ever detected	
MW-5	Semi-annually (1st and 3rd Quarters)	Annually (4th Quarter)	Clean down gradient well - no hydrocarbon concentrations over DTSC MCLs ever detected	

ATTACHMENT A

BLAINE TECH'S GROUND WATER MONITORING REPORT

BLAINE
TECH SERVICES INC.

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

August 5, 1996

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

Attn: R. Jeff Granberry

Shell WIC #204-6001-0109
29 Wildwood Ave.
Piedmont, California

3rd Quarter 1996

Quarterly Groundwater Monitoring Report 960712-L-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,

Francis Thie

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

cc: Weiss Associates
5500 Shellmound Street
Emeryville, CA 94608-2411
Attn: Grady Glasser

(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	7/12/96	TOC	--	NONE	--	--	3.58	13.18
MW-2	7/12/96	TOC	--	NONE	--	--	3.85	11.50
MW-3 *	7/12/96	TOC	ODOR	NONE	--	--	3.77	9.00
MW-4	7/12/96	TOC	--	NONE	--	--	3.36	12.76
MW-5	7/12/96	TOC	--	NONE	--	--	4.02	16.06

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

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 960712-L1

Date: 7-12-96
Page 1 of 1

Site Address: 29 Wildwood Avenue, Piedmont

WIC#: 204-6001-0109

Shell Engineer: R. Jeff Granberry ~~Daniel T. Kirk~~ Phone No.: (510) 675-6168 Fax #: 675-6160

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

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

Comments:

Sampled by:

Printed Name: LADB OLIVER

LAB: SEQUOIA

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

TURN AROUND TIME: 24 hours ☐ 48 hours ☐ 16 days ☒ (Normal) Other ☐ ____

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

UST AGENCY: ____

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	MTBE		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
- MW-1	7/12			X		3		1	A-C			X	X						9607897	
MW-2 -	|			X		3		2	|			X	X						
MW-3	|			X		3		3	|			X	X						
- MW-4	|			X		3		4	|			X	X						
- MW-5	|			X		3		5	|			X	X						
DUP-	|			X		3		6	|			X	X						
-> EB	↓			X		3		7	√				X	X						

	Printed Name	Date	Time		Printed Name	Date	Time
Relinquished By (signature):	LADB OLIVER	7-15-96	4:50	Received (signature):	Fulcher	7/15/96	4:50
Relinquished By (signature):		7/15/96		Received (signature):			
Relinquished By (signature):				Received (signature):			

Printed Name: Fulcher — Date: 7/15/96 Time: 4:50
Printed Name: — Date: — Time:
Printed Name: Scot Ross — Date: 7-15-96 Time: 1622

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

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
Attention: Jim Keller

Project: Shell Piedmont 960712-L1

Enclosed are the results from samples received at Sequoia Analytical on July 15, 1996. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9607897 -01	LIQUID, MW-1	07/12/96	MTBE_W Methyl t-Butyl Ethe
9607897 -01	LIQUID, MW-1	07/12/96	TPHGBW Purgeable TPH/BTEX
9607897 -02	LIQUID, MW-2	07/12/96	MTBE_W Methyl t-Butyl Ethe
9607897 -02	LIQUID, MW-2	07/12/96	TPHGBW Purgeable TPH/BTEX
9607897 -03	LIQUID, MW-3	07/12/96	MTBE_W Methyl t-Butyl Ethe
9607897 -03	LIQUID, MW-3	07/12/96	TPHGBW Purgeable TPH/BTEX
9607897 -04	LIQUID, MW-4	07/12/96	MTBE_W Methyl t-Butyl Ethe
9607897 -04	LIQUID, MW-4	07/12/96	TPHGBW Purgeable TPH/BTEX
9607897 -05	LIQUID, MW-5	07/12/96	MTBE_W Methyl t-Butyl Ethe
9607897 -05	LIQUID, MW-5	07/12/96	TPHGBW Purgeable TPH/BTEX
9607897 -06	LIQUID, DUP	07/12/96	MTBE_W Methyl t-Butyl Ethe
9607897 -06	LIQUID, DUP	07/12/96	TPHGBW Purgeable TPH/BTEX
9607897 -07	LIQUID, EB	07/12/96	MTBE_W Methyl t-Butyl Ethe
9607897 -07	LIQUID, EB	07/12/96	TPHGBW Purgeable TPH/BTEX

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

Very truly yours,

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Sequoia Analytical

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

Blaine Technical Services	Client Proj. ID: Shell Piedmont 960712-L1	Sampled: 07/12/96
985 Timothy Drive	Sample Descript: MW-1	Received: 07/15/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 07/22/96
Attention: Jim Keller	Lab Number: 9607897-01	Reported: 07/23/96

