PACIFIC
ENVIRONMENTAL
GROUP, INC.

October 26, 1994
Project 305-079.2B

Mr. Dan Kirk
Shell Oil Company
P.O. Box 4023
Concord, California 94524

Re: Quarterly Report - Third Quarter 1994
Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California
WIC No 204-5508-5504

Dear Mr. Kirk:

The following presents the results of the third quarter 1994 groundwater monitoring program and status of remediation for the site referenced above. This letter has been prepared for Shell Oil Company by Pacific Environmental Group, Inc. (PACIFIC).

REMEDIAL PROGRESS SUMMARY

Progress toward site remediation is presented in the table below.

	Total Mass Removed (pounds)	
Analyte	Third Quarter 1994	Cumulative
Soil Vapor Extraction		
TPH-g	46.22	623.57
Benzene	0.20	6.46

TPH-g = Total petroleum hydrocarbons calculated as gasoline

QUARTERLY MONITORING FINDINGS

Groundwater monitoring wells were gauged on July 25, 1994 and sampled on July 25, and 26, 1994 by Blaine Tech Services, Inc. (Blaine) at the direction of PACIFIC. The laboratory noted that the sample bottles required for total petroleum hydrocarbons calculated as diesel (TPH-d) and motor oil analyses for Well MW-6 were received broken; therefore, Well MW-6 was resampled on August 4, 1994. Groundwater elevation

contours for the sampling date are shown on Figure 1; groundwater elevation data are presented in Table 1.

All wells were analyzed for the presence of TPH calculated as gasoline (TPH-g), benzene, toluene, ethylbenzene, and xylenes (BTEX compounds), TPH-d, and TPH calculated as motor oil. TPH-g, benzene, and TPH-d concentrations for the this sampling event are shown on Figure 2. Corresponding groundwater analytical data are presented in Tables 2 and 3. Blaine's groundwater sampling report, including field data, is presented as Attachment A. Hydrocarbon ranges for TPH-g, TPH-d, and motor oil can be found in the groundwater sampling report. The laboratory noted that all detectable concentrations of TPH-d appear to be due to a lighter petroleum product than diesel.

REMEDIAL SYSTEM PERFORMANCE EVALUATION

Interim remedial action consisting of soil vapor extraction (SVE) is currently in progress at the site. The SVE system began operation on August 30, 1993.

Remedial System Description

The SVE system consists of a 7.5-horsepower vacuum blower connected to five SVE wells (VEW-1 through VEW-5). Extracted soil vapor is treated by catalytic oxidation before discharge to the atmosphere. A process flow diagram of the system is shown on Figure 3.

Remedial System Operation

From August 30 to September 14, 1993, an internal combustion engine vapor abatement unit was operated at the site. On October 27, 1993, operation of the catalytic oxidation vapor abatement unit was initiated. SVE system operation was continuous between October 27, 1993 and June 28, 1994. The SVE system was temporarily shut down June 28, 1994 due to low TPH-g and benzene concentrations, and seasonally high groundwater levels. SVE system operation resumed on September 13, 1994.

Remedial Objectives

The interim remedial objective for the site is to reduce petroleum hydrocarbon concentrations in impacted soil and groundwater beneath the site. To evaluate progress toward meeting the interim remedial objective, the following system parameters were monitored:

- o SVE system petroleum hydrocarbon mass removal rates,
- o SVE well vapor composition, and
- o SVE system influence.

Progress toward meeting the remedial objectives for the site is discussed below.

Petroleum Hydrocarbon Mass Removal

Progress toward meeting the mass reduction objective is determined by evaluating remedial system mass removal data and the TPH-g and benzene concentration trends in site groundwater monitoring wells. Interim remedial system operational data was collected twice per month. The system flow rate data, hours of operation, and influent soil vapor sample analysis results were used to estimate TPH-g and benzene mass removal values. Mass removal data for the interim remedial system are presented in the table at the beginning of this letter, in Table 4, and shown on Figure 4. SVE system hydrocarbon concentrations are shown on Figure 5. Certified analytical reports and chain-of-custody documentation are presented as Attachment B.

During the third quarter, the SVE system removed approximately 46.22 pounds of TPH-g and 0.20 pound of benzene from beneath the site. To date, the SVE system has removed approximately 623.57 pounds of TPH-g and 6.46 pounds of benzene.

Separate-phase hydrocarbons were not reported in any wells this quarter. Concentrations of TPH-g and benzene in all associated site wells appear to have declined or stabilized, both laterally and downgradient, due to remedial system operation.

Soil Vapor Extraction Well Vapor Composition

No soil vapor samples were obtained from individual SVE wells during the current reporting period of SVE system operation. Individual SVE well analytical data are presented in Table 5.

Soil Vapor Extraction Influence

SVE system influence was not measured during the third quarter 1994.

Discussion

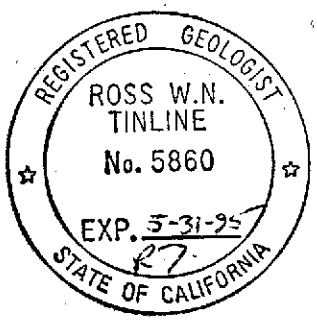
Based on remedial system operation during the third quarter, system operation will be continued into the fourth quarter.

If you have any questions or comments regarding the contents of this letter, please call.

Sincerely,

Pacific Environmental Group, Inc.

Ross W.N. Tinline
Project Geologist
RG 5860



Attachments:
- Table 1 - Groundwater Elevation Data
- Table 2 - Groundwater Analytical Data - Total Petroleum Hydrocarbons (TPH as Gasoline, BTEX Compounds, and TPH as Diesel)
- Table 3 - Groundwater Analytical Data - Total Petroleum Hydrocarbons (Oil and Grease and TPH as Motor Oil)
- Table 4 - Soil Vapor Extraction System Mass Removal Data - Total Petroleum Hydrocarbons (TPH as Gasoline and Benzene)
- Table 5 - Vapor-Phase Analytical Data - Total Petroleum Hydrocarbons (TPH as Gasoline and BTEX Compounds)
- Figure 1 - Groundwater Elevation Contour Map
- Figure 2 - TPH-g/Benzene/TPH-d Concentration Map
- Figure 3 - Soil Vapor Extraction Process Flow Diagram
- Figure 4 - Soil Vapor Extraction System Mass Removal Data
- Figure 5 - Soil Vapor Extraction System Hydrocarbon Concentrations
- Attachment A - Groundwater Sampling Report
- Attachment B - Remedial System Certified Analytical Reports and Chain-of-Custody Documentation

cc: Mr. Brad Boschetto, Shell Oil Company
Mr. Barney Chan, Alameda County Health Care Services
Mr. Richard Hiett, Regional Water Quality Control Board - S.F. Bay Region

Table 1
Groundwater Elevation Data

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)
MW-1	02/16/89	6.64	3.83	2.81
	05/23/89		3.59	3.05
	08/03/89		4.04	2.60
	12/15/89		4.22	2.42
	02/07/90		4.60	2.04
	04/18/90		4.02	2.62
	07/23/90		4.17	2.47
	09/27/90		4.60	2.04
	01/03/91		4.88	1.76
	04/10/91		3.55	3.09
	07/12/91		3.97	2.67
	10/08/91		4.26	2.38
	02/06/92		4.94	1.70
	05/04/92		3.58	3.06
	07/28/92		3.91	2.73
	10/27/92		4.79	1.85
	01/14/93		3.39	3.25
	04/23/93		2.67	3.97
	07/20/93	9.50	3.48	6.02
	10/18/93		4.20	5.30
	01/06/94		4.13	5.37
	04/12/94		2.42	7.08
	07/25/94		3.37	6.13
MW-2	02/16/89	7.68	5.33	2.35
	05/23/89		5.23	2.45
	08/03/89		6.03	1.65
	12/15/89		6.43	1.25
	02/07/90		5.82	1.86
	04/18/90		5.88	1.80
	07/23/90		6.05	1.63
	01/03/91		6.82	0.86
	04/10/91		4.80	2.88
	07/12/91		5.70	1.98
	10/08/91		6.40	1.28
	02/06/92		6.40	1.28
	05/04/92		4.68	3.00
	07/28/92		5.86	1.82
	10/27/92		6.96	0.72
	01/14/93		4.12	3.56
	04/23/93		3.84	3.84
	07/20/93	10.55	5.17	5.38
	10/18/93		6.20	4.35
	01/06/94		5.39	5.16
	04/12/94		4.72	5.83
	07/25/94		5.44	5.11

Table 1 (continued)
Groundwater Elevation Data

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)
MW-3	02/16/89	7.81	5.17	2.64
	05/23/89		5.09	2.72
	08/03/89		5.34	2.47
	12/15/89		6.02	1.79
	02/07/90		4.95	2.86
	04/18/90		5.55	2.26
	07/23/90		5.81	2.00
	09/27/90		6.86	0.95
	01/03/91		6.84	0.97
	04/10/91		4.93	2.88
	07/12/91		5.56	2.25
	10/08/91		6.62	1.19
	02/06/92		6.28	1.53
	05/04/92		4.65	3.16
	07/28/92		5.56	2.25
	10/27/92		6.65	1.16
	01/14/93		3.88	3.93
	04/23/93		--------- Well Inaccessible ---------	
	07/20/93	11.25 (TOB)	--------- Well Inaccessible ---------	
	10/18/93		--------- Well Inaccessible ---------	
	01/06/94		5.54	NA
	04/12/94		4.82	NA
	07/25/94		6.03 (TOB)	5.22
MW-4	05/23/89	7.38	5.60	1.78
	08/03/89		6.37	1.01
	12/15/89		6.91	0.47
	03/08/90		6.06	1.32
	04/18/90		5.84	1.54
	07/23/90		6.92	0.46
	07/23/90		6.92	0.46
	09/27/91		8.03	0.65
	01/03/91		7.54	-0.16
	04/10/91		5.06	2.32
	07/12/91		6.86	0.52
	10/08/91		7.44	-0.06
	02/06/92		7.29	0.09
	05/04/92		5.33	2.05
	07/28/92		6.95	0.43
	10/27/92		7.65	-0.27
	01/14/93		4.84	2.54
	04/23/93		4.84	2.54
	07/20/93	10.28	6.47	3.81
	10/18/93		7.35	2.93
	01/06/94		7.64	2.64
	04/12/94		6.39	3.89
	07/25/94		7.00	3.28

Table 1 (continued)
Groundwater Elevation Data

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)
MW-5	05/23/89	8.18	5.47	2.71
	08/03/89		5.94	2.24
	12/15/89		6.75	1.43
	02/07/90		6.03	2.15
	04/18/90		5.80	2.38
	07/23/90		6.00	2.18
	09/23/90		7.18	1.00
	01/03/91		7.17	1.01
	04/10/91		5.25	2.93
	07/12/91		5.70	2.48
	10/08/91		6.50	1.68
	02/06/92		6.35	1.83
	05/04/92		4.87	3.31
	07/28/92		5.73	2.45
	10/27/92		6.98	1.20
	01/14/93		4.70	3.48
	04/23/93		4.19	3.99
	07/20/93	10.87	5.10	5.77
	10/18/93		5.79	5.08
	01/06/94		5.56	5.31
	04/12/94		4.90	5.97
	07/25/94		5.38	5.49
MW-6	05/23/89	8.21	5.47	2.74
	08/03/89		5.91	2.30
	12/15/89		5.98	2.23
	02/07/90		5.47	2.74
	04/18/90		5.80	2.41
	07/23/90		5.85	2.36
	09/27/90		6.42	1.79
	01/03/91		6.73	1.48
	04/10/91		5.24	2.97
	07/12/91		5.78	2.43
	10/08/91		6.36	1.85
	02/06/92		6.15	2.06
	05/04/92		5.07	3.14
	07/28/92		5.85	2.36
	10/27/92		6.69	1.52
	01/14/93		4.52	3.69
	04/23/93		4.32	3.89
	07/20/93	11.04	5.39	5.65
	10/18/93		6.67	4.37
	01/06/94		5.66	5.38
	04/12/94		4.91	6.13
	07/25/94		5.55	5.49

Table 1 (continued)
Groundwater Elevation Data

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)
MW-7	05/23/89	7.44	5.48	1.96
	08/03/89		4.22	3.22
	12/15/89		4.58	2.86
	02/07/90		5.34	2.10
	04/18/90		4.92	2.52
	07/23/90		4.99	2.45
	09/27/90		6.16	1.28
	01/03/91		4.96	2.48
	04/10/91		4.13	3.31
	07/12/91		4.98	2.46
	10/08/91		5.48	1.96
	02/06/92		5.05	2.39
	05/04/92		4.43	3.01
	07/28/92		4.88	2.56
	10/27/92		5.39	2.05
	01/14/93		4.26	3.18
	04/23/93		4.04	3.40
	07/20/93	10.28	4.36	5.92
	10/18/93		5.14	5.14
	01/06/94		4.83	5.45
	04/12/94		4.24	6.04
	07/25/94		4.58	5.70
MW-8	05/23/89	7.79	6.62	1.17
	08/03/89		6.62	1.17
	12/15/89		6.71	1.08
	03/08/90		4.95	2.84
	04/18/90		6.40	1.89
	07/23/90		6.62	1.17
	09/27/90		6.98	0.81
	01/03/91		7.03	0.76
	04/10/91		4.40	3.39
	07/12/91		6.80	0.99
	10/08/91		7.56	0.23
	02/06/92		6.94	0.85
	05/04/92		5.86	1.93
	07/28/92		6.94	0.85
	10/27/92		7.83	-0.04
	01/14/93		3.60	4.19
	04/23/93		4.12	3.67
	07/20/93	10.61	6.38	4.23
	10/18/93		7.47	3.14
	01/06/94		7.20	3.41
	04/12/94		6.16	4.45
	07/25/94		6.94	3.67

Table 1 (continued)
Groundwater Elevation Data

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)
MW-9	08/03/89	7.63	5.78	1.85
	12/15/89		5.24	2.39
	02/07/90		5.23	2.40
	04/18/90		5.34	2.29
	07/23/90		5.65	1.98
	09/27/90		5.96	1.67
	01/03/91		6.23	1.40
	04/10/91		4.65	2.98
	07/12/91		5.65	1.98
	10/08/91		6.08	1.55
	02/06/92		5.92	1.71
	05/04/92		4.80	2.83
	07/28/92		5.61	2.02
	10/27/92		6.24	1.39
	01/14/93		4.95	2.68
	04/23/93		4.54	3.09
	07/20/93	10.48	5.25	5.23
	10/18/93		6.00	4.48
	01/06/94		5.62	4.86
	04/12/94		4.31	6.17
	07/25/94		5.43	5.05
MW-10	12/15/89	7.45	6.33	0.82
	03/08/90		5.41	2.00
	04/18/90		5.60	1.85
	07/23/90		5.81	1.64
	09/27/90		6.64	0.81
	01/03/91		6.96	0.49
	04/10/91		4.70	2.75
	07/12/91		5.90	1.55
	10/08/91		6.68	0.77
	02/06/92		7.04	0.41
	05/04/92		4.69	2.76
	07/28/92		6.00	1.45
	10/27/92		---------- Well Inaccessible ----------	
	01/14/93		6.07	1.38
	04/23/93		4.14	3.31
	07/20/93	10.61	5.62	4.99
	10/18/93		6.43	4.18
	01/06/94		6.74	3.87
	04/12/94		5.98	4.63
	07/25/94		6.31	4.30

Table 1 (continued)
Groundwater Elevation Data

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)
MW-11	07/20/93	10.56	8.08	2.48
	10/18/93		8.24	2.32
	01/06/94		8.47	2.09
	04/12/94		8.44	2.12
	07/25/94		8.20	2.36
MW-12	07/20/93	9.56	6.76	2.80
	10/18/93		7.12	2.44
	01/06/94		7.15	2.41
	04/12/94		6.68	2.88
	07/25/94		6.83	2.73
MW-13	07/20/93	10.10	8.32	1.78
	10/18/93		8.66	1.44
	01/06/94		8.70	1.40
	04/12/94		8.20	1.90
	07/25/94		8.39	1.71

MSL = Mean sea level
TOC = Top of casing
TOB = Top of box elevation
NA = Not available

Table 2
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline, BTEX Compounds, and TPH as Diesel)

