Shell Oil Company

P. O. Box 5278
Concord, CA 94520-9998
(415) 685-3850

March 14, 1994

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

#530

Mr. Barney M. Chan
Alameda County Health Care Service
80 Swan Way, Room 200
Oakland, California 94621

Dear Mr. Chan:

Attached For your review is a report for the Shell Service Station referenced above. I declare under penalty of perjury that the information contained in the report is true and correct, to the best of my knowledge.

Sincerely,

Shell Oil Company

D. T. Kirk

Daniel T. Kirk
Area Environmental Engineer

PACIFIC
ENVIRONMENTAL
GROUP, INC.

March 14, 1994
Project 305-079.2B

Mr. Dan Kirk
Shell Oil Company
P.O. Box 5278
Concord, California 94520

Re: Quarterly Report - First 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 first quarter 1994 groundwater monitoring program and status of interim 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	Dec. 9, 1993 to Mar. 2, 1994	Cumulative
TPH-g	138.36	519.42
Benzene	0.11	6.03

TPH-g = Total petroleum hydrocarbons calculated as gasoline

QUARTERLY MONITORING FINDINGS

Groundwater monitoring wells were gauged and sampled by Blaine Tech Services, Inc. (Blaine) at the direction of PACIFIC on January 6, 1994. Groundwater elevation contours for the sampling date are shown on Figure 1 and groundwater elevation data are presented in Table 1.

Total petroleum hydrocarbons calculated as gasoline (TPH-g), benzene, and TPH calculated as diesel (TPH-d) concentrations for the January 1994 sampling event are shown on Figure 2. All wells were analyzed for the presence of TPH-g, benzene, toluene, ethylbenzene, and xylenes (BTEX compounds), TPH calculated as motor oil, and TPH-d. Corresponding groundwater analytical data are presented in Tables 2 and 3. Blaine's groundwater sampling report is presented as Attachment A.

The laboratory noted the following: TPH-d concentrations for Wells MW-1, MW-5, MW-6, MW-7, MW-9, MW-10, and the duplicate sample are primarily due to the presence of a lighter petroleum product, possibly gasoline; the TPH-g concentration for Well MW-2 is primarily due to the presence of a discrete peak not indicative of gasoline. The TPH-g concentration in Well MW-6 is due to gasoline and a discrete peak not indicative of gasoline.

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 5.0-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 included as 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 has been continuous since October 27, 1993.

Remedial Objectives

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

- o SVE system petroleum hydrocarbon mass removal rates.
- o SVE well vapor composition.
- 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 are collected twice per month. The system flow rate data, hours of operation, and influent soil vapor sample analysis results are used to estimate TPH-g and benzene mass removal values. Mass removal data for the interim remedial system are presented in Table 4, and are also presented in the table at the beginning of this letter. Certified analytical reports and chain-of-custody documentation are presented as Attachment B.

During this reporting period (December 9, 1993 to March 2, 1994), the SVE system removed approximately 138.36 pounds of TPH-g and 0.11 pound of benzene beneath the site. To date, the SVE system has removed approximately 519.42 pounds of TPH-g and 6.03 pounds of benzene.

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

Soil Vapor Extraction Well Vapor Composition

Soil vapor samples were obtained from each SVE well for laboratory analysis for TPH-g and BTEX compounds during the current reporting period of SVE system operation. These data are used to optimize SVE system operation. SVE well soil vapor analytical data are presented in Table 5.

Soil Vapor Extraction Influence

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

Discussion

Based on SVE system performance during the first quarter 1994, SVE system operation will be continued through the second quarter 1994.

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

Michael Hurd
Senior Geologist
RG 5319

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 System Process Flow Diagram
Attachment A - Groundwater Sampling Report
Attachment B - Certified Analytical Reports and Chain-of-Custody Documentation

cc: 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
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

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		---------- Well Inaccessible ----------	
	10/18/93		---------- Well Inaccessible ----------	
	01/06/94		5.54	2.27
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

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
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

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
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

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
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
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

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-12	07/20/93	9.56	6.76	2.80
	10/18/93		7.12	2.44
	01/06/94		7.15	2.41
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

MSL = Mean sea level
TOC = Top of casing

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]
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 (cont.)	04/23/93	2.4	ND	ND	0.21	0.61	1.2[a]
	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
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
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
	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

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	07/21/93	ND	0.0022	0.0012	0.0011	0.0077	ND
(cont.)	10/18/93	ND	ND	ND	ND	ND	ND
	01/06/94	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]
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]
	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]

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.)	10/18/93	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]
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	13[a]
	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]
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]
	07/28/92	0.051	ND	ND	0.001	0.0006	ND
	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

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 (cont.)	10/18/93	ND	ND	0.8	ND	ND	ND
	01/06/94	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]
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]
	10/27/92	---------- Well Inaccessible ----------					
	01/14/93	26	10	ND	ND	0.16	0.95[c]
	04/23/93	80	21	13	3.4	12	19[a]
	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]

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-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
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
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

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

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-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
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
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
MW-10	07/28/92	NA	ND
	01/14/93	NA	0.2
	04/23/93	NA	ND
	10/18/93	NA	0.61
	01/06/94	NA	0.62
MW-11	10/18/93	NA	0.26
	01/06/94	NA	ND
MW-12	10/18/93	NA	0.12
	01/06/94	NA	ND
MW-13	10/18/93	NA	0.1
	01/06/94	NA	ND

ppm = Parts per million
NA = Not analyzed
ND = Not detected
(D) = Duplicate sample
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

				TPH as Gasoline			Benzene		
Sample ID	Date Sampled	Hourmeter Reading (hrs)	Flow Rate (scfm)	Influent Concentration (ppmv)	Removal Rate (lbs/day)	Removed to Date (lbs)	Influent Concentration (ppmv)	Removal Rate (lbs/day)	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	2,080	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	155.78	13.80	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	160.66	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	90	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	3,678.57	60	12	0.28	519.42	0.58	0.01	6.03
TOTAL POUNDS REMOVED:				**TPH as Gasoline =**		**519.42**		**Benzene=**	**6.03**

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.
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
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
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
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
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

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

N

CHANNEL

LEET DRIVE

TRUCK STORAGE AREA

* MW-3 (2.27)

WASTE OIL TANK

STATION BUILDING

MW-5 (5.31)

VEW-4

MW-2 (5.16)

MW-8 (3.41)

UNDERGROUND FUEL STORAGE TANKS

FORMER UNDERGROUND FUEL STORAGE TANKS

CANOPY

VEW-5

PLANTER

MW-6 (5.38)

MW-10 (3.87)

MW-1 (5.37)

VEW-1

5.0

PARKING

VEW-3

VEW-2

MW-4 (2.64)

PLANTER

MW-7 (5.45)

MW-9 (4.86)

SIDEWALK

PRODUCT ISLANDS

4.0

HEGENBERGER ROAD

3.0

MW-11 (2.09)

MW-13 (1.40)

MW-12 (2.41)

2.0

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

(5.16) GROUNDWATER ELEVATION IN FEET - MSL, 1-6-94

5.0 GROUNDWATER ELEVATION CONTOUR IN FEET - MSL, 1-6-94

* NOT USED IN CONTOURING

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

APPROXIMATE GRADIENT = 0.05

PACIFIC ENVIRONMENTAL GROUP, INC.

