Weiss Associates Environmental and Geologic Services

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

December 19, 1994

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

Re: Fourth Quarter 1994Shell 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 fourth quarter 1994 and proposed work for the first quarter 1995.

Fourth 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. A truck was parked over well MW-6, and it too was not sampled this quarter. 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 pounds of SPHs have been removed from the subsurface.

Anticipated First Quarter 1995 Activities:

- WA will submit a report presenting the results of first quarter 1995 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:

WA recommends continued monitoring of dissolved hydrocarbon concentrations in ground water. 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 been detected in ground water samples collected from well MW-5 since it was installed in 1991. No BTEX compounds or more than 98 ppb TPH-G have been detected in ground water samples collected from 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

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

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

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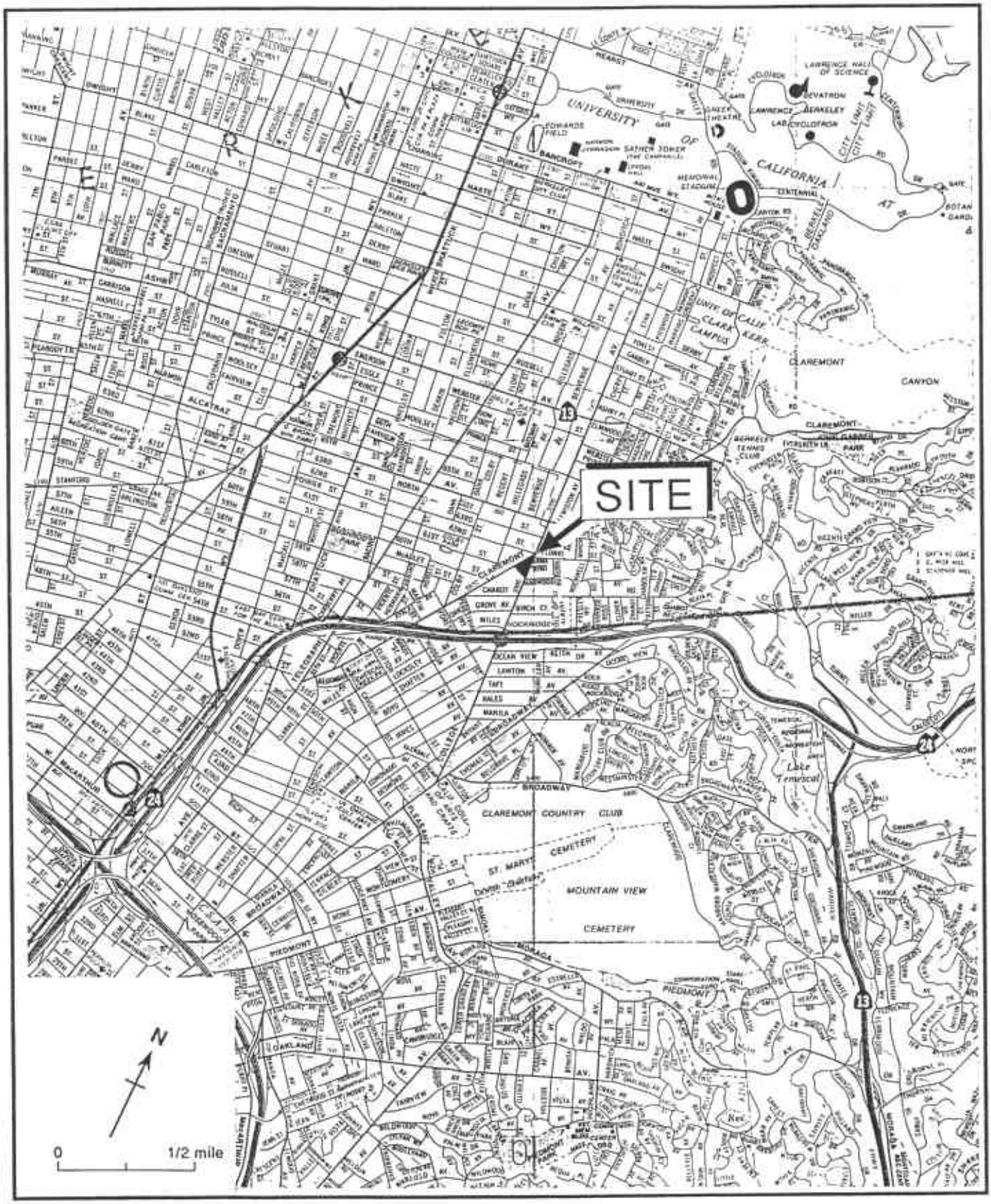

Figure 1. Site Location Map - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California

4/13/92

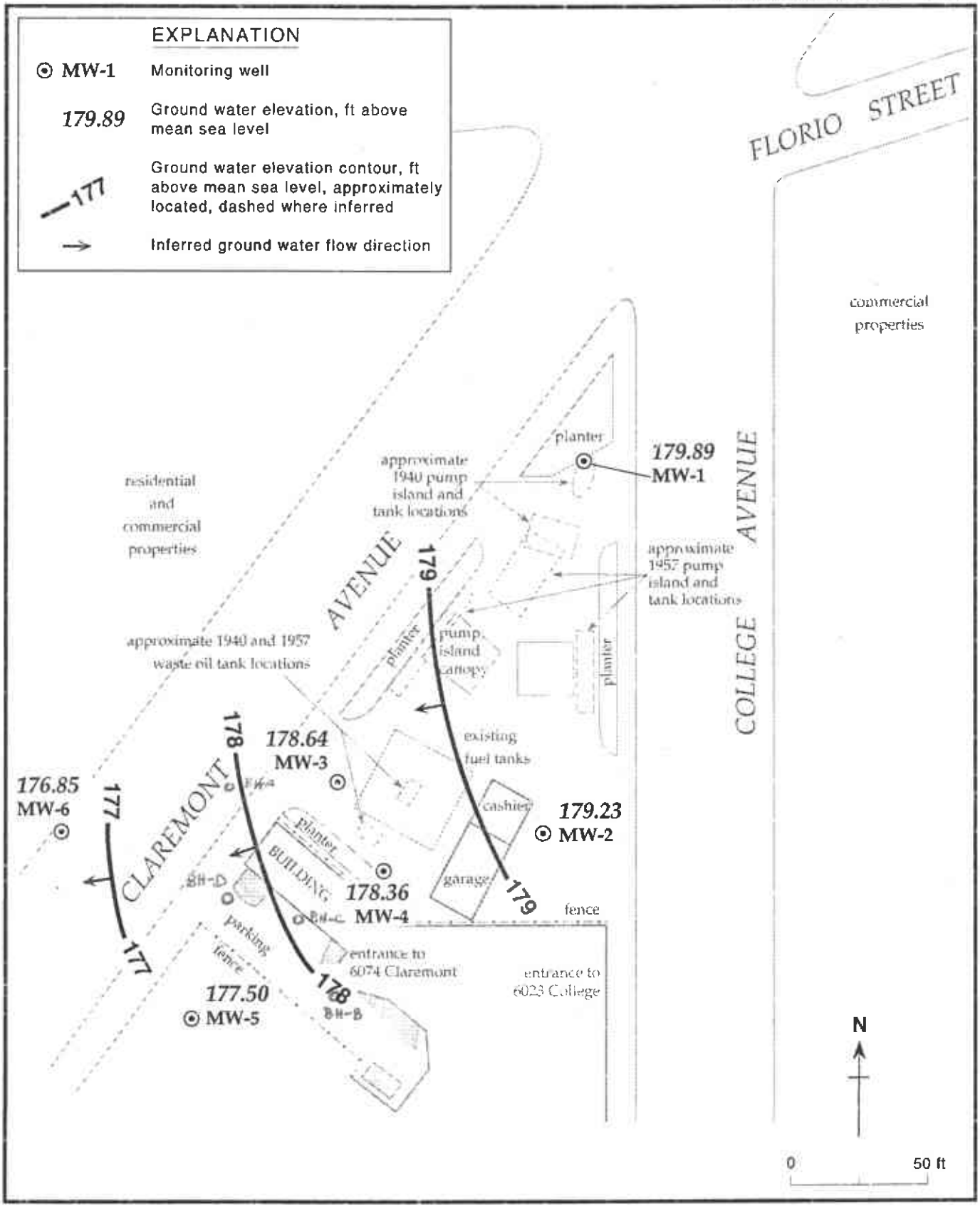

Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - November 8, 1994 - Shell Service Station WIC #204-5510-0303, 6039 College Avenue, Oakland, California