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	TPH as Diesel (ppm)
MW-1	02/16/92	99	20	23	5.7	23	NA
	05/23/92	48	4.2	5.2	1.2	7.7	11
	08/04/89	63	5.5	5.5	3.2	9.5	11
	12/15/89	30	ND	ND	ND	ND	11
	02/07/90	93	13	9.6	2.4	14	10
	04/18/90	55	14	8.4	3.2	13	8.7
	07/24/90	73	16	7.4	2.8	15	3.6
	10/01/90	45	8	4.3	2	11	1.7
	01/02/91	43	10	3.4	1.9	11	3.1
	04/09/91	67	20	9.6	3.5	16	1.8
	07/11/91	NR	NR	NR	NR	NR	NR
	10/08/91	55	18	3.5	2.3	8.6	7.4
	02/06/92	48	12	2.8	1.9	7.4	15[a]
	05/05/92	71	16	6	3.1	14	10[a]
	07/28/92	68	21	5.5	3.4	15	18[a]
	07/28/92(D)	70	17	5	2.7	13	19[a]
	10/27/92	53	18	3.7	3.4	11	1.3
	10/27/92(D)	48	17	3.6	3.1	9.9	2.5[a]
	01/15/93	84	17	5.4	3	13	22[a]
	04/23/93	100	18	7.8	4.7	20	23[a]
	07/20/93	41[d]	12	0.87	1.5	4.4	3.1[a]
	10/18/93	33	14	1.2	2	4.9	8.1[a]
	10/18/93(D)	44	14	1.2	2	4.9	3.7[a]
	01/06/94	71	9	0.87	1.6	5.1	9[a]
	04/12/94	42	6.6	0.17	2.3	4.7	5.9
	04/12/94(D)	40	6.3	0.18	2.0	4.4	4.7
	07/25/94	13	4.4	0.11	0.46	1.4	7.0[a]
MW-2	02/16/89	20	0.2	0.9	2.7	9.6	NA
	05/23/89	1.5	0.0043	0.0029	0.011	0.15	1.6
	08/04/89	15	0.075	0.12	0.85	2.2	7.4
	12/15/89	5	0.052	0.013	0.0041	0.29	2.6
	02/07/90	13	0.032	0.034	0.23	0.64	4.8
	04/18/90	9.8	0.033	0.019	0.46	1.7	3.2
	07/24/90	9.6	0.041	0.027	0.54	0.94	2.7
	10/01/90	0.39	0.0034	0.015	0.0085	0.025	1.6
	01/02/91	1.8	0.056	0.0044	0.0048	0.092	0.83
	04/09/91	1.9	ND	0.028	0.14	0.49	0.28
	07/11/91	8.1	0.089	0.066	0.35	0.93	1.1
	10/08/91	1.4	0.0051	0.0015	0.036	0.27	2.6
	02/06/92	2	0.0078	0.0025	0.13	0.21	5.4[a]
	05/05/92	21[b]	ND	ND	0.3	0.96	1
	07/28/92	2.1	0.0077	0.0033	0.13	0.31	0.83[a]
	10/27/92	1.1	0.016	0.0031	0.0045	0.025	0.53
	01/15/93+	0.29	0.0052	0.0031	0.0084	0.021	0.17[b]

Table 2 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline, BTEX Compounds, and TPH as Diesel)

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	TPH as Diesel (ppm)
MW-2	04/23/93	2.4	ND	ND	0.21	0.61	1.2[a]
(cont.)	07/21/93	0.44	0.0017	0.0017	0.015	0.038	0.13
	10/18/93	2.1	ND	ND	0.09	0.11	1.6[a]
	01/06/94	1.9[e]	ND	0.0067	0.0071	0.012	0.13
	04/12/94	0.12	ND	ND	0.0034	0.0043	0.13
	07/25/94	0.18[f]	0.0053	ND	0.0062	0.0082	0.28[a]
MW-3	02/16/89	60	5.5	0.2	3.2	5.2	NA
	05/23/89	ND	ND	ND	ND	ND	1.5
	08/04/89	2	0.12	0.012	ND	0.086	1.2
	12/15/89	5.2	0.38	0.047	0.017	0.41	1.7
	03/08/90	0.26	0.017	ND	0.0054	0.0025	0.23
	04/19/90	0.26	ND	ND	ND	0.0094	ND
	07/24/90	0.51	0.046	0.0012	ND	0.0093	0.21
	09/28/90	0.46	0.0063	0.0017	ND	0.015	0.35
	01/02/91	4.8	0.92	0.0088	ND	0.19	0.63
	04/09/91	0.12	0.0012	0.0008	0.0035	0.021	0.06
	07/11/91	0.43	0.012	ND	ND	0.0077	ND
	10/08/91	0.77	0.14	0.0007	ND	0.053	0.56
	02/06/91	0.5	0.074	0.0009	0.0052	0.0053	0.34[a]
	05/04/92	0.31	0.047	ND	0.017	0.016	0.29[a]
	07/28/92	0.78	0.13	ND	0.013	0.0042	0.1[a]
	10/27/92	0.74	0.092	0.0028	0.0078	0.0096	0.069[a]
	01/15/93	ND	0.0024	ND	ND	ND	ND
	04/23/93	---------- Well Inaccessible ----------					
	07/20/93	---------- Well Inaccessible ----------					
	10/18/93	---------- Well Inaccessible ----------					
	01/06/94	0.13	0.0017	ND	ND	0.00093	0.064
	04/12/94	ND	0.00082	ND	ND	0.0007	0.075
	07/25/94	0.06[f]	0.0028	ND	ND	0.0007	ND
MW-4	05/23/89	ND	ND	ND	ND	ND	ND
	08/04/89	ND	ND	ND	ND	ND	ND
	12/15/89	ND	ND	ND	ND	ND	ND
	03/08/90	ND	ND	ND	ND	ND	ND
	07/25/90	ND	ND	ND	ND	ND	ND
	09/28/90	ND	ND	ND	ND	ND	ND
	01/02/91	ND	ND	ND	ND	ND	ND
	04/09/91	ND	ND	ND	ND	ND	ND
	07/11/91	ND	ND	ND	ND	ND	ND
	10/08/91	ND	ND	ND	ND	ND	ND
	02/06/92	0.12	ND	ND	ND	ND	2.5[a]
	05/04/92	ND	ND	ND	ND	ND	0.053
	07/28/92	ND	ND	ND	ND	ND	0.06

Table 2 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline, BTEX Compounds, and TPH as Diesel)

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	TPH as Diesel (ppm)
MW-4 (cont.)	10/27/92	ND	ND	ND	ND	ND	ND
	01/14/93	ND	ND	ND	ND	ND	ND
	04/23/93	ND	ND	ND	ND	ND	ND
	07/21/93	ND	0.0022	0.0012	0.0011	0.0077	ND
	10/18/93	ND	ND	ND	ND	ND	ND
	01/06/94	ND	ND	ND	ND	ND	ND
	04/13/94	ND	ND	ND	ND	ND	0.076
	07/26/94	ND	ND	ND	ND	ND	ND
MW-5	05/23/89	26	1.5	0.28	ND	8.1	7
	08/05/89	12	0.86	0.094	ND	2.6	8.7
	12/15/89	1	0.022	0.035	0.018	0.044	0.71
	02/08/90	ND	0.0008	ND	ND	ND	0.62
	04/19/90	19	4.5	0.85	0.097	8	5
	07/24/90	23	3.6	0.4	0.16	6.5	2.7
	09/28/90	5.4	1.4	0.026	0.013	1.3	0.55
	01/02/91	0.86	0.28	0.0028	0.0008	0.045	0.56
	04/09/91	12	0.71	0.13	0.5	2.4	1.8
	07/11/91	24	2.2	0.28	0.43	5.7	1.7
	10/08/91	2.8	0.86	0.013	ND	0.58	1.4
	02/06/92	1	0.3	ND	0.014	0.062	1.2
	05/05/92	10	1.5	0.35	0.71	2.3	4.1[a]
	07/28/92	12	2.2	0.063	1.4	3.5	3.8[a]
	10/27/92	7.5	1.1	0.059	0.23	0.9	0.48[a]
	01/15/93	7.7	0.42	0.049	0.57	0.84	1.1[c]
	04/23/93	110	2.9	2.5	3.4	12	16[a]
	07/21/93	18[d]	1.4	0.084	1.5	3.2	1.2[a]
	10/18/93	14	2	0.1	2.3	5.1	5.8[a]
	01/06/94	81	11	9.3	3.6	12	11[a]
	04/12/94	17	2.9	0.38	0.43	1.3	4.1
	07/25/94	5.9	1.5	0.042	0.034	0.17	5.4[a]
MW-6	05/23/89	22	0.016	0.0065	0.0066	3.4	7
	08/04/89	28	1.2	0.13	2.1	2.8	8.8
	12/15/89	16	0.37	0.092	0.2	0.18	5.5
	02/07/90	22	0.52	0.085	0.63	0.77	2.6
	04/18/90	21	0.9	0.077	2.7	2.7	5.7
	07/24/90	24	1	0.094	3.4	2.7	3
	10/01/90	22	0.7	0.093	2.5	2.4	ND
	01/02/91	25	1	0.088	2.6	3.7	0.96
	04/09/91	18	0.56	0.19	0.48	0.83	0.92
	07/11/91	9.5	0.67	0.051	1.1	0.92	1.9
	10/08/91	11	1	0.043	ND	ND	5.1
	02/06/92	7.2	0.56	0.008	0.72	0.16	15[a]
	05/05/92	7.9	0.61	ND	1.5	0.24	2.9[a]
	07/28/92	17	1.2	ND	3	0.61	3.2[a]

Table 2 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline, BTEX Compounds, and TPH as Diesel)

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	TPH as Diesel (ppm)
MW-6 (cont.)	10/27/92	15	1.3	0.13	1.7	0.49	1.3[a]
	01/14/93	4.9	0.08	0.031	0.33	0.037	1.6[a]
	04/23/93	4.8	0.12	ND	0.78	0.073	1.8[a]
	07/20/93	19[d]	0.57	0.018	1.1	0.13	0.91[a]
	10/18/93	24	0.77	0.44	1.6	0.83	2.5[a]
	01/06/94	20[d]	0.45	0.03	0.53	0.052	2.3[a]
	04/12/94	3.6	0.15	ND	0.34	0.021	1.6
	07/25/94	1.6	0.16	ND	ND	0.010	2.2[a]*
	07/25/94(D)	1.0	0.16	ND	ND	0.018	2.4[a]
MW-7	05/23/89	47	3.5	5	1.5	7.8	11
	08/04/89	68	6.2	6.6	3.6	8.8	22
	12/15/89	100	4.5	5.3	1.3	5.3	12
	02/08/90	96	15	15	2.5	14	8.1
	04/19/90	94	25	13	3.3	13	10
	07/24/90	84	3.8	26	13	3	12
	09/28/90	43	25	6.1	2.4	9	ND
	01/02/91	78	26	16	3	14	3.1
	04/09/91	140	26	16	2.2	14	1.8
	07/11/91	79	7.7	7.2	2.3	10	1.1
	10/08/91	55	29	7.5	1.8	9.3	0.39[a]
	02/06/92	63	16	8.7	1.6	7.4	9.6[a]
	05/05/92	67	22	13	1.8	9.4	9.8[a]
	07/28/92	85	26	17	2.9	15	13a
	10/27/92	63	21	11	3	11	1.9[a]
	01/14/93	120	28	21	1.6	15	2.3[a]
	04/23/93	60	17	3.7	2.2	11	12[a]
	04/23/93(D)	50	17	4.2	2.2	11	14[a]
	07/21/93	47	23	9.9	2.2	12	13
	10/18/93	44	22	3.8	2.6	10	10[a]
	01/06/94	65	16	4.9	1.9	8.5	5.2[a]
	04/12/94	68	12	2	0.58	6.4	3.4
	07/25/94	63	16	5.8	0.30	8.3	4.2[a]
MW-8	05/23/89	ND	ND	ND	ND	ND	0.1
	08/04/89	ND	ND	ND	ND	ND	0.075
	12/15/89	ND	ND	ND	ND	ND	ND
	03/08/90	ND	ND	ND	ND	ND	ND
	07/25/90	ND	ND	ND	ND	ND	ND
	09/28/90	ND	ND	ND	ND	ND	1.1
	01/02/91	ND	0.0013	ND	ND	ND	ND
	04/09/91	0.05	0.0007	0.0011	0.0008	0.001	ND
	07/11/91	ND	ND	ND	ND	ND	ND
	10/08/91	ND	0.0014	ND	ND	ND	ND
	02/06/92	ND	ND	0.0007	ND	ND	0.06[a]
	05/04/92	ND	ND	ND	ND	ND	0.21[b]

Table 2 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline, BTEX Compounds, and TPH as Diesel)

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	TPH as Diesel (ppm)
MW-8	07/28/92	0.051	ND	ND	0.001	0.0006	ND
(cont.)	10/27/92	ND	ND	0.0066	ND	ND	ND
	01/14/93	ND	ND	ND	ND	ND	0.064[b]
	01/14/93(D)	ND	ND	ND	ND	ND	NA
	04/23/93	ND	ND	ND	ND	ND	ND
	07/21/93	ND	0.0007	0.0007	0.0008	0.0041	ND
	10/18/93	ND	ND	0.8	ND	ND	ND
	01/06/94	ND	ND	ND	ND	ND	ND
	04/13/94	ND	ND	ND	ND	ND	ND
	07/26/94	ND	ND	ND	ND	ND	ND
MW-9	08/04/89	47	5.6	6.6	1.5	8.5	12
	12/15/89	88	4.3	5.4	0.14	5.6	9.2
	02/08/90	50	1.8	1.4	3.2	1.8	7.4
	04/19/90	50	14	11	0.73	10	7.5
	07/24/90	62	19	16	0.95	15	3.2
	09/28/90	30	16	6.5	0.98	11	2.7
	01/02/91	34	9.2	3.2	0.77	7	2.5
	04/09/91	66	17	13	1.4	14	2.2
	07/11/91	40	7.7	3.2	1.1	9.4	2
	10/08/91	20	11	0.64	0.24	6	4.7[a]
	02/06/92	36	11	0.49	1.1	6.7	6.6[a]
	05/05/92	31	11	1.7	1.2	8.7	5.8[a]
	07/28/92	50	17	1.2	1.5	12	14
	10/27/92	43	15	0.68	1.7	8.1	0.88[a]
	01/15/93	52	9.6	1.1	1.1	7	0.73[a]
	04/23/93	45	11	1.4	1.5	10	8[a]
	07/21/93	25	10	0.32	1.1	7.1	5.1
	10/18/93	32	14	0.53	2	10	4.9[a]
	01/06/94	41	15	0.81	1.4	9	7.7[a]
	01/06/94(D)	43	15	0.92	1.3	8	8.3[a]
	04/13/94	39	8.3	ND	ND	4.0	2.0
	07/26/94	22	7.5	0.15	ND	4.1	3.6[a]
MW-10	12/15/89	ND	1.5	ND	ND	ND	3.1
	03/08/90	25	17	0.33	2.1	1.4	1.8
	04/19/90	23	15	1.2	0.19	3.3	3.6
	07/25/90	18	12	0.38	ND	1.4	1.9
	09/28/90	9.5	13	0.1	1.8	0.23	0.43
	01/02/91	4.3	3.7	0.0097	ND	0.11	0.63
	04/09/91	45	16	4.6	3	6.9	1.4
	07/11/91	ND	ND	ND	ND	ND	
	10/08/91	3.8	13	0.082	0.0091	0.5	1.5[a]
	02/06/92	22	12	ND	0.6	0.17	1.6[a]
	05/05/92	39	14	5	1.8	5	8[a]
	07/28/92	38	17	2.8	1.5	4	8.7[a]

Table 2 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline, BTEX Compounds, and TPH as Diesel)

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	TPH as Diesel (ppm)
MW-10	10/27/92	----------	----------	----------	Well Inaccessible ----------	----------	----------
(cont.)	01/14/93	26	10	ND	ND	0.16	0.95[c]
	04/23/93	80	21	13	3.4	12	19a
	07/21/93	31	14	4.2	1.7	5.5	4.8
	10/18/93	13	8.6	0.22	ND	0.45	1.2[a]
	01/06/94	16	9.7	<0.125	<0.125	0.21	0.67[a]
	04/13/94	16	5.6	ND	ND	ND	0.86
	07/25/94	2.3	1.4	0.026	0.025	0.051	2.1[a]
MW-11	07/20/93	0.05	0.0025	0.0019	0.0039	0.018	ND
	10/18/93	ND	ND	ND	ND	ND	0.065
	01/06/94	ND	ND	ND	ND	ND	ND
	04/13/94	ND	0.0011	0.00087	ND	0.0015	ND
	07/25/94	ND	ND	ND	ND	ND	ND
MW-12	07/20/93	ND	0.0028	0.0019	0.0032	ND	0.015
	10/18/93	ND	ND	ND	ND	ND	ND
	01/06/94	ND	ND	ND	ND	ND	ND
	04/13/94	ND	0.00061	ND	ND	0.0011	ND
	07/25/94	ND	ND	ND	ND	ND	ND
MW-13	07/21/93	ND	ND	ND	ND	ND	0.0015
	07/21/93(D)	ND	ND	ND	ND	ND	0.001
	10/18/93	ND	ND	ND	ND	ND	ND
	01/06/94	ND	ND	ND	ND	ND	ND
	04/13/94	ND	0.0017	0.0012	0.00059	0.0024	0.1
	07/25/94	ND	ND	ND	ND	ND	ND

ppm = Parts per million
NA = Not analyzed
ND = Not detected
NR = Not reported
(D) = Duplicate sample
\+ = TPH as diesel analysis from April 8, 1993.
* = Sampled August 4, 1994.

a. The laboratory noted that compound detected and calculated as TPH as diesel primarily appears to be due to a lighter petroleum product.
b. Laboratory noted that compound detected and calculated as diesel appears to be a heavier hydrocarbon compound.
c. Laboratory noted that compound detected as TPH as diesel is due to the presence of a combination of a heavier petroleum product and a lighter petroleum product.
d. Laboratory noted that compound detected as gasoline is due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline.
e. Laboratory noted that compound detected as gasoline is due to the presence of a discrete peak not indicative of gasoline.
f. Laboratory noted the result to have an atypical gasoline pattern.

