CAMBRIA

ENVIRONMENTAL
PROTECTION

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January 15, 1997

Susan Hugo
Alameda County Department
of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Re: **Fourth Quarter 1996 Quarterly Monitoring Report**
Shell Service Station
1800 Powell Street
Emeryville, California
WIC #204-2495-0101

Dear Ms. Hugo:

On behalf of Shell Oil Products Company, Cambria Environmental Technology, Inc. (Cambria) is submitting this status report to satisfy the quarterly reporting requirements prescribed by California Administrative Code Title 23 Waters, Division 3, Chapter 16, Article 5, Section 2652.d.

Fourth Quarter 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 calculated ground water elevations and compiled the analytic data (Table 1) and prepared a ground water elevation contour map (Figure 1).

Anticipated First Quarter 1997 Activities

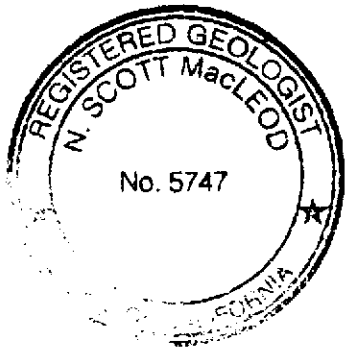
As discussed in the third quarter of 1996 report, we will continue to gauge and remove separate-phase hydrocarbons from well MW-9 on a quarterly basis, however, no sampling activities are scheduled until the fourth quarter of 1997. At that time, Cambria will submit a report presenting a summary of quarterly activities.

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

CAMBRIA

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

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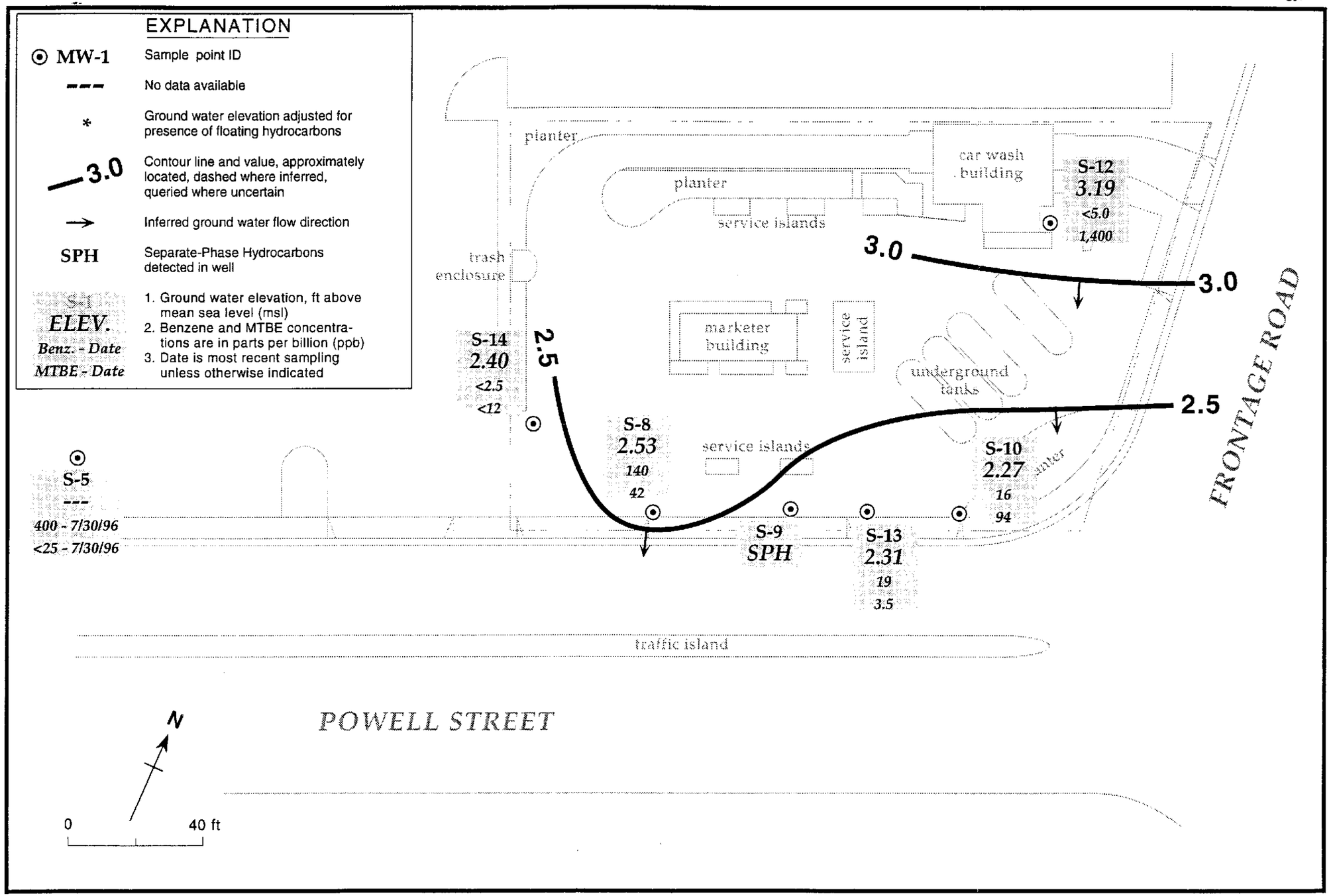

Figure 1. Ground Water Elevation Contours - Shell Service Station WIC #204-2495-01, November 11, 1996 - 1800 Powell Street, Emeryville, California.