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)[a]
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
	11/08/94		**16.00**		**179.89**
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
	11/08/94		**15.04**		**179.23**
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
	08/18/93		14.93		177.59

---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)[a]
	11/19/93		17.58		174.94
	02/28/94		13.30		179.22
	05/04/94		15.25		177.27
	08/10/94		16.63		175.89
	11/08/94		**13.88**		**178.64**
MW-4	06/03/91	193.37	16.77		176.60
	08/30/91		18.71		174.66
	11/22/91		---		---
	03/18/92[a]		13.15	0.24	180.41
	05/28/92[a]		16.22	0.12	177.25
	08/19/92[a]		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
	11/08/94		**15.05**	**0.05**	**178.36**
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[b]		---		---
	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		177.99
	08/18/93		14.02		176.33
	11/19/93		16.50		173.85
	02/28/94		12.55		177.80
	05/04/94		14.27		176.08
	08/10/94		15.60		174.75
	11/08/94		**12.85**		**177.50**
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
	08/10/94		14.98		174.07
	11/08/94		**12.20**		**176.85**

---Table 1 continues on next page---

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

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 (continued)

Well/Boring ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	POG	B	E	T		SVOCs
			<----------parts per billion (ug/L)---------->								
MW-1	06/03/91	17.82	ND	ND	ND	---	ND	ND	ND	N	---
	08/30/91	19.87	ND	520	ND	---	ND	ND	ND	N	---
	11/22/91	20.58	<50	<50	<500	---	<0	<0.5	<0.5	<	---
	03/18/92	13.55	<30	<50	---	---	<0	<0.3	<0.3	<	---
	05/28/92	17.08	<50	<50	---	---	<0	<0.5	<0.5	<	---
	08/19/92	19.07	<50	<50	---	---	<0	<0.5	<0.5	<	---
	11/17/92	20.11	<50	<50	---	---	<0	<0.5	<0.5	<	---
	02/12/93	12.10	<50	<50	---	---	<0	<0.5	<0.5	<	---
	06/10/93	14.87	<50	---	---	---	<0	<0.5	<0.5	<	---
	06/10/93[dup]	14.87	<50	---	---	---	<0	<0.5	<0.5	<	---
	08/18/93	16.90	<50	---	---	---	<0	<0.5	<0.5	<	---
	11/19/93	19.72	<50	---	---	---	<0	<0.5	<0.5	<	---
	02/18/94	15.08	<50	---	---	---	<0	<0.5	<0.5		---
	05/04/94	17.20	<50	---	---	---	<0	<0.5	<0.5	<	---
	08/10/94	18.76	<50	---	---	---	<0	<0.5	<0.5	<	---
	08/10/94[dup]	18.76	<50	---	---	---	<0	<0.5	<0.5	<	---
	11/08/94	**16.00**	**<50**	**---**	**---**	**---**	**<0**	**<0.5**	**<0.5**	**<**	**---**
MW-2	06/03/91	17.00	ND	ND	ND	---	ND	ND	ND	N	---
	08/30/91	18.95	ND	ND	ND	---	ND	ND	ND	N	---
	11/22/91	19.55	<50	<50	<500	---	<0	<0.5	<0.5	<	---
	03/18/92	12.91	<30	---	---	---	<0	<0.3	<0.3	<	---
	05/28/92	16.25	<50	---	---	---	<0	<0.5	<0.5	<	---
	08/19/92	18.21	<50	---	---	---	<0	1.2	2		---
	11/17/92	19.15	<50	---	---	---	<0	1.2	2		---
	02/12/93[dup]	11.60	<50	---	---	---	<0	<0.5	<0.5	<	---
	02/12/93	11.60	<50	---	---	---	<0	<0.5	<0.5	<	---
	06/10/93	14.14	<50	---	---	---	<0	<0.5	<0.5	<	---
	08/18/93	16.10	<50	---	---	---	<0	<0.5	<0.5	<	---
	08/18/93[dup]	16.10	<50	---	---	---	<0	<0.5	<0.5	<	---
	11/19/93	18.77	<50	---	---	---	<0	<0.5	<0.5	<	---
	02/18/94	14.55	<50	---	---	---	<0	<0.5	<0.5		---
	05/04/94	16.34	<50	---	---	---	<0	<0.5	<0.5	<	---
	08/10/94	15.79	<50	---	---	---	<0	<0.5	<0.5	<	---
	11/08/94	**15.04**	**<50**	**---**	**---**	**---**	**<0**	**<0.5**	**<0.5**	**<**	**---**
MW-3	06/03/91	15.84	1,700	690[a]	ND	---	260	98	13	2	---
	08/30/91	17.79	870	370[b]	500	---	44	10	6.1		---

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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	B	E	T		SVOCs
			<----------parts per billion (ug/L)---------->								
	11/22/91	18.40	310	140	500	---	18	3.3	1.2		---
	03/18/92	12.03	67,100	1,900	20,000	---	620	220	28	3	---
	05/28/92	15.16	2,300	1,100[c]	4,600	---	200	71	9	1	---
	08/19/92	17.03	5,700	1,000[c]	1,800	---	71	52	77	13	---
	11/17/92	17.94	3,600	160[c]	1,200	---	16	24	8.6	5	---
MW-3	02/12/93	9.16	4,700	560[c]	<50	---	820	130	58	7	---
	06/10/93	13.20	2,200	---	940[d]	---	310	89	23	2	---
	08/18/93	14.93	260	---	460[d]	---	27	7.0	2.0		---
	11/19/93	17.58	1,500[e]	---	960[d]	<5,000	24	37	54	1	---
	02/18/94	13.30	2,700	---	1,600	<5,000	65	16	5.2		---
	02/18/94[dup]		3,100	---	2,200	<5,000	82	19	6.7		---
	05/04/94	15.25	780	---	710	<5,000	120	21	7.5		f
	05/04/94[dup]	15.25	920	---	1,600	<5,000	120	22	7.7		g
	08/10/94	16.63	920	---	<500	<5,000	20	3.0	2.3		r
	11/08/94	**13.88**	**1,300**	**---**	**1,300**	**---**	**180**	**7.0**	**16**	**1**	
	11/08/94[dup]	**13.88**	**1,200**	**---**	**730**	**---**	**170**	**7.2**	**15**	**1**	
MW-4	06/03/91	16.77	670[h]	1,100[i]	ND	---	240	1.6	2.3		---
	08/30/91	18.71	570	280[i]	2,000	---	64	0.9	1.8		---
	11/22/91[SPH]	---	---	---	---	---	---	---	---	--	---
	03/18/92[SPH]	13.15	---	---	---	---	---	---	---	--	---
	05/28/92[SPH]	16.22	---	---	---	---	---	---	---	--	---
	08/19/92[SPH]	18.05	---	---	---	---	---	---	---	--	---
FP	11/17/92[SPH]	18.89	---	---	---	---	---	---	---	--	---
	02/12/93[SPH]	11.78	---	---	---	---	---	---	---	--	---
	06/10/93	14.20	---	---	---	---	---	---	---	--	---
	08/18/93[SPH]	15.95	---	---	---	---	---	---	---	--	---
	11/19/93[SPH]	18.48	---	---	---	---	---	---	---	--	---
	02/28/94[SPH]	14.60	---	---	---	---	---	---	---	--	---
	05/04/94[SPH]	16.15	---	---	---	---	---	---	---	--	---
	08/10/94[SPH]	17.58	---	---	---	---	---	---	---	--	---
	11/08/94[SPH]	**15.05**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**--**	**---**
MW-5	08/30/91	16.74	ND	80	ND	---	ND	ND	ND	N	---
	11/22/91	17.27	<50	<50	<500	---	<0	<0.5	<0.5	<	---
	03/18/92	11.28	<30	<50	---	---	<0	<0.3	<0.3	<	---
	05/28/92[j]	---	---	---	---	---	---	---	---	--	---
	08/19/92	15.99	<50	<50	---	---	<0	<0.5	<0.5	<	---
	11/17/92	16.84	<50	<50	---	---	<0	<0.5	<0.5	<	---
	02/12/93	10.30	<50	<50	---	---	<0	<0.5	<0.5	<	---
	06/10/93	12.36	<50	---	---	---	<0	<0.5	<0.5	<	---