See individual certified analytical reports for detection limits.

Table 3
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(Oil and Grease and TPH as Motor Oil)

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

Well Number	Date Sampled	Oil and Grease (ppm)	TPH as Motor Oil (ppm)
MW-1	07/28/92	NA	ND
	07/28/92(D)	NA	ND
	01/15/93	NA	ND
	04/23/93	NA	ND
	10/18/93	NA	0.96
	10/18/93(D)	NA	0.67
	01/06/94	NA	ND
	04/12/94	NA	2.5
	04/12/94(D)	NA	2.2
	07/25/94	NA	ND
MW-2	07/28/92	NA	0.32
	01/14/93	NA	NA
	04/23/93	NA	ND
	10/18/93	NA	0.51
	01/06/94	NA	ND
	04/12/94	NA	0.17
	07/25/94	NA	ND
MW-3	07/28/92	ND	0.12
	10/27/92	ND	0.1
	01/15/93	ND	0.12
	04/23/93	NA	ND
	10/18/93	----- Well Inaccessible -----	
	01/06/94	NA	ND
	04/12/94	NA	0.086
	07/25/94	NA	ND
MW-4	07/28/92	NA	ND
	01/14/93	NA	0.12
	04/23/93	NA	0.17
	10/18/93	NA	0.2
	01/06/94	NA	ND
	04/13/94	NA	0.39
	07/25/94	NA	ND
MW-5	07/28/92	NA	1.2
	01/15/93	NA	0.43
	04/23/93	NA	ND
	10/18/93	NA	0.86
	01/06/94	NA	ND

Table 3 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(Oil and Grease and TPH as Motor Oil)

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

Well Number	Date Sampled	Oil and Grease (ppm)	TPH as Motor Oil (ppm)
MW-5	04/12/94	NA	2.2
(cont.)	07/26/94	NA	ND
MW-6	07/28/92	NA	ND
	01/14/93	NA	ND
	04/23/93	NA	ND
	10/18/93	NA	0.83
	01/06/94	NA	ND
	04/12/94	NA	0.58
	07/25/94	NA	ND*
	07/25/94(D)	NA	ND
MW-7	07/28/92	NA	ND
	01/14/93	NA	NA
	04/23/93	NA	ND
	04/23/93(D)	NA	ND
	10/18/93	NA	1
	01/06/94	NA	ND
	04/12/94	NA	0.75
	07/25/94	NA	ND
MW-8	07/28/92	NA	0.15
	01/14/93	NA	NA
	04/23/93	NA	0.15
	10/18/93	NA	0.17
	01/06/94	NA	ND
	04/13/94	NA	0.22
	07/26/94	NA	ND
MW-9	07/28/92	NA	ND
	01/13/93	NA	NA
	04/23/93	NA	ND
	10/18/93	NA	0.39
	01/06/94	NA	ND
	01/06/94(D)	NA	ND
	04/13/94	NA	0.59
	07/26/94	NA	ND
MW-10	07/28/92	NA	ND
	01/14/93	NA	0.2
	04/23/93	NA	ND

Table 3 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(Oil and Grease and TPH as Motor Oil)

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

Well Number	Date Sampled	Oil and Grease (ppm)	TPH as Motor Oil (ppm)
MW-10 (cont.)	10/18/93	NA	0.61
	01/06/94	NA	0.62
	04/13/94	NA	0.27
	07/25/94	NA	ND
MW-11	10/18/93	NA	0.26
	01/06/94	NA	ND
	04/13/94	NA	ND
	07/25/94	NA	ND
MW-12	10/18/93	NA	0.12
	01/06/94	NA	ND
	04/13/94	NA	ND
	07/25/94	NA	ND
MW-13	10/18/93	NA	0.1
	01/06/94	NA	ND
	04/13/94	NA	0.072
	07/25/94	NA	ND

ppm = Parts per million
NA = Not analyzed
ND = Not detected
(D) = Duplicate sample
* = Sampled August 4, 1994
See certified analytical report for detection limit.

Table 4

Soil Vapor Extraction System Mass Removal Data

Total Petroleum Hydrocarbons

(TPH as Gasoline and Benzene)

Shell Service Station

285 Hegenberger Road at Leet Drive

Oakland, California

Sample ID	Date Sampled	Hourmeter Reading (hrs)	Flow Rate (scfm)	TPH as Gasoline: Influent Concentration (ppmv)	TPH as Gasoline: Removal Rate (lbs/day)	TPH as Gasoline: Removed to Date (lbs)	Benzene: Influent Concentration (ppmv)	Benzene: Removal Rate (lbs/day)	Benzene: Removed to Date (lbs)
INFL	08/30/93	6,248	34	7,801	99.35	0.00	123.63	1.29	0.00
INFL	08/31/93	6,250	37	2,364	33.52	5.54	28.46	0.33	0.07
INFL	09/01/93	6,260	30	3,073	35.17	19.85	48.88	0.46	0.23
INFL	09/02/93	6,269	46	2,060	36.62	33.31	54.63	0.79	0.47
INFL	09/08/93	6,361	25	591	5.64	114.30	27.31	0.21	2.39
INFL	09/14/93	6,502 a	29	780	8.48	156.76	13.60	0.12	3.38
INFL	10/27/93	1,190.00 b	85	121	3.90	155.78	1.52	0.04	3.38
INFL	10/28/93	1,213.57	85	187	6.03	160.86	5.18	0.14	3.47
INFL	10/29/93	1,328.37	87	187	6.18	189.86	4.03	0.11	4.06
INFL	11/11/93	1,511.20	80	260	8.90	247.28	5.46	0.15	5.06
INFL	11/22/93	1,779.22	74	194	5.45	327.41	ND	0.00	5.92
INFL	12/09/93	2,183.44	68	35	0.92	381.06	ND	0.00	5.92
INFL	01/11/94	2,591.27	60	165	3.77	420.92	ND	0.00	5.92
INFL	01/27/94	2,976.94	74	151	4.26	485.44	ND	0.00	5.92
INFL	02/10/94	3,199.56	67	31	0.78	508.81	ND	0.00	5.92
INFL	03/02/94	3,676.57	60	12	0.28	519.42	0.56	0.01	6.03
INFL	03/09/94	3,688.03	70	50	1.32	519.74	0.12	0.00	6.03
INFL	03/24/94	4,051.56	46	43	0.78	535.63	0.76	0.01	6.14
INFL	04/11/94	4,482.67	42	ND	0.00	542.60	ND	0.00	6.25
INFL	04/21/94	4,662.97	45	12	0.20	543.35	ND	0.00	6.25
INFL	05/10/94	5,114.89	40	24	0.36	548.60	0.08	0.00	6.26
INFL	06/08/94	5,187.80	40 c	111	1.69	551.71	ND	0.00	6.26
INFL	06/21/94	5,500.70	64	92	2.24	577.35	ND	0.00	6.26
INFL	06/28/94	5,531.03 d	50	76	1.48	579.70	ND	0.00	6.26
INFL	09/13/94	6,481.00 e	65	284	7.01	579.70	1.5	0.03	6.26
INFL	09/20/94	6,544.00	56	92	1.96	610.17	0.50	0.01	6.40
INFL	09/28/94	6,841.00	50	69	1.30	623.57	0.35	0.01	6.46
TOTAL POUNDS REMOVED:				TPH as Gasoline =		623.57		Benzene=	6.46

hrs = Hours

scfm = Standard cubic feet per minute

ppmv = Parts per million by volume

lbs = Pounds

ND = Not detected

a. Internal combustion engine was operated at the site from 08/30/93 to 09/14/93.

b. King-Buck Cat-Ox start-up on 10/27/93.

c. Estimated flow rate.

d. System temporarily shut down June 28, 1994; King-Buck Cat-ox removed to different site.

e. Cat-ox installation and startup on September 13, 1994 (starting hours: 6,481).

See certified analytical reports for detection limits.

Table 5
Vapor–Phase Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

Well Number	Date Sampled	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl–benzene (µg/L)	Xylenes (µg/L)
VEW–1	08/30/93	140,000	3,300	860	1,400	3,400
	09/14/93	53,000	1,000	850	57	1,900
	10/27/93	26,000	660	450	300	1,300
	12/22/93	5.3	ND	0.097	0.11	0.75
	09/13/94	23,000	190	ND	59	120
VEW–2	08/30/93	21,000	ND	ND	180	190
	09/14/93	4,200	23	26	8.0	250
	10/27/93	1,400	ND	ND	8.0	13
	12/22/93	ND	ND	ND	ND	0.25
	09/13/94	2,600	ND	ND	5.2	ND
VEW–3	08/30/93	41,000	ND	62	510	390
	09/14/93	3,100	ND	6.4	14	79
	10/27/93	3,000	ND	ND	49	45
	12/22/93	ND	ND	ND	ND	0.27
	09/13/94	1,200	3.0	ND	5.4	1.8
VEW–4	08/30/93	12,000	ND	ND	74	98
	09/14/93	5,200	ND	27	ND	160
	10/27/93	1,100	ND	4.0	10	22
	12/22/93	NS	NS	NS	NS	NS
	09/13/94	1,400	ND	ND	2.9	ND
VEW–5	08/30/93	120,000	ND	200	1,900	1,500
	09/14/93	3,500	ND	ND	21	64
	10/27/93	9,400	ND	ND	100	71
	12/22/93	150	ND	ND	ND	0.25
	09/13/94	3,600	5.7	ND	8.0	ND

µg/L = Micrograms per liter
ND = Not detected
NS = Not sampled

N

CHANNEL

LEET DRIVE

TRUCK STORAGE AREA

MW-3 (5.22)

WASTE OIL TANK

STATION BUILDING

MW-5 (5.49)

VEW-4

MW-2 (5.11)

MW-8 (3.67)

UNDERGROUND FUEL STORAGE TANKS

FORMER UNDERGROUND FUEL STORAGE TANKS

CANOPY

VEW-5

6.0

?

MW-6 (5.49)

MW-10 (4.30)

MW-1 (6.13)

VEW-1

PLANTER

PARKING

VEW-3

VEW-2

MW-9 (5.05)

5.0

MW-4 (3.28)

PLANTER

MW-7 (5.70)

SIDEWALK

PRODUCT ISLANDS

4.0

HEGENBERGER ROAD

3.0

MW-11 (2.36)

MW-13 (1.71)

2.0

MW-12 (2.73)

SIDEWALK

LEGEND

MW-7 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

VEW-1 ▲ EXISTING SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION

VEW-4 △ DUAL COMPLETION AIR SPARGING/SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION

(5.11) GROUNDWATER ELEVATION IN FEET - MSL, 7-25-94

5.0 GROUNDWATER ELEVATION CONTOUR IN FEET - MSL, 7-25-94

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

APPROXIMATE GRADIENT = 0.06

PACIFIC ENVIRONMENTAL GROUP, INC.

SCALE

0 40 80 FEET

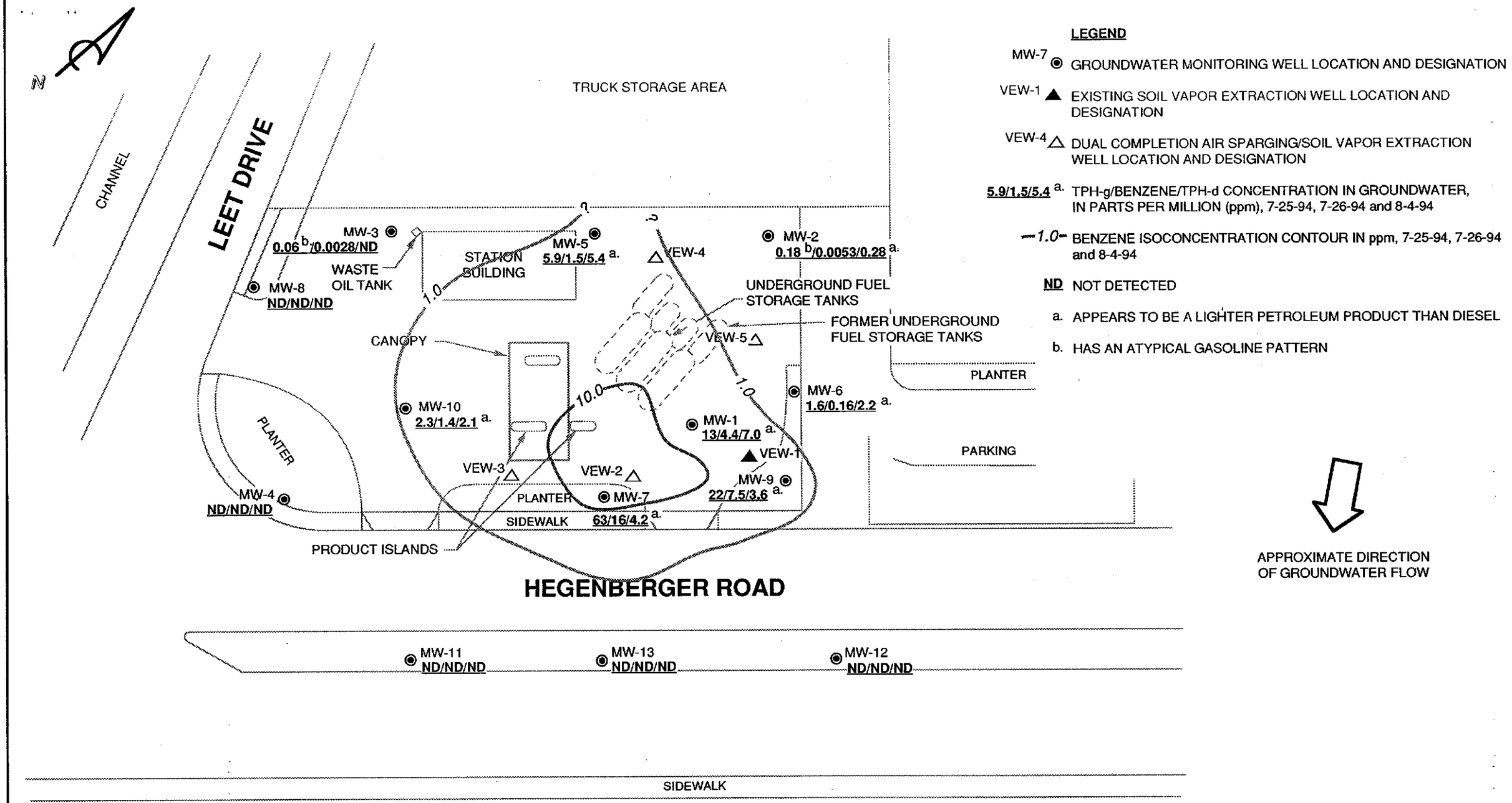
SHELL SERVICE STATION
285 Hegenberger Road at Leet Drive
Oakland, California

GROUNDWATER ELEVATION CONTOUR MAP

FIGURE: **1**

PROJECT: 305-079.2B

10/25/94



PACIFIC ENVIRONMENTAL GROUP, INC.