Table 1. **Ground Water Elevations and Analytic Results** - Shell Service Station WIC# 204-2495-0101, 1800 Powell Street, Emeryville, California

Well ID	Sampling Date	Top-of-Box Elevation (ft msl)	Depth to Water (ft)	Separate Phase Hydrocarbon Tickness (ft)	Ground Water Elevation (ft msl)	TDS (ppm)	TPH-G	TPH-D	B	T	E	X	MTBE
							←		parts per billion (µg/L)				→
S-5	10/26/84	11.72	---	---	---	---	3,000	---	660	20	20	70	---
	02/09/85		---	---	---	---	2,800	---	740	20	20	140	---
	04/27/85		---	---	---	---	4,300	---	750	10	20	<30	---
	07/06/85		---	---	---	---	1,500	---	300	8.0	7.0	9.0	---
	10/24/85		---	---	---	---	2,100	---	760	10	40	50	---
	01/03/86		---	---	---	---	1,300	---	520	9.0	8.0	10	---
	07/05/86		8.36	---	3.36	---	1,400	---	500	10	4.0	<10	---
	10/18/86		---	---	---	---	4,200	---	1,100	9.0	14	7.0	---
	01/13/87		---	---	---	---	4,500	6,100	1,100	15	30	25	---
	07/07/87		9.15	---	2.57	---	3,200	---	1,000	16	9.0	12	---
	10/10/87		9.67	---	2.05	---	1,700	---	16	5.7	5.2	8.9	---
	02/11/88		9.00	---	2.72	---	1,300	---	300	5.0	<5	<5	---
	05/10/88		8.61	---	3.11	---	1,900	---	490	<0.5	<5	<5	---
	08/31/88		9.61	---	2.11	---	6,700	---	760	26	<25	<25	---
	12/03/88		9.47	---	2.25	---	2,900	---	890	5.3	7.3	13	---
	02/16/89		8.29	---	3.43	---	1,300	---	280	3.0	3.4	9.4	---
	08/10/89		9.30	---	2.42	---	1,700	---	530	5.5	<5	5.8	---
	11/11/89		9.42	---	2.30	---	---	---	---	---	---	---	---
	02/21/94		7.95	---	3.77	---	1,000	---	250	<5	<5	<5	---
	02/21/94[dup]		7.95	---	3.77	---	1,300	---	220	<5	<5	11	---
	05/16/94		8.00	---	3.72	---	1,200	---	230	<5	<5	<5	---
	08/09/94[a]		---	---	---	---	---	---	---	---	---	---	---
	11/09/94		8.32	---	3.40	---	1,600	---	220	3.2	1.8	5.0	---
	11/09/94[dup]		8.32	---	---	---	1,600	---	250	3.3	1.9	5.9	---
	02/22/95[a]		---	---	---	---	---	---	---	---	---	---	---
	05/02/95[a]		---	---	---	---	---	---	---	---	---	---	---
	05/10/95		---	---	---	---	910	---	170	1.5	1.3	5.2	---
	08/24/95		8.78	---	2.94	---	620	---	210	<0.5	1.2	5.3	---
	12/08/95		9.78	---	1.94	---	1,600	---	510	3.3	1.5	6.6	---
	12/08/95[dup]		9.78	---	1.94	---	1,600	---	530	1.8	1.1	5.4	---
	02/29/96		7.64	---	4.08	---	1,900	---	470	5.8	<5.0	<5.0	46
	02/29/96[dup]		7.64	---	4.08	---	1,700	---	440	5.4	<5.0	<5.0	40
	05/22/96		8.60	---	3.12	---	1,200	---	490	<10	<10	<10	<50
	07/30/96		9.40	---	2.32	---	1,100	---	400	<5.0	<5.0	6.9	<25

Table 1. **Ground Water Elevations and Analytic Results** - Shell Service Station WIC# 204-2495-0101, 1800 Powell Street, Emeryville, California (continued)

Well ID	Sampling Date	Top-of-Box Elevation (ft msl)	Depth to Water (ft)	Separate Phase Hydrocarbon Tickness (ft)	Ground Water Elevation (ft msl)	TDS (ppm)	TPH-G	TPH-D	B	T	E	X	MTBE
							← parts per billion (µg/L) →						
	11/11/96		← **Well Inaccessible** →										
S-6	04/27/85		---	---	---	---	6,500	---	2,400	30	50	210	---
	07/06/85		---	---	---	---	3,700	---	1,700	34	55	200	---
	10/24/85		Well Abandoned 11/8/85			---	<50	---	23	<0.5	<5	10	---
S-7	10/26/84		---	---	---	---	50	---	1.1	<1	<1	4	---
	02/09/85		---	---	---	---		---	0.90	<1	<1	<3	---
	04/27/85		---	---	---	---	<50	---	<1	<1	<1	<3	---
	07/06/85		---	---	---	---	70	---	2.2	<1	<1	<3	---
	10/24/85		Well Abandoned 11/9/85			---	6,200	---	2,200	130	190	660	---
S-8	10/26/84	12.76	---	---	---	---	1,000	---	610	9.0	1.0	42	---
	02/09/85		---	---	---	---	500	---	160	5.0	<2	17	---
	04/27/85		---	---	---	---	2,700	---	1500	20	10	40	---
	07/06/85		---	---	---	---	440	---	180	5.0	2.0	12	---
	10/24/85		---	---	---	---	2,000	---	1,100	17	5.0	70	---
	01/03/86		---	---	---	---	1,900	---	1,300	20	<10	70	---
	07/05/86		9.50	---	3.26	---	1,600	---	920	30	<10	60	---
	10/18/86		---	---	---	---	1,400	---	640	<10	<10	30	---
	01/13/87		---	---	---	---	670	760	190	5.8	<0.5	19	---
	04/22/87		---	---	---	---	2,400	---	740	54	5.7	59	---
	07/07/87		10.45	---	2.31	---	1,100	---	450	15	<2.5	42	---
	10/10/87		10.83	---	1.93	---	340	---	4.0	0.60	<0.5	17	---
	02/11/88		10.44	---	2.32	---	<1,000	---	260	<10	<10	11	---
	05/10/88		10.17	---	2.59	---	1,800	---	700	14	<5	46	---
	08/31/88[SPH]		10.81	---	1.95	---	---	---	---	---	---	---	---
	12/03/88		10.81	---	1.95	---	960	---	250	4.3	<2.5	14	---
	02/16/89		9.65	---	3.11	---	2,700	---	800	35	10	83	---
	05/28/89		10.46	---	2.3	---	960	---	710	25	84	80	---
	08/10/89		10.59	---	2.17	---	1,300	---	630	17	<5	46	---
	11/11/89		10.29	---	2.47	---	910	---	180	8	<2.5	15	---
	02/21/94		9.52	---	3.24	2,910	3,200	---	480	52	<5	130	---
	05/16/94		9.49	---	3.27	---	1,000	---	220	7.3	<5	28	---

Table 1. Ground Water Elevations and Analytic Results - Shell Service Station WIC# 204-2495-0101, 1800 Powell Street, Emeryville, California (continued)