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Table 2 Analytic Results for [redacted] 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	B	E	T	X	SVOCs
			<----------parts per billion (ug/L)---------->								
	08/18/93	14.02	<50	---	---	---	<0	<0.5	<0.5	<	---
	11/19/93	16.50	<50	---	---	---	<0	<0.5	<0.5	<	---
	11/19/93[dup]	16.50	<50	---	---	---	<0	<0.5	<0.5	<	---
	02/18/94	12.55	<50	---	---	---	<0	<0.5	<0.5	<	---
	05/04/94	14.27	<50	---	---	---	<0	<0.5	<0.5	<	---
	08/10/94	15.60	70[c]	---	---	---	<0	<0.5	<0.5	<	---
	11/08/94	**12.85**	**<50**	---	---	---	**<0**	**<0.5**	**<0.5**	**<**	**---**
MW-6	09/21/93	14.64	<50	<50	---	<5,000	<0	<0.5	<0.5	<	<10-50
	11/19/93[k]	---	---	---	---	---	---	---	---	--	---
	02/28/94	12.18	98[l]	---	---	<5,000	<0	<0.5	<0.5	<	---
	05/04/94	13.62	<50	---	---	<5,000	<0	<0.5	<0.5	<	<2-10
	08/10/94	14.98	80[o]	---	---	<5,000	<0	<0.5	<0.5	<	r
	11/08/94[j]	**12.20**	---	---	---	---	---	---	---	--	---
BH-A	09/09/93	16.50	4,900	2,900[c]	---	<5,000	18	54	<5	1	[m]
BH-B	09/09/93	15.85	<50	150	---	<5,000	<0	<0.5	<0.5	<	ND
BH-C[n]	09/10/93	15.80	640[o]	100	---	<5,000	3	0.6	<0.5	<	ND
BH-D[n]	09/10/93	14.2	24,000[o]	25,000[c]	---	20,000	720	44	86	1	[p]
Bailer	08/19/92		<50	---	---	---	<0	<0.5	<0.5	<	---
Blank	11/17/92		<50	---	---	---	<0	<0.5	<0.5	<	---
Trip	06/03/91		ND	---	---	---	ND	ND	ND	N	---
Blank	08/30/91		ND	---	---	---	ND	ND	ND	N	---
	03/18/92		<30	<50	---	---	<0	<0.3	<0.3	<	---
	05/28/92		<50	---	---	---	<0	<0.5	<0.5	<	---
	08/19/92		<50	---	---	---	<0	<0.5	<0.5	<	---
	11/17/92		<50	---	---	---	<0	<0.5	<0.5	<	---
	02/12/93		<50	---	---	---	<0	<0.5	<0.5	<	---
	06/10/93		<50	---	---	---	<0	<0.5	<0.5	<	---
	11/19/93		<50	---	---	---	<0	<0.5	<0.5	<	---
	02/28/94		<50	---	---	---	<0	<0.5	<0.5	<	---
	05/04/94		<50	---	---	---	<0	<0.5	<0.5	<	---
	08/10/94		<50	---	---	---	<0	<0.5	<0.5	<	---
	11/08/94		**<50**	---	---	---	**<0**	**<0.5**	**<0.5**	**<**	**---**

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Table 2. Analytic Results for [redacted] 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	B	E	T	X	SVOCs
			<----------parts per billion (ug/L)---------->								
DTSC MCLs			NE	NE	NE	---	1	680	100[q]	1,75	---

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
TPH-D = Total petroleum hydrocarbons as diesel by Modified EPA Method 8015
TPH-MO = Total petroleum hydrocarbons as motor oil by EPA Method 8015
B = Benzene by EPA Method 8020
E = Ethylbenzene by EPA Method 8020
T = Toluene by EPA Method 8020
X = Xylenes by EPA Method 8020
POG = Petroleum Oil & Grease by EPA Method 5520B/F
SVOCs = Semivolatile organic compounds by EPA Method 8270
NE = Not established
DTSC MCLs = California Department of Toxic Substances Control Maximum Contaminant Levels drinking water
--- = Not analyzed or measured
< n = Not detected at detection limits of n ppb
ND = Not detected, detection limit not known
SPH = Separate-phase hydrocarbons in well, not sampled
dup = Duplicate sample

Notes:

a = Positive results for diesel appear to be less volatile constituents of gasoline
b = Positive results for diesel has a typical diesel pattern
c = Concentration reported as diesel is primarily due to the presence of a lighter petroleum product, possibly gasoline or kerosene
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
e = Concentration reported as gasoline is due to the presence of gasoline and a descrete peak not indicative of gasoline
f = Compounds are within chromatographic range of gasoline but are not characteristic of the standard gasoline pattern
g = Results include compounds apparently due to gasoline as well as those due to diesel
h = 6.5 ppb Napthalene detected
i = 11.0 ppb Napthalene detected
j = Well inaccessible and not sampled
k = Well inadvertantly not sampled
l = 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
q = DTSC recommended action level; MCL not established
r = Not detected at detection limits between 10 and 50 ppb

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

Well ID	Date	Separate-Phase Hydrocarbon Thickness (ft)	Separate-Phase Hydrocarbons Removed (lbs)	Cumulative Hydrocarbons Removed (lbs)
MW-4[a]	01/15/92	---	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
	11/10/94	**0.05**	**0.08**	**10.26**

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

November 28, 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:
4th quarter of 1994

QUARTERLY GROUNDWATER SAMPLING REPORT 941108-G-2

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
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 (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
MW-1	11/8/94	TOC	--	NONE	--	--	16.00	24.52
MW-2	11/8/94	TOC	--	NONE	--	--	15.04	24.38
MW-3 *	11/8/94	TOC	ODOR	NONE	--	--	13.88	24.78
MW-4	11/8/94	TOC	FREE PRODUCT	15	0.05	50	15.05	--
MW-5	11/8/94	TOC	--	NONE	--	--	12.85	28.58
MW-6	11/8/94	TOC	--	NONE	--	--	12.20	24.25
T-1	11/8/94	TOC	DRY	NONE	--	--	--	4.18
T-2	11/8/94	TOC	DRY	NONE	--	--	--	8.18

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

#3734

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 941108-G72

Date: 11-8-94
Page 1 of 1

Site Address: 6039 College Ave., Oakland

WIC#: 204-5508-3301

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: GRANT MOHR

Printed Name:

LAB: NET

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	SVOC	TPH-MO	~~Metals~~ OIL & GREASE	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
MW1	11/8			X		3						X								
MW2				X		3						X								
MW3				X		7						X	X	X	X					
MW5				X		3						X								
EB				X		3						X								
DUP				X		7						X	X	X	X					
TB				X		2						X								

CHECK ONE (1) BOX ONLY

	C1/D1
Quarterly Monitoring	X 6441
Site Investigation	6442
Soil Closure/Disposal	6443
Water Closure/Disposal	6444
Soil/Air Rem. or Sys. O & M	6452
Water Rem. or Sys. O & M	6453
Other	

TURN AROUND TIME
- 24 hours
- 48 hours
- 10 days (X) (Normal)
- Other

NOTE: Notify Lab as soon as possible of 24/48 hr. TAT.

(11-9-94 GLumbre)
Seal Intact
TH

Relinquished By (signature)	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
	GRANT MOHR	11/9	10:00		GT LUMBRE	11/9	10:00
GT Lumbre	GT LUMBRE	11-9	18:00		MARK GREENE VIA NCS	11/10	01:35
Relinquished By (signature):	Printed Name:	Date:	Time:	Received (signature):	Printed Name: TEMP. 0.7°C	Date:	Time:

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

NATIONAL ENVIRONMENTAL® TESTING, INC.

