Weiss Associates Environmental and Geologic Services

5500 Shellmound Street, Emeryville, CA 94608-2411 Fax: 510-547-5043 Phone: **510-450-6000**

July 24, 1995

Brian Oliva
Alameda County Department
of Environmental Health
1131 Harbor Bay Parkway
Suite 250
Alameda, CA 94502

Re: **Second Quarter 1995**
Shell Service Station
WIC #204-2495-0101
1800 Powell Street
Emeryville, California
WA Job #81-0794-205

Dear Mr. Oliva:

This status report satisfies the quarterly reporting requirements prescribed by California Administrative Code Title 23 Waters, Division 3, Chapter 16, Article 5, Section 2652.d.

Second Quarter 1995 Activities:

- Blaine Tech Services, Inc. (BTS) of San Jose, California measured ground water depths and collected ground water samples from the site wells (Figures 1 and 2). The BTS report describing these activities, including the analytic report for the ground water samples, are included as Attachment A.

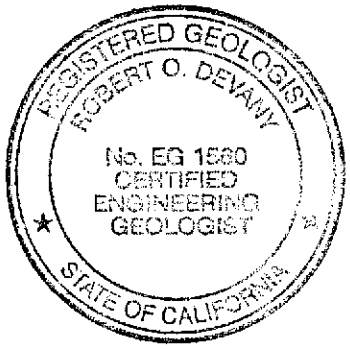
- Weiss Associates (WA) calculated ground water elevations, compiled the analytic data (Table 1) and prepared a map showing ground water elevations, and benzene concentrations (Figure 2).

Anticipated Third Quarter 1995 Activities:

- WA will submit a report presenting the results of the third quarter 1995 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results, ground water elevations and a

ground water elevation contour and benzene concentration in ground water map.

Please call if you have any questions.



Sincerely,
Weiss Associates

Grady S. Glasser
Technical Assistant

Robert O. Devany, C.E.G.
Senior Project Hydrogeologist

Attachments: A - BTS Ground Water Monitoring Report

cc: Dan Kirk, Shell Oil Company, P.O. Box 4023, Concord, California 94524
Kevin Graves, Regional Water Quality Control Board - San Francisco Bay Region, 2101 Webster Street, Suite 500, Oakland, California 94612

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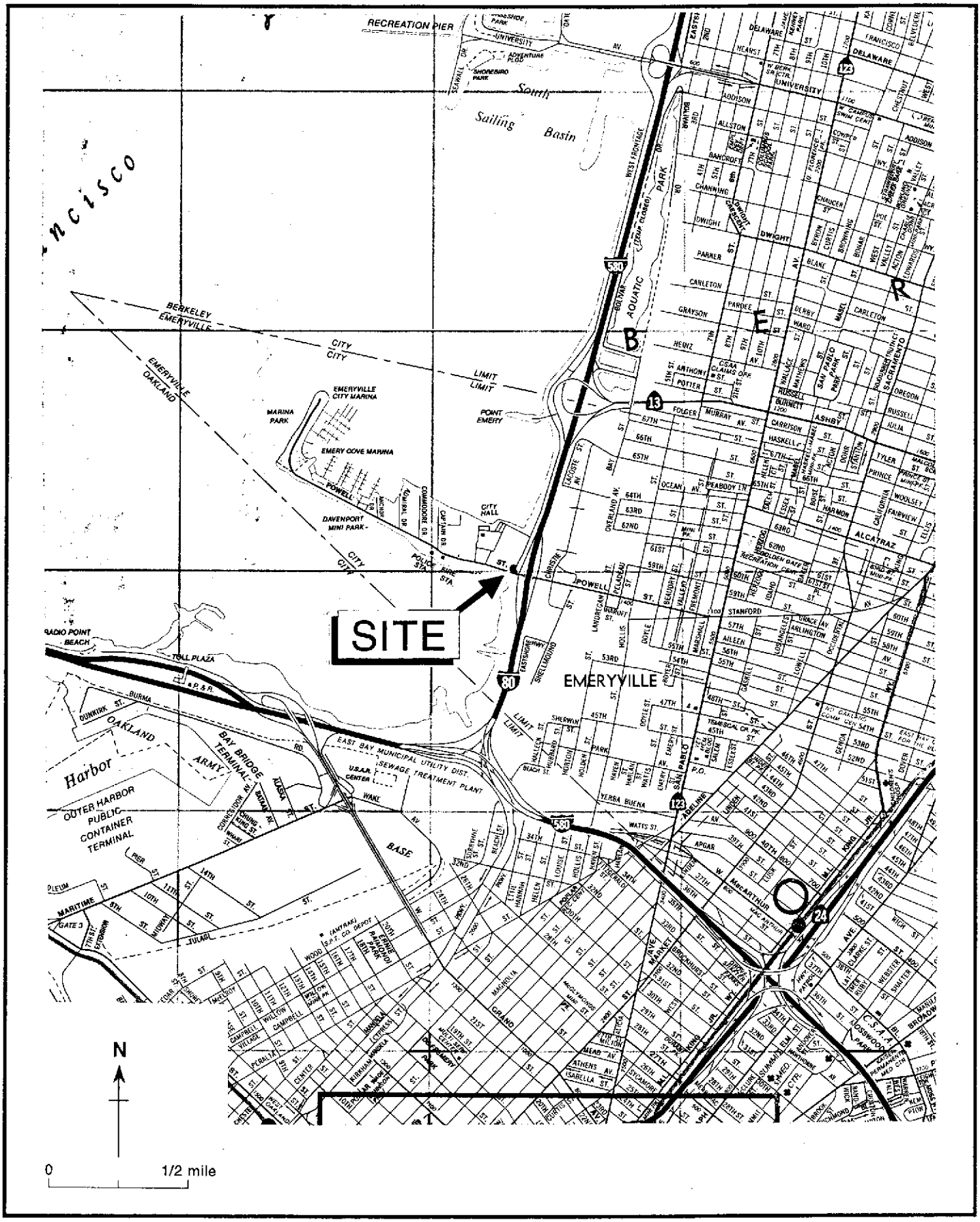