Well ID	Sampling Date	Top-of-Box Elevation (ft msl)	Depth to Water (ft)	Separate Phase Hydrocarbon Tickness (ft)	Ground Water Elevation (ft msl)	TDS (ppm)	TPH-G	TPH-D	B	T	E	X	MTBE
							←			parts per billion (µg/L)			→
	05/16/94[dup]		9.49	---	3.27	---	1,000	---	280	10	<5	29	---
	08/09/94		10.37	---	2.39	4,500	400	---	27	6.6	<0.5	18	---
	11/09/94		9.58	---	3.18	4,600	650	---	170	5.3	<0.5	17	---
	02/22/95		9.02	---	3.74	---	650	---	210	10	1.2	22	---
	05/02/95		8.45	---	4.31	---	1,000	---	280	17	1.4	32	---
	08/24/95		10.02	---	2.74	---	480	---	180	11	1.0	19	---
	08/24/95[dup]		10.02	---	2.74	---	700	---	180	6.5	<0.5	17	---
	12/08/95		10.65	---	2.11	---	740	---	230	6.9	0.7	15	---
	02/29/96		9.10	---	3.66	---	740	---	260	8.1	<5.0	19	58
	05/22/96		10.14	---	2.62	---	1,200	---	350	10	<5.0	23	74
	07/30/96		10.51	---	2.25	---	530	---	220	20	6.3	36	69
	11/11/96		**10.23**	**---**	**2.53**	**---**	**540**	**---**	**140**	**3.7**	**<2.0**	**17**	**42**
S-9	10/26/84[SPH]	12.75	---	---	---	---	---	---	---	---	---	---	---
	02/09/85[SPH]		---	1.30	---	---	---	---	---	---	---	---	---
	04/27/85[SPH]		---	1.25	---	---	---	---	---	---	---	---	---
	07/06/85[SPH]		---	1.20	---	---	---	---	---	---	---	---	---
	10/24/85[SPH]		---	---	---	---	---	---	---	---	---	---	---
	01/03/86[SPH]		---	---	---	---	---	---	---	---	---	---	---
	04/11/86[SPH]		---	---	---	---	---	---	---	---	---	---	---
	07/05/86[SPH]		9.67	---	3.08	---	---	---	---	---	---	---	---
	10/18/86[SPH]		---	---	---	---	---	---	---	---	---	---	---
	01/13/87[SPH]		---	---	---	---	---	---	---	---	---	---	---
	04/22/87[SPH]		---	---	---	---	---	---	---	---	---	---	---
	07/07/87[SPH]		---	---	---	---	---	---	---	---	---	---	---
	10/10/87[SPH]		22.30	---	-9.55	---	---	---	---	---	---	---	---
	02/24/94[SPH]		---	---	---	---	---	---	---	---	---	---	---
	05/16/94[SPH]		---	1.5	---	---	---	---	---	---	---	---	---
	08/09/94[SPH]		11.80	2.0	---	---	---	---	---	---	---	---	---
	11/09/94[SPH]		---	---	---	---	---	---	---	---	---	---	---
	02/22/95[SPH]		11.40	2.38	---	---	---	---	---	---	---	---	---
	05/02/95[SPH]		11.83	2.12	---	---	---	---	---	---	---	---	---
	12/08/95[SPH]		11.92	1.06	---	---	---	---	---	---	---	---	---
	02/29/96[#]		12.10	2.79	2.88	---	---	---	---	---	---	---	---

Table 1. **Ground Water Elevations and Analytic Results** - Shell Service Station WIC# 204-2495-0101, 1800 Powell Street, Emeryville, California (continued)

Well ID	Sampling Date	Top-of-Box Elevation (ft msl)	Depth to Water (ft)	Separate Phase Hydrocarbon Tickness (ft)	Ground Water Elevation (ft msl)	TDS (ppm)	TPH-G	TPH-D	B	T	E	X	MTBE
							← parts per billion (µg/L) →						
	05/22/96#		11.71	1.75	2.44	---	---	---	---	---	---	---	---
	07/30/96#		---	---	---	---	---	---	---	---	---	---	---
	11/11/96#		**---**	**9.00**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
S-10	10/26/84	12.58	---	---	---	---	700,000	---	37,000	100,000	20,000	110,000	---
	02/09/85		---	---	---	---	6,500	---	480	700	100	1,800	---
	04/27/85		---	---	---	---	13,000	---	1,300	500	600	3,700	---
	07/06/85		---	---	---	---	14,000	---	1,300	310	270	2,400	---
	10/24/85		---	---	---	---	4,200	---	580	34	4	440	---
	01/03/86		---	---	---	---	1,700	---	360	10	7.8	170	---
	04/11/86SPH		---	0.01	---	---	---	---	---	---	---	---	---
	07/05/86SPH		9.16	0.01	3.42	---	---	---	---	---	---	---	---
	10/18/86SPH		---	0.03	---	---	---	---	---	---	---	---	---
	01/13/87SPH		---	0.03	---	---	---	---	---	---	---	---	---
	04/22/87SPH		---	0.01	---	---	---	---	---	---	---	---	---
	07/07/87SPH		9.41	0.03	3.17	---	---	---	---	---	---	---	---
	10/10/87SPH		7.77	---	4.81	---	---	---	---	---	---	---	---
	02/11/88		6.41	---	6.17	---	1,200	---	470	16	<5	14	---
	05/10/88		9.04	---	3.54	---	1,100	---	100	6	4	19	---
	08/31/88SPH		9.38	0.01	3.20	---	---	---	---	---	---	---	---
	12/03/88SPH		6.89	---	5.69	---	---	---	---	---	---	---	---
	02/16/89		7.34	---	5.24	---	530	---	89	8.5	1.6	4.5	---
	05/28/89		6.60	---	5.98	---	240	---	65	3.8	2.2	8.6	---
	08/10/89		9.09	---	3.49	---	250	---	23	4.1	<1	6.4	---
	11/11/89		6.58	---	6.00	---	320	---	1.6	1.3	1.4	6.2	---
	02/21/94		8.32	---	4.26	---	1,400	---	190	9.9	<2.5	19	---
	05/16/94		8.35	---	4.23	---	300	---	45	8.6	6.2	19	---
	08/08/94		8.66	---	3.92	---	700	---	57	14	<0.5	9.3	---
	11/09/94		6.68	---	5.90	---	640	---	130	2.0	1.6	4.1	---
	02/22/95		9.12	---	3.46	---	500	---	65	5.9	1.0	8.2	---
	05/02/95		9.50	---	3.08	---	530	---	59	2.3	0.8	8.2	---
	08/24/95		10.06	---	2.52	---	350	---	35	4.6	<0.5	6.7	---
	12/08/95		10.08	---	2.50	---	690	---	28	4.6	0.9	8.6	---
	02/29/96		5.32	---	7.26	---	430	---	32	1.8	0.5	5.8	16