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: 11/21/1994
NET Client Acct. No: 1821
NET Pacific Job No: 94.05420
Received: 11/11/1994

Client Reference Information

Shell 6039 College Avenue, Oakland/941108-G2

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

Jim Hoch
Operations Manager

Enclosure(s)

Ref: Shell 6039 College Avenue, Oakland/941108-G2

SAMPLE DESCRIPTION: MW-1
Date Taken: 11/08/1994
Time Taken:
NET Sample No: 222267

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						11/15/1994	2303
DILUTION FACTOR*	1						11/15/1994	2303
as Gasoline	ND		50	ug/L	5030		11/15/1994	2303
Carbon Range:	--						11/15/1994	2303
METHOD 8020 (GC,Liquid)	--						11/15/1994	2303
Benzene	ND		0.5	ug/L	8020		11/15/1994	2303
Toluene	ND		0.5	ug/L	8020		11/15/1994	2303
Ethylbenzene	ND		0.5	ug/L	8020		11/15/1994	2303
Xylenes (Total)	ND		0.5	ug/L	8020		11/15/1994	2303
SURROGATE RESULTS	--						11/15/1994	2303
Bromofluorobenzene (SURR)	107			% Rec.	5030		11/15/1994	2303

Ref: Shell 6039 College Avenue, Oakland/941108-G2

SAMPLE DESCRIPTION: MW-2
Date Taken: 11/08/1994
Time Taken:
NET Sample No: 222268

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						11/16/1994	2306
DILUTION FACTOR*	1						11/16/1994	2306
as Gasoline	ND		50	ug/L	5030		11/16/1994	2306
Carbon Range:	--						11/16/1994	2306
METHOD 8020 (GC,Liquid)	--						11/16/1994	2306
Benzene	ND		0.5	ug/L	8020		11/16/1994	2306
Toluene	ND		0.5	ug/L	8020		11/16/1994	2306
Ethylbenzene	ND		0.5	ug/L	8020		11/16/1994	2306
Xylenes (Total)	ND		0.5	ug/L	8020		11/16/1994	2306
SURROGATE RESULTS	--						11/16/1994	2306
Bromofluorobenzene (SURR)	100			% Rec.	5030		11/16/1994	2306

Ref: Shell 6039 College Avenue, Oakland/941108-G2

SAMPLE DESCRIPTION: MW-3
Date Taken: 11/08/1994
Time Taken:
NET Sample No: 222269

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
Oil & Grease (Non-Polar)	ND		5,000	ug/L	5520B/F		11/14/1994	265
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						11/16/1994	2307
DILUTION FACTOR*	1						11/15/1994	2303
as Gasoline	1,300		50	ug/L	5030		11/15/1994	2303
Carbon Range:	C5-C14						11/15/1994	2303
METHOD 8020 (GC,Liquid)	--						11/15/1994	2303
Benzene	180	FC	0.5	ug/L	8020		11/16/1994	2307
Toluene	16		0.5	ug/L	8020		11/15/1994	2303
Ethylbenzene	7.0		0.5	ug/L	8020		11/15/1994	2303
Xylenes (Total)	12		0.5	ug/L	8020		11/15/1994	2303
SURROGATE RESULTS	--						11/15/1994	2303
Bromofluorobenzene (SURR)	226	MI		% Rec.	5030		11/15/1994	2303
METHOD M8015 (EXT., Liquid)						11/14/1994		
DILUTION FACTOR*	1						11/15/1994	846
as Motor Oil	1,300	DL,DH	500	ug/L	3510		11/15/1994	846
SURROGATE RESULTS	--						11/15/1994	846
Ortho-terphenyl (SURR)	111			% Rec.	3510		11/15/1994	846

DL : The positive result appears to be a lighter hydrocarbon than Diesel.
DH : The positive result appears to be a heavier hydrocarbon than Diesel.
FC : Compound quantitated at a 10X dilution factor.
MI : Matrix Interference Suspected

Ref: Shell 6039 College Avenue, Oakland/941108-G2

SAMPLE DESCRIPTION: MW-3
Date Taken: 11/08/1994
Time Taken:
NET Sample No: 222269

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8270(GCMS,Liquid)						11/13/1994		
DILUTION FACTOR*	1						11/14/1994	637
Acenaphthene	ND		10	ug/L	8270		11/14/1994	637
Acenaphthylene	ND		10	ug/L	8270		11/14/1994	637
Aldrin	ND		50	ug/L	8270		11/14/1994	637
Anthracene	ND		10	ug/L	8270		11/14/1994	637
Benzidine	ND		44	ug/L	8270		11/14/1994	637
Benzo(a)anthracene	ND		10	ug/L	8270		11/14/1994	637
Benzo(b)fluoranthene	ND		10	ug/L	8270		11/14/1994	637
Benzo(k)fluoranthene	ND		10	ug/L	8270		11/14/1994	637
Benzo(a)pyrene	ND		10	ug/L	8270		11/14/1994	637
Benzo(g,h,i)perylene	ND		10	ug/L	8270		11/14/1994	637
Benzoic acid	ND		50	ug/L	8270		11/14/1994	637
Benzyl alcohol	ND		10	ug/L	8270		11/14/1994	637
Butyl benzyl phthalate	ND		10	ug/L	8270		11/14/1994	637
delta-BHC	ND		50	ug/L	8270		11/14/1994	637
gamma-BHC	ND		50	ug/L	8270		11/14/1994	637
bis(2-Chloroethyl)ether	ND		10	ug/L	8270		11/14/1994	637
bis(2-Chloroethoxy)methane	ND		10	ug/L	8270		11/14/1994	637
bis(2-Chloroisopropyl)ether	ND		10	ug/L	8270		11/14/1994	637
bis(2-Ethylhexyl)phthalate	ND		10	ug/L	8270		11/14/1994	637
4-Bromophenyl phenyl ether	ND		10	ug/L	8270		11/14/1994	637
4-Chloroaniline	ND		10	ug/L	8270		11/14/1994	637
2-Chloronaphthalene	ND		10	ug/L	8270		11/14/1994	637
4-Chlorophenyl phenyl ether	ND		10	ug/L	8270		11/14/1994	637
Chrysene	ND		10	ug/L	8270		11/14/1994	637
4,4'-DDD	ND		50	ug/L	8270		11/14/1994	637
4,4'-DDE	ND		50	ug/L	8270		11/14/1994	637
4,4'-DDT	ND		50	ug/L	8270		11/14/1994	637
Dibenzo(a,h)anthracene	ND		10	ug/L	8270		11/14/1994	637
Dibenzofuran	ND		10	ug/L	8270		11/14/1994	637
Di-n-butylphthalate	ND		10	ug/L	8270		11/14/1994	637
1,2-Dichlorobenzene	ND		10	ug/L	8270		11/14/1994	637
1,3-Dichlorobenzene	ND		10	ug/L	8270		11/14/1994	637
1,4-Dichlorobenzene	ND		10	ug/L	8270		11/14/1994	637
3,3'-Dichlorobenzidine	ND		20	ug/L	8270		11/14/1994	637
Dieldrin	ND		50	ug/L	8270		11/14/1994	637
Diethylphthalate	ND		10	ug/L	8270		11/14/1994	637
Dimethyl phthalate	ND		10	ug/L	8270		11/14/1994	637
2,4-Dinitrotoluene	ND		10	ug/L	8270		11/14/1994	637
2,6-Dinitrotoluene	ND		10	ug/L	8270		11/14/1994	637
Di-n-octyl phthalate	ND		10	ug/L	8270		11/14/1994	637

Ref: Shell 6039 College Avenue, Oakland/941108-G2

SAMPLE DESCRIPTION: MW-3
Date Taken: 11/08/1994
Time Taken:
NET Sample No: 222269