Figure 1. Site Location Map - Shell Service Station WIC# 204-2495-01, 1800 Powell Street, Emeryville, California

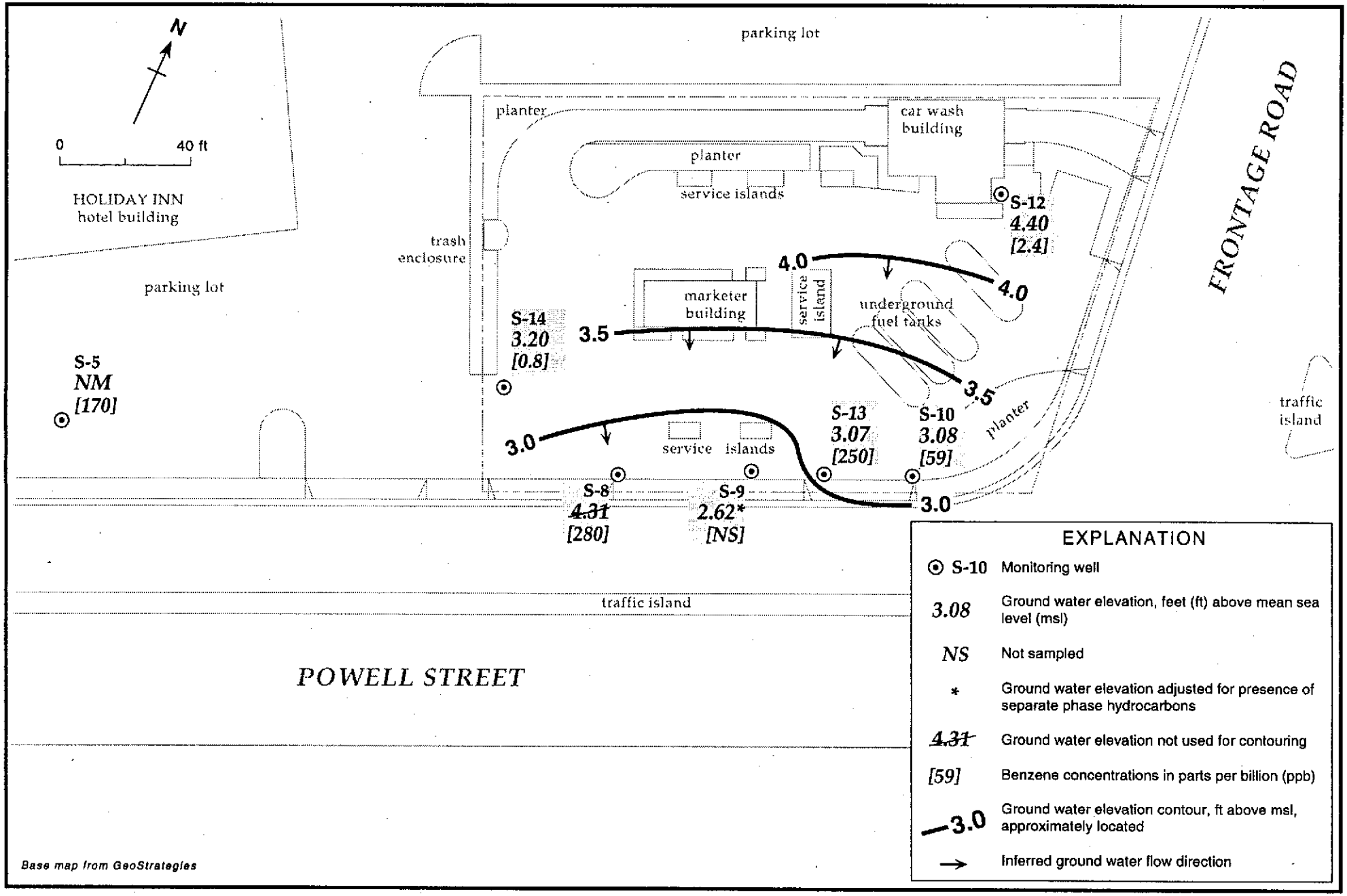

Figure 2. Monitoring Well Locations, Ground Water Elevation Contours, and Benzene Concentrations in Ground Water - May 2, 1995 - Shell Service Station - WIC# 204-2495-0107, 1800 Powell Street, Emeryville, California

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 (ft msl)	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft msl)	TDS (ppm)	TPH-G	TPH-D	B	T	E	X
							← 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**

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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 (ft msl)	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft msl)	TDS (ppm)	TPH-G	TPH-D	B	T	E	X
							← parts per billion (µg/L) →					
S-6[b]	04/27/85		---	---	---	---	6,500	---	2,400	30	50	210
	07/06/85		---	---	---	---	3,700	---	1,700	34	55	200
	10/24/85		---	---	---	---	<50	---	23	<0.5	<5	10
	11/09/85[b]		---	---	---	---	---	---	---	---	---	---
S-7[b]	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		---	---	---	---	6,200	---	2,200	130	190	660
	11/09/85[b]		---	---	---	---	---	---	---	---	---	---
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

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 (ft msl)	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft msl)	TDS (ppm)	TPH-G	TPH-D	B	T	E	X
							← parts per billion (µg/L) →					
	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
	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**
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	0.95	---	---	---	---	---	---	---
	11/09/94[SPH]		---	---	---	---	---	---	---	---	---	---
	02/22/95[SPH]		11.40	2.38	3.25	---	---	---	---	---	---	---
	05/02/95[SPH]		**11.83**	**2.12**	**2.62**	**—**	**—**	**—**	**—**	**—**	**—**	**—**