SCALE

0 40 80 FEET

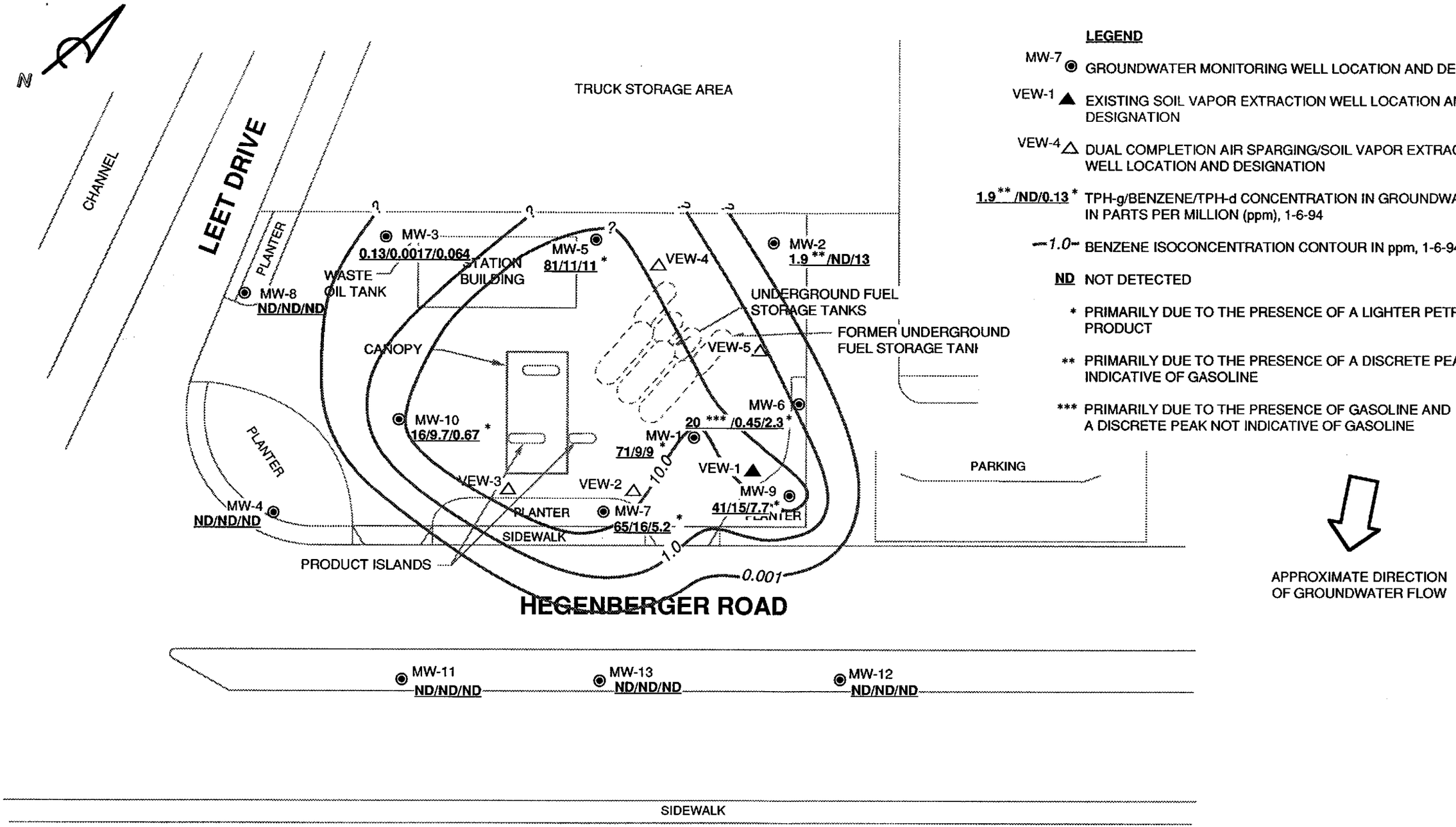
SHELL SERVICE STATION
285 Hegenberger Road at Leet Drive
Oakland, California

GROUNDWATER ELEVATION CONTOUR MAP

FIGURE: 1

PROJECT: 305-079.2B

03/14/94



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
- 1.9 ** /ND/0.13 * TPH-g/BENZENE/TPH-d CONCENTRATION IN GROUNDWATER, IN PARTS PER MILLION (ppm), 1-6-94
- —1.0— BENZENE ISOCONCENTRATION CONTOUR IN ppm, 1-6-94
- ND NOT DETECTED
- * PRIMARILY DUE TO THE PRESENCE OF A LIGHTER PETROLEUM PRODUCT
- ** PRIMARILY DUE TO THE PRESENCE OF A DISCRETE PEAK NOT INDICATIVE OF GASOLINE
- *** PRIMARILY DUE TO THE PRESENCE OF GASOLINE AND A DISCRETE PEAK NOT INDICATIVE OF GASOLINE

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

PACIFIC ENVIRONMENTAL GROUP, INC.