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
Endrin aldehyde	ND		50	ug/L	8270		11/14/1994	637
Fluoranthene	ND		10	ug/L	8270		11/14/1994	637
Fluorene	ND		10	ug/L	8270		11/14/1994	637
Heptachlor	ND		50	ug/L	8270		11/14/1994	637
Heptachlor epoxide	ND		50	ug/L	8270		11/14/1994	637
Hexachlorobenzene	ND		10	ug/L	8270		11/14/1994	637
Hexachlorobutadiene	ND		10	ug/L	8270		11/14/1994	637
Hexachlorocyclopentadiene	ND		10	ug/L	8270		11/14/1994	637
Hexachloroethane	ND		10	ug/L	8270		11/14/1994	637
Indeno(1,2,3-cd)pyrene	ND		10	ug/L	8270		11/14/1994	637
Isophorone	ND		10	ug/L	8270		11/14/1994	637
2-Methylnaphthalene	ND		10	ug/L	8270		11/14/1994	637
Naphthalene	17		10	ug/L	8270		11/14/1994	637
2-Nitroaniline	ND		50	ug/L	8270		11/14/1994	637
3-Nitroaniline	ND		50	ug/L	8270		11/14/1994	637
4-Nitroaniline	ND		50	ug/L	8270		11/14/1994	637
Nitrobenzene	ND		10	ug/L	8270		11/14/1994	637
N-Nitroso-Di-N-propylamine	ND		10	ug/L	8270		11/14/1994	637
N-Nitrosodiphenylamine	ND		10	ug/L	8270		11/14/1994	637
Phenanthrene	ND		10	ug/L	8270		11/14/1994	637
Pyrene	ND		10	ug/L	8270		11/14/1994	637
1,2,4-Trichlorobenzene	ND		10	ug/L	8270		11/14/1994	637
ACID EXTRACTABLES	--						11/14/1994	637
4-Chloro-3-methylphenol	ND		10	ug/L	8270		11/14/1994	637
2-Chlorophenol	ND		10	ug/L	8270		11/14/1994	637
2,4-Dichlorophenol	ND		10	ug/L	8270		11/14/1994	637
2,4-Dimethylphenol	ND		10	ug/L	8270		11/14/1994	637
2,4-Dinitrophenol	ND		50	ug/L	8270		11/14/1994	637
4,6-Dinitro-2-methylphenol	ND		50	ug/L	8270		11/14/1994	637
2-Nitrophenol	ND		10	ug/L	8270		11/14/1994	637
4-Nitrophenol	ND		50	ug/L	8270		11/14/1994	637
Pentachlorophenol	ND		50	ug/L	8270		11/14/1994	637
Phenol	ND		10	ug/L	8270		11/14/1994	637
2,4,6-Trichlorophenol	ND		10	ug/L	8270		11/14/1994	637
2-Methylphenol	ND		10	ug/L	8270		11/14/1994	637
4-Methylphenol	ND		10	ug/L	8270		11/14/1994	637
2,4,5-Trichlorophenol	ND		50	ug/L	8270		11/14/1994	637
SURROGATE RESULTS	--						11/14/1994	637
Nitrobenzene-d5 (SURR)	83			% Rec.	8270		11/14/1994	637
2-Fluorobiphenyl (SURR)	76			% Rec.	8270		11/14/1994	637
p-Terphenyl-d14 (SURR)	71			% Rec.	8270		11/14/1994	637
Phenol-d5 (SURR)	42			% Rec.	8270		11/14/1994	637

Ref: Shell 6039 College Avenue, Oakland/941108-G2

SAMPLE DESCRIPTION: MW-3
Date Taken: 11/08/1994
Time Taken:
NET Sample No: 222269

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
2-Fluorophenol (SURR)	56			% Rec.	8270		11/14/1994	637
2,4,6-Tribromophenol (SURR)	84			% Rec.	8270		11/14/1994	637

Ref: Shell 6039 College Avenue, Oakland/941108-G2

SAMPLE DESCRIPTION: DUP
Date Taken: 11/08/1994
Time Taken:
NET Sample No: 222270

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
Oil & Grease (Non-Polar)	ND		5,000	ug/L	5520B/F		11/14/1994	265
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						11/16/1994	2307
DILUTION FACTOR*	1						11/15/1994	2303
as Gasoline	1,200		50	ug/L	5030		11/15/1994	2303
Carbon Range:	C5-C14						11/15/1994	2303
METHOD 8020 (GC,Liquid)	--						11/15/1994	2303
Benzene	170	FC	0.5	ug/L	8020		11/16/1994	2307
Toluene	15		0.5	ug/L	8020		11/15/1994	2303
Ethylbenzene	7.2		0.5	ug/L	8020		11/15/1994	2303
Xylenes (Total)	11		0.5	ug/L	8020		11/15/1994	2303
SURROGATE RESULTS	--						11/15/1994	2303
Bromofluorobenzene (SURR)	228	MI		% Rec.	5030		11/15/1994	2303
METHOD M8015 (EXT., Liquid)						11/14/1994		
DILUTION FACTOR*	1						11/15/1994	846
as Motor Oil	730	DL,DH	500	ug/L	3510		11/15/1994	846
SURROGATE RESULTS	--						11/15/1994	846
Ortho-terphenyl (SURR)	109			% Rec.	3510		11/15/1994	846
Carbon Range:	C8-C28						11/15/1994	846

DL : The positive result appears to be a lighter hydrocarbon than Diesel.
FC : Compound quantitated at a 10X dilution factor.
MI : Matrix Interference Suspected

Ref: Shell 6039 College Avenue, Oakland/941108-G2

SAMPLE DESCRIPTION: DUP
Date Taken: 11/08/1994
Time Taken:
NET Sample No: 222270

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8270(GCMS,Liquid)						11/13/1994		
DILUTION FACTOR*	1						11/14/1994	637
Acenaphthene	ND		10	ug/L	8270		11/14/1994	637
Acenaphthylene	ND		10	ug/L	8270		11/14/1994	637
Aldrin	ND		50	ug/L	8270		11/14/1994	637
Anthracene	ND		10	ug/L	8270		11/14/1994	637
Benzidine	ND		44	ug/L	8270		11/14/1994	637
Benzo(a)anthracene	ND		10	ug/L	8270		11/14/1994	637
Benzo(b)fluoranthene	ND		10	ug/L	8270		11/14/1994	637
Benzo(k)fluoranthene	ND		10	ug/L	8270		11/14/1994	637
Benzo(a)pyrene	ND		10	ug/L	8270		11/14/1994	637
Benzo(g,h,i)perylene	ND		10	ug/L	8270		11/14/1994	637
Benzoic acid	ND		50	ug/L	8270		11/14/1994	637
Benzyl alcohol	ND		10	ug/L	8270		11/14/1994	637
Butyl benzyl phthalate	ND		10	ug/L	8270		11/14/1994	637
delta-BHC	ND		50	ug/L	8270		11/14/1994	637
gamma-BHC	ND		50	ug/L	8270		11/14/1994	637
bis(2-Chloroethyl)ether	ND		10	ug/L	8270		11/14/1994	637
bis(2-Chloroethoxy)methane	ND		10	ug/L	8270		11/14/1994	637
bis(2-Chloroisopropyl)ether	ND		10	ug/L	8270		11/14/1994	637
bis(2-Ethylhexyl)phthalate	ND		10	ug/L	8270		11/14/1994	637
4-Bromophenyl phenyl ether	ND		10	ug/L	8270		11/14/1994	637
4-Chloroaniline	ND		10	ug/L	8270		11/14/1994	637
2-Chloronaphthalene	ND		10	ug/L	8270		11/14/1994	637
4-Chlorophenyl phenyl ether	ND		10	ug/L	8270		11/14/1994	637
Chrysene	ND		10	ug/L	8270		11/14/1994	637
4,4'-DDD	ND		50	ug/L	8270		11/14/1994	637
4,4'-DDE	ND		50	ug/L	8270		11/14/1994	637
4,4'-DDT	ND		50	ug/L	8270		11/14/1994	637
Dibenzo(a,h)anthracene	ND		10	ug/L	8270		11/14/1994	637
Dibenzofuran	ND		10	ug/L	8270		11/14/1994	637
Di-n-butylphthalate	ND		10	ug/L	8270		11/14/1994	637
1,2-Dichlorobenzene	ND		10	ug/L	8270		11/14/1994	637
1,3-Dichlorobenzene	ND		10	ug/L	8270		11/14/1994	637
1,4-Dichlorobenzene	ND		10	ug/L	8270		11/14/1994	637
3,3'-Dichlorobenzidine	ND		20	ug/L	8270		11/14/1994	637
Dieldrin	ND		50	ug/L	8270		11/14/1994	637
Diethylphthalate	ND		10	ug/L	8270		11/14/1994	637
Dimethyl phthalate	ND		10	ug/L	8270		11/14/1994	637
2,4-Dinitrotoluene	ND		10	ug/L	8270		11/14/1994	637
2,6-Dinitrotoluene	ND		10	ug/L	8270		11/14/1994	637
Di-n-octyl phthalate	ND		10	ug/L	8270		11/14/1994	637