Table 1. **Ground Water Elevations and Analytic Results** - Shell Service Station WIC# 204-2495-0101, 1800 Powell Street, Emeryville, California (continued)

Well ID	Sampling Date	Top-of-Box Elevation (ft msl)	Depth to Water (ft)	Separate Phase Hydrocarbon Tickness (ft)	Ground Water Elevation (ft msl)	TDS (ppm)	TPH-G	TPH-D	B	T	E	X	MTBE
							← parts per billion (µg/L) →						
	05/22/96		6.04	---	6.54	---	100	1,200	19	0.63	<0.5	1.4	5.3
	07/30/96		10.48	---	2.10	---	240	13,000	17	<1.2	<1.2	7.8	11
	11/11/96		**10.31**	**---**	**2.27**	**---**	**370**	**4,800**	**16**	**1.1**	**<0.5**	**7.0**	**94**
S-12	07/06/85	12.84	8.22	---	---	---	<250	2,200	0.71	<0.5	<0.5	<3.6	---
	11/16/85		---	---	---	---	<250	1,400	18	<2	<2	<5	---
	01/03/86		---	---	---	---	<250	---	24	2	<2	<5	---
	07/05/86		8.27	---	4.57	---	80	---	15	0.7	<0.5	2	---
	10/18/86		---	---	---	---	150	---	12	9	<0.5	3.6	---
	01/13/87		---	---	---	---	120	1,000	3.6	0.8	<0.5	2.9	---
	04/22/87		---	---	---	---	100	820	3.7	3.8	0.8	11	---
	07/07/87		9.5	---	3.34	---	70	---	2.5	0.8	<0.5	2.4	---
	10/10/87		9.9	---	2.94	---	220	2,500	2.1	0.7	<0.5	1.2	---
	02/11/88		9.43	---	3.41	---	110	2,500	0.8	<0.5	<0.5	1.3	---
	05/10/88		8.65	---	4.19	---	140	3,800[d]	0.8	0.8	<0.5	2.5	---
	08/31/88		9.86	---	2.98	---	190	2,600[d]	3	15	0.5	4.5	---
	12/03/88		9.93	---	2.91	---	180	3,900[d]	1.2	1	1	7.7	---
	02/16/89		8.08	---	4.76	---	350[e]	2,100[d]	0.6	<0.5	0.5	5.5	---
	05/28/89		9.08	---	3.76	---	290	2,200	2	1.6	4.4	6	---
	08/10/89		9.35	---	3.49	---	240	720	0.7	<0.5	<0.5	1.1	---
	11/11/89		9.28	---	3.56	---	210[e]	4,100	0.7	0.5	<0.5	3.4	---
	02/21/94		8.22	---	4.62	---	240[f]	2,200[g]	0.7	<0.5	<0.5	3.6	---
	05/16/94		8.92	---	3.92	---	96	2,200	1.5	<0.5	<0.5	2.0	---
	08/08/94		---	---	---	---	110[h]	3,500[i]	<0.5	<0.5	<0.5	<0.5	---
	11/09/94		7.56	---	5.28	---	80	5,400[i]	80	<0.5	<0.5	0.6	---
	02/22/95		7.98	---	4.86	---	110	2,900[i,j]	0.7	<0.5	<0.5	3.7	---
	02/22/95[dup]		7.98	---	4.86	---	110	3,400[i,j]	4.8	7.1	<0.5	2.1	---
	05/02/95		8.44	---	4.40	---	140	2,800	2.4	1.1	0.8	4.3	---
	08/24/95		9.00	---	3.84	---	200	1,600	19	12	5.6	24	---
	12/08/95		9.62	---	3.22	---	170	2,700	2.2	0.7	0.9	3.6	---
	02/29/96		7.64	---	5.20	---	1,700	2,200	<5.0	<5.0	<5.0	<5.0	5,600
	05/22/96		8.94	---	3.90	---	<1,000	5,700	<10	<10	<10	<10	2,400
	07/30/96		9.71	---	3.13	---	<500	3,200	<5.0	<5.0	<5.0	<5.0	1,500
	07/30/96[dup]		9.71	---	3.13	---	<500	2,900	<5.0	<5.0	<5.0	<5.0	2,000*

Table 1. **Ground Water Elevations and Analytic Results** - Shell Service Station WIC# 204-2495-0101, 1800 Powell Street, Emeryville, California (continued)

Well ID	Sampling Date	Top-of-Box Elevation (ft msl)	Depth to Water (ft)	Separate Phase Hydrocarbon Tickness (ft)	Ground Water Elevation (ft msl)	TDS (ppm)	TPH-G	TPH-D	B	T	E	X	MTBE
							← parts per billion (µg/L) →						
	11/11/96		**9.65**	**---**	**3.19**	**---**	**<500**	**6,900**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**1,400**
S-13	07/06/85	12.59	9.26	---	---	---	700	3,600	200	<5	<5	45	---
	11/16/85		---	---	---	---	1,900	2,000	700	160	70	340	---
	01/03/86		---	---	---	---	2,800	---	1,400	130	10	500	---
	07/05/86		9.47	---	3.12	---	3,100	---	1,800	60	40	270	---
	10/23/86		---	---	---	---	3,400	---	1,500	28	28	250	---
	01/13/87		---	---	---	---	1,900	900	830	15	<10	99	---
	04/22/87		---	---	---	---	2,900[e]	770[j]	1,100	20	30	140	---
	07/07/87		10.38	---	2.21	---	1,500	---	880	10	6	160	---
	10/10/87		10.78	---	1.81	---	480	2,400	830	15	<0.5	120	---
	02/11/88		10.48	---	2.11	---	1,300	1,300	510	<10	<10	86	---
	05/10/88		9.48	---	3.11	---	1,000	1,300[d]	470	<0.5	<5	50	---
	08/31/88[SPH]		10.74	---	1.85	---	---	---	---	---	---	---	---
	12/03/88		10.3	---	2.29	---	900	2,400[d]	290	4.6	<2.5	20	---
	02/16/89		7.6	---	4.99	---	840[e]	1,200[d]	310	3.5	<2.5	27	---
	05/28/89[c]		10.6	---	1.99	---	2,100	4,600	1,100	19	50	350	---
	08/10/89[c]		10.58	---	2.01	---	900	2,300	230	16	6.9	65	---
	11/11/89		9.84	---	2.75	---	2,800	2,800	200	15	8.6	58	---
	02/21/94		9.26	---	3.33	---	700	1,800[f]	200	<5	<5	45	---
	05/16/94		9.62	---	2.97	---	650	1,700	180	2.5	<2.5	21	---
	08/08/94		10.32	---	2.27	---	470	2,600[i]	12	1.5	0.5	14	---
	11/09/94[a]		---	---	---	---	---	---	---	---	---	---	---
	02/22/95		8.92	---	3.67	---	550	2,400[ij]	190	4.0	<0.5	17	---
	05/02/95		9.52	---	3.07	---	790	2,100	250	6.9	1.2	22	---
	08/24/95		10.02	---	2.57	---	330	1,500	93	<0.5	<0.5	2.0	---
	12/08/95		10.75	---	1.84	---	440	2,400	110	2.2	0.8	23	---
	02/29/96		9.02	---	3.57	---	560	2,500	130	<5.0	<5.0	30	30
	05/22/96		10.20	---	2.39	---	430	3,700	55	1.6	310	27	<5.0
	07/30/96		10.42	---	2.17	---	230	1,600	30	2.0	1.4	17	15
	11/11/96		**10.28**	**---**	**2.31**	**---**	**320**	**2,700**	**19**	**1.1**	**<0.5**	**14**	**3.5**
	11/11/96[dup]		**10.28**	**---**	**2.31**	**---**	**360**	**2,400**	**24**	**1.3**	**<0.5**	**15**	**4.5**