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 (ft msl)	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft msl)	TDS (ppm)	TPH-G	TPH-D	B	T	E	X
							← parts per billion (µg/L) →					
S-10	10/26/84	12.58	---	---	---	---	700,000	---	37,000	100,000	20,000	110000
	02/09/85		---	---	---	---	6,500	---	480	700	100	1800
	04/27/85		---	---	---	---	13,000	---	1,300	500	600	3700
	07/06/85		---	---	---	---	14,000	---	1,300	310	270	2400
	10/24/85		---	---	---	---	4,200	---	580	34	4	440
	01/03/86		---	---	---	---	1,700	---	360	10	7.8	170
	04/11/86[SPH]		---	0.01	---	---	---	---	---	---	---	---
	07/05/86[SPH]		9.16	0.01	3.42	---	---	---	---	---	---	---
	10/18/86[SPH]		---	0.03	---	---	---	---	---	---	---	---
	01/13/87[SPH]		---	0.03	---	---	---	---	---	---	---	---
	04/22/87[SPH]		---	0.01	---	---	---	---	---	---	---	---
	07/07/87[SPH]		9.41	0.03	3.17	---	---	---	---	---	---	---
	10/10/87[SPH]		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
	08/31/88[SPH]		9.38	0.01	3.20	---	---	---	---	---	---	---
	12/03/88[SPH]		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[c]		6.58	---	6	---	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**

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 (ft msl)	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft msl)	TDS (ppm)	TPH-G	TPH-D	B	T	E	X
							← parts per billion (µg/L) →					
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**
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

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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 (ft msl)	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft msl)	TDS (ppm)	TPH-G	TPH-D	B	T	E	X
							← parts per billion (µg/L) →					
	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[i,j]	190	4.0	<0.5	17
	05/02/95		**9.52**	**---**	**3.07**	**---**	**790**	**2,100**	**250**	**6.9**	**1.2**	**22**
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[e]	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

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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 (ft msl)	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft msl)	TDS (ppm)	TPH-G	TPH-D	B	T	E	X
							← parts per billion (µg/L) →					
	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[l]	<0.5	0.6	<0.5	0.8
	08/08/94[dup]		10.29	---	2.4	---	590[k]	2,900[l]	<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**
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
	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**
DTSC MCLs				---		---	NE	NE	1	100[e]	680	1,750

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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
DTSC MCLs = California Department of Toxic Substances Control 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
b = Well abandoned on 11/09/85
c = DTSC 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 ofseveral 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
l = Maximum concentration suitable for domestic water supply as defined by Regional Water Quality Control Board Resolution #89-39

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ATTACHMENT A

BTS GROUND WATER MONITORING REPORT

BLAINE
TECH SERVICES INC.

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

June 1, 1995

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

Attn: Daniel T. Kirk

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

QUARTER:
2nd quarter of 1995

QUARTERLY GROUNDWATER SAMPLING REPORT 950502-K-1

This report contains data collected during routine inspection, gauging and sampling of groundwater monitoring wells performed by Blaine Tech Services, Inc. in response to the request of the consultant who is overseeing work at this site on behalf of our mutual client, Shell Oil Company. Data collected in the course of our field work is presented in a TABLE OF WELL GAUGING DATA. The field information was collected during our preliminary gauging and inspection of the wells, the subsequent evacuation of each well prior to sampling, and at the time of sampling.

Measurements taken include the total depth of the well and the depth to water. The surface of water was further inspected for the presence of immiscibles which may be present as a thin film (a sheen on the surface of the water) or as a measurable free product zone (FPZ). At intervals during the evacuation phase, the purge water was monitored with instruments that measure electrical conductivity (EC), potential hydrogen (pH), temperature (degrees Fahrenheit), and turbidity (NTU). In the interest of simplicity, fundamental information is tabulated here, while the bulk of the information is turned over directly to the consultant who is making professional interpretations and evaluations of the conditions at the site.

STANDARD PROCEDURES

Evacuation

Groundwater wells are thoroughly purged before sampling to insure that the sample is collected from water that has been newly drawn into the well from the surrounding geologic formation. The selection of equipment to evacuate each well is based on the physical characteristics of the well and what is known about the performance of the formation in which the well has been installed. There are several suitable devices which can be used for evacuation. The most commonly employed devices are air or gas actuated pumps, electric submersible pumps, and hand or mechanically actuated bailers. Our personnel frequently employ USGS/Middleburg positive displacement pumps or similar air actuated pumps which do not agitate the water standing in the well.

Normal evacuation removes three case volumes of water from the well. More than three case volumes of water are removed in cases where more evacuation is needed to achieve stabilization of water parameters and when requested by the local implementing agency. Less water may be obtained in cases where the well dewaters and does not recharge to 80% of its original volume within two hours and any additional time our personnel have reason to remain at the site. In such cases, our personnel return to the site within twenty four hours and collect sample material from the water which has recharged into the well case.

Decontamination

All apparatus is brought to the site in clean and serviceable condition. The equipment is decontaminated after each use and before leaving the site. Effluent water from purging and on-site equipment cleaning is collected and transported to Shell's Martinez Manufacturing Complex in Martinez, California

Free Product Skimmer

The column headed, VOLUME OF IMMISCIBLES REMOVED (ml) is included in the TABLE OF WELL GAUGING DATA to cover situations where a free product skimming device must be removed from the well prior to gauging. Skimmers are installed in wells with a free product zone on the surface of the water. The skimmer is a free product recovery device which often prevents normal well gauging and free product zone measurements. The 2.0" and 3.0" PetroTraps fall into the category of devices that obstruct normal gauging. In cases where the consultant elects to have our personnel pull the skimmers out of the well and gauge the well, our personnel perform the additional task of draining the accumulated free product out of the PetroTrap before putting it back in the well. This

recovered free product is measured and logged in the VOLUME OF IMMISCIBLES REMOVED column. Gauging at such sites is performed in accordance with specific directions from the professional consulting firm overseeing work at the site on Shell's behalf.