Ref: Shell 6039 College Avenue, Oakland/941108-G2

SAMPLE DESCRIPTION: DUP
Date Taken: 11/08/1994
Time Taken:
NET Sample No: 222270

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
Endrin aldehyde	ND		50	ug/L	8270		11/14/1994	637
Fluoranthene	ND		10	ug/L	8270		11/14/1994	637
Fluorene	ND		10	ug/L	8270		11/14/1994	637
Heptachlor	ND		50	ug/L	8270		11/14/1994	637
Heptachlor epoxide	ND		50	ug/L	8270		11/14/1994	637
Hexachlorobenzene	ND		10	ug/L	8270		11/14/1994	637
Hexachlorobutadiene	ND		10	ug/L	8270		11/14/1994	637
Hexachlorocyclopentadiene	ND		10	ug/L	8270		11/14/1994	637
Hexachloroethane	ND		10	ug/L	8270		11/14/1994	637
Indeno(1,2,3-cd)pyrene	ND		10	ug/L	8270		11/14/1994	637
Isophorone	ND		10	ug/L	8270		11/14/1994	637
2-Methylnaphthalene	ND		10	ug/L	8270		11/14/1994	637
Naphthalene	14		10	ug/L	8270		11/14/1994	637
2-Nitroaniline	ND		50	ug/L	8270		11/14/1994	637
3-Nitroaniline	ND		50	ug/L	8270		11/14/1994	637
4-Nitroaniline	ND		50	ug/L	8270		11/14/1994	637
Nitrobenzene	ND		10	ug/L	8270		11/14/1994	637
N-Nitroso-Di-N-propylamine	ND		10	ug/L	8270		11/14/1994	637
N-Nitrosodiphenylamine	ND		10	ug/L	8270		11/14/1994	637
Phenanthrene	ND		10	ug/L	8270		11/14/1994	637
Pyrene	ND		10	ug/L	8270		11/14/1994	637
1,2,4-Trichlorobenzene	ND		10	ug/L	8270		11/14/1994	637
ACID EXTRACTABLES	--						11/14/1994	637
4-Chloro-3-methylphenol	ND		10	ug/L	8270		11/14/1994	637
2-Chlorophenol	ND		10	ug/L	8270		11/14/1994	637
2,4-Dichlorophenol	ND		10	ug/L	8270		11/14/1994	637
2,4-Dimethylphenol	ND		10	ug/L	8270		11/14/1994	637
2,4-Dinitrophenol	ND		50	ug/L	8270		11/14/1994	637
4,6-Dinitro-2-methylphenol	ND		50	ug/L	8270		11/14/1994	637
2-Nitrophenol	ND		10	ug/L	8270		11/14/1994	637
4-Nitrophenol	ND		50	ug/L	8270		11/14/1994	637
Pentachlorophenol	ND		50	ug/L	8270		11/14/1994	637
Phenol	ND		10	ug/L	8270		11/14/1994	637
2,4,6-Trichlorophenol	ND		10	ug/L	8270		11/14/1994	637
2-Methylphenol	ND		10	ug/L	8270		11/14/1994	637
4-Methylphenol	ND		10	ug/L	8270		11/14/1994	637
2,4,5-Trichlorophenol	ND		50	ug/L	8270		11/14/1994	637
SURROGATE RESULTS	--						11/14/1994	637
Nitrobenzene-d5 (SURR)	89			% Rec.	8270		11/14/1994	637
2-Fluorobiphenyl (SURR)	78			% Rec.	8270		11/14/1994	637
p-Terphenyl-d14 (SURR)	80			% Rec.	8270		11/14/1994	637
Phenol-d5 (SURR)	47			% Rec.	8270		11/14/1994	637

Ref: Shell 6039 College Avenue, Oakland/941108-G2

SAMPLE DESCRIPTION: DUP
Date Taken: 11/08/1994
Time Taken:
NET Sample No: 222270

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
2-Fluorophenol (SURR)	62			% Rec.	8270		11/14/1994	637
2,4,6-Tribromophenol (SURR)	84			% Rec.	8270		11/14/1994	637

Client Name: Blaine Tech Services
Client Acct: 1821
NET Job No: 94.05420

Date: 11/21/1994
ELAP Cert: 1386

Ref: Shell 6039 College Avenue, Oakland/941108-G2

SAMPLE DESCRIPTION: MW-5
Date Taken: 11/08/1994
Time Taken:
NET Sample No: 222271

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						11/15/1994	2305
DILUTION FACTOR*	1						11/15/1994	2303
as Gasoline	ND		50	ug/L	5030		11/15/1994	2303
Carbon Range:	--						11/15/1994	2303
METHOD 8020 (GC,Liquid)	--						11/15/1994	2303
Benzene	ND		0.5	ug/L	8020		11/15/1994	2303
Toluene	ND		0.5	ug/L	8020		11/15/1994	2303
Ethylbenzene	ND		0.5	ug/L	8020		11/15/1994	2303
Xylenes (Total)	ND		0.5	ug/L	8020		11/15/1994	2303
SURROGATE RESULTS	--						11/15/1994	2303
Bromofluorobenzene (SURR)	94			% Rec.	5030		11/15/1994	2303

Ref: Shell 6039 College Avenue, Oakland/941108-G2

SAMPLE DESCRIPTION: EB
Date Taken: 11/08/1994
Time Taken:
NET Sample No: 222272

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						11/15/1994	2303
DILUTION FACTOR*	1						11/15/1994	2303
as Gasoline	ND		50	ug/L	5030		11/15/1994	2303
Carbon Range:	--						11/15/1994	2303
METHOD 8020 (GC,Liquid)	--						11/15/1994	2303
Benzene	ND		0.5	ug/L	8020		11/15/1994	2303
Toluene	ND		0.5	ug/L	8020		11/15/1994	2303
Ethylbenzene	ND		0.5	ug/L	8020		11/15/1994	2303
Xylenes (Total)	ND		0.5	ug/L	8020		11/15/1994	2303
SURROGATE RESULTS	--						11/15/1994	2303
Bromofluorobenzene (SURR)	105			% Rec.	5030		11/15/1994	2303

Ref: Shell 6039 College Avenue, Oakland/941108-G2

SAMPLE DESCRIPTION: TB
Date Taken: 11/08/1994
Time Taken:
NET Sample No: 222273

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						11/15/1994	2303
DILUTION FACTOR*	1						11/15/1994	2303
as Gasoline	ND		50	ug/L	5030		11/15/1994	2303
Carbon Range:	--						11/15/1994	2303
METHOD 8020 (GC,Liquid)	--						11/15/1994	2303
Benzene	ND		0.5	ug/L	8020		11/15/1994	2303
Toluene	ND		0.5	ug/L	8020		11/15/1994	2303
Ethylbenzene	ND		0.5	ug/L	8020		11/15/1994	2303
Xylenes (Total)	ND		0.5	ug/L	8020		11/15/1994	2303
SURROGATE RESULTS	--						11/15/1994	2303
Bromofluorobenzene (SURR)	87			% Rec.	5030		11/15/1994	2303

Ref: Shell 6039 College Avenue, Oakland/941108-G2

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials
TPH (Gas/BTXE,Liquid)						
as Gasoline	100.0	1.00	1.00	mg/L	11/15/1994	aal
Benzene	103.2	5.16	5.00	ug/L	11/15/1994	aal
Toluene	89.6	4.48	5.00	ug/L	11/15/1994	aal
Ethylbenzene	96.0	4.80	5.00	ug/L	11/15/1994	aal
Xylenes (Total)	99.3	14.9	15.0	ug/L	11/15/1994	aal
Bromofluorobenzene (SURR)	115.0	115	100	% Rec.	11/15/1994	aal
TPH (Gas/BTXE,Liquid)						
as Gasoline	111.0	1.11	1.00	mg/L	11/16/1994	tts
Benzene	96.4	4.82	5.00	ug/L	11/16/1994	tts
Toluene	95.4	4.77	5.00	ug/L	11/16/1994	tts
Ethylbenzene	96.6	4.83	5.00	ug/L	11/16/1994	tts
Xylenes (Total)	100.0	15.0	15.0	ug/L	11/16/1994	tts
Bromofluorobenzene (SURR)	107.0	107	100	% Rec.	11/16/1994	tts
TPH (Gas/BTXE,Liquid)						
as Gasoline	102.0	1.02	1.00	mg/L	11/16/1994	lss
Benzene	91.6	4.58	5.00	ug/L	11/16/1994	lss
Toluene	90.2	4.51	5.00	ug/L	11/16/1994	lss
Ethylbenzene	94.0	4.70	5.00	ug/L	11/16/1994	lss
Xylenes (Total)	96.7	14.5	15.0	ug/L	11/16/1994	lss
Bromofluorobenzene (SURR)	100.0	100	100	% Rec.	11/16/1994	lss
METHOD M8015 (EXT., Liquid)						
as Motor Oil	96.1	961	1000	mg/L	11/15/1994	tts
Ortho-terphenyl (SURR)	100.0	100	100	% Rec.	11/15/1994	tts