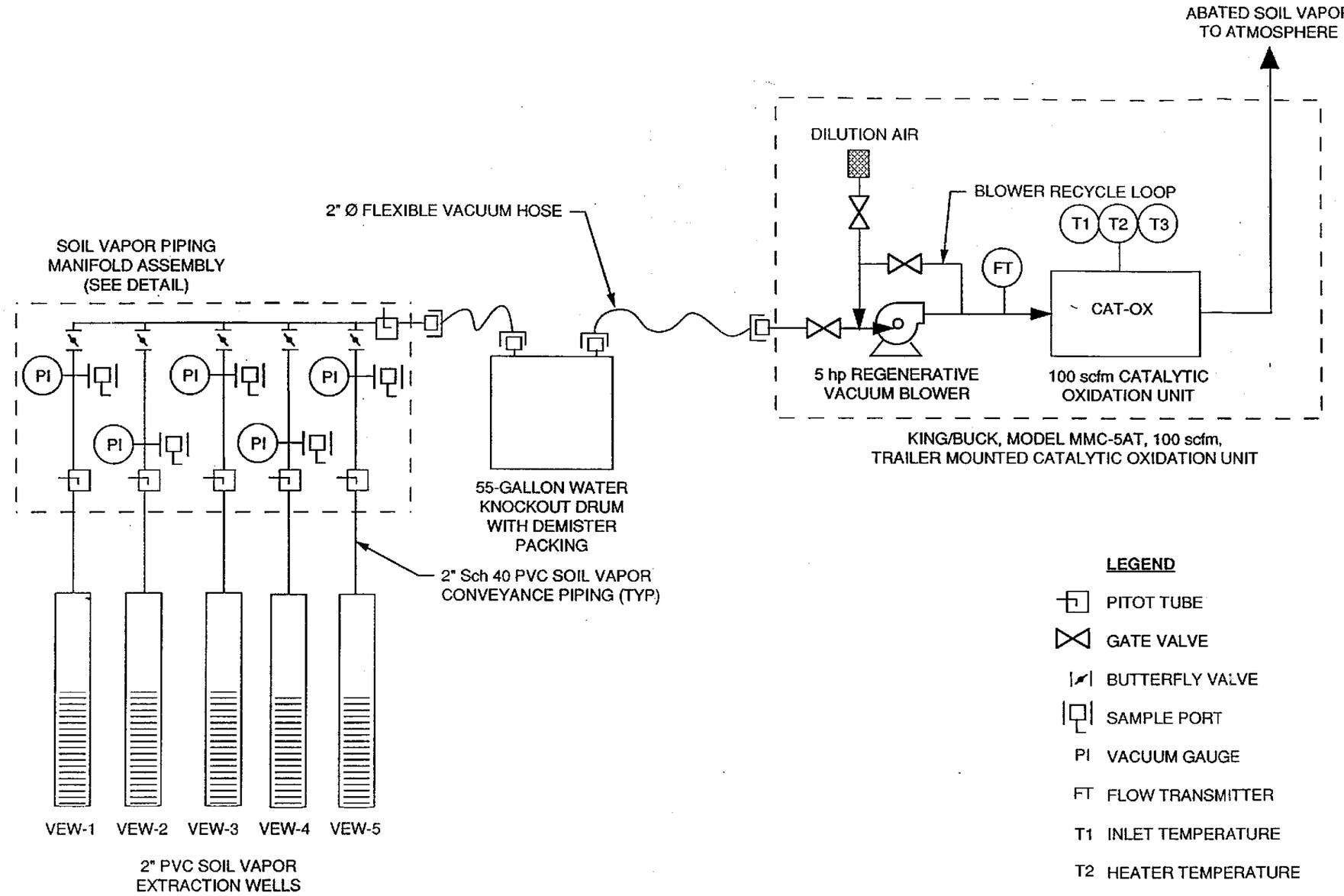
SCALE
0 40 80 FEET

SHELL SERVICE STATION
285 Hegenberger Road at Leet Drive
Oakland, California

TPH-g/BENZENE/TPH-d CONCENTRATION MAP

FIGURE: **2**
PROJECT: 305-079.2B

10/25/94



PACIFIC ENVIRONMENTAL GROUP, INC.	NO SCALE	**SHELL SERVICE STATION** 285 Hegenberger Road at Leet Drive Oakland, California **SOIL VAPOR EXTRACTION PROCESS FLOW DIAGRAM**	FIGURE: **3** PROJECT: 305-079.2B

03/14/94

Figure 4
Soil Vapor Extraction System Mass Removal Data

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

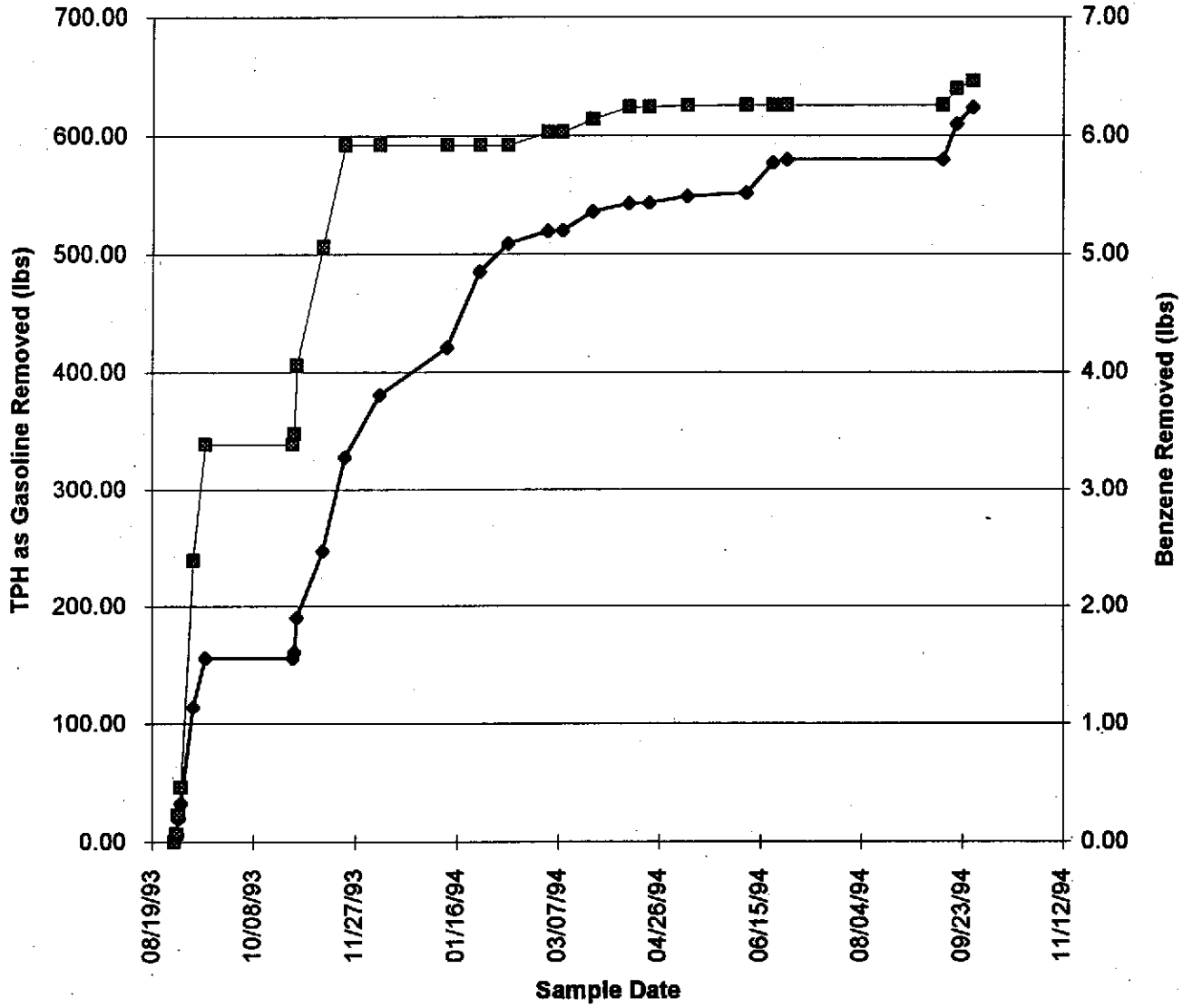
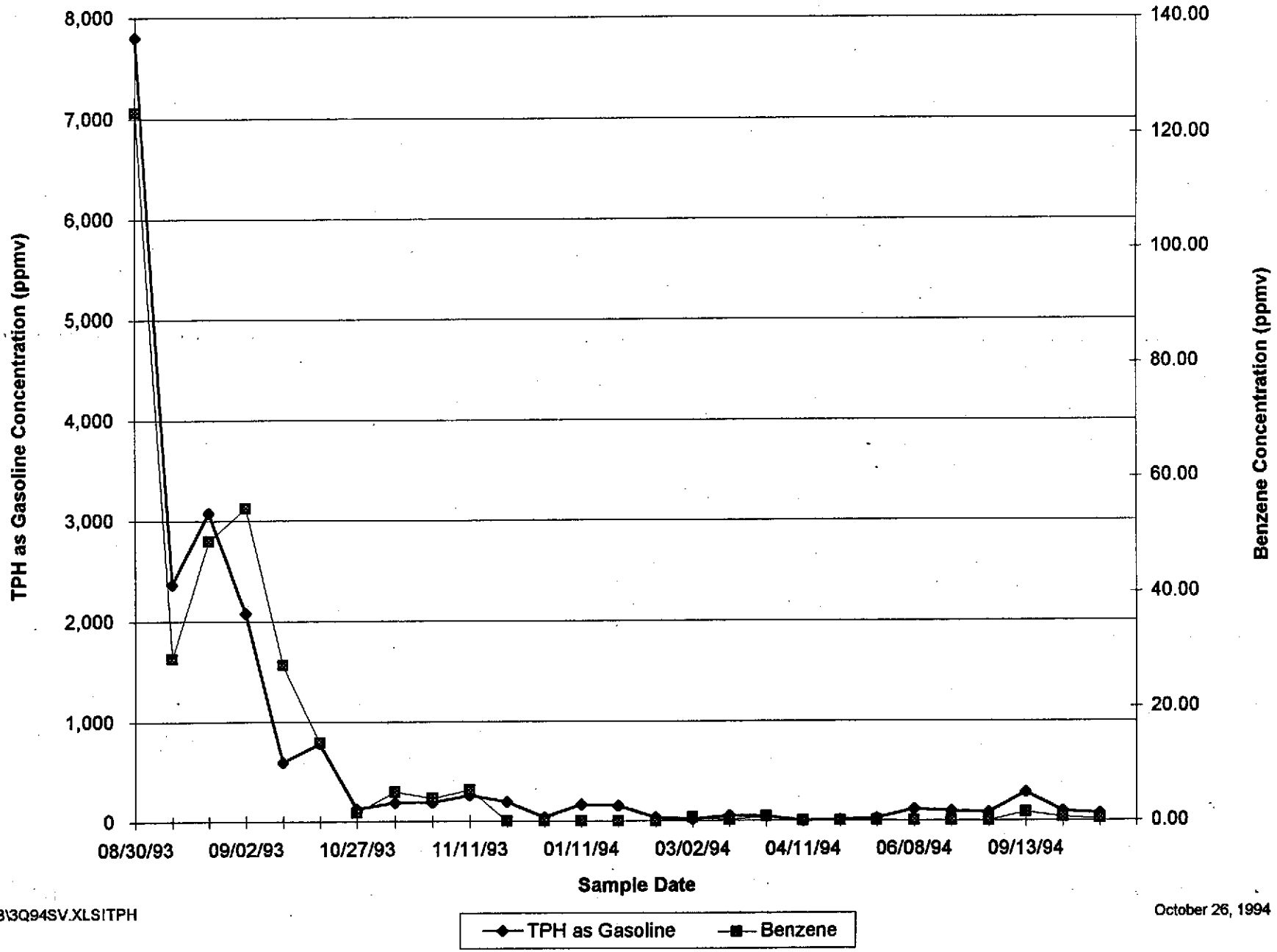


Figure 5
Soil Vapor Extraction System Hydrocrbon Concentrations

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California



3050792B\3Q94SV.XLS!TPH

October 26, 1994

ATTACHMENT A

GROUNDWATER SAMPLING REPORT

BLAINE
TECH SERVICES INC.

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

August 16, 1994

Shell Oil Company
P.O. Box 5278
Concord, CA 94520-9998

Attn: Daniel Kirk

SITE:
Shell WIC #204-5508-5504
285 Hegenburger Road
Oakland, California

QUARTER:
3rd quarter of 1994

QUARTERLY GROUNDWATER SAMPLING REPORT 940725-L-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.

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: Pacific Environmental Group
2025 Gateway Place, Suite #440
San Jose, CA 95110
ATTN: Rhonda Barrick

TABLE OF WELL GAUGING DATA

WELL I.D.	DATA COLLECTION DATE	MEASUREMENT REFERENCED TO	QUALITATIVE OBSERVATIONS (sheen)	DEPTH TO FIRST IMMISCIBLES LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLES LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
MW-1	7/25/94	TOC	ODOR	NONE	--	--	3.37	9.33
MW-2	7/25/94	TOC	--	NONE	--	--	5.44	9.58
MW-3	7/25/94	TOC	--	NONE	--	--	5.43	9.42
MW-4	7/25/94	TOC	--	NONE	--	--	7.00	10.10
MW-5	7/25/94	TOC	ODOR	NONE	--	--	5.38	9.70
MW-6 *	7/25/94	TOC	--	NONE	--	--	5.55	11.00
MW-7	7/25/94	TOC	ODOR	NONE	--	--	4.58	9.95
MW-8	7/25/94	TOC	--	NONE	--	--	6.94	9.93
MW-9	7/25/94	TOC	ODOR	NONE	--	--	5.43	10.72
MW-10	7/25/94	TOC	ODOR	NONE	--	--	6.31	9.94
MW-11	7/25/94	TOC	--	NONE	--	--	8.20	13.84
MW-12	7/25/94	TOC	--	NONE	--	--	6.83	14.59
MW-13	7/25/94	TOC	--	NONE	--	--	8.39	14.33

* Sample DUP was a duplicate sample taken from well MW-6.

1623

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 940725-LL

Date: 7/26/94
Page 1 of 2

Site Address: 285 Hegenberger Road, Oakland

WIC#: 204-5508-5504

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: LAD B OLVER

Printed Name: LAD B OLVER

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	MOTOR OIL	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
MW-1	7/25			X		5		X				X	X						
MW-2	"			X		5		X				X	X						
MW-3	"			X		5		X				X	X						
MW-4	7/26			X		5		X				X	X						
MW-5	7/25			X		5		X				X	X						
MW-6	"			X		5		X				X	X						
MW-7	"			X		5		X				X	X						
MW-8	7/26			X		5		X				X	X						

CHECK ONE (1) BOX ONLY — C1/D1

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

CUSTODY SEALED

Relinquished By (signature)	Printed Name	Date / Time	Received (signature)	Printed Name	Date / Time
[signature]	LAD B OLVER	7/27 12:45	[signature]	G.P. LUMBRE	7/27/94 1215
[signature]	G.P. LUMBRE	7/27 18:00			
(witness)			[signature]	K. Temple	7/28/94 0820

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

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 940725-LL

Date: 7/26/94
Page 2 of 2

Site Address: 285 Hegenberger Road, Oakland

WIC#: 204-5508-5504

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: Lad B Olver

Printed Name: LAD B OLVER

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	MOTOR OIL		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
MW-9	7/26			X		5		X				X	X							
MW-10	7/25			X		5		X				X	X							
MW-11	"			X		5		X				X	X							
MW-12	"			X		5		X				X	X							
MW-13	"			X		5		X				X	X							
DUP.	"			X		5		X				X	X							
E.B.	↓			X		5		X				X	X							
TB	7/25/26			X		2						X								

CUSTODY SEALED 7/27/94 G Lumbre

Relinquished By (signature)	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
Lad B Olver	LAD B OLVER	7/27/94	12:40	G Lumbre	G Lumbre	7/27/94	12:40
G Lumbre	G Lumbre	7/27/94	18:00				
(VIA NCS)				Lumbre	K. Temple	7/28/94	0730

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

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
Quarterly Monitoring	X 8441	24 hours ☐
Site Investigation	☐ 8441	48 hours ☐
Soil Closure/Disposal	☐ 8442	10 days XX (Normal)
Water Closure/Disposal	☐ 8443	Other ☐ ____
Soil/Air Rem. or Sys. O & M	☐ 8462	NOTE: Notify Lab as soon as Possible of 24/48 hr. TAT.
Water Rem. or Sys. O & M	☐ 8463	
Other	☐	

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: 08/11/1994
NET Client Acct. No: 1821
NET Pacific Job No: 94.03275
Received: 07/28/1994

Client Reference Information

SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

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 FOR
Project Coordinator

Jim Hoch
Operations Manager

Enclosure(s)

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

SAMPLE DESCRIPTION: MW-1
Date Taken: 07/25/1994
Time Taken:
NET Sample No: 210344

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/07/1994
DILUTION FACTOR*	20						08/07/1994
as Gasoline	13,000		1,000	ug/L	5030		08/07/1994
Carbon Range:	C5-C14						08/07/1994
METHOD 8020 (GC,Liquid)	--						08/07/1994
Benzene	4,400	FF	10	ug/L	8020		08/10/1994
Toluene	110		10	ug/L	8020		08/07/1994
Ethylbenzene	460		10	ug/L	8020		08/07/1994
Xylenes (Total)	1,400		10	ug/L	8020		08/07/1994
SURROGATE RESULTS	--						08/07/1994
Bromofluorobenzene (SURR)	86			% Rec.	5030		08/07/1994
METHOD M8015 (EXT., Liquid)						08/04/1994	
DILUTION FACTOR*	20						08/08/1994
as Diesel	7,000	DL	1000	ug/L	3510		08/08/1994
as Motor Oil	ND		10000	ug/L	3510		08/08/1994
Carbon Range:	<C10-C18						08/08/1994

DL : The positive result appears to be a lighter hydrocarbon than Diesel.
FF : Compound quantitated at a 100X dilution factor.