Sample Containers

Sample material is collected in specially prepared containers which are provided by the laboratory that performs the analyses.

Sampling

Sample material is collected in stainless steel bailer type devices normally fitted with both a top and a bottom check valve. Water is promptly decanted into new sample containers in a manner which reduces the loss of volatile constituents and follows the applicable EPA standard for handling volatile organic and semi-volatile compounds.

Following collection, samples are promptly placed in an ice chest containing prefrozen blocks of an inert ice substitute such as Blue Ice or Super Ice. The samples are maintained in either an ice chest or a refrigerator until delivered into the custody of the laboratory.

Sample Designations

All sample containers are identified with a site designation and a discrete sample identification number specific to that particular groundwater well. Additional standard notations (e.g. time, date, sampler) are also made on the label.

Chain of Custody

Samples are continuously maintained in an appropriate cooled container while in our custody and until delivered to the laboratory under a standard Shell Oil Company chain of custody. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date, and signature of the person releasing the samples followed by the time, date and signature of the person accepting custody of the samples).

Hazardous Materials Testing Laboratory

The samples obtained at this site were delivered to National Environmental Testing, Inc. in Santa Rosa, California. NET is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1386.

Objective Information Collection

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. performs no consulting and does not become involved in the marketing or installation of remedial systems of any kind. Blaine Tech Services, Inc. is concerned only with the generation of objective information, not with the use of that information to support evaluations and recommendations concerning the environmental condition of the site. Even the straightforward interpretation of objective analytical data is better performed by interested regulatory agencies, and those engineers and geologists who are engaged in the work of providing professional opinions about the site and proposals to perform additional investigation or design remedial systems.

Reportage

Submission of this report and the attached laboratory report to interested regulatory agencies is handled by the consultant in charge of the project. Any professional evaluations or recommendations will be made by the consultant under separate cover.

Please call if we can be of any further assistance.

Richard C. Blaine

RCB/lp

attachments: table of well gauging data
chain of custody
certified analytical report

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

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	5/2/95	INACCESSIBLE						
S-8	5/2/95	TOB	ODOR	NONE	--	--	8.45	18.52
S-9	5/2/95	TOB	FREE PRODUCT	9.71	2.12	--	11.83	--
S-10	5/2/95	TOB	ODOR	NONE	--	--	9.50	19.31
S-12	5/2/95	TOB	ODOR	NONE	--	--	8.44	23.87
S-13	5/2/95	TOB	ODOR	NONE	--	--	9.52	20.03
S-14 *	5/2/95	TOB	ODOR	NONE	--	--	9.49	23.27

* Sample DUP was a duplicate sample taken from well S-14.

#6618

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 950502-K1

Date: 5/2/95
Page 1 of 1

Site Address: 1800 Powell Street, Emeryville

WIC#: 204-2495-0101

Shell Engineer: Dan Kirk — Phone No.: (510) 675-6168 Fax #: 675-6160

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

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

Comments:

Sampled by: KCB

Printed Name: Keith Baum

LAB: NET

CHECK ONE (1) BOX ONLY — C1/D1

- Quarterly Monitoring [X] 6441
- Site Investigation [ ] 6441
- Soil Closure/Disposal [ ] 6442
- Water Closure/Disposal [ ] 6443
- Soil/Air Rem. or Sys. O & M [ ] 6462
- Water Rem. or Sys. O & M [ ] 6463
- Other [ ]

TURN AROUND TIME

- 24 hours [ ]
- 48 hours [ ]
- 10 days [XX] (Normal)
- Other [ ] ____

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

Analysis Required

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			Asbestos	Container Size	Preservation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-8	5/2			W		3						X								
S-10	"			"		3						X								
S-12	"			"		5		X				X								
S-13	"			"		5		X				X			✓					
S-14	"			"		5		X				X								
DUP	"			"		5		X				X							5/3/95	Bob
EB	"			"		3						X							Vial Intact	
TB	↓			↓		2						X								QA

	Relinquished By (signature)	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
1		Keith Baum	5/3	4:00		G PLUMMER	5/3	11:00
2		G PLUMMER	5/3	16:00		PAM GREENE	5-4-95	08:00
3								

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

VIA: NCS

NATIONAL ENVIRONMENTAL TESTING, INC.

Santa Rosa Division
3636 North Laughlin Road
Suite 110
Santa Rosa, CA 95403-8226
Tel: (707) 526-7200
Fax: (707) 541-2333

Jim Keller
Blaine Tech Services
985 Timothy Dr.
San Jose, CA 95133

Date: 05/12/1995
NET Client Acct. No: 1821
NET Pacific Job No: 95.01789
Received: 05/04/1995

Client Reference Information

Shell 1800 Powell Street, Emeryville, CA/950502-K1

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Division Manager

Linda DeMartino
Project Coordinator

Enclosure(s)

Ref: Shell 1800 Powell Street, Emeryville, CA/950502-K1

SAMPLE DESCRIPTION: S-8
Date Taken: 05/02/1995
Time Taken:
NET Sample No: 241124

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/08/1995	2815
Purgeable TPH	1,000		50	ug/L	5030/M8015		05/08/1995	2815
Carbon Range: C6 to C12	--						05/06/1995	2813
METHOD 8020 (GC, Liquid)	--						05/06/1995	2813
Benzene	280	FC	0.5	ug/L	8020		05/06/1995	2813
Toluene	17		0.5	ug/L	8020		05/08/1995	2815
Ethylbenzene	1.4		0.5	ug/L	8020		05/08/1995	2815
Xylenes (Total)	32		0.5	ug/L	8020		05/08/1995	2815
SURROGATE RESULTS	--						05/06/1995	2813
Bromofluorobenzene (SURR)	76			% Rec.	8020		05/06/1995	2813

FC : Compound quantitated at a 10X dilution factor.