Ref: Shell 6039 College Avenue, Oakland/941108-G2

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials
METHOD 8270(GCMS,Liquid)						
Acenaphthene	98.0	49.0	50.0	ug/L	11/14/1994	sjg
Benzo(a)pyrene	88.0	44.0	50.0	ug/L	11/14/1994	sjg
1,4-Dichlorobenzene	92.0	46.0	50.0	ug/L	11/14/1994	sjg
Di-n-octyl phthalate	97.0	48.5	50.0	ug/L	11/14/1994	sjg
Fluoranthene	95.0	47.5	50.0	ug/L	11/14/1994	sjg
Hexachlorobutadiene	95.0	47.5	50.0	ug/L	11/14/1994	sjg
N-Nitrosodiphenylamine	98.0	49.0	50.0	ug/L	11/14/1994	sjg
4-Chloro-3-methylphenol	95.0	47.5	50.0	ug/L	11/14/1994	sjg
2,4-Dichlorophenol	92.0	46.0	50.0	ug/L	11/14/1994	sjg
2-Nitrophenol	91.0	45.5	50.0	ug/L	11/14/1994	sjg
Pentachlorophenol	96.0	48.0	50.0	ug/L	11/14/1994	sjg
Phenol	88.0	44.0	50.0	ug/L	11/14/1994	sjg
2,4,6-Trichlorophenol	93.0	46.5	50.0	ug/L	11/14/1994	sjg
Nitrobenzene-d5 (SURR)	94.0	94	100	% Rec.	11/14/1994	sjg
2-Fluorobiphenyl (SURR)	97.0	97	100	% Rec.	11/14/1994	sjg
p-Terphenyl-d14 (SURR)	96.0	96	100	% Rec.	11/14/1994	sjg
Phenol-d5 (SURR)	82.0	82	100	% Rec.	11/14/1994	sjg
2-Fluorophenol (SURR)	85.0	85	100	% Rec.	11/14/1994	sjg
2,4,6-Tribromophenol (SURR)	84.0	84	100	% Rec.	11/14/1994	sjg

Ref: Shell 6039 College Avenue, Oakland/941108-G2

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials
Oil & Grease (Non-Polar)	ND	5	mg/L	11/14/1994	vah
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	11/15/1994	aal
Benzene	ND	0.5	ug/L	11/15/1994	aal
Toluene	ND	0.5	ug/L	11/15/1994	aal
Ethylbenzene	ND	0.5	ug/L	11/15/1994	aal
Xylenes (Total)	ND	0.5	ug/L	11/15/1994	aal
Bromofluorobenzene (SURR)	105		% Rec.	11/15/1994	aal
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	11/16/1994	tts
Benzene	ND	0.5	ug/L	11/16/1994	tts
Toluene	ND	0.5	ug/L	11/16/1994	tts
Ethylbenzene	ND	0.5	ug/L	11/16/1994	tts
Xylenes (Total)	ND	0.5	ug/L	11/16/1994	tts
Bromofluorobenzene (SURR)	98		% Rec.	11/16/1994	tts
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	11/16/1994	lss
Benzene	ND	0.5	ug/L	11/16/1994	lss
Toluene	ND	0.5	ug/L	11/16/1994	lss
Ethylbenzene	ND	0.5	ug/L	11/16/1994	lss
Xylenes (Total)	ND	0.5	ug/L	11/16/1994	lss
Bromofluorobenzene (SURR)	99		% Rec.	11/16/1994	lss
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	11/16/1994	aal
Benzene	ND	0.5	ug/L	11/16/1994	aal
Toluene	ND	0.5	ug/L	11/16/1994	aal
Ethylbenzene	ND	0.5	ug/L	11/16/1994	aal
Xylenes (Total)	ND	0.5	ug/L	11/16/1994	aal
Bromofluorobenzene (SURR)	113		% Rec.	11/16/1994	aal
METHOD M8015 (EXT., Liquid)					
as Motor Oil	ND	0.5	mg/L	11/15/1994	tts
Ortho-terphenyl (SURR)	92		% Rec.	11/15/1994	tts

Ref: Shell 6039 College Avenue, Oakland/941108-G2

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials
METHOD 8270(GCMS,Liquid)					
Acenaphthene	ND	10	ug/L	11/14/1994	sjg
Acenaphthylene	ND	10	ug/L	11/14/1994	sjg
Aldrin	ND	50	ug/L	11/14/1994	sjg
Anthracene	ND	10	ug/L	11/14/1994	sjg
Benzidine	ND	44	ug/L	11/14/1994	sjg
Benzo(a)anthracene	ND	10	ug/L	11/14/1994	sjg
Benzo(b)fluoranthene	ND	10	ug/L	11/14/1994	sjg
Benzo(k)fluoranthene	ND	10	ug/L	11/14/1994	sjg
Benzo(a)pyrene	ND	10	ug/L	11/14/1994	sjg
Benzo(g,h,i)perylene	ND	10	ug/L	11/14/1994	sjg
Benzoic acid	ND	50	ug/L	11/14/1994	sjg
Benzyl alcohol	ND	10	ug/L	11/14/1994	sjg
Butyl benzyl phthalate	ND	10	ug/L	11/14/1994	sjg
delta-BHC	ND	50	ug/L	11/14/1994	sjg
gamma-BHC	ND	50	ug/L	11/14/1994	sjg
bis(2-Chloroethyl)ether	ND	10	ug/L	11/14/1994	sjg
bis(2-Chloroethoxy)methane	ND	10	ug/L	11/14/1994	sjg
bis(2-Chloroisopropyl)ether	ND	10	ug/L	11/14/1994	sjg
bis(2-Ethylhexyl)phthalate	ND	10	ug/L	11/14/1994	sjg
4-Bromophenyl phenyl ether	ND	10	ug/L	11/14/1994	sjg
4-Chloroaniline	ND	10	ug/L	11/14/1994	sjg
2-Chloronaphthalene	ND	10	ug/L	11/14/1994	sjg
4-Chlorophenyl phenyl ether	ND	10	ug/L	11/14/1994	sjg
Chrysene	ND	10	ug/L	11/14/1994	sjg
4,4'-DDD	ND	50	ug/L	11/14/1994	sjg
4,4'-DDE	ND	50	ug/L	11/14/1994	sjg
4,4'-DDT	ND	50	ug/L	11/14/1994	sjg
Dibenzo(a,h)anthracene	ND	10	ug/L	11/14/1994	sjg
Dibenzofuran	ND	10	ug/L	11/14/1994	sjg
Di-n-butylphthalate	ND	10	ug/L	11/14/1994	sjg
1,2-Dichlorobenzene	ND	10	ug/L	11/14/1994	sjg
1,3-Dichlorobenzene	ND	10	ug/L	11/14/1994	sjg
1,4-Dichlorobenzene	ND	10	ug/L	11/14/1994	sjg
3,3'-Dichlorobenzidine	ND	20	ug/L	11/14/1994	sjg
Dieldrin	ND	50	ug/L	11/14/1994	sjg
Diethylphthalate	ND	10	ug/L	11/14/1994	sjg
Dimethyl phthalate	ND	10	ug/L	11/14/1994	sjg
2,4-Dinitrotoluene	ND	10	ug/L	11/14/1994	sjg
2,6-Dinitrotoluene	ND	10	ug/L	11/14/1994	sjg
Di-n-octyl phthalate	ND	10	ug/L	11/14/1994	sjg
Endrin aldehyde	ND	50	ug/L	11/14/1994	sjg
Fluoranthene	ND	10	ug/L	11/14/1994	sjg
Fluorene	ND	10	ug/L	11/14/1994	sjg
Heptachlor	ND	50	ug/L	11/14/1994	sjg
Heptachlor epoxide	ND	50	ug/L	11/14/1994	sjg
Hexachlorobenzene	ND	10	ug/L	11/14/1994	sjg
Hexachlorobutadiene	ND	10	ug/L	11/14/1994	sjg

