Fax: 510-547-5043 Phone: 510-450-6000

October 17, 1994

Scott Seery
Alameda County Department of
Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Re: Third Quarter 1994 Shell Service Station WIC #204-5508-3301 6039 College Avenue Oakland, California WA Job #81-0618-104

Dear Mr. Seery:

This letter describes recently completed and anticipated activities at the Shell service station referenced above (Figure 1). This status report satisfies the quarterly reporting requirements prescribed by California Administrative Code Title 23 Waters, Chapter 3, Subchapter 16, Article 5, Section 2652.d. Included below are descriptions and results of activities performed in the third quarter 1994 and proposed work for the fourth quarter 1994.

#### Third Quarter 1994 Activities:

- Blaine Tech Services, Inc. (BTS) of San Jose, California measured depths to ground water and collected ground water samples from the site wells. Well MW-4 contained separate-phase hydrocarbons (SPH) and was not sampled. BTS' report describing these activities and analytic results for ground water is included as Attachment A.
- Weiss Associates (WA) compiled the ground water elevation and analytic data (Tables 1 and 2) and prepared a ground water elevation contour map (Figure 2). WA also tabulated SPH removal data on Table 3. To date, over 10.00 pounds of SPHs have been removed from the subsurface.

Scott Seery October 17, 1994



## Anticipated Fourth Quarter 1994 Activities:

 WA will submit a report presenting the results of fourth quarter 1994 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results and a ground water elevation contour map.

## Conclusions and Recommendations:

Despite the fact that hydrocarbons were detected in soil borings between wells MW-4 and MW-5, no total petroleum hydrocarbons as gasoline (TPH-G) or benzene, ethylbenzene, toluene and xylenes (BETX) have ever been detected in ground water samples from well MW-5 since it was installed in 1991. No BTEX compounds or more than 98 ppb TPH-G have ever been detected in downgradient well MW-6. Therefore, the extent of hydrocarbons in ground water has been fully assessed downgradient of the site.



Please call if you have any questions.

Sincerely,

Weiss Associates

J. Michael Asport Staff Scientist I

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James W. Carmody, C.E.G. Senior Project Hydrogeologist

JMA/JWC:jma

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

cc: Dan Kirk, Shell Oil Company, P.O. Box 4023, Concord, CA 94524 Tom Callaghan, San Francisco Bay Regional Water Quality Control Board, 2101 Webster Street, Oakland, CA 94612

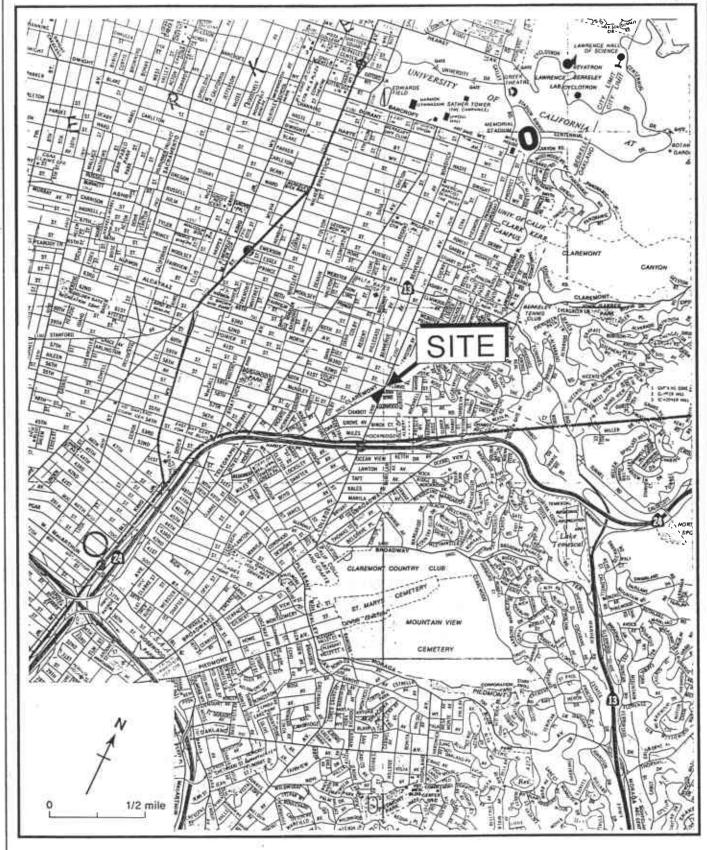


Figure 1. Site Location Map - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California

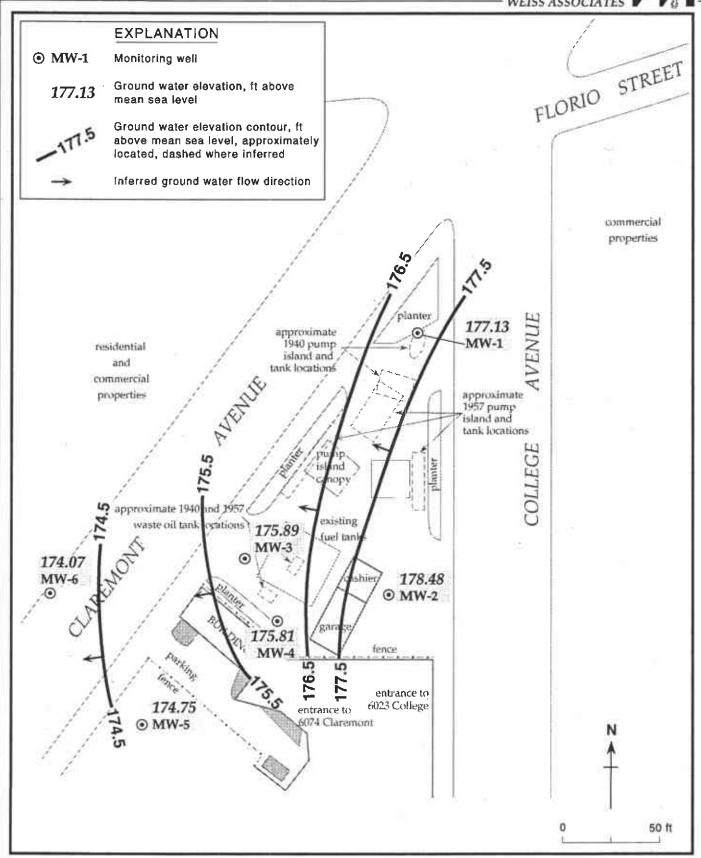


Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - August 10, 1994 - Shell Service Station WIC #204-5510-0303, 6039 College Avenue, Oakland, California

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

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft above msl) <sup>a</sup>
MW-1	06/03/91	195.89	17.82		178.07
	08/30/91		19.87		176.02
	11/22/91		20.58		175.31
	03/18/92		13.55		182.34
	05/28/92		17.08		178.81
	08/19/92		19.07		176.82
•	11/17/92		20.11		175.78
	02/12/93		12.10		183.79
	06/10/93		14.87		181.02
	08/18/93		16.90		178.99
	11/19/93		19.72		176.17
	02/28/94		15.08		180.81
	05/04/94		17.20		178.69
	08/10/94		18.76		177.13
MW-2	06/03/91	194.27	17.00		177.27
	08/30/91		18.95		175.32
	11/22/91		19.55		174.72
	03/18/92		12.91		181.36
	05/28/92		16.25		178.02
	08/19/92		18.21		176.06
	11/17/92		19.15		175.12
	02/12/93		11.60		182.67
	06/10/93		14.14		180.13
	08/18/93		16.10		178.17
•	11/19/93		18.77		175.50
	02/28/94		14.35		179.92
	05/04/94		16.34		177.93
	08/10/94		15.79		178.48
MW-3	06/03/91	192.52	15.84		176.68
	08/30/91		17.79		174.73
•	11/22/91		18.40		174.12
	03/18/92		12.03		180.49
	05/28/92		15.16		177.36
	08/19/92		17.03		175.49
	11/17/92		17.94		174.58
	02/12/93		9.16		183.36
	06/10/93		13.20		179.32