Ref: Shell 1800 Powell Street, Emeryville, CA/950502-K1

SAMPLE DESCRIPTION: S-10
Date Taken: 05/02/1995
Time Taken:
NET Sample No: 241125

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/08/1995	2815
Purgeable TPH	530		50	ug/L	5030/M8015		05/09/1995	2821
Carbon Range: C6 to C12	--						05/08/1995	2815
METHOD 8020 (GC, Liquid)	--						05/08/1995	2815
Benzene	59	FC	0.5	ug/L	8020		05/08/1995	2815
Toluene	2.3		0.5	ug/L	8020		05/09/1995	2821
Ethylbenzene	0.8		0.5	ug/L	8020		05/09/1995	2821
Xylenes (Total)	8.2		0.5	ug/L	8020		05/09/1995	2821
SURROGATE RESULTS	--						05/08/1995	2815
Bromofluorobenzene (SURR)	84			% Rec.	8020		05/08/1995	2815

FC : Compound quantitated at a 10X dilution factor.

Ref: Shell 1800 Powell Street, Emeryville, CA/950502-K1

SAMPLE DESCRIPTION: EB
Date Taken: 05/02/1995
Time Taken:
NET Sample No: 241126

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/06/1995	2813
Purgeable TPH	ND		50	ug/L	5030/M8015		05/06/1995	2813
Carbon Range: C6 to C12	--						05/06/1995	2813
METHOD 8020 (GC, Liquid)	--						05/06/1995	2813
Benzene	ND		0.5	ug/L	8020		05/06/1995	2813
Toluene	ND		0.5	ug/L	8020		05/06/1995	2813
Ethylbenzene	ND		0.5	ug/L	8020		05/06/1995	2813
Xylenes (Total)	ND		0.5	ug/L	8020		05/06/1995	2813
SURROGATE RESULTS	--						05/06/1995	2813
Bromofluorobenzene (SURR)	76			% Rec.	8020		05/06/1995	2813

Ref: Shell 1800 Powell Street, Emeryville, CA/950502-K1

SAMPLE DESCRIPTION: S-12
Date Taken: 05/02/1995
Time Taken:
NET Sample No: 241127

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/06/1995	2813
Purgeable TPH	140		50	ug/L	5030/M8015		05/06/1995	2813
Carbon Range: C6 to C12	--						05/06/1995	2813
METHOD 8020 (GC, Liquid)	--						05/06/1995	2813
Benzene	2.4		0.5	ug/L	8020		05/06/1995	2813
Toluene	1.1		0.5	ug/L	8020		05/06/1995	2813
Ethylbenzene	0.8		0.5	ug/L	8020		05/06/1995	2813
Xylenes (Total)	4.3		0.5	ug/L	8020		05/06/1995	2813
SURROGATE RESULTS	--						05/06/1995	2813
Bromofluorobenzene (SURR)	91			% Rec.	8020		05/06/1995	2813
METHOD 3510/8015-M (Shell)						05/05/1995		
DILUTION FACTOR*	1						05/06/1995	984
Extractable TPH	2,800		50	ug/L	3510/M8015		05/06/1995	984
Carbon range: C10 to C28	--						05/06/1995	984

Ref: Shell 1800 Powell Street, Emeryville, CA/950502-K1

SAMPLE DESCRIPTION: S-13
Date Taken: 05/02/1995
Time Taken:
NET Sample No: 241128

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/06/1995	2813
Purgeable TPH	790		50	ug/L	5030/M8015		05/06/1995	2813
Carbon Range: C6 to C12	--						05/06/1995	2813
METHOD 8020 (GC, Liquid)	--						05/06/1995	2813
Benzene	250	FD	0.5	ug/L	8020		05/08/1995	2815
Toluene	6.9		0.5	ug/L	8020		05/06/1995	2813
Ethylbenzene	1.2		0.5	ug/L	8020		05/06/1995	2813
Xylenes (Total)	22		0.5	ug/L	8020		05/06/1995	2813
SURROGATE RESULTS	--						05/06/1995	2813
Bromofluorobenzene (SURR)	98			% Rec.	8020		05/06/1995	2813
METHOD 3510/8015-M (Shell)						05/05/1995		
DILUTION FACTOR*	1						05/06/1995	984
Extractable TPH	2,100		50	ug/L	3510/M8015		05/06/1995	984
Carbon range: C10 to C28	--						05/06/1995	984

FD : Compound quantitated at a 20X dilution factor.

Ref: Shell 1800 Powell Street, Emeryville, CA/950502-K1

SAMPLE DESCRIPTION: S-14
Date Taken: 05/02/1995
Time Taken:
NET Sample No: 241129

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/06/1995	2813
Purgeable TPH	210		50	ug/L	5030/M8015		05/06/1995	2813
Carbon Range: C6 to C12	--						05/06/1995	2813
METHOD 8020 (GC, Liquid)	--						05/06/1995	2813
Benzene	1.0	C	0.5	ug/L	8020		05/06/1995	2813
Toluene	0.9	C	0.5	ug/L	8020		05/06/1995	2813
Ethylbenzene	1.1	C	0.5	ug/L	8020		05/06/1995	2813
Xylenes (Total)	6.3	C	0.5	ug/L	8020		05/06/1995	2813
SURROGATE RESULTS	--						05/06/1995	2813
Bromofluorobenzene (SURR)	94			% Rec.	8020		05/06/1995	2813
METHOD 3510/8015-M (Shell)						05/05/1995		
DILUTION FACTOR*	1						05/06/1995	984
Extractable TPH	2,300		50	ug/L	3510/M8015		05/06/1995	984
Carbon range: C10 to C28	--						05/06/1995	984

C : Positive result confirmed by secondary column or GC/MS analysis.