Ref: Shell 6039 College Avenue, Oakland/941108-G2

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials
Hexachlorocyclopentadiene	ND	10	ug/L	11/14/1994	sjg
Hexachloroethane	ND	10	ug/L	11/14/1994	sjg
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	11/14/1994	sjg
Isophorone	ND	10	ug/L	11/14/1994	sjg
2-Methylnaphthalene	ND	10	ug/L	11/14/1994	sjg
Naphthalene	ND	10	ug/L	11/14/1994	sjg
2-Nitroaniline	ND	50	ug/L	11/14/1994	sjg
3-Nitroaniline	ND	50	ug/L	11/14/1994	sjg
4-Nitroaniline	ND	50	ug/L	11/14/1994	sjg
Nitrobenzene	ND	10	ug/L	11/14/1994	sjg
N-Nitroso-Di-N-propylamine	ND	10	ug/L	11/14/1994	sjg
N-Nitrosodiphenylamine	ND	10	ug/L	11/14/1994	sjg
Phenanthrene	ND	10	ug/L	11/14/1994	sjg
Pyrene	ND	10	ug/L	11/14/1994	sjg
1,2,4-Trichlorobenzene	ND	10	ug/L	11/14/1994	sjg
4-Chloro-3-methylphenol	ND	10	ug/L	11/14/1994	sjg
2-Chlorophenol	ND	10	ug/L	11/14/1994	sjg
2,4-Dichlorophenol	ND	10	ug/L	11/14/1994	sjg
2,4-Dimethylphenol	ND	10	ug/L	11/14/1994	sjg
2,4-Dinitrophenol	ND	50	ug/L	11/14/1994	sjg
4,6-Dinitro-2-methylphenol	ND	50	ug/L	11/14/1994	sjg
2-Nitrophenol	ND	10	ug/L	11/14/1994	sjg
4-Nitrophenol	ND	50	ug/L	11/14/1994	sjg
Pentachlorophenol	ND	50	ug/L	11/14/1994	sjg
Phenol	ND	10	ug/L	11/14/1994	sjg
2,4,6-Trichlorophenol	ND	10	ug/L	11/14/1994	sjg
2-Methylphenol	ND	10	ug/L	11/14/1994	sjg
4-Methylphenol	ND	10	ug/L	11/14/1994	sjg
2,4,5-Trichlorophenol	ND	50	ug/L	11/14/1994	sjg
Nitrobenzene-d5 (SURR)	74		% Rec.	11/14/1994	sjg
2-Fluorobiphenyl (SURR)	67		% Rec.	11/14/1994	sjg
p-Terphenyl-d14 (SURR)	80		% Rec.	11/14/1994	sjg
Phenol-d5 (SURR)	39		% Rec.	11/14/1994	sjg
2-Fluorophenol (SURR)	54		% Rec.	11/14/1994	sjg
2,4,6-Tribromophenol (SURR)	77		% Rec.	11/14/1994	sjg

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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	Analyst Initials
Oil & Grease (Non-Polar)	94.4	96.9	2.6	162	ND	153	155	mg/L	11/14/1994	vah
TPH (Gas/BTXE,Liquid)										
as Gasoline	100.0	86.0	15.0	1.00	ND	1.00	0.86	mg/L	11/15/1994	aal
Benzene	99.5	88.3	11.9	20.5	ND	20.4	18.1	ug/L	11/15/1994	aal
Toluene	99.8	94.9	5.0	56.7	ND	56.6	53.8	ug/L	11/15/1994	aal
TPH (Gas/BTXE,Liquid)										
as Gasoline	102.0	111.0	8.5	1.00	ND	1.02	1.11	mg/L	11/16/1994	tts
Benzene	91.1	99.6	8.9	22.4	ND	20.4	22.3	ug/L	11/16/1994	tts
Toluene	92.5	101.2	8.9	83.1	ND	76.9	84.1	ug/L	11/16/1994	tts
TPH (Gas/BTXE,Liquid)										
as Gasoline	99.0	94.0	5.2	1.00	ND	0.99	0.94	mg/L	11/16/1994	lss
Benzene	96.7	88.5	8.9	20.9	ND	20.2	18.5	ug/L	11/16/1994	lss
Toluene	96.3	86.8	10.4	87.6	ND	84.4	76.0	ug/L	11/16/1994	lss
TPH (Gas/BTXE,Liquid)										
as Gasoline	103.0	93.0	10.1	1.00	ND	1.03	0.93	mg/L	11/16/1994	aal
Benzene	99.5	93.5	6.2	20.1	ND	20.0	18.8	ug/L	11/16/1994	aal
Toluene	99.6	97.2	2.4	56.2	ND	56.0	54.6	ug/L	11/16/1994	aal
METHOD M8015 (EXT., Liquid)										
as diesel	84.5	97.5	14.3	2.00	ND	1.69	1.95	mg/L	11/15/1994	hs

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Client Acct: 1821
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LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	RPD	LCS Amount Found	LCS Amount Expected	Units	Date Analyzed	Analyst Initials
Oil & Grease (Non-Polar)	74.4		119	160	mg/L	11/14/1994	vah
METHOD M8015 (EXT., Liquid)							
Ortho-terphenyl (SURR)	94.0		0.94	1.0	% Rec.	11/15/1994	tts

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LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	RPD	LCS Amount Found	LCS Amount Expected	Units	Date Analyzed	Analyst Initials
METHOD 8270(GCMS,Liquid)							
Acenaphthene	84.0		84	100	ug/L	11/14/1994	sjg
1,4-Dichlorobenzene	71.0		71	100	ug/L	11/14/1994	sjg
2,4-Dinitrotoluene	89.0		89	100	ug/L	11/14/1994	sjg
N-Nitroso-Di-N-propylamine	103.0		103	100	ug/L	11/14/1994	sjg
Pyrene	97.0		97	100	ug/L	11/14/1994	sjg
1,2,4-Trichlorobenzene	75.0		75	100	ug/L	11/14/1994	sjg
4-Chloro-3-methylphenol	82.0		164	200	ug/L	11/14/1994	sjg
2-Chlorophenol	87.0		174	200	ug/L	11/14/1994	sjg
4-Nitrophenol	30.0		60	200	ug/L	11/14/1994	sjg
Pentachlorophenol	71.5		143	200	ug/L	11/14/1994	sjg
Phenol	44.5		89	200	ug/L	11/14/1994	sjg
Nitrobenzene-d5 (SURR)	89.0		89	100	% Rec.	11/14/1994	sjg
2-Fluorobiphenyl (SURR)	79.0		79	100	% Rec.	11/14/1994	sjg
p-Terphenyl-d14 (SURR)	79.0		79	100	% Rec.	11/14/1994	sjg
Phenol-d5 (SURR)	47.0		47	100	% Rec.	11/14/1994	sjg
2-Fluorophenol (SURR)	67.0		67	100	% Rec.	11/14/1994	sjg
2,4,6-Tribromophenol (SURR)	90.0		90	100	% Rec.	11/14/1994	sjg

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LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	RPD	LCS Amount Found	LCS Amount Expected	Units	Date Analyzed	Analyst Initials
METHOD 8270(GCMS,Liquid)							
Acenaphthene	82.0		82	100	ug/L	11/14/1994	sjg
1,4-Dichlorobenzene	71.0		71	100	ug/L	11/14/1994	sjg
2,4-Dinitrotoluene	90.0		90	100	ug/L	11/14/1994	sjg
N-Nitroso-Di-N-propylamine	102.0		102	100	ug/L	11/14/1994	sjg
Pyrene	100.0		100	100	ug/L	11/14/1994	sjg
1,2,4-Trichlorobenzene	72.0		72	100	ug/L	11/14/1994	sjg
4-Chloro-3-methylphenol	80.0		160	200	ug/L	11/14/1994	sjg
2-Chlorophenol	88.0		176	200	ug/L	11/14/1994	sjg
4-Nitrophenol	33.0		66	200	ug/L	11/14/1994	sjg
Pentachlorophenol	65.0		130	200	ug/L	11/14/1994	sjg
Phenol	43.5		87	200	ug/L	11/14/1994	sjg
Nitrobenzene-d5 (SURR)	89.0		89	100	% Rec.	11/14/1994	sjg
2-Fluorobiphenyl (SURR)	77.0		77	100	% Rec.	11/14/1994	sjg
p-Terphenyl-d14 (SURR)	83.0		83	100	% Rec.	11/14/1994	sjg
Phenol-d5 (SURR)	47.0		47	100	% Rec.	11/14/1994	sjg
2-Fluorophenol (SURR)	67.0		67	100	% Rec.	11/14/1994	sjg
2,4,6-Tribromophenol (SURR)	94.0		94	100	% Rec.	11/14/1994	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.

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

Revised September, 1993
abb.93

COOLER RECEIPT FORM

Project: 941108-G2 Log No: 3734
Cooler received on: 11/10/94 and checked on 11/10/94 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 — RMP 1.070c
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)