<sup>--</sup> Table 1 continues on next page --

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

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft above msl) <sup>a</sup>
	08/18/93		14.93		177.59
MW-3	11/19/93		17.58		174.94
(cont.)	02/28/94		13.30		179.22
(/	05/04/94		15.25		177.27
	08/10/94		16.63		175.89
MW-4	06/03/91	193.37	16.77		176.60
	08/30/91	1,0,0,	18.71		174.66
	11/22/91				
	03/18/92a		13.15	0.24	180.41
	05/28/92a	•	16.22	0.12	177.25
	08/19/92a		18.05	0.09	175.39
	11/17/92		18.89		174.48
	02/12/93		11.78	< 0.01	181.59
	06/10/93		14.20		179.17
	08/18/93		15.95	0.01	177.43
	11/19/93		18.48	0.01	174.90
	02/28/94		14.60	< 0.01	178.77
	05/04/94		16.15	< 0.01	177.22
	08/10/94		17.58	0.02	175.81
MW-5	08/30/91	190.35	16.74		173.61
	11/22/91		17.27		173.08
	03/18/92		11.28		179.07
	05/28/92 <sup>b</sup>				
	08/19/92		15.99		174.36
	11/17/92		16.84		173.51
	02/12/93		10.30		180.05
	06/10/93		12.36		1 <b>77.99</b>
	08/18/93		14.02		176.33
	11/19/93		16.50		173.85
	02/28/94		12.55	4	177.80
	05/04/94		14.27		176.08
	08/10/94		15.60		174.75
MW-6	09/21/93	189.05	14.64		174.41
	11/19/93				
	02/28/94		12.18		176.87
	05/04/94		13.62		175.43

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

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft above msl) <sup>a</sup>
	08/10/94		14.98		174.07

#### Notes:

a = When separate-phase hydrocarbons are present, ground water elevation is corrected by the relation: Corrected ground water elevation = (Top-of-Casing Elevation) - (depth to water) + (0.8 x separate-phase hydrocarbon thickness)

b = Well inaccessible

--- = Data not available

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

Well/Boring	Ωn+n	Depth to	TPH-G	TPH-D .	TPH-MO	POG	В	E	Т	X	SV0Cs
ID III	Date Sampled	Water (ft)	<			-parts per	billion (ug	J/L)			>
MW-1	06/03/91 08/30/91 11/22/91 03/18/92 05/28/92 08/19/92 11/17/92 02/12/93 06/10/93 06/10/93 08/18/93 11/19/93 02/18/94 05/04/94 08/10/94	17.82 19.87 20.58 13.55 17.08 19.07 20.11 12.10 14.87 14.87 16.90 19.72 15.08 17.20 18.76	ND ND <50 <30 <50 <50 <50 <50 <50 <50 <b>50</b>	ND 520 <50 <50 <50 <50 <50	ND ND <500		ND	ND ND 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ND NO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ND ND <0.53 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55	
MW-2	06/03/91 08/30/91 11/22/91 03/18/92 05/28/92 08/19/92 11/17/92 02/12/93 06/10/93 06/10/93 08/18/93 08/18/93 02/18/94 05/04/94	17.00 18.95 19.55 12.91 16.25 18.21 19.15 11.60 14.14 16.10 18.77 14.55 16.34 15.79	ND ND <50 <30 <50 <50 <50 <50 <50 <50 <50 <50	ND ND <50	ND ND <500		ND NO.53.55.55.55.55.55.55.55.55.55.55.55.55.	ND ND 5 5 3 5 2 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ND VO.53 VO.53 VO.55 VO.55 VO.55 VO.55 VO.55	ND ND <0.53 <0.59 1.99 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <	
MW-3	06/03/91 08/30/91 11/22/91 03/18/92 05/28/92 08/19/92 11/17/92 02/12/93 06/10/93 08/18/93	15.84 17.79 18.40 12.03 15.16 17.03 17.94 9.16 13.20 14.93	1,700 870 310 67,100 2,300 5,700 3,600 4,700 2,200 260	690° 370° 140 1,900 1,100° 1,000° 160° 560°	ND 500 500 20,000 4,600 1,800 1,200 <50 940° 460°		260 44 18 620 200 71 16 820 310 27	98 10 3.3 220 71 52 24 130 89 7.0	13 6.1 1.2 28 9 77 8.6 58 23 2.0	24 2.9 2.9 38 17 130 50 77 23 2.2	

<sup>--</sup> Table 1 continues on next page --

Well/Boring ID	Date Sampled	Depth to Water (ft)	TPH-G <	TPH-D	TPH-MO	POG parts per	B billion (ug	E /L)	T 	Х	SV0Cs >
MW-3 (cont.)	11/19/93 02/18/94 02/18/94 05/04/94 05/04/94 08/10/94	17.58 13.30 15.25 15.25	1,500° 2,700 3,100 780 920	   	960 <sup>d</sup> 1.600 2.200 710 1.600	<5,000 <5,000 <5,000 <5,000 <5,000 <5,000	24 65 82 120 120	37 16 19 21 22	54 5.2 6.7 7.5 7.7	17 6.3 7.9 6.9 7.1 2.2	 f g
Mw-4	06/03/91 08/30/91 11/22/91 <sup>5PH</sup> 03/18/92 <sup>5PH</sup> 05/28/92 <sup>5PH</sup> 08/19/92 <sup>5PH</sup> 11/17/92 <sup>5PH</sup> 02/12/93 <sup>5PH</sup> 06/10/93 08/18/93 <sup>5PH</sup> 02/28/94 <sup>5PH</sup> 05/04/94 <sup>5PH</sup>	16.77 18.71  13.15 16.22 18.05 18.89 11.78 14.20 15.95 18.48 14.60 16.15 17.58	670 <sup>h</sup> 570	1.100', 280'	ND 2.000		240 64	1.6 0.9	2.3 1.8	2.3 0.9	
MW-5	08/30/91 11/22/91 03/18/92 05/28/92 <sup>3</sup> 08/19/92 11/17/92 02/12/93 06/10/93 08/18/93 11/19/93 11/19/93 02/18/94 05/04/94	16.74 17.27 11.28 	ND <50 <50 <50 <50 <50 <50 <50 <50	80 <50 <50 <50 <50 <50 	ND <500		ND	ND <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.	ND <0.5 5	ND <0.53 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55	
MW-6	09/21/93 11/19/93 <sup>k</sup> <b>62/28/94</b> 05/04/94	14.64 12.18 13.62 14.98	<50 <b>98</b> <50	<50  	   	<5,000 <5,000 <5,000 <5,000	<0.5 <0.5 <0.5 <b>&lt;0.</b> 5	<0.5 <0.5 <0.5 <b>&lt;0.</b> 5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <b>&lt;0.5</b>	<10-50  <2-10 r

2.900° .

18

**54** 

<5

11

<5.000

09/09/93

16.50

BH-A



<sup>--</sup> Table 1 continues on next page --

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

Well/Boring ID	Date Sampled	Depth to Water (ft)	TPH-G <	TPH-D	TPH-MO	POG parts per	B billion (ug	E g/L)	T	X	SVOCs
BH-B	09/09/93	15.85	<50	150		<5.000	<0.5	<0.5	<0.5	<0.5	ND
BM-C"	09/10/93	15.80	640°	100		<5,000	3.5	0.6	<0.5	<0.5	ND
BHAO"	09/10/93	14.2	24,000°	25,000°		20,000	<b>720</b>	44	<b>8</b> 6	11	ρ
Bailer Blank	08/19/92 11/17/92		<50 <50				<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	
Trip Blank	06/03/91 08/30/91 03/18/92 05/28/92 08/19/92 11/17/92 02/12/93 06/10/93 11/19/93 02/28/94 05/04/94		ND N30 V50 V50 V50 V50 V50 V50 V50 V50 V50 V5	<pre></pre>			ND ND .3 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	ND ND VO.5 VO.5 VO.5 VO.5 VO.5 VO.5 VO.5	ND ND <0.3 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	ND ND <0.3 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	
DTSC MCLs			NE	NE	NE		1	680	100 <sup>q</sup>	1.750	