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

SAMPLE DESCRIPTION: MW-2
Date Taken: 07/25/1994
Time Taken:
NET Sample No: 210345

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/06/1994
DILUTION FACTOR*	1						08/06/1994
as Gasoline	180	G-	50	ug/L	5030		08/06/1994
Carbon Range:	C5-C14						08/06/1994
METHOD 8020 (GC,Liquid)	--						08/06/1994
Benzene	5.3		0.5	ug/L	8020		08/06/1994
Toluene	ND		0.5	ug/L	8020		08/06/1994
Ethylbenzene	6.2		0.5	ug/L	8020		08/06/1994
Xylenes (Total)	8.2		0.5	ug/L	8020		08/06/1994
SURROGATE RESULTS	--						08/06/1994
Bromofluorobenzene (SURR)	105			% Rec.	5030		08/06/1994
METHOD M8015 (EXT., Liquid)						08/04/1994	
DILUTION FACTOR*	1						08/08/1994
as Diesel	280	DL	50	ug/L	3510		08/08/1994
as Motor Oil	ND		500	ug/L	3510		08/08/1994
Carbon Range:	<C10-C18						08/08/1994

DL : The positive result appears to be a lighter hydrocarbon than Diesel.
G- : The positive result has an atypical pattern for Gasoline analysis.

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

SAMPLE DESCRIPTION: MW-3
Date Taken: 07/25/1994
Time Taken:
NET Sample No: 210346

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/06/1994
DILUTION FACTOR*	1						08/06/1994
as Gasoline	60	G-	50	ug/L	5030		08/06/1994
Carbon Range:	C5-C12						08/06/1994
METHOD 8020 (GC,Liquid)	--						08/06/1994
Benzene	2.8		0.5	ug/L	8020		08/06/1994
Toluene	ND		0.5	ug/L	8020		08/06/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/06/1994
Xylenes (Total)	0.7		0.5	ug/L	8020		08/06/1994
SURROGATE RESULTS	--						08/06/1994
Bromofluorobenzene (SURR)	82			% Rec.	5030		08/06/1994
METHOD M8015 (EXT., Liquid)						08/04/1994	
DILUTION FACTOR*	1						08/08/1994
as Diesel	ND		50	ug/L	3510		08/08/1994
as Motor Oil	ND		500	ug/L	3510		08/08/1994
Carbon Range:	--						08/08/1994

G- : The positive result has an atypical pattern for Gasoline analysis.

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

SAMPLE DESCRIPTION: MW-4
Date Taken: 07/26/1994
Time Taken:
NET Sample No: 210347

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/06/1994
DILUTION FACTOR*	1						08/06/1994
as Gasoline	ND		50	ug/L	5030		08/06/1994
Carbon Range:	--						08/06/1994
METHOD 8020 (GC,Liquid)	--						08/06/1994
Benzene	ND		0.5	ug/L	8020		08/06/1994
Toluene	ND		0.5	ug/L	8020		08/06/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/06/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/06/1994
SURROGATE RESULTS	--						08/06/1994
Bromofluorobenzene (SURR)	75			% Rec.	5030		08/06/1994
METHOD M8015 (EXT., Liquid)						08/04/1994	
DILUTION FACTOR*	1						08/08/1994
as Diesel	ND		50	ug/L	3510		08/08/1994
as Motor Oil	ND		500	ug/L	3510		08/08/1994
Carbon Range:	--						08/08/1994

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

SAMPLE DESCRIPTION: MW-5
Date Taken: 07/25/1994
Time Taken:
NET Sample No: 210348

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/06/1994
DILUTION FACTOR*	10						08/06/1994
as Gasoline	5,900		500	ug/L	5030		08/06/1994
Carbon Range:	C5-C14						08/06/1994
METHOD 8020 (GC,Liquid)	--						08/06/1994
Benzene	1,500	FF	5	ug/L	8020		08/07/1994
Toluene	42		5	ug/L	8020		08/06/1994
Ethylbenzene	34		5	ug/L	8020		08/06/1994
Xylenes (Total)	170		5	ug/L	8020		08/06/1994
SURROGATE RESULTS	--						08/06/1994
Bromofluorobenzene (SURR)	98			% Rec.	5030		08/06/1994
METHOD M8015 (EXT., Liquid)						08/04/1994	
DILUTION FACTOR*	5						08/08/1994
as Diesel	5,400	DL	250	ug/L	3510		08/08/1994
as Motor Oil	ND		2500	ug/L	3510		08/08/1994
Carbon Range:	<C10-C18						08/08/1994

DL : The positive result appears to be a lighter hydrocarbon than Diesel.
FF : Compound quantitated at a 100X dilution factor.

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

SAMPLE DESCRIPTION: MW-6
Date Taken: 07/25/1994
Time Taken:
NET Sample No: 210349

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/06/1994
DILUTION FACTOR*	20						08/06/1994
as Gasoline	1,600		1,000	ug/L	5030		08/06/1994
Carbon Range:	C5-C14+						08/06/1994
METHOD 8020 (GC,Liquid)	--						08/06/1994
Benzene	160		10	ug/L	8020		08/07/1994
Toluene	ND		10	ug/L	8020		08/06/1994
Ethylbenzene	ND		10	ug/L	8020		08/06/1994
Xylenes (Total)	10		10	ug/L	8020		08/06/1994
SURROGATE RESULTS	--						08/06/1994
Bromofluorobenzene (SURR)	116			% Rec.	5030		08/06/1994

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Client Name: Blaine Tech Services
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Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

SAMPLE DESCRIPTION: MW-7
Date Taken: 07/25/1994
Time Taken:
NET Sample No: 210350

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/06/1994
DILUTION FACTOR*	100						08/06/1994
as Gasoline	63,000		5,000	ug/L	5030		08/06/1994
Carbon Range:	C5-C12						08/06/1994
METHOD 8020 (GC,Liquid)	--						08/06/1994
Benzene	16,000	FH	50	ug/L	8020		08/07/1994
Toluene	5,800	FH	50	ug/L	8020		08/07/1994
Ethylbenzene	300		50	ug/L	8020		08/06/1994
Xylenes (Total)	8,300	FH	50	ug/L	8020		08/07/1994
SURROGATE RESULTS	--						08/06/1994
Bromofluorobenzene (SURR)	119			% Rec.	5030		08/06/1994
METHOD M8015 (EXT., Liquid)						08/04/1994	
DILUTION FACTOR*	1						08/08/1994
as Diesel	4,200	DL	50	ug/L	3510		08/08/1994
as Motor Oil	ND		500	ug/L	3510		08/08/1994
Carbon Range:	<C10-C18						08/08/1994

DL : The positive result appears to be a lighter hydrocarbon than Diesel.
FH : Compound quantitated at a 500X dilution factor.

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

SAMPLE DESCRIPTION: MW-8
Date Taken: 07/26/1994
Time Taken:
NET Sample No: 210351

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/06/1994
DILUTION FACTOR*	1						08/06/1994
as Gasoline	ND		50	ug/L	5030		08/06/1994
Carbon Range:	--						08/06/1994
METHOD 8020 (GC,Liquid)	--						08/06/1994
Benzene	ND		0.5	ug/L	8020		08/06/1994
Toluene	ND		0.5	ug/L	8020		08/06/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/06/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/06/1994
SURROGATE RESULTS	--						08/06/1994
Bromofluorobenzene (SURR)	89			% Rec.	5030		08/06/1994
METHOD M8015 (EXT., Liquid)						08/04/1994	
DILUTION FACTOR*	1						08/08/1994
as Diesel	ND		50	ug/L	3510		08/08/1994
as Motor Oil	ND		500	ug/L	3510		08/08/1994
Carbon Range:	--						08/08/1994

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

SAMPLE DESCRIPTION: MW-9
Date Taken: 07/26/1994
Time Taken:
NET Sample No: 210352

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/06/1994
DILUTION FACTOR*	100						08/06/1994
as Gasoline	22,000		5,000	ug/L	5030		08/06/1994
Carbon Range:	C5-C12						08/06/1994
METHOD 8020 (GC,Liquid)	--						08/06/1994
Benzene	7,500	FH	50	ug/L	8020		08/07/1994
Toluene	150		50	ug/L	8020		08/06/1994
Ethylbenzene	ND		50	ug/L	8020		08/06/1994
Xylenes (Total)	4,100		50	ug/L	8020		08/06/1994
SURROGATE RESULTS	--						08/06/1994
Bromofluorobenzene (SURR)	96			% Rec.	5030		08/06/1994
METHOD M8015 (EXT., Liquid)						08/04/1994	
DILUTION FACTOR*	1						08/08/1994
as Diesel	3,600	DL	50	ug/L	3510		08/08/1994
as Motor Oil	ND		500	ug/L	3510		08/08/1994
Carbon Range:	<C10-C18						08/08/1994

DL : The positive result appears to be a lighter hydrocarbon than Diesel.
FH : Compound quantitated at a 500X dilution factor.

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Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

SAMPLE DESCRIPTION: MW-10
Date Taken: 07/25/1994
Time Taken:
NET Sample No: 210353

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/06/1994
DILUTION FACTOR*	1						08/06/1994
as Gasoline	2,300		50	ug/L	5030		08/06/1994
Carbon Range:	C5-C14						08/06/1994
METHOD 8020 (GC,Liquid)	--						08/06/1994
Benzene	1,400	FD	0.5	ug/L	8020		08/07/1994
Toluene	26		0.5	ug/L	8020		08/06/1994
Ethylbenzene	25		0.5	ug/L	8020		08/06/1994
Xylenes (Total)	51		0.5	ug/L	8020		08/06/1994
SURROGATE RESULTS	--						08/06/1994
Bromofluorobenzene (SURR)	80			% Rec.	5030		08/06/1994
METHOD M8015 (EXT., Liquid)						08/04/1994	
DILUTION FACTOR*	1						08/08/1994
as Diesel	2,100	DL	50	ug/L	3510		08/08/1994
as Motor Oil	ND		500	ug/L	3510		08/08/1994
Carbon Range:	<C10-C18						08/08/1994

DL : The positive result appears to be a lighter hydrocarbon than Diesel.
FD : Compound quantitated at a 20X dilution factor.

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

SAMPLE DESCRIPTION: MW-11
Date Taken: 07/25/1994
Time Taken:
NET Sample No: 210354

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/07/1994
DILUTION FACTOR*	1						08/07/1994
as Gasoline	ND		50	ug/L	5030		08/07/1994
Carbon Range:	--						08/07/1994
METHOD 8020 (GC,Liquid)	--						08/07/1994
Benzene	ND		0.5	ug/L	8020		08/07/1994
Toluene	ND		0.5	ug/L	8020		08/07/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/07/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/07/1994
SURROGATE RESULTS	--						08/07/1994
Bromofluorobenzene (SURR)	81			% Rec.	5030		08/07/1994
METHOD M8015 (EXT., Liquid)						08/04/1994	
DILUTION FACTOR*	1						08/08/1994
as Diesel	ND		50	ug/L	3510		08/08/1994
as Motor Oil	ND		500	ug/L	3510		08/08/1994
Carbon Range:	--						08/08/1994

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

SAMPLE DESCRIPTION: MW-12
Date Taken: 07/25/1994
Time Taken:
NET Sample No: 210355

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/06/1994
DILUTION FACTOR*	1						08/06/1994
as Gasoline	ND		50	ug/L	5030		08/06/1994
Carbon Range:	--						08/06/1994
METHOD 8020 (GC,Liquid)	--						08/06/1994
Benzene	ND		0.5	ug/L	8020		08/06/1994
Toluene	ND		0.5	ug/L	8020		08/06/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/06/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/06/1994
SURROGATE RESULTS	--						08/06/1994
Bromofluorobenzene (SURR)	82			% Rec.	5030		08/06/1994
METHOD M8015 (EXT., Liquid)						08/04/1994	
DILUTION FACTOR*	1						08/08/1994
as Diesel	ND		50	ug/L	3510		08/08/1994
as Motor Oil	ND		500	ug/L	3510		08/08/1994
Carbon Range:	--						08/08/1994

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

SAMPLE DESCRIPTION: MW-13
Date Taken: 07/25/1994
Time Taken:
NET Sample No: 210356

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/07/1994
DILUTION FACTOR*	1						08/07/1994
as Gasoline	ND		50	ug/L	5030		08/07/1994
Carbon Range:	--						08/07/1994
METHOD 8020 (GC,Liquid)	--						08/07/1994
Benzene	ND		0.5	ug/L	8020		08/07/1994
Toluene	ND		0.5	ug/L	8020		08/07/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/07/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/07/1994
SURROGATE RESULTS	--						08/07/1994
Bromofluorobenzene (SURR)	15	S2		% Rec.	5030		08/07/1994
METHOD M8015 (EXT., Liquid)						08/04/1994	
DILUTION FACTOR*	1						08/08/1994
as Diesel	ND		50	ug/L	3510		08/08/1994
as Motor Oil	ND		500	ug/L	3510		08/08/1994
Carbon Range:	--						08/08/1994

S2:Analyzed twice with low surrogate recovery, possible matrix interference

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

SAMPLE DESCRIPTION: DUP
Date Taken: 07/25/1994
Time Taken:
NET Sample No: 210357

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/07/1994
DILUTION FACTOR*	10						08/07/1994
as Gasoline	1,000		500	ug/L	5030		08/07/1994
Carbon Range:	C5-C14						08/07/1994
METHOD 8020 (GC,Liquid)	--						08/07/1994
Benzene	160		5	ug/L	8020		08/07/1994
Toluene	ND		5	ug/L	8020		08/07/1994
Ethylbenzene	ND		5	ug/L	8020		08/07/1994
Xylenes (Total)	18		5	ug/L	8020		08/07/1994
SURROGATE RESULTS	--						08/07/1994
Bromofluorobenzene (SURR)	79			% Rec.	5030		08/07/1994
METHOD M8015 (EXT., Liquid)						08/04/1994	
DILUTION FACTOR*	1						08/08/1994
as Diesel	2,400	DL	50	ug/L	3510		08/08/1994
as Motor Oil	ND		500	ug/L	3510		08/08/1994
Carbon Range:	<C10-C18						08/08/1994

DL : The positive result appears to be a lighter hydrocarbon than Diesel.