Ref: Shell 1800 Powell Street, Emeryville, CA/950502-K1

SAMPLE DESCRIPTION: DUP
Date Taken: 05/02/1995
Time Taken:
NET Sample No: 241130

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/06/1995	2813
Purgeable TPH	160		50	ug/L	5030/M8015		05/06/1995	2813
Carbon Range: C6 to C12	--						05/06/1995	2813
METHOD 8020 (GC, Liquid)	--						05/06/1995	2813
Benzene	0.6	C	0.5	ug/L	8020		05/06/1995	2813
Toluene	0.6	C	0.5	ug/L	8020		05/06/1995	2813
Ethylbenzene	0.7	C	0.5	ug/L	8020		05/06/1995	2813
Xylenes (Total)	3.8	C	0.5	ug/L	8020		05/06/1995	2813
SURROGATE RESULTS	--						05/06/1995	2813
Bromofluorobenzene (SURR)	76			% Rec.	8020		05/06/1995	2813
METHOD 3510/8015-M (Shell)						05/05/1995		
DILUTION FACTOR*	1						05/06/1995	984
Extractable TPH	2,600		50	ug/L	3510/M8015		05/06/1995	984
Carbon range: C10 to C28	--						05/06/1995	984

C : Positive result confirmed by secondary column or GC/MS analysis.

Client Name: Blaine Tech Services
Client Acct: 1821
NET Job No: 95.01789

Date: 05/12/1995
ELAP Cert: 1386
Page: 9

Ref: Shell 1800 Powell Street, Emeryville, CA/950502-K1

SAMPLE DESCRIPTION: TB
Date Taken: 05/02/1995
Time Taken:
NET Sample No: 241131

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/06/1995	2813
Purgeable TPH	ND		50	ug/L	5030/M8015		05/06/1995	2813
Carbon Range: C6 to C12	--						05/06/1995	2813
METHOD 8020 (GC, Liquid)	--						05/06/1995	2813
Benzene	ND		0.5	ug/L	8020		05/06/1995	2813
Toluene	ND		0.5	ug/L	8020		05/06/1995	2813
Ethylbenzene	ND		0.5	ug/L	8020		05/06/1995	2813
Xylenes (Total)	ND		0.5	ug/L	8020		05/06/1995	2813
SURROGATE RESULTS	--						05/06/1995	2813
Bromofluorobenzene (SURR)	74			% Rec.	8020		05/06/1995	2813

Ref: Shell 1800 Powell Street, Emeryville, CA/950502-K1

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 5030/8015-M (Shell)							
Purgeable TPH	102.0	0.51	0.50	mg/L	05/06/1995	aal	2813
Benzene	95.6	4.78	5.00	ug/L	05/06/1995	aal	2813
Toluene	90.8	4.54	5.00	ug/L	05/06/1995	aal	2813
Ethylbenzene	94.2	4.71	5.00	ug/L	05/06/1995	aal	2813
Xylenes (Total)	95.3	14.3	15.0	ug/L	05/06/1995	aal	2813
Bromofluorobenzene (SURR)	84.0	84	100	% Rec.	05/06/1995	aal	2813
METHOD 5030/8015-M (Shell)							
Purgeable TPH	113.2	0.566	0.50	mg/L	05/08/1995	pbg	2815
Benzene	103.2	5.16	5.00	ug/L	05/08/1995	pbg	2815
Toluene	104.8	5.24	5.00	ug/L	05/08/1995	pbg	2815
Ethylbenzene	102.8	5.14	5.00	ug/L	05/08/1995	pbg	2815
Xylenes (Total)	102.7	15.4	15.0	ug/L	05/08/1995	pbg	2815
Bromofluorobenzene (SURR)	82.9	82.9	100	% Rec.	05/08/1995	pbg	2815
METHOD 5030/8015-M (Shell)							
Purgeable TPH	100.6	0.503	0.50	mg/L	05/09/1995	pbg	2821
Benzene	106.8	5.34	5.00	ug/L	05/09/1995	pbg	2821
Toluene	100.2	5.01	5.00	ug/L	05/09/1995	pbg	2821
Ethylbenzene	102.6	5.13	5.00	ug/L	05/09/1995	pbg	2821
Xylenes (Total)	102.7	15.4	15.0	ug/L	05/09/1995	pbg	2821
Bromofluorobenzene (SURR)	81.0	81	100	% Rec.	05/09/1995	pbg	2821
METHOD 3510/8015-M (Shell)							
Extractable TPH	101.0	1010	1000	mg/L	05/06/1995	tts	984

Ref: Shell 1800 Powell Street, Emeryville, CA/950502-K1

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 5030/8015-M (Shell)						
Purgeable TPH	ND	0.05	mg/L	05/06/1995	aal	2813
Benzene	ND	0.5	ug/L	05/06/1995	aal	2813
Toluene	ND	0.5	ug/L	05/06/1995	aal	2813
Ethylbenzene	ND	0.5	ug/L	05/06/1995	aal	2813
Xylenes (Total)	ND	0.5	ug/L	05/06/1995	aal	2813
Bromofluorobenzene (SURR)	78		% Rec.	05/06/1995	aal	2813
METHOD 5030/8015-M (Shell)						
Purgeable TPH	ND	0.05	mg/L	05/08/1995	pbg	2815
Benzene	ND	0.5	ug/L	05/08/1995	pbg	2815
Toluene	ND	0.5	ug/L	05/08/1995	pbg	2815
Ethylbenzene	ND	0.5	ug/L	05/08/1995	pbg	2815
Xylenes (Total)	ND	0.5	ug/L	05/08/1995	pbg	2815
Bromofluorobenzene (SURR)	82		% Rec.	05/08/1995	pbg	2815
METHOD 5030/8015-M (Shell)						
Purgeable TPH	ND	0.05	mg/L	05/09/1995	pbg	2821
Benzene	ND	0.5	ug/L	05/09/1995	pbg	2821
Toluene	ND	0.5	ug/L	05/09/1995	pbg	2821
Ethylbenzene	ND	0.5	ug/L	05/09/1995	pbg	2821
Xylenes (Total)	ND	0.5	ug/L	05/09/1995	pbg	2821
Bromofluorobenzene (SURR)	73		% Rec.	05/09/1995	pbg	2821
METHOD 3510/8015-M (Shell)						
Extractable TPH	ND	0.05	mg/L	05/06/1995	tts	984