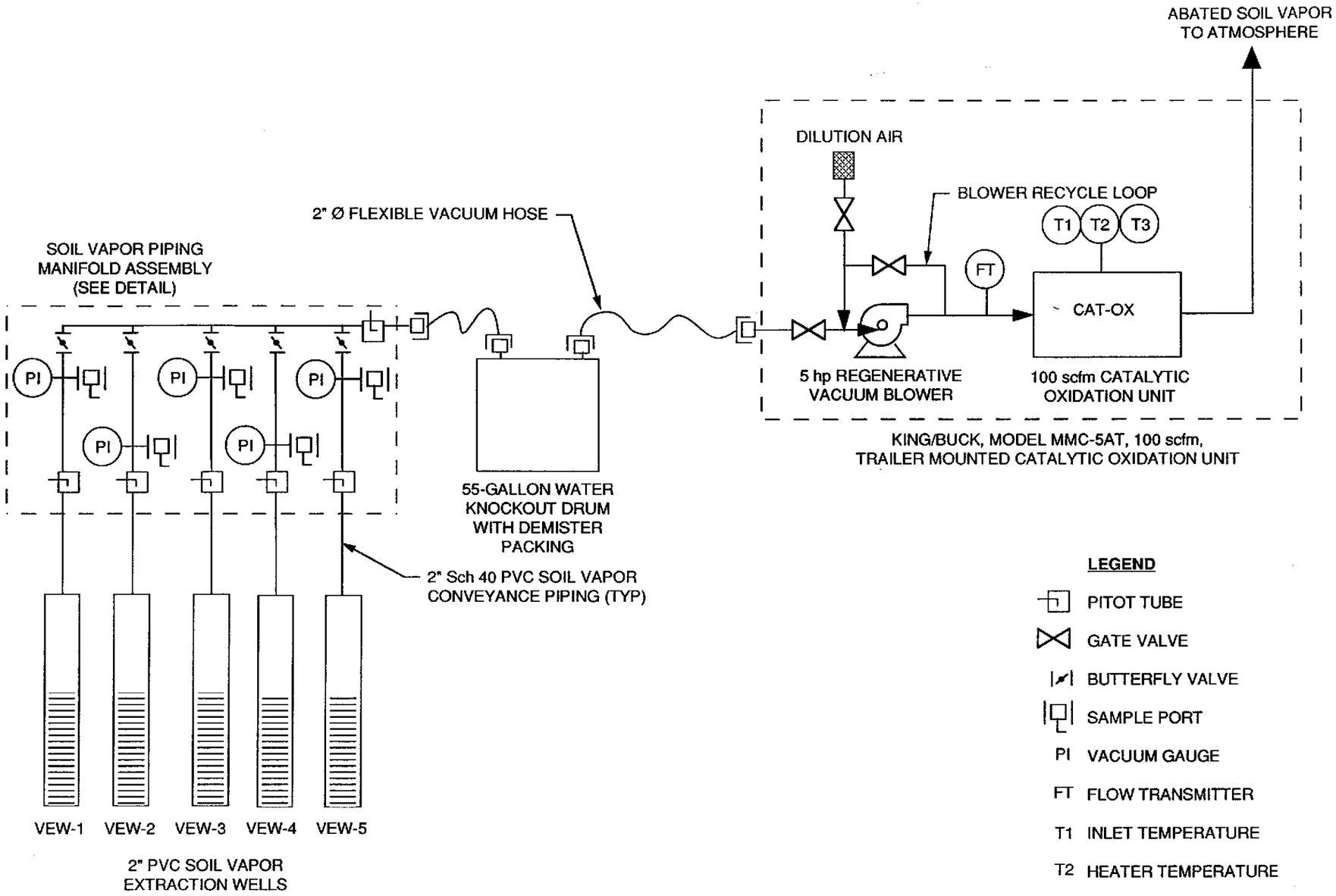
SCALE
0 40 80 FEET

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

TPH-g/BENZENE/TPH-d CONCENTRATION MAP

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

93/14/94



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

ATTACHMENT A

GROUNDWATER SAMPLING REPORT

BLAINE
TECH SERVICES INC.

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

January 24, 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:
1st quarter of 1994

QUARTERLY GROUNDWATER SAMPLING REPORT 940106-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.

STANDARD PROCEDURES

Evacuation

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

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

Decontamination

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

Free Product Skimmer

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

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

Sample Containers

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

Sampling

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

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

Sample Designations

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

Chain of Custody

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

Hazardous Materials Testing Laboratory

The samples obtained at this site were delivered to Anametrix, Inc. in San Jose, California. Anametrix, Inc. is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1234.

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.

James Allen for:
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	1/6/94	TOC	ODOR	NONE	--	--	4.13	9.36
MW-2	1/6/94	TOC	ODOR	NONE	--	--	5.39	9.59
MW-3	1/6/94	TOC	ODOR	NONE	--	--	5.54	9.45
MW-4	1/6/94	TOC	--	NONE	--	--	7.64	10.11
MW-5	1/6/94	TOC	ODOR	NONE	--	--	5.56	9.71
MW-6	1/6/94	TOC	ODOR	NONE	--	--	5.66	11.01
MW-7	1/6/94	TOC	ODOR	NONE	--	--	4.83	9.96
MW-8	1/6/94	TOC	--	NONE	--	--	7.20	9.95
MW-9 *	1/6/94	TOC	ODOR	NONE	--	--	5.62	10.76
MW-10	1/6/94	TOC	ODOR	NONE	--	--	6.74	9.99
MW-11	1/6/94	TOC	--	NONE	--	--	8.47	13.86
MW-12	1/6/94	TOC	--	NONE	--	--	7.15	14.60
MW-13	1/6/94	TOC	--	NONE	--	--	8.70	14.36

* Sample DUP was a duplicate sample taken from well MW-9.

#162

9401067

(18) 10/27

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 940106-21

Date: 1/6/94
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: Anametrix

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	TPH MOTOR OIL	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
(1) MW-1	1/6			X		5		X				X	X						
(2) MW-2	↓			X		5		X				X	X						
(3) MW-3				X		5		X				X	X						
(4) MW-4				X		5		X				X	X						
(5) MW-5				X		5		X				X	X						
(6) MW-6				X		5		X				X	X						
(7) MW-7				X		5		X				X	X						
(8) MW-8	↓			X		5		X				X	X						

CHECK ONE (1) BOX ONLY — C1/01

- Quarterly Monitoring [X] 8441
- Site Investigation [ ] 8441
- Soil Closure/Disposal [ ] 8442
- Water Closure/Disposal [ ] 8443
- Soil/Air Rem. or Sys. O & M [ ] 8442
- Water Rem. or Sys. O & M [ ] 8443
- Other [ ]

TURN AROUND TIME

- 24 hours [ ]
- 48 hours [ ]
- 14 days [X] (Normal)
- Other [ ] ____

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

Relinquished By (signature)	Printed Name	Date/Time	Received (signature)	Printed Name	Date/Time
LAD B Olver	LAD B OLVER	1-7-94 1035	Kenny S. Carrasco	Kenny S. Carrasco	1-7-94 1035
Kenny S. Carrasco	Kenny S. Carrasco	1-7-94 1055	Brandy C. Falcon	Brandy C. Falcon	1/7/94 10:55
Relinquished By (signature):	Printed Name:	Date: Time:	Received (signature):	Printed Name:	Date: Time:

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

#162

9401067

(18) (10/27)

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 940106-41

Date: 1/6/94
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: ZAB Olver

Printed Name: ZAD B OLVER

LAB: Anametrix

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	TPH MOTOR OIL	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
(9) MW-9	1/6			X		5		X				X	X						
(10) MW-10	1			X		5		X				X	X						
(11) MW-11				X		5		X				X	X						
(12) MW-12				X		5		X				X	X						
(13) MW-13				X		5		X				X	X						
(14) DUP				X		5		X				X	X						
(15) E.B.				X		5		X				X	X					PLACE EB ON HOLD.	
(16) T.B.	↓			X		2						X							

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 — 14 days [X] (Normal)
- Water Closure/Disposal [ ] 8443 — Other [ ]
- Soil/Air Rem. or Sys. O & M [ ] 8442
- Water Rem. or Sys. O & M [ ] 8443
- Other [ ]

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

Relinquished By (signature)	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
ZAB Olver	ZAD B OLVER	1-7-94	1035	Benny S. Carrizosa	BENNY S. CARRIZOSA	1-7-94	1035
Benny S. Carrizosa	BENNY S. CARRIZOSA	1-7-94	1055	Brandy C. Falcon	Brandy C. Falcon	1/7/94	10155
Relinquished By (signature):	Printed Name:	Date:	Time:	Received (signature):	Printed Name:	Date:	Time:

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

Inchcape Testing Services
Anametrix Laboratories

1961 Concourse Drive
Suite E
San Jose, CA 95131
Tel: 408-432-8192
Fax: 408-432-8198

MR. JIM KELLER
BLAINE TECH
985 TIMOTHY DRIVE
SAN JOSE, CA 95133

Workorder # : 9401067
Date Received : 01/07/94
Project ID : 204-5508-5504
Purchase Order: MOH-B813

The following samples were received at Anametrix for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9401067- 1	MW-1
9401067- 2	MW-2
9401067- 3	MW-3
9401067- 4	MW-4
9401067- 5	MW-5
9401067- 6	MW-6
9401067- 7	MW-7
9401067- 8	MW-8
9401067- 9	MW-9
9401067-10	MW-10
9401067-11	MW-11
9401067-12	MW-12
9401067-13	MW-13
9401067-14	DUP
9401067-15	E.B.
9401067-16	T.B.