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

Abbreviations:	Notes:
TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015	a = Positive results for diesel appear to be less volatile
TPH-D = Total petroleum hydrocarbons as diesel by Modified EPA Method 8015	constituents of gasoline b = Positive results for diesel has a typical diesel pattern
TPH-MO = Total petroleum hydrocarbons as motor oil by EPA Method 8015	c = Concentration reported as diesel is primarily due to the presence of a lighter petroleum product, possibly gasoline or kerosene d = Concentration reported as meter oil is due to the presence of a concentration reported as meter oil is due to the presence of a concentration reported as meter oil is due to the presence of a concentration reported as meter oil is due to the presence of a concentration reported as meter oil is due to the presence of a concentration reported as meter oil is due to the presence of a concentration reported as diesel is primarily due to the presence of a lighter petroleum product, possibly gasoline or kerosene
B = 8enzene by EPA Method 8020 E = Ethylbenzene by EPA Method 8020	d = Concentration reported as motor oil is due to the presence of a combination of motor oil and a lighter petroleum product of hydrocarbon range C6-C12, possibly gasoline
T = Toluene by EPA Method 8020 X = Xylenes by EPA Method 8020	e = Concentration reported as gasoline is due to the presence of gasoline and a descrete peak not indicative of gasoline
POG = Petroleum Oil & Grease by EPA Method 5520B/F SVOCs = Semivolatile organic compounds by EPA Method 8270	f = Compounds are within chromatographic range of gasoline but are not characteristic of the standard gasoline pattern
NE = Not established DTSC MCLs = California Department of Toxic Substances Control Maximum	g = Results include compounds apparently due to gasoline as well as those due to diesel
Contaminant Levels drinking water = Not analyzed or measured	<pre>h = 6.5 ppb Napthalene detected i = 11.0 ppb Napthalene detected</pre>
<pre><n =="" at="" detected="" detected,="" detection="" known<="" limit="" limits="" n="" nd="Not" not="" of="" ppb="" pre=""></n></pre>	<pre>j = Well inaccessible and not sampled k = Well inadvertantly not sampled</pre>
SPH = Separate-phase hydrocarbons in well, not sampled dup = Duplicate sample	* The concentration reported as gasoline is primarily due to the presence of a discrete peak not indicative of gasoline
	m = 13 ppb-methylnaphthalene and 23 ppb naphthalene detected n = Due to chain of custody mis-communication analyses run after
	holding time expiration
	o = The positive result has an atypical pattern for gasoline analysis p = 75 ppb 2-methylnapthalene and 18 ppb napthalene detected
	<ul> <li>q = DTSC recommended action level; MCL not established</li> <li>r = Not detected at detection limits between 10 and 50 ppb</li> </ul>

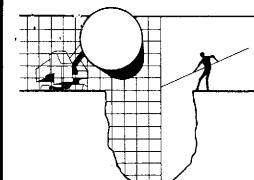
Separate-Phase Hydrocarbon Removal - Shell Service Station WIC #204-5508-3301, Table 3. 6039 College Avenue, Oakland, California

Well ID	Date	Separate-Phase Hydrocarbon Thickness (ft)	Separate-Phase Hydrocarbons Removed (lbs)	Cumulative Hydrocarbons Removed (lbs)
MW-4ª	01/15/92	<del></del>	3.12	3.12
	02/15/92		3.12	6.24
	03/18/92	0.24		6.24
	04/29/92		1.50	7.74
	05/28/92	0.12	0.18	7.92
	08/19/92	0.09	0.96	8.86
	11/17/92		0.96	9.82
	02/12/93	< 0.01		9.82
	06/10/93	0.02	0.06	9.88
	08/18/93	0.01	0.06	9.94
	11/19/93	0.01	0.06	10.00
	02/28/94	0.01	0.06	10.06
	05/04/94	0.00	0.06	10.12
	08/10/94	0.02	0.06	10.18

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

## ATTACHMENT A

GROUND WATER MONITORING REPORT AND ANALYTIC REPORT



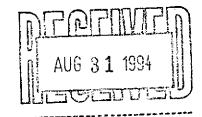
# BLAINE TECH SERVICES INC.

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

August 26, 1994

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

Attn: Daniel T. Kirk



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

QUARTER: 3rd quarter of 1994

### **QUARTERLY GROUNDWATER SAMPLING REPORT 940810-Z-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 removed 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 #178.

### **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

ATTEN 26' 1 1 4

ATTN: Michael Asport

## 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 (mi)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
MW-1 *	8/10/94	тос		NONE	<del>-</del>		18.76	24.64
MW-2	8/10/94	TOC	<u>-</u>	NONE	-	_ <del>_</del>	15.79	24.24
MW-3	8/10/94	TOC	ODOR	NONE	-	<del>-</del>	16.63	24.86
MW-4	8/10/94	TOC	FREE PRODUCT	17,56	0.02	20	17.58	-
MW-5	8/10/94	TOC	••	NONE		·	15.60	28.67
MW-6	8/10/94	TOC	-	NONE .	-	-	14.98	24.30
T-1	8/10/94	TOC	DRY	NONE	-	_	-	4.16
T-2	8/10/94	TOC	DRY	NONE	_	_	_	8.22

<sup>\*</sup> Sample DUP was a duplicate sample taken from well MW-1.

RETAIL EN		COI				NG -	WES	ST			СН		1 O Ial N						ORD	1	e: 8-10-94
Silo Addross: 6039 Co	olleg	ge Ave.	, Oak	land	· ,					And	alys	ls Re	∍qu	lred	ì		_		LAB: NET	·	
WIC#: 204-550	08-33	 301																	CHECK OHE (1) LOX OHLY	CT/DI	JUAN AROUND MAUT.
Sholl Enginoor:  Dan Kirk  Consultont Name & Ad Blaine Tech Service 985 Timothy Drive  Consultant Contact: Jim Keller  Comments:  Sampled by: GRANT	Idross ces, Sa	i Inc. In Jose	! C^	Phone 75-61 Fax #: 9513 Phone 95-55 Fax #:	675-6 13 No.: <i>(</i>	7408)	8015 Mod. Gas)	8015 Mod. Diesel)	BIEX (EPA 8020/602)	rganics (EPA 8240)	losed	Combination TPH 8015 & BTEX 8020	MOTOL OIL		É GREASE	5/20	n Used	y/N	Ste Invertigation   Soil Classity/Okposal  Wales Classity/Okposal  Soil/At term or tye.	) +44 ) +44 ) +44 ) +44 ) +44 ) +44 ) +44	24 hours
Sample ID	Dale	Sludge	\$oll	Waler	Alr	No, of conts,	TPH (EPA 8	TPH (EPA 8	BIEX (EPA	Volatile Organics	Test for Disposal	Combinat	TPH-1	SVOC	OIL É	Container Size	Preparation Used	Сотрозне	MATERIAL DESCRIPTION		SAMPLE : CONDITION/ COMMENTS
MW-1	8/10			×		3					•	X									
Mw-2				8		3						K									
Mw-3			• •	٨		9						K	χ	Х	X						
Mw-5	7		;	×		3			-			X		_	<u> </u>						
MW-6 1		•		p		7						X		X	$\frac{1}{\lambda}$			<del></del>			•
E8				K		3				ļ ···		X			-				(6051970)	62	(P) 1- \
Dup				X		3						K							10	^	Kunfr
TB	V			X		2		_	//		1	X	7							_	sent it it
Relinguished by (signalure): Relinguished by (signalure): Relinguished by (signalure):		- G	ayan	MOI	HR_	4	Dat	•: <i>\$</i> •://	[//9		e)vec	(100 (100 (100 (100	nature	): -	حمدا			Printe	d Name:	?8	Date: 8///91 Date: 8//2/94



Santa Rosa Division 435 Tesconi Circle Santa Rosa, CA 95401

Tel: (707) 526-7200 Fax: (707) 526-9623

Jim Keller Blaine Tech Services 985 Timothy Dr. San Jose, CA 95133 Date: 08/25/1994

NET Client Acct. No: 1821 NET Pacific Job No: 94.03554

Received: 08/12/1994

Client Reference Information

SHELL, 6039 College Ave., Oakland, 940810-Z1

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:

Judy Ridley ()
Project Coordinator

Operations Manager

Enclosure(s)





Date: 08/25/1994

ELAP Cert: 1386

Page: 2

Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

SAMPLE DESCRIPTION: MW-1

Date Taken: 08/10/1994

Time Taken:

		Reportin	ıg		Date	Date
Parameter	Results Flags	Limit	Units	Method	Extracted	Analyzed
TPH (Gas/BTXE, Liquid)						
METHOD 5030/M8015	p- w					08/18/1994
DILUTION FACTOR*	1					08/18/1994
as Gasoline	ND	50	ug/L	5030		08/18/1994
Carbon Range:						08/18/1994
METHOD 8020 (GC, Liquid)						08/18/1994
Benzene	ND	0.5	ug/L	8020		08/18/1994
Toluene	ND	0.5	ug/L	8020		08/18/1994
Ethylbenzene	ND	0.5	ug/L	8020		08/18/1994
Xylenes (Total)	ND	0.5	ug/L	8020		08/18/1994
SURROGATE RESULTS						08/18/1994
Bromofluorobenzene (SURR)	93		t Rec.	5030		08/18/1994



Client Acct: 1821 NET Job No: 94.03554 Date: 08/25/1994

ELAP Cert: 1386

Page: 3

Ref: SHELL, 6039 College Ave., Oakland, 940810-21

SAMPLE DESCRIPTION: MW-2

Date Taken: 08/10/1994

Time Taken:

	•	Reportin	ıg		Date	Date
Parameter	Results Flags	Limit	Units	Method	Extracted	Analyzed
TPH (Gas/BTXE,Liquid)						
METHOD 5030/MB015						08/18/1994
DILUTION FACTOR*	1					08/18/1994
as Gasoline	ND	50	ug/L	5030		08/18/1994
Carbon Range:						08/18/1994
METHOD 8020 (GC, Liquid)						08/18/1994
Benzene	ND	0.5	ug/L	8020		08/18/1994
Toluene	ND	0.5	ug/L	8020		08/18/1994
Ethylbenzene	ND	0.5	ug/L	8020		08/18/1994
Xylenes (Total)	ND	0.5	ug/L	8020		08/18/1994
SURROGATE RESULTS						08/18/1994
Bromofluorobenzene (SURR)	91		% Rec.	5030		08/18/1994



Client Acct: 1821 NET Job No: 94.03554 Date: 08/25/1994

ELAP Cert: 1386 Page: 4

Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

SAMPLE DESCRIPTION: MW-5

Date Taken: 08/10/1994

Time Taken:

NET Sample No: 211680

	•		Reportin	Reporting			Date
Parameter	Results	Flags	Limit	Units	Method	Extracted	Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015							08/18/1994
DILUTION FACTOR*	1						08/18/1994
as Gasoline	70	G-	50	ug/L	5030		08/18/1994
Carbon Range:	C4-C5						08/18/1994
METHOD 8020 (GC, Liquid)							08/18/1994
Benzene	ND		0.5	ug/L	8020		08/18/1994
Toluene	ND		0.5	ug/L	8020		08/18/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/18/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/18/1994
SURROGATE RESULTS							08/18/1994
Bromofluorobenzene (SURR)	89			% Rec.	5030		08/18/1994

 $\mbox{G-}\ :$  The positive result has an atypical pattern for Gasoline analysis.

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Acct: 1821 NET Job No: 94 03554 Date: 08/25/1994

ELAP Cert: 1386 Page: 5

Ref: SHELL, 6039 College Ave.; Oakland, 940810-Z1

SAMPLE DESCRIPTION: EB

Date Taken: 08/10/1994

Time Taken:

			Reportin	Reporting			Date
Parameter	Results	Flags	Limit	Units	Method	Extracted	Analyzed
TPH (Gas/BTXE,Liquid)							_
METHOD 5030/M8015		,					08/18/1994
DILUTION FACTOR*	1						08/18/1994
as Gasoline	ND		50	ug/L	5030		08/18/1994
Carbon Range:							08/18/1994
METHOD 8020 (GC, Liquid)							08/18/1994
Benzene	ND	•	0.5	ug/L	8020		08/18/1994
Toluene	ND		0.5	ug/L	8020		08/18/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/18/1994
Xylenes (Total)	ND		0.5	ug/L	802D		08/18/1994
SURROGATE RESULTS							08/18/1994
Bromofluorobenzene (SURR)	90			% Rec.	5030		08/18/1994



Client Acct: 1821 NET Job No: 94.03554 Date: 08/25/1994

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Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

SAMPLE DESCRIPTION: DUP

Date Taken: 08/10/1994

Time Taken:

		Reportin	g		Date	Date
Parameter	Results Flags	Limit	Units	Method	Extracted	Analyzed
TPH (Gas/BTXE, Liquid)						
METHOD 5030/M8015						08/20/1994
DILUTION FACTOR*	1					08/20/1994
as Gasoline	ND	50	ug/L	5030		08/20/1994
Carbon Range:						08/20/1994
METHOD 8020 (GC, Liquid)	••					08/20/1994
Benzene	ND	0.5	ug/L	8020		08/20/1994
Toluene	ND	0.5	ug/L	8020		08/20/1994
Ethylbenzene	ND	0.5	ug/L	8020		08/20/1994
Xylenes (Total)	ND	0.5	ug/L	8020		08/20/1994
SURROGATE RESULTS				-		08/20/1994
Bromofluorobenzene (SURR)	89		% Rec.	5030		08/20/1994



Client Acct: 1821 NET Job No: 94.03554 Date: 08/25/1994

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Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

SAMPLE DESCRIPTION: TB

Date Taken: 08/10/1994

Time Taken:

			Reportin	g		Date	Date
Parameter	Results	Flags	Limit	Units	Method	Extracted	Analyzed
TPH (Gas/BTXE, Liquid)							
METHOD 5030/M8015							08/18/1994
DILUTION FACTOR*	1						OB/18/1994
as Gasoline	ND		50	ug/L	5030		OB/18/1994
Carbon Range:							08/18/1994
METHOD 8020 (GC, Liquid)							08/18/1994
Benzene	ND		0.5	ug/L	8020		08/18/1994
Toluene	ND		0.5	ug/L	8020		08/18/1994
Ethylbenzene	ND		0,5	ug/L	8020		08/18/1994
Xylenes (Total)	ND		0.5	ug/L	8020		OB/18/1994
SURROGATE RESULTS							08/18/1994
Bromofluorobenzene (SURR)	93			% Rec.	5030		08/18/1994



Client Acct: 1821

Date: 08/25/1994

ELAP Cert: 1386

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Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

SAMPLE DESCRIPTION: MW-3

Date Taken: 08/10/1994

Time Taken:

		Reporting			Date	Date
Parameter	Results Flags	Limit	Units	Method	Extracted	Analyzed
Oil & Grease (Total)	ND	5,000	ug/L	5520B		08/12/1994
Oil & Grease (Non-Polar)	ND	5,000	ug/L	5520B/F		08/12/1994
TPH (Gas/BTXE, Liquid)						
METHOD 5030/M8015						08/20/1994
DILUTION FACTOR*	1		-			08/20/1994
as Gasoline	920	50	ug/L	5030	•	08/20/1994
Carbon Range:	C5-C12					08/20/1994
METHOD 8020 (GC, Liquid)	**					08/20/1994
Benzene	20	0.5	ug/L	8020		08/20/1994
Toluene	2.3	0.5	ug/L	8020		08/20/1994
Ethylbenzene	3.0	0.5	ug/L	8020		08/20/1994
Xylenes (Total)	2.2	0.5	ug/L	8020		08/20/1994
SURROGATE RESULTS						08/20/1994
Bromofluorobenzene (SURR)	99		% Rec.	5030		D8/20/1994
METHOD M8015 (EXT., Liquid)					08/15/1994	
DILUTION FACTOR*	1					08/16/1994
as Motor Oil	ND	500	ug/L	3510		08/16/1994
Carbon Range:						08/16/1994



Client Acct: 1821 NET Job No: 94.03554 Date: 08/25/1994

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Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

SAMPLE DESCRIPTION: MW-3

Date Taken: 08/10/1994

Time Taken:

		Reportir	ng		Date	Date
Parameter	Results Flags	Limit	Units	Method	Extracted	Analyzed
METHOD 8270 (GCMS, Liquid)					08/13/1994	
DILUTION FACTOR*	1				-	08/15/1994
Acenaphthene	ND	10	ug/L	8270		08/15/1994
Acenaphthylene	ND	10	ug/L	B270		08/15/1994
Aldrin	ND	50	ug/L	8270		08/15/1994
Anthracene	ND	10	ug/L	8270		08/15/1994
Benzidine	ND	44	ug/L	8270		08/15/1994
Benzo (a) anthracene	ND	10	ug/L	B270		08/15/1994
Benzo (b) fluoranthene	ND	10	ug/L	8270		08/15/1994
Benzo(k) fluoranthene	ND	10	ug/L	8270		08/15/1994
Benzo(a)pyrene	ND	10	ug/L	8270		08/15/1994
Benzo(g,h,i)perylene	ND	10	ug/L	8270		08/15/1994
Benzoic acid	ND .	50	ug/L	6270		08/15/1994
Benzyl alcohol	ND	10	ug/L	B270		08/15/1994
Butyl benzyl phthalate	ND	10	ug/L	8270		08/15/1994
delta-BHC	ND	50	ug/L	8270		08/15/1994
gamma-BHC	ND	50	ug/L	6270		08/15/1994
bis(2-Chloroethyl)ether	ND	10	ug/L	B270		08/15/1994
bis(2-Chloroethoxy)methane	ND	10	ug/L	8270		08/15/1994
bis(2-Chloroisopropyl)ether	ND	10	ug/L	8270		08/15/1994
bis(2-Ethylhexyl)phthalate	ND	10	ug/L	B270		08/15/1994
4-Bromophenyl phenyl ether	ND	10	ug/L	8270		08/15/1994
4-Chloroaniline	ND	10	ug/L	8270		08/15/1994
2-Chloronaphthalene	ND	10	ug/L	8270		08/15/1994
4-Chlorophenyl phenyl ether	ND	10	ug/L	8270		08/15/1994
Chrysene	ND	10	ug/L	8270		08/15/1994
4,4'-DDD	ND	50	ug/L	8270		08/15/1994
4,4'-DDE	ND	50	ug/L	8270		08/15/1994
4,4'-DDT	ND	50	ug/L	8270		08/15/1994
Dibenzo(a,h)anthracene	ND	10	ug/L	8270		08/15/1994
Dibenzofuran	ND	10	ug/L	8270		08/15/1994
Di-n-butylphthalate	ND	10	ug/L	8270		08/15/1994
1,2-Dichlorobenzene	ND	10	ug/L	8270		08/15/1994
1,3-Dichlorobenzene	ND	10	ug/L	8270		08/15/1994
1,4-Dichlorobenzene	ND	10	ug/L	8270		08/15/1994
3,3'-Dichlorobenzidine	ND	20	ug/L	8270	•	08/15/1994
Dieldrin	ND	50	ug/L	8270		08/15/1994
Diethylphthalate	ND	10	ug/L	8270		08/15/1994
Dimethyl phthalate	ND	10	ug/L	8270		08/15/1994
2,4-Dinitrotoluene	ND	10	ug/L	8270		08/15/1994
2,6-Dinitrotoluene	ND	10	ug/L	8270		08/15/1994
Di-n-octyl phthalate	ND	10	ug/L	8270		08/15/1994