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

SAMPLE DESCRIPTION: EB
Date Taken: 07/25/1994
Time Taken:
NET Sample No: 210358

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/06/1994
DILUTION FACTOR*	1						08/06/1994
as Gasoline	ND		50	ug/L	5030		08/06/1994
Carbon Range:	--						08/06/1994
METHOD 8020 (GC,Liquid)	--						08/06/1994
Benzene	ND		0.5	ug/L	8020		08/06/1994
Toluene	ND		0.5	ug/L,	8020		08/06/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/06/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/06/1994
SURROGATE RESULTS	--						08/06/1994
Bromofluorobenzene (SURR)	80			% Rec.	5030		08/06/1994
METHOD M8015 (EXT., Liquid)						08/04/1994	
DILUTION FACTOR*	1						08/08/1994
as Diesel	ND		50	ug/L	3510		08/08/1994
as Motor Oil	ND		500	ug/L	3510		08/08/1994
Carbon Range:	--						08/08/1994

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

SAMPLE DESCRIPTION: TB
Date Taken: 07/25/1994
Time Taken:
NET Sample No: 210359

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/07/1994
DILUTION FACTOR*	1						08/07/1994
as Gasoline	ND		50	ug/L	5030		08/07/1994
Carbon Range:	--						08/07/1994
METHOD 8020 (GC,Liquid)	--						08/07/1994
Benzene	ND		0.5	ug/L	8020		08/07/1994
Toluene	ND		0.5	ug/L	8020		08/07/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/07/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/07/1994
SURROGATE RESULTS	--						08/07/1994
Bromofluorobenzene (SURR)	61	S2		% Rec.	5030		08/07/1994

S2:Analyzed twice with low surrogate recovery, possible matrix interference

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940725-L1

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	103.0	1.03	1.00	mg/L	08/06/1994	jmh
Benzene	101.6	5.08	5.00	ug/L	08/06/1994	jmh
Toluene	98.2	4.91	5.00	ug/L	08/06/1994	jmh
Ethylbenzene	93.0	4.65	5.00	ug/L	08/06/1994	jmh
Xylenes (Total)	96.7	14.5	15.0	ug/L	08/06/1994	jmh
Bromofluorobenzene (SURR)	90.0	90	100	% Rec.	08/06/1994	jmh
TPH (Gas/BTXE,Liquid)						
as Gasoline	95.0	0.95	1.00	mg/L	08/07/1994	jmh
Benzene	102.2	5.11	5.00	ug/L	08/07/1994	jmh
Toluene	97.6	4.88	5.00	ug/L	08/07/1994	jmh
Ethylbenzene	90.8	4.54	5.00	ug/L	08/07/1994	jmh
Xylenes (Total)	94.7	14.2	15.0	ug/L	08/07/1994	jmh
Bromofluorobenzene (SURR)	95.0	95	100	% Rec.	08/07/1994	jmh
TPH (Gas/BTXE,Liquid)						
as Gasoline	105.0	1.05	1.00	mg/L	08/10/1994	jmh
Benzene	89.2	4.46	5.00	ug/L	08/10/1994	jmh
Toluene	89.0	4.45	5.00	ug/L	08/10/1994	jmh
Ethylbenzene	87.8	4.39	5.00	ug/L	08/10/1994	jmh
Xylenes (Total)	90.0	13.5	15.0	ug/L	08/10/1994	jmh
Bromofluorobenzene (SURR)	90.0	90	100	% Rec.	08/10/1994	jmh
METHOD M8015 (EXT., Liquid)						
as Diesel	96.7	967	1000	mg/L	08/08/1994	jmh
as Motor Oil	86.8	868	1000	mg/L	08/08/1994	jmh

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METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	08/06/1994	jmh
Benzene	ND	0.5	ug/L	08/06/1994	jmh
Toluene	ND	0.5	ug/L	08/06/1994	jmh
Ethylbenzene	ND	0.5	ug/L	08/06/1994	jmh
Xylenes (Total)	ND	0.5	ug/L	08/06/1994	jmh
Bromofluorobenzene (SURR)	78		% Rec.	08/06/1994	jmh
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	08/07/1994	jmh
Benzene	ND	0.5	ug/L	08/07/1994	jmh
Toluene	ND	0.5	ug/L	08/07/1994	jmh
Ethylbenzene	ND	0.5	ug/L	08/07/1994	jmh
Xylenes (Total)	ND	0.5	ug/L	08/07/1994	jmh
Bromofluorobenzene (SURR)	76		% Rec.	08/07/1994	jmh
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	08/10/1994	jmh
Benzene	ND	0.5	ug/L	08/10/1994	jmh
Toluene	ND	0.5	ug/L	08/10/1994	jmh
Ethylbenzene	ND	0.5	ug/L	08/10/1994	jmh
Xylenes (Total)	ND	0.5	ug/L	08/10/1994	jmh
Bromofluorobenzene (SURR)	85		% Rec.	08/10/1994	jmh
METHOD M8015 (EXT., Liquid)					
as Diesel	ND	0.05	mg/L	08/08/1994	jmh
as Motor Oil	ND	0.5	mg/L	08/08/1994	jmh

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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
TPH (Gas/BTXE,Liquid)										
as Gasoline	100.0	94.0	6.1	1.00	ND	1.0	0.94	mg/L	08/06/1994	jmh
Benzene	94.0	88.5	6.0	40.0	ND	37.6	35.4	ug/L	08/06/1994	jmh
Toluene	95.5	92.6	3.1	84.0	ND	80.2	77.8	ug/L	08/06/1994	jmh
TPH (Gas/BTXE,Liquid)										
as Gasoline	101.0	107.0	5.8	1.00	ND	1.01	1.07	mg/L	08/07/1994	jmh
Benzene	103.4	106.9	3.3	31.9	ND	33.0	34.1	ug/L	08/07/1994	jmh
Toluene	100.8	102.9	2.1	73.3	ND	73.9	75.4	ug/L	08/07/1994	jmh
TPH (Gas/BTXE,Liquid)										
as Gasoline	113.0	113.0	0.0	1.00	ND	1.13	1.13	mg/L	08/10/1994	jmh
Benzene	114.9	114.9	0.0	40.2	ND	46.2	46.2	ug/L	08/10/1994	jmh
Toluene	104.9	105.2	0.3	84.2	ND	88.3	88.6	ug/L	08/10/1994	jmh
TPH (Gas/BTXE,Liquid)										
as Gasoline	96.7	86.3	11.4	1.00	ND	0.967	0.863	mg/L	08/10/1994	jmh
Benzene	94.3	85.6	9.7	40.2	ND	37.9	34.4	ug/L	08/10/1994	jmh
Toluene	96.8	91.8	5.3	84.2	ND	81.5	77.3	ug/L	08/10/1994	jmh
METHOD M8015 (EXT., Liquid)										
as Diesel	73.0	82.5	12.2	2.00	ND	1.46	1.65	mg/L	08/08/1994	jmh

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LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	RPD	LCS Amount Found	LCS Amount Expected	Units	Date Analyzed	Analyst Initials
METHOD M8015 (EXT., Liquid)							
as Diesel	84.0		0.84	1.00	mg/L	08/08/1994	jmh

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KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. 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: Shell, Oakland, 940725-L1 Log No: 11623
Cooler received on: 7-28-94 and checked on 7-28-94 by J. Sorensen
(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 2.0°C, 0.2°C
Did all bottles arrive in good condition (unbroken)?	YES (NO) *
Did bottle labels match COC?	(YES) NO
Were proper bottles used for analysis indicated?	(YES) NO
Correct preservatives used?	(YES) NO
VOA vials checked for headspace bubbles?	(YES) NO

Note which voas (if any) had bubbles:*

Sample descriptor:	Number of vials:

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

List here all other jobs received in the same cooler:

Client Job #	NET log #

MW-6 - Both 1L Ambers were recd. broken
DUP - 1 of 2 1L Ambers was recd. broken (coolerrec)

Client notified 8/3/94
JK

1787

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 9403804K3

Date: 8/4
Page 1 of 1

Site Address: 285 Hegenberger Road, Oakland

WIC#: 204-5508-5504

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

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

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

Comments:

Sampled by: KCB/GM

Printed Name: Keith Brown

LAB: Nor

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 ~~Purgeable Halocarbons~~	Motor Oil	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
MW6	8/4			W		5		X				X	X					ATTN: JUDY RIDLEY OR LINDA	

Analysis Required

CHECK ONE (1) BOX ONLY	C/O#	TURN AROUND TIME
Quarterly Monitoring	☒ 6441	24 hours ☐
Site Investigation	☐ 6441	48 hours ☐
Soil Closure/Disposal	☐ 6442	72 hours ☒ (Normal)
Water Closure/Disposal	☐ 6443	Other ☐
Soil/Air Rem. or Sys. O & M	☐ 6442	NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.
Water Rem. or Sys. O & M	☐ 6443	
Other	☐	

SIGNED 8/6/94 (contract)

Relinquished By (signature)	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
	Keith Brown	8/4/94	12:50				
		8/4/94	16:30				
(VIA UPS)					K. Temple	8/6/94	0800

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

NET 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: 08/16/1994
NET Client Acct. No: 1821
NET Pacific Job No: 94.03455
Received: 08/06/1994

Client Reference Information

SHELL, 285 Hegenberger Road, Oakland, Job No. 940804K3

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 FOR
Project Coordinator

Jim Hoch
Operations Manager

Enclosure(s)

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940804K3

SAMPLE DESCRIPTION: MW6
Date Taken: 08/04/1994
Time Taken:
NET Sample No: 211276

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
METHOD M8015 (EXT., Liquid)						08/09/1994	
DILUTION FACTOR*	1						08/10/1994
as Diesel	2,200	DL	50	ug/L	3510		08/10/1994
as Motor Oil	ND		500	ug/L	3510		08/10/1994
Carbon Range:	<C10-C22						08/10/1994

DL : The positive result appears to be a lighter hydrocarbon than Diesel.

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940804K3

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials
METHOD M8015 (EXT., Liquid)						
as Diesel	103.8	1038	1000	mg/L	08/10/1994	tdn
as Motor Oil	92.0	920	1000	mg/L	08/10/1994	tdn

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940804K3

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials
METHOD M8015 (EXT., Liquid)					
as Diesel	ND	0.05	mg/L	08/10/1994	tdn
as Motor Oil	ND	0.5	mg/L	08/10/1994	tdn

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940804K3

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
METHOD M8015 (EXT., Liquid)										
as Diesel	81.0	83.5	3.0	2.00	ND	1.62	1.67	mg/L	08/10/1994	tdn

Ref: SHELL, 285 Hegenberger Road, Oakland, Job No. 940804K3

LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	RPD	LCS Amount Found	LCS Amount Expected	Units	Date Analyzed	Analyst Initials
METHOD M8015 (EXT., Liquid)							
as Diesel	57.0		0.57	1.00	mg/L	08/10/1994	tdn

COOLER RECEIPT FORM

Project: Shell, Oakland 940804K3 Log No: 1787
Cooler received on: 8-6-94 and checked on 8-8-94 by J. Sorensen
(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 1.4°C

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

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

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

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

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

Sample descriptor:	Number of vials:

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

List here all other jobs received in the same cooler:

Client Job #	NET log #

(coolerrec)

SHELL WELL MONITORING DATA SHEET

Project #: 940725-L1	Wic # 204 5508 5504
Sampler: LAD	Date Sampled: 7/25/94
Well I.D.: MW-1	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 9.33 After	Depth to Water: Before 3.37 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other --

Volume Conversion Factor (VCF):

$(12 \times (d^2/4) \times \pi)/231$

Where
12 = in./foot
d = diameter (in.)
π = 3.1416
231 = in.³/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

3.9 (1 Case Volume) x 3 (Specified Volumes) = 11.7 gallons

Purging: Bailer X
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump _____

Sampling: Bailer X
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1600	71.6	7.1	3200.	10.	4.	STRONG ODOR
1604	69.6	7.1	3400.	15.	8.	
1610	70.8	7.1	2900.	12.	12.	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 12.

Sampling Time: 1616

Sample I.D.: MW-1 Laboratory: NET

Analyzed for: TPHG, BTEX, TPHD, MOTOR OIL

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations: DO 3.8 PPM, NEW LOCK

SHELL WELL MONITORING DATA SHEET

Project #: 940725-L1	Wic # 204 5508 5504
Sampler: LAD	Date Sampled: 7/25/94
Well I.D.: MW-2	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 9.58 After	Depth to Water: Before 5.44 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other --

Volume Conversion Factor (VCF):

$(12 \times (d^2/4) \times \pi)/231$

Where
12 = in/feet
d = diameter (in.)
π = 3.1416
231 = in3/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

2.7	x	3	=	8.1
1 Case Volume		Specified Volumes		gallons

Purging: Bailer ☒
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump _____

Sampling: Bailer ☒
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1233	68.4	7.2	4000.	38.	3.	
1236	67.0	7.2	4200.	>200.	6.	
1243	68.6	7.2	4200.	198.	9.	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 9.

Sampling Time: 1250

Sample I.D.: MW-2 Laboratory: NET

Analyzed for: TPHG, BTEX, TPHD, MOTOR OIL

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations: 5b, D.O. 4.8 PPM

SHELL WELL MONITORING DATA SHEET

Project #: 940725-L1	Wic # 204 5508 5504
Sampler: LAD	Date Sampled: 7/25/94
Well I.D.: MW-3	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 9.42 After	Depth to Water: Before 5.43 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other --

Volume Conversion Factor (VCF):
$(22 \times (d^2/4) \times \pi)/231$
where
22 = in/foot
d = diameter (in.)
π = 3.1416
231 = in^3/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

1 Case Volume	x	Specified Volumes	=	gallons
2.6	x	3	=	7.8

Purging: Bailer X
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump ___

Sampling: Bailer X
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1152	68.8	7.2	2400.	33.	3.	
1157	67.6	7.2	2500.	86.	6.	
1206	67.6	7.2	2600.	79.	8.	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 8.

Sampling Time: 1215

Sample I.D.: MW-3 Laboratory: NET

Analyzed for: TPHG, BTEX, TPHD, MOTOR OIL

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations: D.O. 5.3 PPM, NEW 4" CAP

SHELL WELL MONITORING DATA SHEET

Project #: 940725-L1	Wic # 204 5508 5504
Sampler: LAD	Date Sampled: 7/26/94
Well I.D.: MW-4	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 10.10 After	Depth to Water: Before 7.00 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other --

Volume Conversion Factor (VCF):
(12 = (d²/4) × π)/231
where
12 = in/foot
d = diameter (in.)
π = 3.1416
231 = in³/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

2.0	x	3	=	6.0
1 Case Volume		Specified Volumes		gallons

Purging: Bailer ☒
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump ___

Sampling: Bailer ☒
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1316	65.4	7.2	3600.	18.	2.	
1318	63.8	7.3	3500.	71.	4.	
	DEWATERED AT		4. GAL.			
7-26 934	RETURNED TO SAMPLE DTW AT					8.70'
938	61.8	7.0	3600.	20.	—	

Did Well Dewater? YES If yes, gals. Gallons Actually Evacuated: 4

Sampling Time: 940

Sample I.D.: MW-4 Laboratory: NET

Analyzed for: TPH6, BTEX, TPHD, MOTOR OIL

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations: D.O. 4.5 PPM

SHELL WELL MONITORING DATA SHEET

Project #: 940725-LI	Wic # 204 5508 5504
Sampler: LAD	Date Sampled: 7/25/94
Well I.D.: MW-5	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 9.70 After	Depth to Water: Before 5.38 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade Other --	

Volume Conversion Factor (VCF):
(12 × (d²/4) × π)/231
where
12 = in./foot
d = diameter (in.)
π = 3.1416
231 = in.³/gal.

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

1 Case Volume	x	Specified Volumes	=	gallons
2.8	x	3	=	8.4

Purging: Bailer ~~X~~
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump ___

Sampling: Bailer X
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1535	68.0	7.1	3200.	36.	3.	STRONG ODOR
1540	66.2	7.1	3200.	51.	6.	
1544	69.6	7.2	3200.	59.	9.	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 9.

Sampling Time: 1550

Sample I.D.: MW-5 Laboratory: NET

Analyzed for: TPHG, BTEX, TPHD, MOTOR OIL

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations: D.O. 3.0 PPM

SHELL WELL MONITORING DATA SHEET

Project #: 940725-L1	Wic # 204 5508 5504
Sampler: LAD	Date Sampled: 7/25/94
Well I.D.: MW-6	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 11.00 After	Depth to Water: Before 5.55 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other --

Volume Conversion Factor (VCF):
$(12 \times (d^2/4) \times \pi)/231$
where
12 = in/foot
d = diameter (in.)
π = 3.1416
231 = in3/gal

Well dia.	VCF
2"	0.16
3"	0.37
4"	0.65
6"	1.47
10"	4.08
12"	5.87

3.5	x	3	=	10.5
1 Case Volume		Specified Volumes		gallons

Purging: Bailer X
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump ___

Sampling: Bailer X
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1405	66.2	7.2	3000.	24.	4.	
1410	64.8	7.2	2900.	19.	8.	
1415	65.4	7.2	2600.	21.	11.	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 11.

Sampling Time: 1420

Sample I.D.: MW-6 Laboratory: NET

Analyzed for: TPHG, BTEX, TPHD, MOTOR OIL

Duplicate I.D.: DUP Cleaning Blank I.D.:

Analyzed for: TPHG, BTEX, TPHD, MOTOR OIL

Shipping Notations:

Additional Notations: D.O. 4.8 PPM

SHELL WELL MONITORING DATA SHEET

Project #: 940725-LI	Wic # 204 5508 5504
Sampler: LAD	Date Sampled: 7/25/94
Well I.D.: MW-7	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 9.95 After	Depth to Water: Before 4.58 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other --

Volume Conversion Factor (VCF):
(12 × (d^2/4) × π)/231
Where
12 = in/foot
d = diameter (in.)
π = 3.1416
231 = in^3/gal

Well dia.	VCF
2"	0.16
3"	0.37
4"	0.65
6"	1.47
10"	4.08
12"	5.87

3.5	x	3	=	10.5
1 Case Volume		Specified Volumes		gallons

Purging: Bailer ~~X~~
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump _____

Sampling: Bailer X
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1458	65.8	7.0	5000.	14.	4.	ODOR
1503	64.6	7.1	5700.	61.	7.	
1513	64.6	7.1	5100.	53.	11.	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 11.