This report consists of 17 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group which performed the analysis(es) and generated the data.

The results contained within this report relate to only the sample(s) tested. Additionally, these data should be considered in their entirety and Anametrix cannot be responsible for the detachment, separation, or otherwise partial use of this report.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234.

If you have any further questions or comments on this report, please call us as soon as possible. Thank you for using Anametrix.

Corinne Khan for
Doug Robbins
Laboratory Director

1/27/94
Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. JIM KELLER
BLAINE TECH
985 TIMOTHY DRIVE
SAN JOSE, CA 95133

Workorder # : 9401067
Date Received : 01/07/94
Project ID : 204-5508-5504
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9401067- 1	MW-1	WATER	01/06/94	TPHd
9401067- 2	MW-2	WATER	01/06/94	TPHd
9401067- 3	MW-3	WATER	01/06/94	TPHd
9401067- 4	MW-4	WATER	01/06/94	TPHd
9401067- 5	MW-5	WATER	01/06/94	TPHd
9401067- 6	MW-6	WATER	01/06/94	TPHd
9401067- 7	MW-7	WATER	01/06/94	TPHd
9401067- 8	MW-8	WATER	01/06/94	TPHd
9401067- 9	MW-9	WATER	01/06/94	TPHd
9401067-10	MW-10	WATER	01/06/94	TPHd
9401067-11	MW-11	WATER	01/06/94	TPHd
9401067-12	MW-12	WATER	01/06/94	TPHd
9401067-13	MW-13	WATER	01/06/94	TPHd
9401067-14	DUP	WATER	01/06/94	TPHd
9401067- 1	MW-1	WATER	01/06/94	TPHgBTEX
9401067- 2	MW-2	WATER	01/06/94	TPHgBTEX
9401067- 3	MW-3	WATER	01/06/94	TPHgBTEX
9401067- 4	MW-4	WATER	01/06/94	TPHgBTEX
9401067- 5	MW-5	WATER	01/06/94	TPHgBTEX
9401067- 6	MW-6	WATER	01/06/94	TPHgBTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. JIM KELLER
BLAINE TECH
985 TIMOTHY DRIVE
SAN JOSE, CA 95133

Workorder # : 9401067
Date Received : 01/07/94
Project ID : 204-5508-5504
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9401067- 7	MW-7	WATER	01/06/94	TPHgBTEX
9401067- 8	MW-8	WATER	01/06/94	TPHgBTEX
9401067- 9	MW-9	WATER	01/06/94	TPHgBTEX
9401067-10	MW-10	WATER	01/06/94	TPHgBTEX
9401067-11	MW-11	WATER	01/06/94	TPHgBTEX
9401067-12	MW-12	WATER	01/06/94	TPHgBTEX
9401067-13	MW-13	WATER	01/06/94	TPHgBTEX
9401067-14	DUP	WATER	01/06/94	TPHgBTEX
9401067-16	T.B.	WATER	01/06/94	TPHgBTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. JIM KELLER
BLAINE TECH
985 TIMOTHY DRIVE
SAN JOSE, CA 95133

Workorder # : 9401067
Date Received : 01/07/94
Project ID : 204-5508-5504
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentration reported as gasoline for sample MW-2 is primarily due to the presence of a discrete peak not indicative of gasoline.
- The concentration reported as gasoline for sample MW-6 is due to a combination of gasoline and a discrete peak not indicative of gasoline.
- The concentrations reported as diesel for samples MW-1, MW-5, MW-6, MW-7, MW-9, DUP and MW-10 are primarily due to the presence of a lighter petroleum product of hydrocarbon range C6-C12, possibly gasoline.

Cheryl Burman 1/24/94
Department Supervisor Date

Teresa Shor 1/24/94
Chemist Date

Organic Analysis Data Sheet
Total Petroleum Hydrocarbons as Gasoline with BTEX
ITS - Anametrix Laboratories - (408)432-8192

Lab Workorder : 9401067 | Client Project ID : 204-5508-5504

Matrix : WATER | Units : ug/L

Compound Name	Method Reporting Limit*	Client ID MW-1 Lab ID 9401067-01	Client ID MW-2 Lab ID 9401067-02	Client ID MW-3 Lab ID 9401067-03	Client ID MW-4 Lab ID 9401067-04	Client ID MW-5 Lab ID 9401067-05
Benzene	0.50	9000	<5	1.7	ND	11000
Toluene	0.50	870	6.7	ND	ND	9300
Ethylbenzene	0.50	1600	7.1	ND	ND	3600
Total Xylenes	0.50	5100	12	0.93	ND	12000
TPH as Gasoline	50	71000	1900	130	ND	81000
Surrogate Recovery		114%	114%	119%	108%	113%
Instrument ID		HP4	HP4	HP4	HP4	HP4
Date Sampled		01/06/94	01/06/94	01/06/94	01/06/94	01/06/94
Date Analyzed		01/13/94	01/13/94	01/13/94	01/13/94	01/14/94
RLMF		500	10	1	1	250
Filename Reference		FPJ06701.D	FPJ06702.D	FPJ06703.D	FPJ06704.D	FRJ06705.D

* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.
TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.
BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Analyst 1/26/94 Date

Supervisor 1/26/94 Date

Issued on 1/26/94 @ 7:14 AM

Organic Analysis Data Sheet
Total Petroleum Hydrocarbons as Gasoline with BTEX
ITS - Anametrix Laboratories - (408)432-8192

Lab Workorder : 9401067 | Client Project ID : 204-5508-5504

Matrix : WATER | Units : ug/L

Compound Name	Method Reporting Limit*	Client ID MW-6 Lab ID 9401067-06	Client ID MW-7 Lab ID 9401067-07	Client ID MW-8 Lab ID 9401067-08	Client ID MW-9 Lab ID 9401067-09	Client ID MW-10 Lab ID 9401067-10
Benzene	0.50	450	16000	ND	15000	9700
Toluene	0.50	30	4900	ND	810	<125
Ethylbenzene	0.50	530	1900	ND	1400	<125
Total Xylenes	0.50	52	8500	ND	9000	210
TPH as Gasoline	50	20000	65000	ND	41000	16000
Surrogate Recovery		118%	114%	105%	114%	120%
Instrument ID		HP4	HP4	HP4	HP4	HP4
Date Sampled		01/06/94	01/06/94	01/06/94	01/06/94	01/06/94
Date Analyzed		01/13/94	01/13/94	01/13/94	01/13/94	01/13/94
RLMF		50	500	1	250	250
Filename Reference		FPJ06706.D	FPJ06707.D	FPJ06708.D	FPJ06709.D	FPJ06710.D

* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.
TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.
BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Doshi 1/26/94
Analyst Date

Cheryl Balma 1/26/94
Supervisor Date

Organic Analysis Data Sheet
Total Petroleum Hydrocarbons as Gasoline with BTEX
ITS - Anametrix Laboratories - (408)432-8192