Client Name: Blaine Tech Services
Client Acct: 1821
NET Job No: 95.01789

Date: 05/12/1995
ELAP Cert: 1386
Page: 12

Ref: Shell 1800 Powell Street, Emeryville, CA/950502-K1

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
METHOD 5030/8015-M (Shell)											241194
Purgeable TPH	88.0	94.0	6.6	0.50	ND	0.44	0.47	mg/L	05/06/1995	2813	241194
Benzene	75.4	82.0	8.4	8.98	ND	6.77	7.36	ug/L	05/06/1995	2813	241194
Toluene	90.5	94.8	4.6	30.6	ND	27.7	29.0	ug/L	05/06/1995	2813	241194
METHOD 5030/8015-M (Shell)											241264
Purgeable TPH	110.6	111.2	0.5	0.500	ND	0.553	0.556	mg/L	05/08/1995	2815	241264
Benzene	99.8	99.4	0.4	9.35	ND	9.33	9.29	ug/L	05/08/1995	2815	241264
Toluene	89.7	89.7	0.0	36.0	ND	32.3	32.3	ug/L	05/08/1995	2815	241264
METHOD 3510/8015-M (Shell)											241071
Extractable TPH	75.5	76.0	0.7	2.00	ND	1.51	1.52	mg/L	05/06/1995	984	241071

Ref: Shell 1800 Powell Street, Emeryville, CA/950502-K1

LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	Duplicate LCS % Recovery	RPD	LCS Amount Found	Duplicate LCS Amount Found	LCS Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch
METHOD 3510/8015-M (Shell)										
Extractable TPH	57.4			0.574		1.00	mg/L	05/06/1995	tts	984

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KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

COOLER RECEIPT FORM

Project: 950502-KJ Log No: 1618
Cooler received on: 5-4-95 and checked on 5-4-95 by Pam Greene
(signature) Pam Greene

Were custody papers present?..... (YES) NO

Were custody papers properly filled out?..... (YES) NO

Were the custody papers signed?..... (YES) NO

Was sufficient ice used?..... (YES) NO Temp 1.2°

Did all bottles arrive in good condition (unbroken)?..... (YES) NO

Did bottle labels match COC?..... YES (NO) ~~OK~~

Were proper bottles used for analysis indicated?..... (YES) NO

Correct preservatives used?..... (YES) NO

VOA vials checked for headspace bubbles?..... (YES) NO
Note which voas (if any) had bubbles:*

Sample descriptor:	Number of vials:

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

List here all other jobs received in the same cooler:

Client Job #	NET log #

* Per Fran Thil - 3 VOA's w/no labels are ID'd as S-10
~~PM~~
09:30

(coolerrec)

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 950510-H1

Date: 5-10-95
Page 1 of 1

Site Address: 1800 Powell Street, Emeryville

WIC#: 204-2495-0101

Shell Engineer: Dan Kirk
Phone No.: (510) 675-6168
Fax #: 675-6160

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

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

Comments:

Sampled by: ~~TROY~~ TNH

Printed Name: TROY N HORNER

Analysis Required

LAB: NET

CHECK ONE (1) BOX ONLY		CT/DT
Quarterly Monitoring	[X]	5441
Site Investigation	[ ]	5441
Soil Classify/Disposal	[ ]	5442
Water Classify/Disposal	[ ]	5443
Soil/Air Rem. or Sys. O & M	[ ]	5442
Water Rem. or Sys. O & M	[ ]	5443
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			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-5	5/10			X		3						X								
TB	5/10			X		2						X								

(5/11/95 GB) Seal Intact PA

Relinquished By (signature):	Printed Name:	Date: / Time:	Received (signature):	Printed Name:	Date: / Time:
[signature]	TROY N. HORNER	Date: 5-11-95 Time: 1030	[signature]	G PLUMBLE	Date: 5/11 Time: 10:20
[signature]	G PLUMBLE	Date: 5/11 Time: 16:00	[signature]	PAM GREENE	Date: 5-12-95 Time: 08:00
		Date: Time:			Date: Time:

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

VIA: NCS

NATIONAL ENVIRONMENTAL TESTING, INC.

Santa Rosa Division
3636 North Laughlin Road
Suite 110
Santa Rosa, CA 95403-8226
Tel: (707) 526-7200
Fax: (707) 541-2333

Jim Keller
Blaine Tech Services
985 Timothy Dr.
San Jose, CA 95133

Date: 05/23/1995
NET Client Acct. No: 1821
NET Job No: 95.01902
Received: 05/12/1995

Client Reference Information

Shell 1800 Powell Street, Emeryville, CA./950510-H1

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Ken Larson
Division Manager

Jennifer L. Roseberry
Project Manager

Enclosure(s)

Ref: Shell 1800 Powell Street, Emeryville, CA./950510-H1

SAMPLE DESCRIPTION: S-5
Date Taken: 05/10/1995
Time Taken:
NET Sample No: 241788

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/20/1995	2848
Purgeable TPH	910		50	ug/L	5030/M8015		05/20/1995	2848
Carbon Range: C6 to C12	--						05/20/1995	2848
METHOD 8020 (GC, Liquid)	--						05/20/1995	2848
Benzene	170	FC	0.5	ug/L	8020		05/18/1995	2843
Toluene	1.5		0.5	ug/L	8020		05/20/1995	2848
Ethylbenzene	1.3		0.5	ug/L	8020		05/20/1995	2848
Xylenes (Total)	5.2		0.5	ug/L	8020		05/20/1995	2848
SURROGATE RESULTS	--						05/20/1995	2848
Bromofluorobenzene (SURR)	89			% Rec.	8020		05/20/1995	2848

FC : Compound quantitated at a 10X dilution factor.