Sampling Time: 1515

Sample I.D.: MW-7 Laboratory: NET

Analyzed for: TPHG, BTEX, TPHD, MOTOR OIL

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations: D.O. 1.8 PPM

SHELL WELL MONITORING DATA SHEET

Project #: 940725-L1	Wic # 204 5508 5504
Sampler: LAD	Date Sampled: 7/26/94
Well I.D.: MW-8	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 9.93 After	Depth to Water: Before 6.94 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC)	Grade Other --

Volume Conversion Factor (VCF):
$(12 \times (d^2/4) \times \pi)/231$
Where
12 = in/foot
d = diameter (in.)
π = 3.1416
231 = in³/gal

Well dia.	VCF
2"	0.16
3"	0.37
4"	0.65
6"	1.47
10"	4.08
12"	5.87

1 Case Volume	x	Specified Volumes	=	gallons
1.9	x	3	=	5.7

Purging: Bailer X
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump _____

Sampling: Bailer X
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

	TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
	1304	68.4	7.2	6000.	24.	2.	
	1308	65.8	7.2	5800.	13.	4.	
		DEWATERED AT 4. GAL					
7-26	915	RETURNED TO SAMPLE				DTWAT	8.30
	917	64.2	7.0	5600.	9.	—	

Did Well Dewater? YES If yes, gals. Gallons Actually Evacuated: 4.

Sampling Time: 920

Sample I.D.: MW-8 Laboratory: NET

Analyzed for: TPHG, BTEX, TPHD, MOTOR OIL

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations: NEW 4" CAP, D.O. 4.3 PPM

SHELL WELL MONITORING DATA SHEET

Project #: 940725-L1	Wic # 204 5508 5504
Sampler: LAD	Date Sampled: 7/26/94
Well I.D.: MW-9	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 10.72 After	Depth to Water: Before 5.43 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other --

Volume Conversion Factor (VCF):

$(\pi = (d^2/4) \times \pi)/231$

where

231 = in³/gal
d = diameter (in.)
π = 3.1416
231 = in³/gal

Well dia.	VCF
2"	0.16
3"	0.37
4"	0.65
6"	1.47
10"	4.08
12"	5.87

3.4	x	3	=	10.2
1 Case Volume		Specified Volumes		gallons

Purging: Bailer X
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump _____

Sampling: Bailer X
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

	TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
	1436	64.8	7.1	4200.	19.	4.	ODOR
	1440	63.8	7.1	4400.	31.	8.	
		DEWATERED		AT	8. GAL		
7-26	1047	RETURNED		TO	SAMPLE	DTW AT 7.80'	
	1050	66.0	7.1	4700.	48.	—	

Did Well Dewater? YES If yes, gals. Gallons Actually Evacuated: 8.

Sampling Time: 1055

Sample I.D.: MW-9 Laboratory: NET

Analyzed for: TPHG, BTEX, TPHD, MOTOR OIL

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations: DO. 5.2 PPM, NEW 4" CAP

SHELL WELL MONITORING DATA SHEET

Project #: 940725-L1	Wic # 204 5508 5504
Sampler: LAD	Date Sampled: 7/25/94
Well I.D.: MW-10	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 9.94 After	Depth to Water: Before 6.31 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other --

Volume Conversion Factor (VCF):
$(12 \times (d^2/4) \times \pi)/231$
where
12 = in/foot
d = diameter (in.)
π = 3.1416
231 = in.^{3}/gal

Well dia.	VCF
2"	0.16
3"	0.37
4"	0.65
6"	1.47
10"	4.08
12"	5.87

2.4	x	3	=	7.2
1 Case Volume		Specified Volumes		gallons

Purging: Bailer [X]
Middleburg [ ]
Electric Submersible [ ]
Suction Pump [ ]
Type of Installed Pump _____

Sampling: Bailer [X]
Middleburg [ ]
Electric Submersible [ ]
Suction Pump [ ]
Installed Pump [ ]

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1327	70.8	7.2	3600.	33.	3.	ODOR
1330	70.2	7.2	3500.	48.	5.	
1340	70.0	7.2	3400.	80.	8.	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 8.

Sampling Time: 1345

Sample I.D.: MW-10 Laboratory: NET

Analyzed for: TPHG, BTEX, TPHD, MOTOR OIL

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations: D.O. 4.0 PPM, NEW LOCK

SHELL WELL MONITORING DATA SHEET

Project #: 940725-L1	Wic # 204550855O4
Sampler: LAD	Date Sampled: 7/25/94
Well I.D.: MW-11	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 13.84 After	Depth to Water: Before 8.20 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC)	Grade Other --

Volume Conversion Factor (VCF):

$(12 \times (d^2/4) \times \pi)/231$

where

12 = in/foot
d = diameter (in.)
π = 3.1416
231 = in3/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

1 Case Volume	x	Specified Volumes	=	gallons
3.7	x	3	=	11.1

Purging: Bailer (X)
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump _____

Sampling: Bailer (X)
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1015	62.4	7.2	>10 000,	14.	4.	
1018	61.4	7.2	>10000,	135.	8.	
DEWATERED			AT 8 GAL.			
RETURNED			TO SAMPLE	DTW AT 9.50'		
1650	63.4	7.0	>10000	9.	—	

Did Well Dewater? YES If yes, gals. Gallons Actually Evacuated: 8.

Sampling Time: 1655

Sample I.D.: MW-11 Laboratory: NET

Analyzed for: TPHG, BTEX, TPH D, MOTOR OIL

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations: D.O. 5.5 PPM

SHELL WELL MONITORING DATA SHEET

Project #: 940725-L1	Wic # 204 5508 5504
Sampler: LAD	Date Sampled: 7/25/94
Well I.D.: MW-12	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 14.59 After	Depth to Water: Before 6.83 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC)	Grade Other --

Volume Conversion Factor (VCF):
$(12 \times (d^2/4) \times \pi)/231$
where
12 = in./foot
d = diameter (in.)
π = 3.1416
231 = in.3/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

5.0	x	3	=	15.0
1 Case Volume		Specified Volumes		gallons

Purging: Bailer [X]
Middleburg [ ]
Electric Submersible [ ]
Suction Pump [ ]
Type of Installed Pump _____

Sampling: Bailer [X]
Middleburg [ ]
Electric Submersible [ ]
Suction Pump [ ]
Installed Pump [ ]

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1030	63.8	7.1	>10000.	22.	5.	
1034	62.8	7.1	>10000.	46.	10.	
1038	62.4	7.1	>10000.	196.	15.	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 15.

Sampling Time: 1042

Sample I.D.: MW-12 Laboratory: NET

Analyzed for: TPH G, BTEX, TPH D, MOTOR OIL

Duplicate I.D.: Cleaning Blank I.D.:

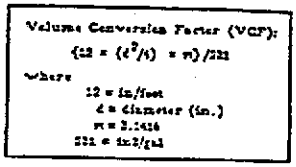
Analyzed for:

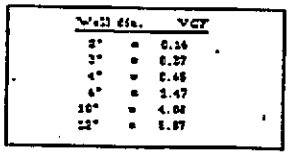
Shipping Notations:

Additional Notations: D.O. 5.0 PPM

SHELL WELL MONITORING DATA SHEET

Project #: 940725-L1	Wic # 204 5508 5504
Sampler: LAD	Date Sampled: 7/25/94
Well I.D.: MW-13	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 14.33 After	Depth to Water: Before 8.39 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC)	Grade Other --





3.9	x	3	=	11.7
1 Case Volume		Specified Volumes		gallons

Purging: Bailer (X)
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump ___

Sampling: Bailer (X)
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1113	62.4	7.1	>10 000,	152.	4.	
1117	62.0	7.1	>10 000,	>200,	8.	
1122	61.6	7.2	>10 000.	>200.	12.	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 12.

Sampling Time: 1130

Sample I.D.: MW-13 Laboratory: NET

Analyzed for: TPHG, BTEX, TPHD, MOTOR OIL

Duplicate I.D.: Cleaning Blank I.D.: EB AT 1055

Analyzed for: TPHG, BTEX, TPHD, MOTOR OIL AFTER MW-12

Shipping Notations:

Additional Notations: DO 4.8 PPM

ATTACHMENT B

REMEDIAL SYSTEM CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Maree Doden

Project: 305-079.5B/Oakland

Enclosed are the results from 1 air sample received at Sequoia Analytical on June 29,1994. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
4FG9001	Air, Infl	6/28/94	EPA 5030/8015 Mod./8020

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

Very truly yours,

SEQUOIA ANALYTICAL

Eileen A. Manning
for Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Project ID:	305-079.5B/Oakland	Sampled: Jun 28, 1994
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received: Jun 29, 1994
San Jose, CA 95110	Analysis Method:	EPA 5030/8015 Mod./8020	Reported: Jul 5, 1994
Attention: Maree Doden	First Sample #:	4FG9001	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 4FG9001 Infl
Purgeable Hydrocarbons	5.0	330
Benzene	0.050	N.D.
Toluene	0.050	N.D.
Ethyl Benzene	0.050	N.D.
Total Xylenes	0.050	N.D.
Chromatogram Pattern:		C6 - C8

Quality Control Data

Report Limit Multiplication Factor:	5.0
Date Analyzed:	6/29/94
Instrument Identification:	GCHP-3
Surrogate Recovery, %: (QC Limits = 70-130%)	79

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063 - (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520 (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834 (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Maree Doden

Client Project ID: 305-079.5B/Oakland
QC Sample Group: 4FG9001
Reported: Jul 5, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD Batch#:	4FF3403	4FF3403	4FF3403	4FF3403
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	6/29/94	6/29/94	6/29/94	6/29/94
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Matrix Spike % Recovery:	110	110	110	110
Matrix Spike Duplicate % Recovery:	110	110	110	110
Relative % Difference:	0.0	0.0	0.0	0.0
LCS Batch#:				
Date Prepared:				
Date Analyzed:				
Instrument I.D.#:				
LCS % Recovery:				
% Recovery Control Limits:	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SHELL OIL COMPANY 205-079-5B
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 6/28/94
Page 1 of 1

Site Address: 285 Hegenberger Oakland

WIC#: 204-5508-5504

Shell Engineer: Dan Kirk — Phone No.: (510) 675-6168 Fax #: 675-6177

Consultant Name & Address: PACIFIC ENVIRONMENTAL GROUP, INC. 2025 GATEWAY PLACE, Ste. 440 SAN JOSE, CALIFORNIA 95110

Consultant Contact: Justin Hawkins — Phone No.: 408 441-7500 Fax #: 441-7539

Comments:

Sampled by: Tim R. Wright

Printed Name: TIM R. WRIGHT

LAB: Sequoia

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 gas			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
INFL	6/28/94				X	1						X				1L	N	N	VST/soil - Vapor/Gas	-01 A

9406690

Analysis Required

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring ☐	4461	24 hours ☐
Site Investigation ☐	4441	48 hours ☐
Soil Classify/Disposal ☐	4442	15 days ☒ (Normal)
Water Classify/Disposal ☐	4443	Other ☐ ____
Soil/Air Rem. or Sys. O & M ☒	4452	NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.
Water Rem. or Sys. O & M ☐	4453	
Other ☐		

UST AGENCY: _____

Relinquished By (signature)	Printed Name	Date/Time	Received (signature)	Printed Name	Date/Time
Tim R. Wright	Tim R. Wright	6/28/94 1400	M Dorn	M Dorn	6/28/94 1400
M Dorn	M Dorn	6/29/94 10:55	Greg Futcher	Greg Futcher	6-29-94 10:55
Greg Futcher	Greg Futcher	6-29-94 11:30		KEITH E. GRESS	6-29-94 11:30

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

Shell Oil Chain of Custody

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: RE6 (Shell 305-079-58) MASTER LOG NO. / PAGE: 9406690

REC. BY (PRINT): [illegible] DATE OF LOG-IN: 6.29.94

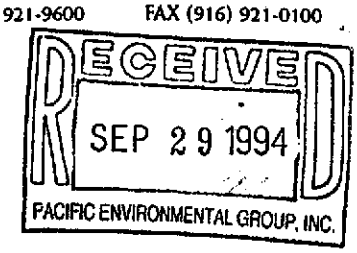
CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
1. Custody Seal(s): Present / Absent; Intact / Broken*	1	A	INFL	1 LITER	A	6/29/20	
2. Custody Seal Nos.:							
3. Chain-of-Custody Records: Present / Absent*							
4. Traffic Reports or Packing List: Present / Absent							
5. Airbill: Airbill / Sticker Present / Absent							
6. Airbill No.:							
7. Sample Tags: Present / Absent* Sample Tag Nos.: Listed / Not Listed on Chain-of-Custody							
8. Sample Condition: Intact/Broken*/Leaking*							
9. Does information on custody reports, traffic reports and sample tags agree? Yes / No*							
10. Proper Preservatives Used: Yes / No*							
11. Date Rec. at Lab: 062994							
12. Time Rec. at Lab: 1130							

* If Circled, contact Project Manager and attach record of resolution

Form SC001.

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100



Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Maree Doden

Project: 305-079.5B/Oakland

Enclosed are the results from samples received at Sequoia Analytical on September 21, 1994. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9409B52 -01	AIR, Effl	09/20/94	TPHGB Purgeable TPH / BTEX
9409B52 -02	AIR, Infl	09/20/94	TPHGB Purgeable TPH / BTEX

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

Very truly yours,

SEQUOIA ANALYTICAL

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 305-079.5B/Oakland	Sampled: 09/20/94
2025 Gateway Place, Suite 440	Sample Descript: Effl	Received: 09/21/94
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 09/21/94
Attention: Maree Doden	Lab Number: 9409B52-01	Reported: 09/28/94

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	0.10	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	82

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 305-079.5B/Oakland	Sampled: 09/20/94
2025 Gateway Place, Suite 440	Sample Descript: Infl	Received: 09/21/94
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 09/21/94
Attention: Maree Doden	Lab Number: 9409B52-02	Reported: 09/28/94

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	100	390
Benzene	1.0	2.1
Toluene	1.0	2.4
Ethyl Benzene	1.0	1.6
Xylenes (Total)	1.0	14
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	107

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Maree Doden

Client Project ID: 305-079.5B/Oakland

QC Sample Group: 9409B52 01-02

Reported: Sep 28, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD Batch#:	9409834-02	9409834-02	9409834-02	9409834-02
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	9/21/94	9/21/94	9/21/94	9/21/94
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Matrix Spike % Recovery:	90	89	89	90
Matrix Spike Duplicate % Recovery:	99	98	98	97
Relative % Difference:	9.5	9.6	9.6	7.5
LCS Batch#:				
Date Prepared:				
Date Analyzed:				
Instrument I.D.#:				
LCS % Recovery:				
% Recovery Control Limits:	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SHELL OIL COMPANY 305074 9 B
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date
Page

Site Address: 285 Hegenberger Rd Oakland CA

WIC#: 204 7620 1502

Shell Engineer: Dan Kirk | Phone No.: | Fax #:

Consultant Name & Address: 2025 Gateway Place Pacific Environmental Group Suite 440 S.J.

Consultant Contact: Justin Hawkins | Phone No.: (408) 441-7500 | Fax #: 441-9102

Comments:

Sampled by: [signature]

Printed Name: Paul Priebe

Analysis Required

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
EFFL	9-20-94				X	1						X				1L	N	N	UST Soil	9409B52-9
INFL	9-20-94				X	1						X				1L	N	N	Vapor Gas	-02

LAB: Sequoia

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND
G.W. Monitoring ☐	4451	24 hours ☐
Site Investigation ☐	4441	48 hours ☐
Soil Classify/Disposal ☐	4442	15 days ☒ (Normal)
Water Classify/Disposal ☐	4443	Other ☐ ____
Soil/Air Rem. or Sys. O & M ☒	4452	NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.
Water Rem. or Sys. O & M ☐	4453	
Other ☐		

UST AGENCY: _____

Relinquished By (signature)	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
[signature]	Paul Priebe	9-20-94	1610	Denise Alarcon	Denise Alarcon	9/21/94	0830
Denise Alarcon	Denise Alarcon	9/21/94	[illegible]	[signature]	W. Sowers	9/21/94	11:00
[signature]	Printed Name:	Date:	Time:	[signature]	Suzanne Lee	9-21-94	1253

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

Rev. 1/1/93

Shell Oil Chain of Custody

SEQUOIA ANALYTICAL SAMPLE RECEIPT

CLIENT NAME: PEG Shell 305.0795B
REC. BY (PRINT): SL

MASTER LOG NO. / PAGE: 9409B52
DATE OF LOG-IN: 9/21/94

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS CONDITION (ET
1. Custody Seal(s): Present / (Absent) Intact / Broken*	1	A	EFF1	Tedlar	Air	9.20	
2. Custody Seal Nos.:	2	A	INF1				
3. Chain-of-Custody Records: (Present) / Absent*							
4. Traffic Reports or Packing List: Present / (Absent)							
5. Airbill: Airbill / Sticker Present / (Absent)							
6. Airbill No.:							
7. Sample Tags: (Present) / Absent* Sample Tag Nos.: (Listed) / Not Listed on Chain-of-Custody							
8. Sample Condition: (Intact)/Broken*/Leaking*							
9. Does Information on custody reports, traffic reports and sample tags agree? (Yes) / No*							
10. Proper Preservatives Used: (Yes) / No*							
11. Date Rec. at Lab: 9.21.94							
12. Time Rec. at Lab: 1253							

* If Circled, contact Project Manager and attach record of resolution

Form SC001

Page ___ of ___

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Maree Doden

Project: 305-079.5B/Oakland

Enclosed are the results from samples received at Sequoia Analytical on September 30, 1994. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9409H54 -01	AIR, Effl	09/28/94	TPHGB Purgeable TPH / BTEX
9409H54 -02	AIR, Infl	09/28/94	TPHGB Purgeable TPH / BTEX

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

Very truly yours,

SEQUOIA ANALYTICAL

L Huang FOR
Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 305-079.5B/Oakland	Sampled: 09/28/94
2025 Gateway Place, Suite 440	Sample Descript: Effl	Received: 09/30/94
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 09/30/94
Attention: Maree Doden	Lab Number: 9409H54-01	Reported: 10/06/94

Instrument ID: GCHP20

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	0.10	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	106

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

SEQUOIA ANALYTICAL - ELAP #1210

J Hwang FOR

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 305-079.5B/Oakland	Sampled: 09/28/94
2025 Gateway Place, Suite 440	Sample Descript: Infl	Received: 09/30/94
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 09/30/94
Attention: Maree Doden	Lab Number: 9409H54-02	Reported: 10/06/94

Instrument ID: GCHP20

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	20	290
Benzene	0.20	1.2
Toluene	0.20	0.95
Ethyl Benzene	0.20	0.53
Xylenes (Total)	0.20	3.0
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	256 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

EManning FOR
Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 305-079.5B/Oakland	Received: 09/30/94
2025 Gateway Place, Suite 440		
San Jose, CA 95110	Lab Proj. ID: 9409H54	Reported: 10/06/94
Attention: Maree Doden		

LABORATORY NARRATIVE

Q - High surrogate recovery is due to co-elution.