Client Acct: 1821 NET Job No: 94.03554 Date: 08/25/1994

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Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

SAMPLE DESCRIPTION: MW-3

Date Taken: 08/10/1994

Time Taken:

_		Reporting			Date	Date
Parameter	Results Flags	Limit	Units	Method	Extracted	Analyzed
Endrin aldehyde	ND	50	ug/L	8270		08/15/1994
Fluoranthene	ND	10	ug/L	8270		08/15/1994
Fluorene	ND	10	ug/L	8270		08/15/1994
Heptachlor	ND	50	ug/L	8270		08/15/1994
Heptachlor epoxide	ND	50	ug/L	8270		08/15/1994
Hexachlorobenzene	ND	10	ug/L	8270		08/15/1994
Hexachlorobutadiene	ND	10	ug/L	8270		08/15/1994
Hexachlorocyclopentadiene	ND	10	ug/L	8270		08/15/1994
Hexachloroethane	ND	10	ug/L	8270		08/15/1994
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	8270		08/15/1994
Isophorone	ND	10	ug/L	8270		08/15/1994
2-Methylnaphthalene	ND	10	ug/L	8270		08/15/1994
Naphthalene	ND	10	ug/L	8270		08/15/1994
2-Nitroaniline	ND	50	ug/L	8270		08/15/1994
3-Nitroaniline	ND	50	ug/L	8270		08/15/1994
4-Nitroaniline	ND	50	ug/L	8270		08/15/1994
Nitrobenzene	ND	10	ug/L	8270		DB/15/1994
N-Nitroso-Di-N-propylamine	ND	10	ug/L	8270		08/15/1994
N-Nitrosodiphenylamine	ND	10	ug/L	8270		08/15/1994
Phenanthrene	ND	10	ug/L	8270		08/15/1994
Pyrene	ND	10	ug/L	8270		08/15/1994
1,2,4-Trichlorobenzene	ND	10	ug/L	8270		08/15/1994
ACID EXTRACTABLES						08/15/1994
4-Chloro-3-methylphenol	ND	10	ug/L	8270		08/15/1994
2-Chlorophenol	ND	10	ug/L	8270	•	08/15/1994
2,4-Dichlorophenol	ND	10	ug/L	8270		08/15/1994
2,4-Dimethylphenol	ND	10	ug/L	8270		08/15/1994
2,4-Dinitrophenol	ND	50	ug/L	8270		08/15/1994
4,6-Dinitro-2-methylphenol	ND	50	ug/L	8270		08/15/1994
2-Nitrophenol	ND	10	ug/L	8270		08/15/1994
4-Nitrophenol	ND	50	ug/L	8270		08/15/1994
Pentachlorophenol	ND .	50	ug/L	8270		08/15/1994
Phenol	ND	10	ug/L	8270		08/15/1994
2,4,6-Trichlorophenol	ND	10	ug/L	8270		08/15/1994
2-Methylphenol	ND	10	ug/L	8270		08/15/1994
4-Methylphenol	ND	10	ug/L	8270		08/15/1994
2,4,5-Trichlorophenol	ND	50	ug/L	8270		08/15/1994
URROGATE RESULTS			-		•	08/15/1994
Nitrobenzene-d5 (SURR)	77		₹ Rec.	B270		OB/15/1994
-Fluorobiphenyl (SURR)	66		ł Rec.	8270		08/15/1994
o-Terphenyl-d14 (SURR)	64		% Rec.	8270	•	08/15/1994
Phenol-d5 (SURR)	29		% Rec.	8270		08/15/1994



Client Acct: 1821

ET Job No: 94.03554

Date: 0B/25/1994

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Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

SAMPLE DESCRIPTION: MW-3

Date Taken: 08/10/1994

Time Taken:

	Reporting					<b>Pate</b>	Date
Parameter	Results	Flags	Limit	Units	Method	Extracted	Analyzed
2-Fluorophenol (SURR)	38			% Rec.	8270		08/15/1994
2,4,6-Tribromophenol (SURR)	86			% Rec.	8270		08/15/1994



Client Acct: 1821 NET Job No: 94.03554 Date: 08/25/1994

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Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

SAMPLE DESCRIPTION: MW-6

Date Taken: 08/10/1994

Time Taken:

NET Sample No: 211685

			Reporting			Date	Date
Parameter	Results	Flags	Limit	Units	Method	Extracted	Analyzed
Oil & Grease (Total)	ND		5,000	ug/L	5520B		08/12/1994
Oil & Grease (Non-Polar)	ND		5,000	ug/L	5520B/F		08/12/1994
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015							08/22/1994
DILUTION FACTOR*	1						08/22/1994
as Gasoline	80	G-	50	ug/L	5030		08/22/1994
Carbon Range:	C4-C5						08/22/1994
METHOD 8020 (GC, Liquid)							08/22/1994
Benzene	ND		0.5	ug/L	8020		08/22/1994
Toluene	ND	-	0.5	ug/L	B020		08/22/1994
Ethylbenzene	, ND		0.5	ug/L	8020		08/22/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/22/1994
SURROGATE RESULTS							08/22/1994
Bromofluorobenzene (SURR)	90			% Rec.	5030		08/22/1994

 $\ensuremath{\text{G-}}$  : The positive result has an atypical pattern for Gasoline analysis.



Client Acct: 1821 NET Job No: 94.03554

Date: 08/25/1994

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Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

SAMPLE DESCRIPTION: MW-6

Date Taken: 08/10/1994

Time Taken:

		Reportin	a		Date ·	Date
Parameter	Results Flags	Limit	Units	Method	Extracted	Analyzed
METHOD 8270 (GCMS, Liquid)					08/13/1994	
DILUTION FACTOR*	1					OB/15/1994
Acenaphthene	ND	10	ug/L	8270		08/15/1994
Acenaphthylene	ND	10	ug/L	8270		08/15/1994
Aldrin	ND	50	ug/L	8270		08/15/1994
Anthracene	ND	10	ug/L	8270		08/15/1994
Benzidine	ND	44	ug/L	8270		08/15/1994
Benzo(a)anthracene	ND	10	ug/L	8270		08/15/1994
Benzo(b)fluoranthene	ND	10	ug/L	8270		08/15/1994
Benzo(k)fluoranthene	' ND	10	ug/L	8270		08/15/1994
Benzo(a)pyrene	ND	10	ug/L	8270		08/15/1994
Benzo(g,h,i)perylene	ND	10	ug/L	8270		08/15/1994
Benzoic acid	ND	50	ug/L	8270		08/15/1994
Benzyl alcohol	ND	10	ug/L	8270		08/15/1994
Butyl benzyl phthalate	ND	10	ug/L	8270		08/15/1994
delta-BHC	ND	50	ug/L	8270		08/15/1994
gamma-BHC	ND	50	ug/L	8270		08/15/1994
bis(2-Chloroethyl)ether	ND	10	ug/L	8270		08/15/1994
bis(2-Chloroethoxy)methane	ND	10	ug/L	8270		08/15/1994
bis(2-Chloroisopropyl)ether	ND	10	ug/L	8270		08/15/1994
bis(2-Ethylhexyl)phthalate	ND	10	ug/L	8270		08/15/1994
4-Bromophenyl phenyl ether	ND	10	ug/L	8270		08/15/1994
4-Chloroaniline	NTD	10	ug/L	8270		08/15/1994
2-Chloronaphthalene	ND	10	ug/L	8270		08/15/1994
4-Chlorophenyl phenyl ether	ND	10	ug/L	8270		OB/15/1994
Chrysene	ND	10	ug/L	8270		08/15/1994
4,4'-DDD	ND	50	ug/L	8270		08/15/1994
4,4'-DDE	ND	50	ug/L	8270		08/15/1994
4,4'-DDT	ND	50	ug/L	8270		08/15/1994
Dibenzo (a,h) anthracene	ND	10	ug/L	8270		08/15/1994
Dibenzofuran	ND	10	ug/L	8270		08/15/1994
Di-n-butylphthalate	ND	10	ug/L	8270		08/15/1994
1,2-Dichlorobenzene	ND	10	ug/L	8270		08/15/1994
1,3-Dichlorobenzene	ND	10	ug/L	8270		08/15/1994
1,4-Dichlorobenzene	ND	10	ug/L	8270		08/15/1994
3,3'-Dichlorobenzidine	ND	20	ug/L	8270		08/15/1994
Dieldrin	ND	50	ug/L	8270		08/15/1994
Diethylphthalate	ND	10	ug/L	8270		08/15/1994
Dimethyl phthalate	ND	10	ug/L	8270		08/15/1994
2,4-Dinitrotoluene	ND	10	ug/L	8270		08/15/1994
2,6-Dinitrotoluene	ND	10	ug/L	8270		08/15/1994
Di-n-octyl phthalate	ND	10	ug/L	8270		08/15/1994