Ref: Shell 1800 Powell Street, Emeryville, CA./950510-H1

SAMPLE DESCRIPTION: TB
Date Taken: 05/10/1995
Time Taken:
NET Sample No: 241789

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/18/1995	2843
Purgeable TPH	ND		50	ug/L	5030/M8015		05/18/1995	2843
Carbon Range: C6 to C12	--						05/18/1995	2843
METHOD 8020 (GC, Liquid)	--						05/18/1995	2843
Benzene	ND		0.5	ug/L	8020		05/18/1995	2843
Toluene	ND		0.5	ug/L	8020		05/18/1995	2843
Ethylbenzene	ND		0.5	ug/L	8020		05/18/1995	2843
Xylenes (Total)	ND		0.5	ug/L	8020		05/18/1995	2843
SURROGATE RESULTS	--						05/18/1995	2843
Bromofluorobenzene (SURR)	73			% Rec.	8020		05/18/1995	2843

Ref: Shell 1800 Powell Street, Emeryville, CA./950510-H1

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 5030/8015-M (Shell)							
Purgeable TPH	109.2	0.546	0.50	mg/L	05/18/1995	lss	2843
Benzene	92.0	4.60	5.00	ug/L	05/18/1995	lss	2843
Toluene	99.2	4.96	5.00	ug/L	05/18/1995	lss	2843
Ethylbenzene	96.2	4.81	5.00	ug/L	05/18/1995	lss	2843
Xylenes (Total)	87.5	13.13	15.0	ug/L	05/18/1995	lss	2843
Bromofluorobenzene (SURR)	91.0	91	100	% Rec.	05/18/1995	lss	2843
METHOD 5030/8015-M (Shell)							
Purgeable TPH	104.0	0.52	0.50	mg/L	05/20/1995	lss	2848
Benzene	100.6	5.03	5.00	ug/L	05/20/1995	lss	2848
Toluene	94.4	4.72	5.00	ug/L	05/20/1995	lss	2848
Ethylbenzene	95.6	4.78	5.00	ug/L	05/20/1995	lss	2848
Xylenes (Total)	90.0	13.5	15.0	ug/L	05/20/1995	lss	2848
Bromofluorobenzene (SURR)	84.0	84	100	% Rec.	05/20/1995	lss	2848

Ref: Shell 1800 Powell Street, Emeryville, CA./950510-H1

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 5030/8015-M (Shell)						
Purgeable TPH	ND	0.05	mg/L	05/18/1995	lss	2843
Benzene	ND	0.5	ug/L	05/18/1995	lss	2843
Toluene	ND	0.5	ug/L	05/18/1995	lss	2843
Ethylbenzene	ND	0.5	ug/L	05/18/1995	lss	2843
Xylenes (Total)	ND	0.5	ug/L	05/18/1995	lss	2843
Bromofluorobenzene (SURR)	80		% Rec.	05/18/1995	lss	2843
METHOD 5030/8015-M (Shell)						
Purgeable TPH	ND	0.05	mg/L	05/20/1995	lss	2848
Benzene	ND	0.5	ug/L	05/20/1995	lss	2848
Toluene	ND	0.5	ug/L	05/20/1995	lss	2848
Ethylbenzene	ND	0.5	ug/L	05/20/1995	lss	2848
Xylenes (Total)	ND	0.5	ug/L	05/20/1995	lss	2848
Bromofluorobenzene (SURR)	72		% Rec.	05/20/1995	lss	2848

Ref: Shell 1800 Powell Street, Emeryville, CA./950510-H1

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
METHOD 5030/8015-M (Shell)											241777
Purgeable TPH	96.2	111.6	14.7	0.50	ND	0.481	0.558	mg/L	05/18/1995	2843	241777
Benzene	96.5	109.7	12.7	7.64	ND	7.37	8.38	ug/L	05/18/1995	2843	241777
Toluene	106.5	121.5	13.2	26.1	ND	27.8	31.7	ug/L	05/18/1995	2843	241777
METHOD 5030/8015-M (Shell)											241758
Purgeable TPH	86.0	90.0	4.5	0.50	ND	0.43	0.45	mg/L	05/20/1995	2848	241758
Benzene	85.7	89.9	4.8	7.61	ND	6.52	6.84	ug/L	05/20/1995	2848	241758
Toluene	86.8	90.0	3.6	28.0	ND	24.3	25.2	ug/L	05/20/1995	2848	241758

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KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

COOLER RECEIPT FORM

Project: 950510-#1 Log No: 6734
Cooler received on: 5-12-95 and checked on 5-12-95 by
(signature)

Were custody papers present?.....~~YES~~ NO

Were custody papers properly filled out?.....~~YES~~ NO

Were the custody papers signed?.....~~YES~~ NO

Was sufficient ice used?.....~~YES~~ NO Temp.: 0°c.

Did all bottles arrive in good condition (unbroken)?.....~~YES~~ NO

Did bottle labels match COC?.....~~YES~~ NO

Were proper bottles used for analysis indicated?.....~~YES~~ NO

Correct preservatives used?.....~~YES~~ NO

VOA vials checked for headspace bubbles?.....YES NO
Note which voas (if any) had bubbles:*

Sample descriptor:	Number of vials:

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

List here all other jobs received in the same cooler:

Client Job #	NET log #

(coolerrec)