SEQUOIA ANALYTICAL

LManning FOR

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Maree Doden

Client Project ID: 305-079.5B/Oakland
QC Sample Group: 9409H54 01,02
Reported: Oct 4, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD Batch#:	9409F50-01	9409F50-01	9409F50-01	9409F50-01
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	9/30/94	9/30/94	9/30/94	9/30/94
Instrument I.D.#:	GCHP20	GCHP20	GCHP20	GCHP20
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Matrix Spike % Recovery:	110	100	100	103
Matrix Spike Duplicate % Recovery:	100	100	100	100
Relative % Difference:	9.5	0.0	0.0	3.0
LCS Batch#:				
Date Prepared:				
Date Analyzed:				
Instrument I.D.#:				
LCS % Recovery:				
% Recovery Control Limits:	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL

Eileen A. Manning FOR
Eileen A. Manning
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT): DR

MASTER LOG NO. / PAGE: 9409454
DATE OF LOG-IN: 9/30/94

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
1. Custody Seal(s): Present / Absent Intact / Broken*	01	A	EEE1	Tedlar	A	9/28	
2. Custody Seal Nos.:	02	b	Int1	b	b	b	
3. Chain-of-Custody Records: Present / Absent*							
4. Traffic Reports or Packing List: Present / Absent							
5. Airbill: Airbill / Sticker Present / Absent							
6. Airbill No.:							
7. Sample Tags: Present / Absent* Sample Tag Nos.: Listed / Not Listed on Chain-of-Custody							
8. Sample Condition: Intact/Broken*/Leaking*							
9. Does information on custody reports, traffic reports and sample tags agree? Yes / No*							
10. Proper Preservatives Used: Yes / No*							
11. Date Rec. at Lab: 9/30/94							
12. Time Rec. at Lab: 1252							

* If Circled, contact Project Manager and attach record of resolution

Form SC001

Page ___ of ___

SHELL OIL COMPANY 305-0795

RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: _____

Date: 9-28-94

Page 1 of 1

Site Address: 285 Hegenberger RD Oakland CA

WIC#: 204-7620-1502

Shell Engineer: Dan Kirk — Phone No.: 510 675 6168 — Fax #: 675 6172

Consultant Name & Address: 2025 Gateway Place Pacific Environmental Group Suite 440 S.J.

Consultant Contact: Justin Hawkins — Phone No.: (408) 441-7500 — Fax #: 441-9102

Comments:

Sampled by: [signature]

Printed Name: Paul Priebe

LAB: Sequoia

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

TURN AROUND TIME: 24 hours ☐ — 48 hours ☐ — 15 days ☒ (Normal) — Other ☐ ____

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

UST AGENCY: _____

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
EFFL	9-28-94				X	1						X		1L	N	N	UST/Soil	9409454-
INFL	9-28-94				X	↓						↓		↓	↓	↓	Vapor/Gas	

	Relinquished By (signature)	Printed Name	Date / Time	Received (signature)	Printed Name	Date / Time
1	[signature]	Paul Priebe	9-28-94 7:30	[signature]	M Doden	9/29/94 0800
2	[signature]	M Doden	9/30/94 9:50	[signature]	S. Teu	9/30/94 9:50
3	[signature]		9/30/94	[signature]	David Lawrence	9/30/94 1252

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

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT): DR

MASTER LOG NO. / PAGE: 9409454
DATE OF LOG-IN: 9/30/94

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
1. Custody Seal(s):	Present / ~~Absent~~ Intact / Broken*	01	A	EEE1	Tedlar	A	9/28	
2. Custody Seal Nos.:		02	b	Int1	b	b	b	
3. Chain-of-Custody Records:	Present / Absent*							
4. Traffic Reports or Packing List:	Present / ~~Absent~~							
5. Airbill:	Airbill / Sticker Present / ~~Absent~~							
6. Airbill No.:								
7. Sample Tags:	Present / Absent*							
Sample Tag Nos.:	Listed / Not Listed on Chain-of-Custody							
8. Sample Condition:	~~Intact~~/Broken*/Leaking*							
9. Does information on custody reports, traffic reports and sample tags agree?	~~Yes~~ / No*							
10. Proper Preservatives Used:	~~Yes~~ No*							
11. Date Rec. at Lab:	9/30/94							
12. Time Rec. at Lab:	1252							

DR

* If Circled, contact Project Manager and attach record of resolution

Form SC001

Page ___ of ___

SHELL OIL COMPANY 305-0795B
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 9-28-94
Page 1 of 1

Site Address: 285 Hegenberger RD Oakland CA

VIC#: 204-7620-1502

Shell Engineer: Dan Kirk — Phone No.: 510 675 6168 Fax #: 675 6172

Consultant Name & Address: 2025 Gateway Place Pacific Environmental Group Suite 440 S.J.

Consultant Contact: Justin Hawkins — Phone No.: (408) 441-7500 Fax #: 441-9102

Comments:

Sampled by: [signature]

Printed Name: Paul Priebe

LAB: Sequoia

CHECK ONE (1) BOX ONLY		CT/DT
G.W. Monitoring	☐	4461
Site Investigation	☐	4441
Soil Classify/Disposal	☐	4442
Water Classify/Disposal	☐	4443
Soil/Air Rem. or Sys. O & M	☒	4452
Water Rem. or Sys. O & M	☐	4453
Other	☐	

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

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

UST AGENCY: _____

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020			Asbestos	Container Size	Preservation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
EFFL	9-28-94				X	1						X				1L	N	N	UST/Soil - Vapor/Gas	9409454-01
INFL	9-28-94				X	↓						↓				↓	↓	↓		-02

	Printed Name:	Date:	Received (signature):	Printed Name:	Date:
Relinquished By (signature): [signature]	Paul Priebe	Time: 7:30	[signature]	mDoden	Time: 0800
Relinquished By (signature): [signature]	mDoden	Date: 9/30 Time: 9:50	[signature]	S. Teu	Date: 9/30 Time: 9:50
Relinquished By (signature): [signature]		Date: 9/30 Time:	[signature]	David Lawrence	Date: 9/30/94 Time: 1252

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

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Maree Doden

Project: 305-079.5B/Oakland

Enclosed are the results from samples received at Sequoia Analytical on September 14, 1994. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9409683 -01	AIR, VEW - 1	09/13/94	TPHGB Purgeable TPH / BTEX
9409683 -02	AIR, VEW - 2	09/13/94	TPHGB Purgeable TPH / BTEX
9409683 -03	AIR, VEW - 3	09/13/94	TPHGB Purgeable TPH / BTEX
9409683 -04	AIR, VEW - 4	09/13/94	TPHGB Purgeable TPH / BTEX
9409683 -05	AIR, VEW - 5	09/13/94	TPHGB Purgeable TPH / BTEX
9409683 -06	AIR, EFFL	09/13/94	TPHGB Purgeable TPH / BTEX
9409683 -07	AIR, INFL	09/13/94	TPHGB Purgeable TPH / BTEX

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

Very truly yours,

SEQUOIA ANALYTICAL

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 305-079.5B/Oakland	Sampled: 09/13/94
2025 Gateway Place, Suite 440	Sample Descript: VEW - 1	Received: 09/14/94
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 09/15/94
Attention: Maree Doden	Lab Number: 9409683-01	Reported: 09/19/94

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**1000**	**23000**
Benzene	**10**	**190**
Toluene	10	N.D.
Ethyl Benzene	**10**	**59**
Xylenes (Total)	**10**	**120**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	168 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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Pacific Environmental Group	Client Proj. ID: 305-079.5B/Oakland	Sampled: 09/13/94
2025 Gateway Place, Suite 440	Sample Descript: VEW - 2	Received: 09/14/94
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 09/15/94
Attention: Maree Doden	Lab Number: 9409683-02	Reported: 09/19/94

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**500**	**2600**
Benzene	5.0	N.D.
Toluene	5.0	N.D.
Ethyl Benzene	**5.0**	**5.2**
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	79

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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

Pacific Environmental Group	Client Proj. ID: 305-079.5B/Oakland	Sampled: 09/13/94
2025 Gateway Place, Suite 440	Sample Descript: VEW - 3	Received: 09/14/94
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 09/14/94
Attention: Maree Doden	Lab Number: 9409683-03	Reported: 09/19/94

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	100	**1200**
Benzene	1.0	**3.0**
Toluene	1.0	N.D.
Ethyl Benzene	1.0	**5.4**
Xylenes (Total)	1.0	**1.8**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	201 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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

Pacific Environmental Group	Client Proj. ID: 305-079.5B/Oakland	Sampled: 09/13/94
2025 Gateway Place, Suite 440	Sample Descript: VEW - 4	Received: 09/14/94
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 09/14/94
Attention: Maree Doden	Lab Number: 9409683-04	Reported: 09/19/94

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**250**	**1400**
Benzene	2.5	N.D.
Toluene	2.5	N.D.
Ethyl Benzene	**2.5**	**2.9**
Xylenes (Total)	2.5	N.D.
Chromatogram Pattern:		**C6-C8**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	206 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 305-079.5B/Oakland	Sampled: 09/13/94
2025 Gateway Place, Suite 440	Sample Descript: VEW - 5	Received: 09/14/94
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 09/15/94
Attention: Maree Doden	Lab Number: 9409683-05	Reported: 09/19/94

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**500**	**3600**
Benzene	**5.0**	**5.7**
Toluene	5.0	N.D.
Ethyl Benzene	**5.0**	**8.0**
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	151 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 305-079.5B/Oakland	Sampled: 09/13/94
2025 Gateway Place, Suite 440	Sample Descript: EFFL	Received: 09/14/94
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 09/14/94
Attention: Maree Doden	Lab Number: 9409683-06	Reported: 09/19/94

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	**0.10**	**0.20**
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	**0.10**	**0.21**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	102

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 305-079.5B/Oakland	Sampled: 09/13/94
2025 Gateway Place, Suite 440	Sample Descript: INFL	Received: 09/14/94
San Jose, CA 95110	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 09/15/94
Attention: Maree Doden	Lab Number: 9409683-07	Reported: 09/19/94

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**250**	**1200**
Benzene	**2.5**	**5.1**
Toluene	2.5	N.D.
Ethyl Benzene	**2.5**	**2.8**
Xylenes (Total)	2.5	N.D.
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	125

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110 Attention: Maree Doden	Client Proj. ID: 305-079.5B/Oakland Lab Proj. ID: 9409683	Received: 09/14/94 Reported: 09/19/94

LABORATORY NARRATIVE

Q-Coelution Confirmed

SEQUOIA ANALYTICAL

Eileen Manning
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Maree Doden

Client Project ID: 305-079.5B/Oakland

QC Sample Group: 9409683 01, 05

Reported: Sep 19, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD Batch#:	940949202	940949202	940949202	940949202
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	9/15/94	9/15/94	9/15/94	9/15/94
Instrument I.D.#:	GCHP-17	GCHP-17	GCHP-17	GCHP-17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Matrix Spike % Recovery:	89	88	91	90
Matrix Spike Duplicate % Recovery:	87	87	88	90
Relative % Difference:	2.3	1.1	3.4	0.0
LCS Batch#:				
Date Prepared:				
Date Analyzed:				
Instrument I.D.#:				
LCS % Recovery:				
% Recovery Control Limits:	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Maree Doden

Client Project ID: 305-079.5B/Oakland
QC Sample Group: 9409683 02
Reported: Sep 19, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD Batch#:	940949201	940949201	940949201	940949201
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	9/15/94	9/15/94	9/15/94	9/15/94
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Matrix Spike % Recovery:	110	110	110	110
Matrix Spike Duplicate % Recovery:	110	110	110	110
Relative % Difference:	0.0	0.0	0.0	0.0
LCS Batch#:				
Date Prepared:				
Date Analyzed:				
Instrument I.D.#:				
LCS % Recovery:				
% Recovery Control Limits:	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL

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Client Project ID: 305-079.5B/Oakland

QC Sample Group: 9409683 03, 06

Reported: Sep 19, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD Batch#:	940955101	940955101	940955101	940955101
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	9/14/94	9/14/94	9/14/94	9/14/94
Instrument I.D.#:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Matrix Spike % Recovery:	93	93	93	93
Matrix Spike Duplicate % Recovery:	96	98	97	97
Relative % Difference:	3.2	5.2	4.2	4.2
LCS Batch#:				
Date Prepared:				
Date Analyzed:				
Instrument I.D.#:				
LCS % Recovery:				
% Recovery Control Limits:	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL

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Client Project ID: 305-079.5B/Oakland
QC Sample Group: 9409683 04
Reported: Sep 19, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD Batch#:	940955101	940955101	940955101	940955101
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	9/14/94	9/14/94	9/14/94	9/14/94
Instrument I.D.#:	GCHP-20	GCHP-20	GCHP-20	GCHP-20
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Matrix Spike % Recovery:	91	92	92	93
Matrix Spike Duplicate % Recovery:	96	98	98	97
Relative % Difference:	5.3	6.3	6.3	4.2
LCS Batch#:				
Date Prepared:				
Date Analyzed:				
Instrument I.D.#:				
LCS % Recovery:				
% Recovery Control Limits:	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL

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Client Project ID: 305-079.5B/Oakland

QC Sample Group: 9409683 07

Reported: Sep 19, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD Batch#:	940949202	940949202	940949202	940949202
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	9/15/94	9/15/94	9/15/94	9/15/94
Instrument I.D.#:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Matrix Spike % Recovery:	91	91	94	93
Matrix Spike Duplicate % Recovery:	93	94	96	97
Relative % Difference:	2.2	3.2	2.1	4.2

LCS Batch#:				
Date Prepared:				
Date Analyzed:				
Instrument I.D.#:				
LCS % Recovery:				
% Recovery Control Limits:	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL

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SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT): PH

MASTER LOG NO. / PAGE: 9409687
DATE OF LOG-IN: 09/14/94

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present / (Absent) — Intact / Broken*
2. Custody Seal Nos.: —
3. Chain-of-Custody Records: (Present) / Absent*
4. Traffic Reports or Packing List: Present / (Absent)
5. Airbill: Airbill / Sticker — Present / (Absent)
6. Airbill No.: —
7. Sample Tags: (Present) / Absent* — Sample Tag Nos.: (Listed) / Not Listed on Chain-of-Custody
8. Sample Condition: (Intact)/Broken*/Leaking*
9. Does Information on custody reports, traffic reports and sample tags agree? (Yes) / No*
10. Proper Preservatives Used: (Yes) / No*
11. Date Rec. at Lab: 9-14-94
12. Time Rec. at Lab: 1220

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
01	A	VEW-1	Tedlar	A	9-13	
02		VEW-2				
03		VEW-3				
04		VEW-4				
05		VEW-5				
06		EFFL				
07	✓	INFL				

KWH

d, contact Project Manager and attach record of resolution