Lab Workorder : 9401067 | Client Project ID : 204-5508-5504

Matrix : WATER | Units : ug/L

Compound Name	Method Reporting Limit*	Client ID MW-11 Lab ID 9401067-11	Client ID MW-12 Lab ID 9401067-12	Client ID MW-13 Lab ID 9401067-13	Client ID DUP Lab ID 9401067-14	Client ID T.B. Lab ID 9401067-16
Benzene	0.50	ND	ND	ND	15000	ND
Toluene	0.50	ND	ND	ND	920	ND
Ethylbenzene	0.50	ND	ND	ND	1300	ND
Total Xylenes	0.50	ND	ND	ND	8000	ND
TPH as Gasoline	50	ND	ND	ND	43000	ND
Surrogate Recovery		106%	103%	111%	109%	104%
Instrument ID		HP4	HP4	HP4	HP4	HP4
Date Sampled		01/06/94	01/06/94	01/06/94	01/06/94	01/06/94
Date Analyzed		01/13/94	01/13/94	01/13/94	01/13/94	01/13/94
RLMF		1	1	1	500	1
Filename Reference		FPJ06711.D	FPJ06712.D	FPJ06713.D	FPJ06714.D	FPJ06716.D

* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.
TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.
BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Irma Shea 1/24/94
Analyst Date

Cheryl Balmer 1/24/94
Supervisor Date

Issued on 1/18/94 @ 10:24 AM

Organic Analysis Data Sheet
Total Petroleum Hydrocarbons as Gasoline with BTEX
ITS - Anametrix Laboratories - (408)432-8192

Lab Workorder : 9401067 | Client Project ID : 204-5508-5504

Matrix : WATER | Units : ug/L

Compound Name	Method Reporting Limit*	Client ID Lab ID Method Blank	Client ID Lab ID Method Blank	Client ID Lab ID Method Blank	Client ID Lab ID	Client ID Lab ID
Benzene	0.50	ND	ND	ND		
Toluene	0.50	ND	ND	ND		
Ethylbenzene	0.50	ND	ND	ND		
Total Xylenes	0.50	ND	ND	ND		
TPH as Gasoline	50	ND	ND	ND		
Surrogate Recovery		102%	101%	92%		
Instrument ID		HP4	HP4	HP4		
Date Sampled		N/A	N/A	N/A		
Date Analyzed		01/12/94	01/13/94	01/14/94		
RLMF		1	1	1		
Filename Reference		BJ1202E1.D	BJ1302E1.D	BJ1402E1.D		

* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.
TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.
BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Lucia Shor 1/24/94
Analyst Date

Cheryl Balmer 1/24/94
Supervisor Date

Issued on 1/18/94 @ 10:30 AM

Laboratory Control Spike Report
Total Petroleum Hydrocarbons as Gasoline
ITS - Anametrix Laboratories - (408)432-8192

Instrument ID : HP4
Matrix : LIQUID

Analyst : IS
Supervisor : CM
Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Gasoline	500	122%	56-141
Surrogate Recovery		111%	61-139
Date Analyzed		01/13/94	
Multiplier		1	
Filename Reference		MJ1202E1.D	

* Limits established by Inchcape Testing Services, Anametrix Laboratories.

Laboratory Control Spike Report
Total Petroleum Hydrocarbons as Gasoline
ITS - Anametrix Laboratories - (408)432-8192

Instrument ID : HP4
Matrix : LIQUID

Analyst : TS
Supervisor : CB
Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Gasoline	500	102%	56-141
Surrogate Recovery		109%	61-139
Date Analyzed		01/14/94	
Multiplier		1	
Filename Reference		MJ1302E1.D	

* Limits established by Inchcape Testing Services, Anametrix Laboratories.

Laboratory Control Spike Report
Total Petroleum Hydrocarbons as BTEX
ITS - Anametrix Laboratories - (408)432-8192

Instrument ID : HP4
Matrix : LIQUID

Analyst : [illegible]
Supervisor : [illegible]
Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Benzene	20	125%	52-133
Toluene	20	130%	57-136
Ethylbenzene	20	135%	56-139
Total Xylenes	20	125%	56-141
Surrogate Recovery		100%	61-139
Date Analyzed		01/14/94	
Multiplier		1	
Filename Reference		MJ1401E1.D	

* Limits established by Inchcape Testing Services, Anametrix Laboratories.

Matrix Spike Report
Total Petroleum Hydrocarbons as Gasoline
ITS - Anametrix Laboratories - (408)432-8192

Project ID : 204-5508-5504
Sample ID : MW-3
Matrix : WATER
Date Sampled : 01/06/94

Laboratory ID : 9401067-03
Analyst : IS
Supervisor : [illegible]
Instrument ID : HP4
Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	SAMPLE RESULTS	MS RECOVERY	MSD RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS
Gasoline	500	130	108%	104%	50-139	4%	30
Surrogate Recovery		119%	120%	116%			
Date Analyzed		01/13/94	01/13/94	01/13/94			
Multiplier		1	1	1			
Filename Reference		FPJ06703.D	FMJ06703.D	FDJ06703.D			

* Limits established by Inchcape Testing Services, Anametrix Laboratories.

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS DIESEL
ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.: 9401067
Matrix : WATER
Date Sampled : 01/06/94
Date Extracted: 01/11/94

Project Number : 204-5508-5504
Date Released : 01/21/94
Instrument I.D.: HP19

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)	Surrogate %Rec
9401067-01	MW-1	01/13/94	250	9000	55%
9401067-02	MW-2	01/12/94	50	130	81%
9401067-03	MW-3	01/12/94	50	64	86%
9401067-04	MW-4	01/12/94	50	ND	79%
9401067-05	MW-5	01/14/94	500	11000	37%
9401067-06	MW-6	01/13/94	50	2300	57%
9401067-07	MW-7	01/14/94	250	5200	56%
9401067-08	MW-8	01/13/94	50	ND	82%
9401067-09	MW-9	01/14/94	250	7700	75%
9401067-11	MW-11	01/13/94	50	ND	87%
9401067-12	MW-12	01/13/94	50	ND	75%
9401067-13	MW-13	01/13/94	50	ND	83%
9401067-14	DUP	01/14/94	250	8300	92%
BJ1111F9	METHOD BLANK	01/12/94	50	ND	60%

Note : Reporting limit is obtained by multiplying the dilution factor times 50 ug/L.
The surrogate recovery limits for C25 are 30-130%.

ND - Not detected at or above the practical quantitation limit for the method.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following sample extraction by EPA Method 3510.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Analyst 1/24/94 Date

Supervisor 1/24/94 Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL
ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.: 9401067
Matrix : WATER
Date Sampled : 01/06/94
Date Extracted: 01/11/94

Project Number : 204-5508-5504
Date Released : 01/21/94
Instrument I.D.: HP19

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)	Surrogate %Rec
9401067-01	MW-1	01/13/94	500	ND	55%
9401067-02	MW-2	01/12/94	100	ND	81%
9401067-03	MW-3	01/12/94	100	ND	86%
9401067-04	MW-4	01/12/94	100	ND	79%
9401067-05	MW-5	01/14/94	1000	ND	37%
9401067-06	MW-6	01/13/94	100	ND	57%
9401067-07	MW-7	01/14/94	500	ND	56%
9401067-08	MW-8	01/13/94	100	ND	82%
9401067-09	MW-9	01/14/94	500	ND	75%
9401067-11	MW-11	01/13/94	100	ND	87%
9401067-12	MW-12	01/13/94	100	ND	75%
9401067-13	MW-13	01/13/94	100	ND	83%
9401067-14	DUP	01/14/94	500	ND	92%
BJ1111F9	METHOD BLANK	01/12/94	100	ND	60%

Note : Reporting limit is obtained by multiplying the dilution factor times 50 ug/L.
The surrogate recovery limits for C25 are 30-130%.