Table 1. **Ground Water Elevations and Analytic Results** - Shell Service Station WIC# 204-2495-0101, 1800 Powell Street, Emeryville, California (continued)

Well ID	Sampling Date	Top-of-Box Elevation (ft msl)	Depth to Water (ft)	Separate Phase Hydrocarbon Tickness (ft)	Ground Water Elevation (ft msl)	TDS (ppm)	TPH-G	TPH-D	B	T	E	X	MTBE
							← parts per billion (µg/L) →						
S-14	11/16/85	12.69	---	---	---	---	<250	400	3	<2	<2	<5	---
	01/03/86		---	---	---	---	<250	---	3	2	<2	<5	---
	04/22/87		---	---	---	---	1,200	18,000	7.4	2.7	15	110	---
	07/07/87		10.32	---	2.37	---	190	---	6.5	0.6	1.9	26	---
	10/10/87		10.77	---	1.92	---	4,900	21,000	7	1.2	<0.5	25	---
	02/11/88		10.4	---	2.29	---	370	12,000[c]	4.6	<2.5	<2.5	26	---
	05/10/88		9.66	---	3.03	---	660	2,200[d]	2.9	<2.5	<2.5	24	---
	08/31/88		10.74	---	1.95	---	700	7,900	3.2	<2.5	<2.5	15	---
	12/03/88		10.69	---	2.00	---	210	11,000[d]	<0.5	<0.5	0.8	6.8	---
	02/16/89		9.69	---	3.00	---	130[e]	5,700[d]	<0.5	<0.5	<0.5	4.4	---
	05/28/89		10.42	---	2.27	---	770	5,200	<0.5	<0.5	<0.5	4.5	---
	08/10/89		10.54	---	2.15	---	920	8,800	<1	<1	1.6	17	---
	11/11/89		9.91	---	2.78	---	710	28,000	20	57	25	69	---
	02/21/94		9.3	---	3.09	---	2,800	3,600	<5	<5	<5	14	---
	02/21/94		9.30	---	3.39	---	2,300[f]	3,600[g]	<5.0	<5	<5	14	---
	05/16/94		9.54	---	3.15	---	310	6,700	<2.5	<2.5	<2.5	3.1	---
	08/08/94		10.29	---	2.4	---	480[k]	2,900	<0.5	0.6	<0.5	0.8	---
	08/08/94[dup]		10.29	---	2.4	---	590[k]	2,900	<0.5	0.6	<0.5	1.5	---
	11/09/94		9.52	---	3.07	---	170[k]	6,400[i]	0.7	<0.5	<0.5	2.7	---
	02/22/95		9.18	---	3.51	---	550	7,000[i,j]	<0.5	<0.5	<0.5	1.6	---
	05/02/95		9.49	---	3.2	---	210	2,300	1.0	0.9	1.1	6.3	---
	05/02/95[dup]		9.49	---	3.2	---	160	2,600	0.6	0.6	0.7	3.8	---
	08/24/95		9.94	---	2.75	---	180	3,700	0.5	<0.5	<0.5	1.3	---
	12/08/95		10.65	---	2.04	---	190	4,900	1.0	<0.5	0.6	4.6	---
	02/29/96		8.90	---	3.79	---	200	11,000	<0.5	<0.5	<0.5	2.0	3.0
	05/22/96		10.10	---	2.59	---	93	3,800	<0.5	<0.5	<0.5	1.6	<2.5
	05/22/96[dup]		10.10	---	2.59	---	150	3,900	<0.5	<0.5	<0.5	1.8	<2.5
	07/30/96		10.37	---	2.32	---	<50	2,500	<0.5	<0.5	<0.5	0.89	<2.5
	11/11/96		**2.4**	**---**	**2.40**	**---**	**2,600**	**27,000**	**<2.5**	**<2.5**	**<2.5**	**3.9**	**<12**
Trip Blank	02/21/94		---	---	---	---	<50	---	<0.5	<0.5	<0.5	<0.5	---
	02/24/94		---	---	---	---	<50	---	<0.5	<0.5	<0.5	<0.5	---
	05/16/94		---	---	---	---	<50	---	<0.5	<0.5	<0.5	<0.5	---
	08/08/94		---	---	---	---	<50	---	<0.5	<0.5	<0.5	<0.5	---

Table 1. **Ground Water Elevations and Analytic Results** - Shell Service Station WIC# 204-2495-0101, 1800 Powell Street, Emeryville, California (continued)

Well ID	Sampling Date	Top-of-Box Elevation (ft msl)	Depth to Water (ft)	Separate Phase Hydrocarbon Tickness (ft)	Ground Water Elevation (ft msl)	TDS (ppm)	TPH-G	TPH-D	B	T	E	X	MTBE
							←			parts per billion (µg/L)			→
	11/09/94		---	---	---	---	<50	---	<0.5	<0.5	<0.5	<0.5	---
	02/22/95		---	---	---	---	<50	---	<0.5	0.9	<0.5	<0.5	---
	05/02/95		---	---	---	---	<50	---	<0.5	<0.5	<0.5	<0.5	---
	05/10/95		---	---	---	---	<50	---	<0.5	<0.5	<0.5	<0.5	---
	12/08/95		---	---	---	---	<50	---	<0.5	<0.5	<0.5	<0.5	---
MCLs				---		---	NE	NE	1	100[c]	680	1,750	NE