QC Batch Number: GC072296BTEX03A
Instrument ID: GCHP03

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.5	N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	89

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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

Blaine Technical Services	Client Proj. ID: Shell Piedmont 960712-L1	Sampled: 07/12/96
985 Timothy Drive	Sample Descript: MW-1	Received: 07/15/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 07/22/96
Attention: Jim Keller	Lab Number: 9607897-01	Reported: 07/23/96

QC Batch Number: GC072296BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

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

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	89

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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

Blaine Technical Services	Client Proj. ID: Shell Piedmont 960712-L1	Sampled: 07/12/96
985 Timothy Drive	Sample Descript: MW-2	Received: 07/15/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 07/22/96
Attention: Jim Keller	Lab Number: 9607897-02	Reported: 07/23/96

QC Batch Number: GC072296BTEX02A
Instrument ID: GCHP02

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.5	270

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 Penner
Project Manager

Sequoia Analytical

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

Blaine Technical Services	Client Proj. ID: Shell Piedmont 960712-L1	Sampled: 07/12/96
985 Timothy Drive	Sample Descript: MW-2	Received: 07/15/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 07/22/96
Attention: Jim Keller	Lab Number: 9607897-02	Reported: 07/23/96

QC Batch Number: GC072296BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	**0.50**	**0.68**
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	87

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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Blaine Technical Services	Client Proj. ID: Shell Piedmont 960712-L1	Sampled: 07/12/96
985 Timothy Drive	Sample Descript: MW-3	Received: 07/15/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 07/22/96
Attention: Jim Keller	Lab Number: 9607897-03	Reported: 07/23/96

QC Batch Number: GC072296BTEX03A
Instrument ID: GCHP03

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	50	3600

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	108

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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

Blaine Technical Services	Client Proj. ID: Shell Piedmont 960712-L1	Sampled: 07/12/96
985 Timothy Drive	Sample Descript: MW-3	Received: 07/15/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 07/22/96
Attention: Jim Keller	Lab Number: 9607897-03	Reported: 07/23/96

QC Batch Number: GC072296BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**1000**	**2700**
Benzene	**10**	**210**
Toluene	10	N.D.
Ethyl Benzene	10	N.D.
Xylenes (Total)	10	N.D.
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	108

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Technical Services	Client Proj. ID: Shell Piedmont 960712-L1	Sampled: 07/12/96
985 Timothy Drive	Sample Descript: MW-4	Received: 07/15/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 07/22/96
Attention: Jim Keller	Lab Number: 9607897-04	Reported: 07/23/96

QC Batch Number: GC072296BTEX03A
Instrument ID: GCHP03

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.5	-

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	80

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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Blaine Technical Services	Client Proj. ID: Shell Piedmont 960712-L1	Sampled: 07/12/96
985 Timothy Drive	Sample Descript: MW-4	Received: 07/15/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 07/22/96
Attention: Jim Keller	Lab Number: 9607897-04	Reported: 07/23/96

QC Batch Number: GC072296BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	80

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Renner
Project Manager

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Blaine Technical Services	Client Proj. ID: Shell Piedmont 960712-L1	Sampled: 07/12/96
985 Timothy Drive	Sample Descript: MW-5	Received: 07/15/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 07/22/96
Attention: Jim Keller	Lab Number: 9607897-05	Reported: 07/23/96

QC Batch Number: GC072296BTEX03A
Instrument ID: GCHP03

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.5	-

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	109

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Technical Services	Client Proj. ID: Shell Piedmont 960712-L1	Sampled: 07/12/96
985 Timothy Drive	Sample Descript: MW-5	Received: 07/15/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 07/22/96
Attention: Jim Keller	Lab Number: 9607897-05	Reported: 07/23/96

QC Batch Number: GC072296BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**62**
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		**C6-C8**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	109

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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Blaine Technical Services	Client Proj. ID: Shell Piedmont 960712-L1	Sampled: 07/12/96
985 Timothy Drive	Sample Descript: DUP	Received: 07/15/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 07/22/96
Attention: Jim Keller	Lab Number: 9607897-06	Reported: 07/23/96

QC Batch Number: GC072296BTEX03A
Instrument ID: GCHP03

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	25	3400

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	102

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Technical Services	Client Proj. ID: Shell Piedmont 960712-L1	Sampled: 07/12/96
985 Timothy Drive	Sample Descript: DUP	Received: 07/15/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 07/22/96
Attention: Jim Keller	Lab Number: 9607897-06	Reported: 07/23/96