Client Acct: 1821 NET Job No: 94.03554 Date: 08/25/1994

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Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

SAMPLE DESCRIPTION: MW-6

Date Taken: 08/10/1994

Time Taken:

			Reporting			Date	Date
Parameter	Results	Flags	Limit	Units	Method	Extracted	Analyzed
Endrin aldehyde	ND		50	ug/L	8270		08/15/1994
Fluoranthene	ND		10	ug/L	8270		08/15/1994
Fluorene	ND		10	ug/L	8270		08/15/1994
Heptachlor	ND		50	ug/L	8270		08/15/1994
Heptachlor epoxide	ND		50	ug/L	8270		08/15/1994
Hexachlorobenzene	ND		10	ug/L	8270		08/15/1994
Hexachlorobutadiene	ND		10	ug/L	8270		08/15/1994
Hexachlorocyclopentadiene .	ND		10	ug/L	8270		08/15/1994
Hexachloroethane	ND		10	ug/L	8270		08/15/1994
Indeno(1,2,3-cd)pyrene	ND		10	ug/L	8270		08/15/1994
Isophorone	ND		10	ug/L	8270		08/15/1994
2-Methylnaphthalene	ND		10	ug/L	8270		08/15/1994
Naphthalene	ND		10	ug/L	8270		08/15/1994
2-Nitroaniline	ND		50	ug/L	8270		OB/15/1994
3-Nitroaniline	ND		50	ug/L	8270		08/15/1994
4-Nitroaniline	ND		50	ug/L	8270		08/15/1994
Nitrobenzene	ND		10	ug/L	8270		08/15/1994
N-Nitroso-Di-N-propylamine	ND		10	ug/L	8270		. DB/15/1994
N-Nitrosodiphenylamine	ND	•	10	ug/L	8270		08/15/1994
Phenanthrene	ND		10	ug/L	8270		08/15/1994
Pyrene	ND		10	ug/L	8270		08/15/1994
1,2,4-Trichlorobenzene	ND		10	ug/L	8270		08/15/1994
ACID EXTRACTABLES							08/15/1994
4-Chloro-3-methylphenol	ND		10	ug/L	B270		08/15/1994
2-Chlorophenol	ND		10	ug/L	8270		08/15/1994
2,4-Dichlorophenol	ND		10	· ug/L	8270		08/15/1994
2,4-Dimethylphenol	ND		10	ug/L	8270		08/15/1994
2,4-Dinitrophenol	ND		50	ug/L	8270		08/15/1994
4,6-Dinitro-2-methylphenol	ND		50	ug/L	8270		08/15/1994
2-Nitrophenol	ND		10	ug/L	8270		08/15/1994
4-Nitrophenol	ND		50	ug/L	8270		08/15/1994
Pentachlorophenol	ND		50	ug/L	8270		08/15/1994
Phenol	ND		10	ug/L	8270		08/15/1994
2,4,6-Trichlorophenol	ND		10	ug/L	8270		08/15/1994
2-Methylphenol	ND		10	ug/L	8270		08/15/1994
4-Methylphenol	ND		10	ug/L	8270		08/15/1994
2,4,5-Trichlorophenol	ND		50	ug/L	8270		08/15/1994
SURROGATE RESULTS						•	08/15/1994
Nitrobenzene-d5 (SURR)	78			% Rec.	B270		08/15/1994
2-Fluorobiphenyl (SURR)	68			% Rec.	B270		08/15/1994
p-Terphenyl-d14 (SURR)	54			% Rec.	8270		08/15/1994
Phenol-d5 (SURR)	29			% Rec.	8270		08/15/1994



Client Acct: 1821

Date: 08/25/1994

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Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

SAMPLE DESCRIPTION: MW-6

Date Taken: 08/10/1994

Time Taken:

•	Reporting				Date	Date
Parameter	Results Flags	Limit	Units	Method	Extracted	Analyzed
2-Fluorophenol (SURR)	37		% Rec.	8270		08/15/1994
2,4,6-Tribromophenol (SURR)	65		% Rec.	8270		08/15/1994



Client Name: Blaine

Blaine Tech Service

lient Acct: 1821 NET Job No: 94.03554 Date: 08/25/1994

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Ref: SHELL, 6039 College Ave., Oakland, 940810-Zl

# CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

		CCV	CCA			
	CCV	Standard	Standard			
	Standard	Amount	Amount		Date	Analyst
Parameter	% Recovery	Found	Expected	Units	Analyzed	Initials
TPH (Gas/BTXE, Liquid)						
as Gasoline	105.0	1.05	1.00	mg/L	08/20/1994	lss
Benzene	101.2	5.06	5.00	ug/L	08/20/1994	lss
Toluene	104.8	5.24	5.00	ug/L	08/20/1994	lss
Ethylbenzene	103.4	5.17	5.00	ug/L	08/20/1994	lss
Xylenes (Total)	106.0	15.9	15.0	ug/L	08/20/1994	lss
Bromofluorobenzene (SURR)	104.0	104	100	% Rec.	08/20/1994	lss
TPH (Gas/BTXE,Liquid)						
as Gasoline	96.0	0.96	1.00	mg/L	08/18/1994	lss
Benzene	88.2	4.41	5.00	ug/L	08/18/1994	lss
Toluene	87.4	4.37	5.00	ug/L	08/18/1994	lss
Ethylbenzene	90.0	4.50	5.00	ug/L	08/18/1994	lss
Xylenes (Total)	88.0	13.2	15.0	ug/L	08/18/1994	lss
Bromofluorobenzene (SURR)	95.0	95	100	% Rec.	08/18/1994	lss
TPH (Gas/BTXE,Liquid)	•					
as Gasoline	97.0	0.97	1.00	mg/L	08/22/1994	lss
Benzene	92.6	4.63	5.00	ug/L	08/22/1994	lss
Toluene	94.2	4.71	5.00	ug/L	08/22/1994	lss
Ethylbenzene	95.6	4.78	5.00	ug/L	08/22/1994	lss
Xylenes (Total)	93.3	14.0	15.0	ug/L	08/22/1994	lss
Bromofluorobenzene (SURR)	99.0	99	100	% Rec.	08/22/1994	lss
METHOD M8015 (EXT., Liquid)						
as Motor Oil	109.7	1097	1000	mg/L	08/16/1994	tdn



Client Name:

Blaine Tech Services

lient Acct: 1821 NET Joh No: 94 03554 Date: 08/25/1994

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Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

# CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

		CCA	ccv			
	CCV	Standard	Standard			
	Standard	Amount	Amount		Date	Analyst
Parameter	% Recovery	Found	Expected	Units	Analyzed	Initials
METHOD 8270 (GCMS, Liquid)						
Acenaphthene	98.0	49.0	50.0	ug/L	08/15/1994	sjg
Benzo(a)pyrene	102.0	51.0	50.0	ug/L	08/15/1994	sjg
1,4-Dichlorobenzene	90.0	45.0	50.0	ug/L	08/15/1994	sjg
Di-n-octyl phthalate	115.0	57.5	50.0	ug/L	08/15/1994	sjg
Fluoranthene	93.0	46.5	50.0	ug/L	08/15/1994	sjg
Hexachlorobutadiene	92.0	46.0	50.0	ug/L	08/15/1994	sjg
N-Nitrosodiphenylamine	96.0	48.0	50.0	ug/L	08/15/1994	sjg
4-Chloro-3-methylphenol	96.0	48.0	50.0	ug/L	08/15/1994	sjg
2,4-Dichlorophenol	96.0	48.0	50.0	ug/L	08/15/1994	sjg
2-Nitrophenol	96.0	48.0	50.0	ug/L	OB/15/1994	gįs
Pentachlorophenol	90.0	45.0	50.0	ug/L	08/15/1994	sjg
Phenol	91.0	45.5	50.0	ug/L	08/15/1994	ajg
2,4,6-Trichlorophenol	95.0	47.5	50.0	ug/L	08/15/1994	вjg
Nitrobenzene-d5 (SURR)	99.0	99	100	% Rec.	08/15/1994	sjg
2-Fluorobiphenyl (SURR)	99.0	99	100	% Rec.	08/15/1994	sjg
p-Terphenyl-d14 (SURR)	91.0	91	100	% Rec.	08/15/1994	sjg
Phenol-d5 (SURR)	82.0	82	100	% Rec.	08/15/1994	sjg
2-Fluorophenol (SURR)	90.0	90	100	% Rec.	08/15/1994	sjg
2.4.6-Tribromophenol (SURR)	75.0	75	100	% Rec.	08/15/1994	sia .