ND - Not detected at or above the practical quantitation limit for the method.
TPHd - Total Petroleum Hydrocarbons as motor oil is determined by GCFID following sample extraction by EPA Method 3510.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Lucia Sher 1/24/94
Analyst Date

Cheryl Baemer 1/25/94
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS DIESEL
ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.: 9401067
Matrix : WATER
Date Sampled : 01/06/94
Date Extracted: 01/18/94

Project Number : 204-5508-5504
Date Released : 01/21/94
Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)	Surrogate %Rec
9401067-10	MW-10	01/21/94	50	670	43%
BJ1812F1	METHOD BLANK	01/21/94	50	ND	53%

Note : Reporting limit is obtained by multiplying the dilution factor times 50 ug/L.
The surrogate recovery limits for C25 are 30-130%.

ND - Not detected at or above the practical quantitation limit for the method.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following sample extraction by EPA Method 3510.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Analyst 1/26/94
Date

Supervisor 1/26/94
Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL
ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.: 9401067
Matrix : WATER
Date Sampled : 01/06/94
Date Extracted: 01/18/94

Project Number : 204-5508-5504
Date Released : 01/21/94
Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)	Surrogate %Rec
9401067-10	MW-10	01/21/94	100	620	43%
BJ1812F1	METHOD BLANK	01/21/94	100	ND	53%

Note : Reporting limit is obtained by multiplying the dilution factor times 50 ug/L.
The surrogate recovery limits for C25 are 30-130%.

ND - Not detected at or above the practical quantitation limit for the method.
TPHd - Total Petroleum Hydrocarbons as motor oil is determined by GCFID following sample extraction by EPA Method 3510.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Analyst 1/20/94 Date

Supervisor 1/20/94 Date

TOTAL EXTRACTABLE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 3510 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : WATER
Date Sampled : N/A
Date Extracted: 01/11/94
Date Analyzed : 01/12/94

Anametrix I.D. : MJ1111F9
Analyst : IS
Supervisor : [illegible]
Date Released : 01/21/94
Instrument I.D.: HP19

COMPOUND	SPIKE AMT (ug/L)	LCS REC (ug/L)	% REC LCS	LCSD REC (ug/L)	% REC LCSD	RPD	% REC LIMITS
DIESEL	1250	940	75%	990	79%	5%	47-130
SURROGATE			88%		97%		30-130

* Quality control limits established by Anametrix, Inc.

TOTAL EXTRACTABLE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 3510 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : WATER
Date Sampled : N/A
Date Extracted: 01/18/94
Date Analyzed : 01/19/94

Anametrix I.D. : MJ1812F1
Analyst : IS
Supervisor : [illegible]
Date Released : 01/21/94
Instrument I.D.: HP23

COMPOUND	SPIKE AMT (ug/L)	LCS REC (ug/L)	% REC LCS	LCSD REC (ug/L)	% REC LCSD	RPD	% REC LIMITS
DIESEL	1250	800	64%	700	56%	-13%	47-130
SURROGATE			67%		73%		30-130

* Quality control limits established by Anametrix, Inc.

ATTACHMENT B

CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

SEQUOIA ANALYTICAL
680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Justin Hawkins

Project: 305-79.01/Shell, Oakland

Enclosed are the results from 5 air samples received at Sequoia Analytical on December 23,1993. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3LC3301	Air, VEW-1	12/22/93	EPA 5030/8015/8020
3LC3302	Air, VEW-2	12/22/93	EPA 5030/8015/8020
3LC3303	Air, VEW-3	12/22/93	EPA 5030/8015/8020
3LC3304	Air, VEW-5	12/22/93	EPA 5030/8015/8020
3LC3305	Air, Effl	12/22/93	EPA 5030/8015/8020

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

Elleen A. Manning
Project Manager

SEQUOIA ANALYTICAL
680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	305-79.01/Shell, Oakland	Sampled:	Dec 22, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Dec 23, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Dec 29, 1993
Attention: Justin Hawkins	First Sample #:	3LC3301		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3LC3301 VEW-1	Sample I.D. 3LC3302 VEW-2	Sample I.D. 3LC3303 VEW-3	Sample I.D. 3LC3304 VEW-5	Sample I.D. 3LC3305 Effl
Purgeable Hydrocarbons	5.0	5.3	N.D.	N.D.	150	N.D.
Benzene	0.050	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.050	0.097	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.050	0.11	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.050	0.75	0.25	0.27	0.25	N.D.
Chromatogram Pattern:		Gas	--	--	Gas + Discrete Peaks	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	12/23/93	12/23/93	12/23/93	12/23/93	12/23/93
Instrument Identification:	GCHP-17	GCHP-17	GCHP-17	GCHP-17	GCHP-17
Surrogate Recovery, %: (QC Limits = 70-130%)	92	94	93	118	96

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

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Justin Hawkins

Client Project ID: 305-79.01/Shell, Oakland

QC Sample Group: 3LC3301-05

Reported: Dec 29, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	M. Nipp	M. Nipp	M. Nipp	M. Nipp
MS/MSD Batch#:	G3LA6702	G3LA6702	G3LA6702	G3LA6702
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	12/23/93	12/23/93	12/23/93	12/23/93
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:	97	100	98	100
Matrix Spike Duplicate % Recovery:	99	100	100	100
Relative % Difference:	2.0	0.0	2.0	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 305-7901
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 12 Page 1 of

Site Address: 285 Hegenberger OAKLAND

WIC#: 204-7620-1502

Shell Engineer: DAN Kirk. Phone No.: 675-8148 Fax #: 675-8172

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: Joe Vojvoda

Printed Name: Joe VOJVODA

LAB: Seguoia

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 GAS			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
VEW-1	12/14/93				X	1						X				1 pint	UP	N	UST Soil VAPOR	9312C33 01
VEW-2																				02
VEW-3																				03
~~VEW-4~~																			ND	
VEW-5																				04
FFFL																				05

Relinquished By (signature): Joe Vojvoda	Printed Name: Joe Vojvoda	Date: 12-22-93 Time: 1620	Received (signature): M Doden	Printed Name: M Doden	Date: 12/22/93 Time: 1720
Relinquished By (signature): M Doden	Printed Name: M Doden	Date: 12-23-93 Time: 1050	Received (signature):	Printed Name:	Date: Time:
Relinquished By (signature):	Printed Name:	Date: Time:	Received (signature): John Miller	Printed Name: John Miller	Date: 12/23/93 Time: 1000

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

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 ☐
- 15 days ☒ (Normal)
- Other ☐ ____

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

UST AGENCY: _____

Rev. 1/1/93

Shell Chain of Custody

SEQUOIA ANALYTICAL — SAMPLE RECEIPT LOG

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

MASTER LOG NO. / PAGE: 9312 C33
DATE OF LOG-IN: 12-23-93

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: 12-23-93
12. Time Rec. at Lab: 10:00