QC Batch Number: GC072296BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**500**	**2800**
Benzene	**5.0**	**210**
Toluene	5.0	N.D.
Ethyl Benzene	5.0	N.D.
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	102

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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Blaine Technical Services	Client Proj. ID: Shell Piedmont 960712-L1	Sampled: 07/12/96
985 Timothy Drive	Sample Descript: EB	Received: 07/15/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 07/22/96
Attention: Jim Keller	Lab Number: 9607897-07	Reported: 07/23/96

QC Batch Number: GC072296BTEX03A
Instrument ID: GCHP03

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.5	N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	80

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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

Blaine Technical Services	Client Proj. ID: Shell Piedmont 960712-L1	Sampled: 07/12/96
985 Timothy Drive	Sample Descript: EB	Received: 07/15/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 07/22/96
Attention: Jim Keller	Lab Number: 9607897-07	Reported: 07/23/96

QC Batch Number: GC072296BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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	80

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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Blaine Technical Services	Client Proj. ID: Shell Piedmont 960712-L1	Received: 07/15/96
985 Timothy Drive		
San Jose, CA 95133	Lab Proj. ID: 9607897	Reported: 07/23/96
Attention: Jim Keller		

LABORATORY NARRATIVE

Please note: Due to coelution with early eluters no result could be determained for MTBE.

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Tech Services, Inc.	Client Project ID:	Shell, Piedmont / 960712-L1	
985 Timothy Drive	Matrix:	Liquid	
San Jose, CA 95133			
Attention: Jim Keller	Work Order #:	9607897 -01, 03-07	Reported: Jul 29, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC072296BTEX03A	GC072296BTEX03A	GC072296BTEX03A	GC072296BTEX03A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	B. Sullivan	B. Sullivan	B. Sullivan	B. Sullivan
MS/MSD #:	960782201	960782201	960782201	960782201
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/22/96	7/22/96	7/22/96	7/22/96
Analyzed Date:	7/22/96	7/22/96	7/22/96	7/22/96
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	9.7	9.9	30
MS % Recovery:	100	97	99	100
Dup. Result:	10	9.7	10	30
MSD % Recov.:	100	97	100	100
RPD:	0.0	0.0	1.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK072296	BLK072296	BLK072296	BLK072296
Prepared Date:	7/22/96	7/22/96	7/22/96	7/22/96
Analyzed Date:	7/22/96	7/22/96	7/22/96	7/22/96
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.9	9.6	9.8	29
LCS % Recov.:	99	96	98	97

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

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.	Client Project ID:	Shell, Piedmont / 960712-L1	
985 Timothy Drive	Matrix:	Liquid	
San Jose, CA 95133			
Attention: Jim Keller	Work Order #:	9607897-02	Reported: Jul 29, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC072296BTEX02A	GC072296BTEX02A	GC072296BTEX02A	GC072296BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	B. Sullivan	B. Sullivan	B. Sullivan	B. Sullivan
MS/MSD #:	960782202	960782202	960782202	960782202
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/22/96	7/22/96	7/22/96	7/22/96
Analyzed Date:	7/22/96	7/22/96	7/22/96	7/22/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.6	9.5	9.5	28
MS % Recovery:	96	95	95	93
Dup. Result:	9.3	9.3	9.2	28
MSD % Recov.:	93	93	92	93
RPD:	3.2	2.1	3.2	0.0
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK072296	BLK072296	BLK072296	BLK072296
Prepared Date:	7/22/96	7/22/96	7/22/96	7/22/96
Analyzed Date:	7/22/96	7/22/96	7/22/96	7/22/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.5	9.4	9.3	28
LCS % Recov.:	95	94	93	93

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

SEQUOIA ANALYTICAL

Reggy Renner
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

COOLER RECEIPT FORM

roject: 960124-52 Log No: 006
ooler received on: 1/24/96 and checked on 1/24/96 by: Em Greene
(signature)

ere custody papers present?	YES	NO
ere custody papers properly filled out?	YES	NO
ere the custody papers signed?	YES	NO
as sufficient ice used?	YES	NO
id all bottles arrive in good condition (unbroken)?	YES	NO Temp 0°
id bottle labels match COC?	YES	NO
ere proper bottles used for analysis indicated?	YES	NO
orrect preservatives used?	YES	NO
OA vials checked for headspace bubbles?	YES	NO

Note which voas (if any) had bubbles:*

ample descriptor:	Number of vials:

*All VOAs with headspace bubbles have been set aside so they will not be used for analysis..... YES NO

ist here all other jobs received in the same cooler:

lient Job #	NET log #

(coolerrec)