Table 1. **Ground Water Elevations and Analytic Results** - Shell Service Station WIC# 204-2495-0101, 1800 Powell Street, Emeryville, California (continued)

Abbreviations:

ft msl = Feet above mean sea level
TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
TPH-D = Total petroleum hydrocarbons as diesel by Modified EPA Method 8015
B = Benzene by EPA Method 8020
T = Toluene by EPA Method 8020
E = Ethylbenzene by EPA Method 8020
X = Xylenes by EPA Method 8020
MTBE = Methyl tertiary butyl ether by EPA Method 8020
MCLs = Maximum contaminant levels for drinking water
NE = Not established
<n = Not detected at a detection limit of n ppb
dup = Duplicate sample
SPH = Separate-phase hydrocarbons present, often unable to measure thickness accurately
--- = Not analyzed/not measured

Notes:

a = Well inaccessible
c = Recommended action level; MCL not established
d = Compounds detected within the chromatographic range appear to be weathered diesel
e = Compounds detected within the chromatographic range of gasoline but not characteristic of the standard gasoline pattern.
f = The concentrations reported as gasoline for samples S-12 and S-14 are primarily due to the presence of a discrete peak
g = The concentrations reported as diesel for samples S-12, S-13 and S-14 are due to the presence of a combination of diesel and a heavier petroleum product of hydrocarbon range C18 - C36, possibly motor oil
h = The result for gasoline is an unknown hydrocarbon which consists of several peaks
i = The positive result appears to be a heavier hydrocarbon than diesel
j = Compounds detected within the chromatographic range of diesel appears to include gasoline compounds.
k = The positive result appears to be a heavier hydrocarbon than gasoline
* = MTBE confirmed by EPA Method 8260
# = Tar-like substance in well, probably from previous landfill activities; not gasoline

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 3, 1996

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

Attn: R. Jeff Granberry

Shell WIC #204-2495-0101
1800 Powell Street
Emeryville, California

4th Quarter 1996

Quarterly Groundwater Monitoring Report 961111-F-2

Blaine Tech Services, Inc. performs environmental sampling and documentation as an independent third party. Copies of our Sampling Report along with the laboratory's Certified Analytical Report are forwarded to the consultant overseeing work at this site. Submission of the assembled documents to interested regulatory agencies will be made by the designated consultant.

Groundwater monitoring at this site was performed in accordance with Standard Operating Procedures provided to the interested regulatory agencies. If you have any questions about the work performed at this site please call me at (408) 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)
S-5	11/11/96	INACCESSIBLE						
S-8	11/11/96	TOB	ODOR	NONE	--	--	10.23	18.66
S-9	11/11/96	TOB	FREE PRODUCT	--	9.0	2000	--	--
S-10	11/11/96	TOB	ODOR	NONE	--	--	10.31	19.92
S-12	11/11/96	TOB	--	NONE	--	--	9.65	24.38
S-13 *	11/11/96	TOB	--	NONE	--	--	10.28	19.89
S-14	11/11/96	TOB	SHEEN	--	--	--	10.29	23.78

* Sample DUP was a duplicate sample taken from well S-13.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 961111-F2

Date: 11/11/96
Page 1 of 1

Site Address: 1800 Powell Street, Emeryville

WIC#: 204-2495-0101

Shell Engineer: ~~Dan Kirk~~ R. Jeff Granberry
Phone No.: (510) 675-6168
Fax #: 675-6160 72

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

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

Comments:

Sampled by: TG

Printed Name: Tim GRAF

LAB: SEQUOIA

Analysis Required: 9611689

CHECK ONE (1) BOX ONLY	CT/DT
Quarterly Monitoring [X]	5461
Site Investigation [ ]	5441
Soil Classify/Disposal [ ]	5442
Water Classify/Disposal [ ]	5443
Soil/Air Rem. or Sys. O & M [ ]	5462
Water Rem. or Sys. O & M [ ]	5463
Other [ ]	

TURN AROUND TIME: 24 hours [ ] 48 hours [ ] 16 days [X] (Normal) Other [ ]

NOTE: Notify Lab as soon as Possible of 24/48 hrs. 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		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
1 S-8	11/11			W		3						X	X							
2 S-10	|			|		5		X				X	X							
3 S-12	|			|		5		X				X	X							
4 S-13	|			|		5		X				X	X							
5 S-14	|			|		5		X				X	X							
6 EB	|			|		5		X				X	X							
7 Dup	11/11			W		5		X				X	X							

Relinquished By (signature)	Printed Name	Date / Time	Received (signature)	Printed Name	Date / Time
Tim Graf	Tim GRAF	Date: 11-12-96 Time: 1000	Madison Weis	M. Heid	Date: 11-12-96 Time: 1000
Michael Weis		Date: Time:			Date: Time:
		Date: Time:	[signature]	R. Harling	Date: 11/12/96 Time: 1115

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, Emeryville, 961111-F2

Enclosed are the results from samples received at Sequoia Analytical on November 12, 1996. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9611689 -01	LIQUID, S-8	11/11/96	TPGBMW Purgeable TPH/BTEX
9611689 -02	LIQUID, S-10	11/11/96	TPHD_W Extractable TPH
9611689 -02	LIQUID, S-10	11/11/96	TPGBMW Purgeable TPH/BTEX
9611689 -03	LIQUID, S-12	11/11/96	TPHD_W Extractable TPH
9611689 -03	LIQUID, S-12	11/11/96	TPGBMW Purgeable TPH/BTEX
9611689 -04	LIQUID, S-13	11/11/96	TPHD_W Extractable TPH
9611689 -04	LIQUID, S-13	11/11/96	TPGBMW Purgeable TPH/BTEX
9611689 -05	LIQUID, S-14	11/11/96	TPHD_W Extractable TPH
9611689 -05	LIQUID, S-14	11/11/96	TPGBMW Purgeable TPH/BTEX
9611689 -06	LIQUID, EB	11/11/96	TPHD_W Extractable TPH
9611689 -06	LIQUID, EB	11/11/96	TPGBMW Purgeable TPH/BTEX
9611689 -07	LIQUID, Dup	11/11/96	TPHD_W Extractable TPH
9611689 -07	LIQUID, Dup	11/11/96	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 Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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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, Emeryville, 961111-F2	Sampled: 11/11/96
985 Timothy Drive	Sample Descript: S-8	Received: 11/12/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 11/18/96
Attention: Jim Keller	Lab Number: 9611689-01	Reported: 11/25/96