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
01	A	VEW-1	Tedlar	Air	12/22/93	
02		-2				
03		-3				
04		-5				
05		EFFL				

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

Page 1 of 1

Form SC001

SEQUOIA ANALYTICAL

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

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Justin Hawkins

Project: 305-79.01L/Shell, Oakland

Enclosed are the results from 1 air sample received at Sequoia Analytical on January 12,1994. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
4A49801	Air, Infl	1/11/94	EPA 5030/8015/8020

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
Project Manager

SEQUOIA ANALYTICAL

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

Pacific Environmental Group	Client Project ID:	305-79.01L/Shell, Oakland	Sampled:	Jan 11, 1994
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Jan 12, 1994
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Jan 19, 1994
Attention: Justin Hawkins	First Sample #:	4A49801		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 4A49801 Infl
Purgeable Hydrocarbons	5.0	700
Benzene	0.050	N.D.
Toluene	0.050	0.30
Ethyl Benzene	0.050	N.D.
Total Xylenes	0.050	1.2
Chromatogram Pattern:		Weathered gas < C8

Quality Control Data

Report Limit Multiplication Factor:	5.0
Date Analyzed:	1/13/94
Instrument Identification:	GCHP-3
Surrogate Recovery, %: (QC Limits = 70-130%)	122

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

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Justin Hawkins

Client Project ID: 305-79.01L/Shell, Oakland

QC Sample Group: 4A49801

Reported: Jan 19, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	M. Nipp	M. Nipp	M. Nipp	M. Nipp
MS/MSD Batch#:	G4A23505	G4A23505	G4A23505	G4A23505
Date Prepared:	-	-	-	-
Date Analyzed:	1/13/94	1/13/94	1/13/94	1/13/94
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:	100	100	100	103
Matrix Spike Duplicate % Recovery:	100	100	100	103
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 305-7901 L

RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: ______

Date: 1-11 Page 1 of 1

Site Address: 285 Hegenberger Rd, Oakland

WIC#: 204-7620-1502

Shell Engineer: DAN Kirt — Phone No.: 510 6756168 Fax #: 6756172

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: [signature]

Printed Name: Joe Vojvoda

LAB: Sequoia

Analysis Required

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 ☐ 15 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 CA.9			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
INFL	1/11/94				X	1						X				1 bag	UP	N	UST Soil VAPR	9401498-01

Relinquished By (signature):	Printed Name:	Date/Time	Received (signature):	Printed Name:	Date/Time
[signature]	Joe Vojvoda	Date: 1-11-94 Time: 1410	[signature]	M Doden	Date: 1/11/94 Time: 1410
[signature]	M Doden	Date: 1/12/94 Time: 10:15	[signature]	R. Hayes	Date: 1/12/94 Time: 10:15
[signature]	R. Hayes	Date: 1/12 Time: 10:27	[signature]	KEITH E. GROSS	Date: 01.12.94 Time: 10:55

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

Rev. 1/17/93 — Shell Oil Chn. of Custody

10

CLI ___ Shell Oil
REC): ___ Va.

MASTER LOG NO. / PAGE: 9401498
DATE OF LOG-IN: 1/12/94

CIR	PRIATE RE PONSE	LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMA CONDITIC	S: (ETC)
1.	I: Pr ont / Absent Int t / Broken*	01	A	INFL	1L Teflon	Air	011194		
2.	ls.: ___								
3.	ly Pr ent / Absent*								
4.	or Pr ont / Absent								
5.	Al ll / Sticker Pr ent / Absent								
6.	___								
7.	Pr ent / Absent* : Li d / Not Listed on Chain-of-Custody								
8.	n: Int ct/Broken*/Leaki								

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: 01-12-94

12. Time Rec. at Lab: 10:55

* 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

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Justin Hawkins

Project: 305-079.5B/Shell, Oakland

Enclosed are the results from 2 air samples received at Sequoia Analytical on January 28,1994. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
4AF2201	Air, Infl	1/27/94	EPA 5030/8015 Mod./8020
4AF2202	Air, Effl	1/27/94	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
Project Manager

SEQUOIA ANALYTICAL

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

Pacific Environmental Group	Client Project ID:	305-079.5B/Shell, Oakland	Sampled:	Jan 27, 1994
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Jan 28, 1994
San Jose, CA 95110	Analysis Method:	EPA 5030/8015 Mod./8020	Reported:	Feb 2, 1994
Attention: Justin Hawkins	First Sample #:	4AF2201		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 4AF2201 Infl	Sample I.D. 4AF2202 Effl
Purgeable Hydrocarbons	5.0	640	N.D.
Benzene	0.050	N.D.	N.D.
Toluene	0.050	N.D.	N.D.
Ethyl Benzene	0.050	N.D.	N.D.
Total Xylenes	0.050	13	N.D.
Chromatogram Pattern:		Gas + Non-gas mix < C8	--

Quality Control Data

Report Limit Multiplication Factor:	5.0	1.0
Date Analyzed:	1/28/94	1/28/94
Instrument Identification:	GCHP-17	GCHP-3
Surrogate Recovery, %: (QC Limits = 70-130%)	159*	97

*Coelution confirmed

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

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Justin Hawkins

Client Project ID: 305-079.5B/Shell, Oakland
QC Sample Group: 4AF2201

Reported: Feb 2, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	Harabajahian	Harabajahian	Harabajahian	Harabajahian
MS/MSD Batch#:	G4AB4407	G4AB4407	G4AB4407	G4AB4407
Date Prepared:	-	-	-	-
Date Analyzed:	1/28/94	1/28/94	1/28/94	1/28/94
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:	100	100	100	100
Matrix Spike Duplicate % Recovery:	98	98	97	97
Relative % Difference:	2.0	2.0	3.0	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
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

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Justin Hawkins

Client Project ID: 305-079.5B/Shell, Oakland

QC Sample Group: 4AF2202

Reported: Feb 2, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	Harabajahian	Harabajahian	Harabajahian	Harabajahian
MS/MSD Batch#:	G4AB4407	G4AB4407	G4AB4407	G4AB4407
Date Prepared:	-	-	-	-
Date Analyzed:	1/28/94	1/28/94	1/28/94	1/28/94
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:	100	110	100	107
Matrix Spike Duplicate % Recovery:	93	93	92	90
Relative % Difference:	7.3	17	8.3	17
LCS Batch#:				
Date Prepared:				
Date Analyzed:				
Instrument I.D.#:				
LCS % Recovery:				
% Recovery Control Limits:	71-133	72-128	72-130	71-120

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

Eileen A. Manning
Project Manager

SHELL OIL COMPANY 305-079.5B
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 1/2[illegible]
Page 1 of 1

Site Address: 285 Hegenberger Oakland

WIC#: 204-7620-1502

Shell Engineer: Dan Kirk — Phone No.: 510 675-6170 — Fax #: 675-6172

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			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
INFL	1/27/94				X	1						X				1L	N	N	UST Soil	9401F22-01
effL	↓				X	1						X				↓	↓	↓	Vapor Gas	-02

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 ☐
- 15 days ☒ (Normal)
- Other ☐ _____