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Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

# METHOD BLANK REPORT

Method Blank

	24.41.41					
	Amount	Reporting		Date	Analyst	
Parameter	Found	Limit	Units	Analyzed	<u> Initials</u>	
Oil & Grease (Total)	ND	5	mg/L	08/12/1994	temp	
Oil & Grease (Non-Polar)	ND	5	mg/L	08/12/1994	temp	
TPH (Gas/BTXE, Liquid)						
as Gasoline	ND	0.05	mg/L	08/20/1994	lss	
Benzene	ND	0.5	ug/L	08/20/1994	lss	
Toluene	ND	0.5	ug/L	08/20/1994	lss	
Ethylbenzene	ND	0.5	ug/L	08/20/1994	lss	
Xylenes (Total)	ND	0.5	ug/L	08/20/1994	lss	
Bromofluorobenzene (SURR)	89	-	% Rec.	08/20/1994	lss	
TPH (Gas/BTXE, Liquid)						
as Gasoline	ND	0.05	mg/L	08/18/1994	lss	
Вепzеле	ND	0.5	ug/L	08/18/1994	lss	
Toluene	ND	0.5	ug/L	08/18/1994	lss	
Ethylbenzene	ND ·	0.5	ug/L	08/18/1994	lss	
Xylenes (Total)	ND	0.5	ug/L	08/18/1994	lss	
Bromofluorobenzene (SURR)	100		% Rec.	08/18/1994	lss	
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	08/22/1994	lss	
Benzene	ND	0.5	ug/L	08/22/1994	lss	
Toluene	ND	0.5	ug/L	08/22/1994	lss	
Ethylbenzene	ND	0.5	ug/L	08/22/1994	lss	
Xylenes (Total)	ND	0.5	ug/L	08/22/1994	lss	
Bromofluorobenzene (SURR)	90		% Rec.	08/22/1994	lss	
METHOD M8015 (EXT., Liquid)						
as Motor Oil	ND	0.5	mg/L	08/16/1994	tdn	



Client Acct: 1821 NET Job No: 94.03554 Date: 08/25/1994

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Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

# METHOD BLANK REPORT

Method Blank

	Blank						
	Amount	Reporting		Date	Analyst		
<u>Parameter</u>	Found	Limit	Units	Analyzed	Initials		
METHOD 8270 (GCMS, Liquid)							
Acenaphthene	ND	1.9	ug/L	08/15/1994	sjg		
Acenaphthylene	ND	3.5	ug/L	08/15/1994	sjg		
Aldrin	ND	1.9	ug/L	08/15/1994	sjg		
Anthracene	ND	1.9	ug/L	08/15/1994	sjg		
Benzidine	ND	44	ug/L	08/15/1994	sjg		
Benzo(a)anthracene	ND	7.8	ug/L	08/15/1994	sjg		
Benzo(b) fluoranthene	ND	4.8	ug/L	08/15/1994	sjg		
Benzo(k)fluoranthene	ND	2.5	ug/L	08/15/1994	sjg		
Benzo(a)pyrene	ND	2.5	ug/L	08/15/1994	sjg		
Benzo(g,h,i)perylene	ND	4.1	ug/L	08/15/1994	sjg		
Butyl benzyl phthalate	ND	2.5	ug/L	08/15/1994	sjg		
delta-BHC	ND	50	ug/L	08/15/1994	sjg		
gamma-BHC	ND	50	ug/L	08/15/1994	sjg		
bis(2-Chloroethyl)ether	ND	5.7	ug/L	08/15/1994	sjg		
bis(2-Chloroethoxy)methane	ND	5.3	ug/L	08/15/1994	sjg		
bis(2-Chloroisopropyl)ether	ND	5.7	ug/L	08/15/1994	sjg		
bis(2-Ethylhexyl)phthalate	ND	2.5	ug/L	08/15/1994	sjg		
4-Bromophenyl phenyl ether	ND	1.9	ug/L	08/15/1994	sjg		
2-Chloronaphthalene	ND	1.9	ug/L	08/15/1994	sjg		
4-Chlorophenyl phenyl ether	ND	4.2	ug/L	08/15/1994	sjg		
Chrysene	ND	2.5	ug/L	08/15/1994	sjg		
4,4'-DDD	· ND	2.8	ug/L	08/15/1994	sjg		
4,4'-DDE	ND	5.6 ·	ug/L	08/15/1994	sjg		
4,4'-DDT	ND	4.7	ug/L	08/15/1994	sjg		
Dibenzo(a,h)anthracene	ND	2.5	ug/L	08/15/1994	sjg		
Di-n-butylphthalate	ND	2.5	ug/L	08/15/1994	sjg		
1,2-Dichlorobenzene	ND	1.9	ug/L	08/15/1994	sjg		
1,3-Dichlorobenzene	ND	1.9	ug/L	08/15/1994	sjg		
1,4-Dichlorobenzene	ND	4.4	ug/L	08/15/1994	sjg		
3,3'-Dichlorobenzidine	ND	17	ug/L	08/15/1994	sjg		
Dieldrin .	ND	2,5	ug/L	08/15/1994	sjg		
Diethylphthalate	ND	1.9	ug/L	08/15/1994	sjg		
Dimethyl phthalate	ND	1.6	ug/L	08/15/1994	sjg		
2,4-Dinitrotoluene	ND	5.7	ug/L	08/15/1994	sjg		
2,6-Dinitrotoluene	ND	1.9	ug/L	08/15/1994	sjg		
Di-n-octyl phthalate	ND	2.5	ug/L	08/15/1994	sjg		
Endrin aldehyde	ND	50	ug/L	08/15/1994	gţa		
Fluoranthene	ND	2.2	ug/L	08/15/1994	sjg		
Fluorene	ND	1.9	ug/L	08/15/1994	sjg		
Heptachlor	ND	1.9	ug/L	08/15/1994	sjg		
Heptachlor epoxide	ND	2.2	ug/L	· 08/15/1994	sjg		
Hexachlorobenzene	ND	1.9	ug/L	08/15/1994	sjg		
Hexachlorobutadiene	ND	0.9	ug/L	08/15/1994	sjg		
Hexachlorocyclopentadiene	ND	5.0	ug/L	08/15/1994	sjg		
Hexachloroethane	ND	1.6	ug/L	08/15/1994	sjg		
Indeno(1,2,3-cd)pyrene	ND	3.7	ug/L	08/15/1994	sjg		
Isophorone	ND	2,2	ug/L	08/15/1994	sjg		

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



lient Acct: 1821 NET Job No: 94.03554 Date: 08/25/1994

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Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