QC Batch Number: GC111896BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**200**	**540**
Methyl t-Butyl Ether	**10**	**42**
Benzene	**2.0**	**140**
Toluene	**2.0**	**3.7**
Ethyl Benzene	2.0	N.D.
Xylenes (Total)	**2.0**	**17**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	115

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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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, Emeryville, 961111-F2	Sampled: 11/11/96
985 Timothy Drive	Sample Descript: S-10	Received: 11/12/96
San Jose, CA 95133	Matrix: LIQUID	Extracted: 11/14/96
	Analysis Method: EPA 8015 Mod	Analyzed: 11/20/96
Attention: Jim Keller	Lab Number: 9611689-02	Reported: 11/25/96

QC Batch Number: GC1114960HBPEXZ
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	**500**	**4800**
Chromatogram Pattern:	**C9-C24**	**W-Diesel**

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	95

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

SEQUOIA ANALYTICAL - ELAP #1210

David O. Richter for

Peggy Penner
Project Manager

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	Client Proj. ID: Shell, Emeryville, 961111-F2	Sampled: 11/11/96
985 Timothy Drive	Sample Descript: S-10	Received: 11/12/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 11/19/96
Attention: Jim Keller	Lab Number: 9611689-02	Reported: 11/25/96

QC Batch Number: GC111996BTEX17A
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**	**370**
Methyl t-Butyl Ether	**2.5**	**94**
Benzene	**0.50**	**16**
Toluene	**0.50**	**1.1**
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	**0.50**	**7.0**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	104

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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	Client Proj. ID: Shell, Emeryville, 961111-F2	Sampled: 11/11/96
985 Timothy Drive	Sample Descript: S-12	Received: 11/12/96
San Jose, CA 95133	Matrix: LIQUID	Extracted: 11/14/96
	Analysis Method: EPA 8015 Mod	Analyzed: 11/23/96
Attention: Jim Keller	Lab Number: 9611689-03	Reported: 11/25/96

QC Batch Number: GC1114960HBPEXZ
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	**250**	**6900**
Chromatogram Pattern:		**C9-C24**

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	191 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

David O. Richard for

Peggy Penner
Project Manager

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	Client Proj. ID: Shell, Emeryville, 961111-F2	Sampled: 11/11/96
985 Timothy Drive	Sample Descript: S-12	Received: 11/12/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 11/18/96
Attention: Jim Keller	Lab Number: 9611689-03	Reported: 11/25/96

QC Batch Number: GC111896BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	N.D.
Methyl t-Butyl Ether	**25**	**1400**
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	77

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

SEQUOIA ANALYTICAL - ELAP #1210

David D. Duncan for

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Technical Services	Client Proj. ID: Shell, Emeryville, 961111-F2	Sampled: 11/11/96
985 Timothy Drive	Sample Descript: S-13	Received: 11/12/96
San Jose, CA 95133	Matrix: LIQUID	Extracted: 11/14/96
	Analysis Method: EPA 8015 Mod	Analyzed: 11/20/96
Attention: Jim Keller	Lab Number: 9611689-04	Reported: 11/25/96

QC Batch Number: GC1114960HBPEXZ
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	2700
Chromatogram Pattern:	C9-C24	W-Diesel
Unidentified HC		+C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	135

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, Emeryville, 961111-F2	Sampled: 11/11/96
985 Timothy Drive	Sample Descript: S-13	Received: 11/12/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 11/18/96
Attention: Jim Keller	Lab Number: 9611689-04	Reported: 11/25/96

QC Batch Number: GC111896BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**320**
Methyl t-Butyl Ether	**2.5**	**3.5**
Benzene	**0.50**	**19**
Toluene	**0.50**	**1.1**
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	**0.50**	**14**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	76

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, Emeryville, 961111-F2	Sampled: 11/11/96
985 Timothy Drive	Sample Descript: S-14	Received: 11/12/96
San Jose, CA 95133	Matrix: LIQUID	Extracted: 11/14/96
	Analysis Method: EPA 8015 Mod	Analyzed: 11/21/96
Attention: Jim Keller	Lab Number: 9611689-05	Reported: 11/25/96

QC Batch Number: GC1114960HBPEXZ
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	**500**	**27000**
Chromatogram Pattern:		
Weathered Diesel		**C9-C24**

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	136

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, Emeryville, 961111-F2	Sampled: 11/11/96
985 Timothy Drive	Sample Descript: S-14	Received: 11/12/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 11/18/96
Attention: Jim Keller	Lab Number: 9611689-05	Reported: 11/25/96

QC Batch Number: GC111896BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**250**	**2600**
Methyl t-Butyl Ether	12	N.D.
Benzene	2.5	N.D.
Toluene	2.5	N.D.
Ethyl Benzene	2.5	N.D.
Xylenes (Total)	**2.5**	**3.9**
Chromatogram Pattern:		
Unidentified HC		**>C9**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	73

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, Emeryville, 961111-F2	Sampled: 11/11/96
985 Timothy Drive	Sample Descript: EB	Received: 11/12/96
San Jose, CA 95133	Matrix: LIQUID	Extracted: 11/14/96
	Analysis Method: EPA 8015 Mod	Analyzed: 11/21/96
Attention: Jim Keller	Lab Number: 9611689-06	Reported: 11/25/96

QC Batch Number: GC1114960HBPEXZ
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	**50**	**120**
Chromatogram Pattern:		
Unidentified HC		**C9-C24**
Discrete Peak		**@C13**

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	124

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, Emeryville, 961111-F2	Sampled: 11/11/96
985 Timothy Drive	Sample Descript: EB	Received: 11/12/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 11/15/96
Attention: Jim Keller	Lab Number: 9611689-06	Reported: 11/25/96

QC Batch Number: GC111596BTEX21A
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	91

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

SEQUOIA ANALYTICAL - ELAP #1210

David D. Richard for

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, Emeryville, 961111-F2	Sampled: 11/11/96
985 Timothy Drive	Sample Descript: Dup	Received: 11/12/96
San Jose, CA 95133	Matrix: LIQUID	Extracted: 11/14/96
	Analysis Method: EPA 8015 Mod	Analyzed: 11/22/96
Attention: Jim Keller	Lab Number: 9611689-07	Reported: 11/25/96