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

UST AGENCY: _____

Relinquished By (signature)	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
Tim R. Wright	Tim R. WRIGHT	1/27/94	1505	M Doden	M Doden	1/27/94	1550
M Doden	M Doden	1/28/94	1321	C. Hinton	C. Hinton	1/28	1321
C. Hinton	C. Hinton	1/28	1510	Kenneth Guess	Kenneth Guess	1-28-94	1510

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

Rev. 7/12/93

Shell Oil Chn. of Custody

CLIENT NAME: SHELL 305-079-58 MASTER LOG NO. / PAGE: 9401 F22

REC. BY (PRINT): FG DATE OF LOG-IN: 1/28/94

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	INFL	TEDLAR	AIR	01/27	
2. Custody Seal Nos.:	02	A	EFFL	↓	↓	↓	
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: 01-28-94							
12. Time Rec. at Lab: 1510							

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

SHELL OIL COMPANY 305-079.5B
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 1/27/94
Page 1 of 1

Site Address: 245 Hegenberger Oakland

WIC#: 204-7620-1502

Shell Engineer: Dan Kirk — Phone No.: 675-6170 510 — Fax #: 675-6172

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: T. R. Wright

Printed Name: Tim R. WRIGHT

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 ☐ — 15 days ☒ (Normal) — Other ☐ ____

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

UST AGENCY: _____

Analysis Required: 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

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
INFL	1/27/94				X	1	1L	N	N	UST Soil	
effL	↓				X	1	↓	↓	↓	Vapor Gas	

	Printed Name	Date / Time		Printed Name	Date / Time
Relinquished By (signature): T. R. Wright	Tim R. WRIGHT	1/27/94 1500	Received (signature): M Doden	M Doden	1/27/94 1500
Relinquished By (signature): M Doden	M Doden	1/28/94 1321	Received (signature): C. Hinton	C. Hinton	1/28 1321
Relinquished By (signature):		Date: Time:	Received (signature):		Date: Time:

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

Rev. 1/12/93 — Shell Oil Chn. of Custody

SEQUOIA ANALYTICAL

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

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 February 11,1994. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
4B68201	Air, Infl	2/10/94	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
Project Manager

SEQUOIA ANALYTICAL

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

Pacific Environmental Group	Client Project ID:	305-079.5B/Oakland	Sampled:	Feb 10, 1994
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Feb 11, 1994
San Jose, CA 95110	Analysis Method:	EPA 5030/8015 Mod./8020	Reported:	Feb 15, 1994
Attention: Maree Doden	First Sample #:	4B68201		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 4B68201 Infl
Purgeable Hydrocarbons	5.0	130
Benzene	0.050	N.D.
Toluene	0.050	1.8
Ethyl Benzene	0.050	0.68
Total Xylenes	0.050	2.2
Chromatogram Pattern:		C4 - C12

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Analyzed:	2/11/94
Instrument Identification:	GCHP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	211*

*Coelution confirmed

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

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: 4B68201

Reported: Feb 15, 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#:	G4B30301	G4B30301	G4B30301	G4B30301
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	2/11/94	2/11/94	2/11/94	2/11/94
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:	100	100	100	100
Matrix Spike Duplicate % Recovery:	110	110	110	107
Relative % Difference:	9.5	9.5	9.5	6.8
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 305-079.5

RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: _____

Date: 2/

Page 1 of

Site Address: 285 Hengenberger Rd. OAKland

WIC#: 204 7620 -1502

Shell Engineer: DAN Kirk

Phone No.: 675 61 68 (510)

Fax #: 675 6172

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: Joe Vojvoda

Printed Name: Joe Vojvoda

LAB: Sequoia

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 (GAS)	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
INFL	2/10/94				X	1						X		1 VOA	NP	N	UST Soil/Vapor/gas	9402682-01

CHECK ONE (1) BOX ONLY | CT/DT | TURN AROUND TIME

- 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 ☐
- 15 days ☒ (Normal)
- Other ☐ ____

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

UST AGENCY: _____

Relinquished By (signature)	Printed Name	Date/Time	Received (signature)	Printed Name	Date/Time
Joe Vojvoda	Joe Vojvoda	2-10-94 15:00	M Dodem	M Dodem	2/10/94 1500
M Dodem	M Dodem	2/11/94 12:15	L Olmsched	L. OLMSCHED	2/11/94 10:15
L. Olmsched	L. OLMSCHED	2/11 1200	E Burton	L. Burton	2/11 1110

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

Rev. 1/12/93

Shell Oil Chn. of Custody

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

MASTER LOG NO. / PAGE: 9402682
DATE OF LOG-IN: 2/11/94

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	INFL	TEDLAR	A	2-10	
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: 2/11/94							
12. Time Rec. at Lab: 1110							

* 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 1 air sample received at Sequoia Analytical on March 3,1994. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
4C18601	Air, Infl	3/2/94	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
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:	Mar 2, 1994
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Mar 3, 1994
San Jose, CA 95110	Analysis Method:	EPA 5030/8015 Mod./8020	Reported:	Mar 7, 1994
Attention: Maree Doden	First Sample #:	4C18601		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 4C18601 Infl
Purgeable Hydrocarbons	5.0	52
Benzene	0.050	2.0
Toluene	0.050	0.37
Ethyl Benzene	0.050	N.D.
Total Xylenes	0.050	N.D.
Chromatogram Pattern:		C4 - C12

Quality Control Data

Report Limit Multiplication Factor:	2.5
Date Analyzed:	3/3/94
Instrument Identification:	GCHP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	121

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
Matrix: Liquid
QC Sample Group: 4C18601

Reported: Mar 7, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	R. Vincent	R. Vincent	R. Vincent	R. Vincent
MS/MSD Batch#:	G4BG0205	G4BG0205	G4BG0205	G4BG0205
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	3/3/94	3/3/94	3/3/94	3/3/94
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:	110	100	100	100
Matrix Spike Duplicate % Recovery:	110	100	100	100
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 305-079.5B
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: ____________

Date: 3-3-94
Page 1 of 1

Site Address: 285 Hegenberger Rd, oakland

WIC#: 204-7620-1502

Shell Engineer: DAN KIRK
Phone No.: (510) 675-6168
Fax #: 675-6172

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

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

Comments:

Sampled by: Joe Vojvoda
Printed Name: Joe Vojvoda

Analysis Required

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	☐
15 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 GAS			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
INFL	3/2/94				X	1						X				bag	NP	N	UST Soil	Vapor 9403186-01

Relinquished By (signature):	Printed Name:	Date/Time	Received (signature):	Printed Name:	Date/Time
Joe Vojvoda	Joe Vojvoda	Date: 3-3-94 Time: 7:00	[signature]	M Doden	Date: 3/3/94 Time: 0700
M Doden	M Doden	Date: 3/3/94 Time: 1015	[signature]	L. OLMSCHEID	Date: 3/3/94 Time: 1015
[signature]	L. OLMSCHEID	Date: 3/3/94 Time: 11:40	[signature]	P. HUPANO	Date: 3-3-94 Time: 1140

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

Shell Oil Chn. of Custody

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

MASTER LOG NO. / PAGE: 9403186
DATE OF LOG-IN: 3-3-94

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	INFL	TEDLAR	A	3-2	
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: 3-3-94							
Time Rec. at Lab: 1140							

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

Form SC001