# METHOD BLANK REPORT

Method Blank

	DIGILIC				
	Amount	Reporting		Date	Analyst
Parameter	Found	Limit	Units	Analyzed	<u>Initials</u>
Naphthalene	ND	1.6	ug/L	08/15/1994	sjg
Nitrobenzene	ND	1.9	ug/L	08/15/1994	sjg
N-Nitroso-Di-N-propylamine	ND	10	ug/L	08/15/1994	sjg
N-Nitrosodiphenylamine	ND	10	ug/L	08/15/1994	sjg
Phenanthrene	ND	5.4	ug/L	08/15/1994	sjg
Pyrene	ND	1.9	ug/L	08/15/1994	sjg
1,2,4-Trichlorobenzene	ND	1.9	ug/L	08/15/1994	sjg
4-Chloro-3-methylphenol	ND	3.0	ug/L	08/15/1994	sjg
2-Chlorophenol	ND	3.3	ug/L	08/15/1994	sjg
2,4-Dichlorophenol	ND	2.7	ug/L	08/15/1994	sjg
2,4-Dimethylphenol	ND	2.7	ug/L	08/15/1994	sjg
2,4-Dinitrophenol	ND	42	ug/L	08/15/1994	sjg
4,6-Dinitro-2-methylphenol	ND	24	ug/L	08/15/1994	sjg
2-Nitrophenol	ND	3.6	ug/L	08/15/1994	sjg
4-Nitrophenol	ND	2.4	ug/L	08/15/1994	sjg
Pentachlorophenol	ND	3.6	ug/L	08/15/1994	sjg
Phenol	ND	1.5	ug/L	08/15/1994	sjg
2,4,6-Trichlorophenol	ND	2.7	ug/L	08/15/1994	sjg
Nitrobenzene-d5 (SURR)	77		% Rec.	08/15/1994	sjg
2-Fluorobiphenyl (SURR)	66		% Rec.	08/15/1994	sjg
p-Terphenyl-d14 (SURR)	64		% Rec.	08/15/1994	sjg
Phenol-d5 (SURR)	44		% Rec.	08/15/1994	sjg
2-Fluorophenol (SURR)	57		% Rec.	08/15/1994	sjg
2,4,6-Tribromophenol (SURR)	90		% Rec.	08/15/1994	sjg



lient Acct: 1821 NET Job No: 94.03554 Date: 08/25/1994

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Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE

	Matrix	Matrix Spike				Matrix	Matrix Spike			
	Spike	Dup		Spike	Sample	Spike	Dup.		Date	Analyst
<u>Parameter</u>	% Rec.	% Rec.	RPD	Amount	Conc.	Conc.	Conc.	Units	Analyzed	<u>Initials</u>
Oil & Grease (Total)	93.6	94.6	1.1	172	ND	161	159	mg/L	08/12/1994	temp
Oil & Grease (Non-Polar)	93.6	94.6	1.1	172	ND	161	159	mg/L	08/12/1994	temp
TPH (Gas/BTXE, Liquid)										
as Gasoline	101.0	105.0	3.9	1.00	ND	1,01	1.05	mg/L	08/20/1994	lss
Benzene	103.6	107.5	3.7	38.5	ND	39.9	41.4	ug/L	08/20/1994	lss
Toluene	101.0	102.9	1.9	102	ND	103	105	ug/L	08/20/1994	lss
TPH (Gas/BTXE, Liquid)										
as Gasoline	100.0	99.0	0.9	1.00	ND	1.00	0.99	mg/L	08/18/1994	lss
Benzene	103.0	104.0	1.0	30.2	ND	31.1	31.4	ug/L	08/18/1994	lss
Toluene	102.9	103.6	0.7	94.0	ND	96.7	97.4	ug/L	08/18/1994	lss
TPH (Gas/BTXE, Liquid)										
as Gasoline	106.0	108.0	1.9	1.00	0.08	1.14	1.16	mg/L	08/22/1994	lss
Benzene	103.6	106.6	2.9	30.4	ND	31.5	32.4	ug/L	08/22/1994	lss
Toluene	102.7	105.6	2.8	95.6	ND	98.2	101	ug/L	08/22/1994	lss



Client Name: Blaine Tech Services Date: 08/25
ELAP Cert: 1386

Date: 08/25/1994

Ref: SHELL, 6039 College Ave., Oakland, 940810-21

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE

	Matrix	Matrix Spike				Matrix	Matrix Spike			
•	Spike	Σи́Σ		Spike	Sample	Spike	Dup.		Date	Analyst
Parameter	% Rec.	% Rec.	RPD	Amount	Conc.	Conc.	Conc.	Units	Analyzed	<u>Initials</u>
METHOD 8270 (GCMS, Liquid)										
Acenaphthene	80.0	75.0	6.5	100	ND	80	75	ug/L	08/15/1994	sjg
1,4-Dichlorobenzene	71.0	75.0	5.5	100	ND	71	75	ug/L	08/15/1994	sjg
2,4-Dinitrotoluene	91.0	91.0	0.0	1.00	ND	91	91	ug/L	08/15/1994	sjg
N-Nitroso-Di-N-propylamine	89.0	95.0	6.5	100	ND	89	95	ug/L	08/15/1994	sjg
Pyrene	94.0	101.0	7.1	100	ND	94	101	ug/L	08/15/1994	вjg
1,2,4-Trichlorobenzene	71.0	70.0	1.4	100	ND	71	70	ug/L	08/15/1994	sjg
4-Chloro-3-methylphenol	67.0	69.0	2.9	200	ND	134	138	ug/L	08/15/1994	sjg
2-Chlorophenol	70.0	77.0	9.5	200	ND	140	154	ug/L	08/15/1994	sjg
4-Nitrophenol	61.0	66.0	7.9	200	ND	122	132	ug/L	08/15/1994	sjg
Pentachlorophenol	74.0	80.0	7.8	200	ND	148	160	ug/L	08/15/1994	sjg
Phenol	45.5	48.5	6.4	200	ND	91	97	ug/L	08/15/1994	sia



Client Acct: 1821 NET Job No: 94.03554 Date: 08/25/19:

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Ref: SHELL, 6039 College Ave., Oakland, 940810-Z1

# LABORATORY CONTROL SAMPLE REPORT

		LCS.	LCS			
	LCS	Amount	Amount		Date	Analyst
Parameter	% Recovery RPD	Found	Expected	Units	Analyzed	Initials
Oil & Grease (Total)	94.4	153	162	mg/L	08/12/1994	temp
Oil & Grease (Total)	96.2	150	156	mg/L	08/12/1994	temp
Oil & Grease (Non-Polar)	86.4	140	162	mg/L	08/12/1994	temp
METHOD 8270 (GCMS, Liquid)						
Acenaphthene	67.0	67	100	ug/L	08/15/1994	sjg
1,4-Dichlorobenzene	61.0	61	100	ug/L	08/15/1994	sjg
2,4-Dinitrotoluene	87.0	87	100	ug/L	08/15/1994	sjg
N-Nitroso-Di-N-propylamine	86.0	86	100	ug/L	08/15/1994	sjg
Pyrene	92.0	92	100	ug/L	08/15/1994	sjg
1,2,4-Trichlorobenzene	60.0	60	100	ug/L	08/15/1994	sjg
4-Chloro-3-methylphenol	82.0	164	200	ug/L	08/15/1994	sjg
2-Chlorophenol	81.0	162	200	ug/L	08/15/1994	sjg
4-Nitrophenol	39.5	79	200	ug/L	08/15/1994	sjg
Pentachlorophenol	83.0	166	200	ug/L	08/15/1994	sjg
Phenol	39.0	78	200	ug/L	08/15/1994	sjg
Nitrobenzene-d5 (SURR)	81.0	81	100	% Rec.	08/15/1994	sjg
2-Fluorobiphenyl (SURR)	67.0	67	100	% Rec.	08/15/1994	sjg
p-Terphenyl-d14 (SURR)	59.0	59	100 .	% Rec.	08/15/1994	sjg
Phenol-d5 (SURR)	49.0	49	100	者 Rec.	08/15/1994	sjg
2-Fluorophenol (SURR)	62.0	62	100	% Rec.	08/15/1994	sjg
2.4.6-Tribromophenol (SURR)	101.0	. 101	100	% Rec.	08/15/1994	sjg



#### 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. Actual reporting limits and results have been multiplied by the listed dilution factor. Do not multiply the reporting limits or reported values by the dilution factor.

dw : Result expressed as dry weight.

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 the 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., Rev. 1, December 1987.

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

Revised September, 1993 abb.93

## COOLER RECEIPT FORM

Project: Shell 6037 College Arc. Ob	Kland	год ио:_	1893
Cooler received on: 8/12/94 and	checked on T	712/94 by	K. Temple
	<u>(s</u>	ignature	
Were custody papers present?	• • • • • • • • • • •		YES) NO
Were custody papers properly fille	d out?		ES NO
Were the custody papers signed?	• • • • • • • • • • • • •		YES NO
Was sufficient ice used?	•••		YES NO 5.7°C
Did all bottles arrive in good cor	dition (unbro	oken)?	YES NO
Did bottle labels match COC?			YES NO
Were proper bottles used for analy	sis indicated	i?(	YES NO
Correct preservatives used?	• • • • • • • • • • • • • • • • • • • •		YES NO
VOA vials checked for headspace bu Note which voas (if any) h	abbles? ad bubbles:*		YES NO
Sample descriptor: Nu	umber of vials	3:	
		<del> </del>	
<del></del>	<del></del> -		
*All VOAs with headspace bubbles I used for analysis	nave been set	aside so the	y will not be YES NO
List here all other jobs received	in the same	cooler:	
Client Job # N	ET log #		
			•
	<del></del>		
			•
	<del></del>		

(coolerrec)