QC Batch Number: GC1114960HBPEXZ
Instrument ID: GCHP19B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	2400
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	139

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, Emeryville, 961111-F2	Sampled: 11/11/96
985 Timothy Drive	Sample Descript: Dup	Received: 11/12/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 11/18/96
Attention: Jim Keller	Lab Number: 9611689-07	Reported: 11/25/96

QC Batch Number: GC111896BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**360**
Methyl t-Butyl Ether	**2.5**	**4.5**
Benzene	**0.50**	**24**
Toluene	**0.50**	**1.3**
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	**0.50**	**15**
Chromatogram Pattern:		**Gas**

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

Sequoia Analytical

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

Client Project ID: Shell Emeryville / 961111-F2
Matrix: Liquid
Work Order #: 9611689 -01, 03

Reported: Nov 27, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC111896BTEX21A	GC111896BTEX21A	GC111896BTEX21A	GC111896BTEX21A
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 #:	961138813	961138813	961138813	961138813
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/18/96	11/18/96	11/18/96	11/18/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	9.9	9.9	30
MS % Recovery:	110	99	99	100
Dup. Result:	10	9.7	9.7	29
MSD % Recov.:	100	97	97	97
RPD:	9.5	2.0	2.0	3.4
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK111896	BLK111896	BLK111896	BLK111896
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/18/96	11/18/96	11/18/96	11/18/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.5	9.0	9.1	28
LCS % Recov.:	95	90	91	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

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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Blaine Tech Services, Inc.	Client Project ID:	Shell Emeryville / 961111-F2	
985 Timothy Drive	Matrix:	Liquid	
San Jose, CA 95133			
Attention: Jim Keller	Work Order #:	9611689-02	Reported: Nov 27, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC111996BTEX17A	GC111996BTEX17A	GC111996BTEX17A	GC111996BTEX17A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	Y. Arteaga	Y. Arteaga	Y. Arteaga	Y. Arteaga
MS/MSD #:	961138818	961138818	961138818	961138818
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/19/96	11/19/96	11/19/96	11/19/96
Analyzed Date:	11/19/96	11/19/96	11/19/96	11/19/96
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	10	10	30
MS % Recovery:	100	100	100	100
Dup. Result:	10	10	10	29
MSD % Recov.:	100	100	100	97
RPD:	0.0	0.0	0.0	3.4
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK111996	BLK111996	BLK111996	BLK111996
Prepared Date:	11/19/96	11/19/96	11/19/96	11/19/96
Analyzed Date:	11/19/96	11/19/96	11/19/96	11/19/96
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	10	10	30
LCS % Recov.:	100	100	100	100
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

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.

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Sequoia Analytical

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Blaine Tech Services, Inc.	Client Project ID:	Shell Emeryville / 961111-F2	
985 Timothy Drive	Matrix:	Liquid	
San Jose, CA 95133			
Attention: Jim Keller	Work Order #:	9611689-04, 05, 07	Reported: Nov 27, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC111896BTEX02A	GC111896BTEX02A	GC111896BTEX02A	GC111896BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	Y. Arteaga	Y. Arteaga	Y. Arteaga	Y. Arteaga
MS/MSD #:	961138818	961138818	961138818	961138818
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/18/96	11/18/96	11/18/96	11/18/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	9.3	9.0	25
MS % Recovery:	100	93	90	83
Dup. Result:	11	9.6	9.2	26
MSD % Recov.:	110	96	92	87
RPD:	9.5	3.2	2.2	3.9
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK111896	BLK111896	BLK111896	BLK111896
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/18/96	11/18/96	11/18/96	11/18/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	11	9.8	9.4	26
LCS % Recov.:	110	98	94	87
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

David D. Richter for

Peggy Penner
Project Manager

Please Note:
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Sequoia Analytical

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Blaine Tech Services, Inc.	Client Project ID:	Shell Emeryville / 961111-F2	
985 Timothy Drive	Matrix:	Liquid	
San Jose, CA 95133			
Attention: Jim Keller	Work Order #:	9611689-06	Reported: Nov 27, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC111596BTEX21A	GC111596BTEX21A	GC111596BTEX21A	GC111596BTEX21A
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 #:	961138812	961138812	961138812	961138812
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/15/96	11/15/96	11/15/96	11/15/96
Analyzed Date:	11/15/96	11/15/96	11/15/96	11/15/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.4	8.8	8.9	27
MS % Recovery:	94	88	89	90
Dup. Result:	9.2	8.7	8.9	27
MSD % Recov.:	92	87	89	90
RPD:	2.2	1.1	0.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK111596	BLK111596	BLK111596	BLK111596
Prepared Date:	11/15/96	11/15/96	11/15/96	11/15/96
Analyzed Date:	11/15/96	11/15/96	11/15/96	11/15/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.4	8.7	8.9	27
LCS % Recov.:	94	87	89	90
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

Peggy Penner
Project Manager

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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.

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Blaine Tech Services, Inc.	Client Project ID:	Shell Emeryville / 961111-F2	
985 Timothy Drive	Matrix:	Liquid	
San Jose, CA 95133			
Attention: Jim Keller	Work Order #:	9611689-01-07	Reported: Nov 27, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Diesel
QC Batch#:	GC1114960HBPEXZ
Analy. Method:	EPA 8015M
Prep. Method:	EPA 3520
Analyst:	B. Sullivan
MS/MSD #:	961139103
Sample Conc.:	N.D.
Prepared Date:	11/14/96
Analyzed Date:	11/20/96
Instrument I.D.#:	GCHP19
Conc. Spiked:	1000 µg/L
Result:	1300
MS % Recovery:	130
Dup. Result:	1300
MSD % Recov.:	130
RPD:	0.0
RPD Limit:	0-50

LCS #:	BLK111496
Prepared Date:	11/14/96
Analyzed Date:	11/20/96
Instrument I.D.#:	GCHP19
Conc. Spiked:	1000 µg/L
LCS Result:	1300
LCS % Recov.:	130

MS/MSD	50-150
LCS	60-140
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

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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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: Jim Keller

Client Proj. ID: Shell, Emeryville, 961111-F2

Lab Proj. ID: 9611689

Received: 11/12/96

Reported: 11/25/96

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 21 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

TPH-Extractables EPA Method 8015 (modified):
The surrogate in sample S-12 was high, outside QC limits at 191%.

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager