Shell Oil Company

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

January 11, 1994

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

No appreciable difference in GW conc yet, perhaps too soon to expect..

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

530

D. T. Kirk

Daniel T. Kirk
Area Environmental Engineer

ALCO HAZMAT
94 JAN 18 PM 2:33

PACIFIC
ENVIRONMENTAL
GROUP, INC.

January 11, 1994
Project 305-79.01

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

Re: Quarterly Report and Remedial System Evaluation Report -
Fourth Quarter 1993
Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California
WIC No 204-5508-5504

Dear Mr. Kirk:

This letter presents the results of the fourth quarter 1993 monitoring program and status of interim remedial action at the site referenced above (Figure 1). Pacific Environmental Group, Inc. (PACIFIC) has prepared this information for Shell Oil Company.

REMEDIAL PROGRESS SUMMARY

Progress toward site remediation is presented in the table below.

	Total Mass Removed (pounds)	
Analyte	Aug. 30 to Dec. 9, 1993	Cumulative
TPH-g	381.06	381.06
Benzene	5.92	5.92

TPH-g = Total petroleum hydrocarbons calculated as gasoline

FINDINGS

Groundwater monitoring wells were gauged and sampled by Blaine Tech Services, Inc. (Blaine) at the direction of PACIFIC on October 18, 1993. Groundwater elevation contours for the sampling date are shown on Figure 2. Table 1 presents groundwater elevation data.

Groundwater analytical data are presented in Tables 2 and 3. All wells were analyzed for the presence of total petroleum hydrocarbons calculated as gasoline (TPH-g), benzene, toluene, ethylbenzene, and xylenes (BTEX compounds), TPH calculated as motor oil, and TPH calculated as diesel (TPH-d). TPH-g, benzene, and TPH-d concentrations for the October 1993 sampling event are shown on Figure 3. Blaine's groundwater sampling report is presented as Attachment A.

The laboratory noted that the concentrations reported as TPH-d for Wells MW-1, MW-2, 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.

REMEDIAL SYSTEM PERFORMANCE EVALUATION

PACIFIC initiated operation of a soil vapor extraction (SVE) system on August 30, 1993. A brief description of the SVE system and a performance evaluation of SVE system operation from August 30 to December 9, 1993, is provided below.

Remedial System Description

An SVE system was installed to address petroleum hydrocarbon-impacted soil and groundwater beneath the site. The SVE system is comprised of an SVE and abatement unit connected to five SVE wells (VEW-1 through VEW-5). A process flow diagram of the SVE system is shown on Figure 4.

Remedial System Operation

From August 30 to September 14, 1993, an internal combustion engine was operated at the site. On October 27, 1993, operation of a catalytic oxidation unit was initiated.

Remedial Objectives

The remedial objective for the SVE system is to reduce petroleum hydrocarbon concentrations in the impacted soil and groundwater beneath the site. To determine if the SVE system is sufficiently affecting the petroleum hydrocarbon-impacted areas beneath the site, and to evaluate progress toward meeting the source reduction objective, the following SVE system parameters are monitored:

- Petroleum hydrocarbon mass removal rates.
- SVE well vapor sampling and analysis.
- SVE system influence.

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

Soil Vapor Extraction System Mass Removal

Interim remedial system operational and analytical 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. From SVE system startup on August 30, 1993 to December 9, 1993 the SVE system removed approximately 381.06 pounds of TPH-g and 5.92 pounds of benzene from soil and groundwater beneath the site. TPH-g and benzene mass removal data for the 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 included as Attachment B.

Soil Vapor Extraction Well Vapor Composition

Soil vapor samples are obtained from each SVE well and analyzed for the presence of TPH-g and BTEX compounds approximately once during each month 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 fourth quarter 1993.

Discussion

Based on SVE system performance during the fourth quarter 1993, SVE system operation will be continued through the first quarter of 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- Soil Vapor Extraction Well Vapor Data Total Petroleum Hydrocarbons (TPH as Gasoline and Benzene)
Figure 1 - Site Location Map
Figure 2 - Groundwater Elevation Contour Map
Figure 3 - TPH-g/Benzene/TPH-d Concentration Map
Figure 4 - 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
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
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

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 (cont.)	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 ---------	
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
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

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 (cont.)	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
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
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

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 (cont.)	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
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
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

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 (cont.)	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
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
MW-11	07/20/93	10.56	8.08	2.48
	10/18/93		8.24	2.32
MW-12	07/20/93	9.56	6.76	2.80
	10/18/93		7.12	2.44
MW-13	07/20/93	10.10	8.32	1.78
	10/18/93		8.66	1.44

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	99.0	20	23	5.7	23	NA
	05/23/92	48.0	4.2	5.2	1.2	7.7	11.0
	08/04/89	63.0	5.5	5.5	3.2	9.5	11.0
	12/15/89	30.0	ND	ND	ND	ND	11.0
	02/07/90	93.0	13.0	9.6	2.4	14.0	10.0
	04/18/90	55.0	14.0	8.4	3.2	13.0	8.7
	07/24/90	73.0	16.0	7.40	2.80	15.0	3.6
	10/01/90	45.0	8.0	4.3	2.0	11.0	1.7
	01/02/91	43.0	10.0	3.40	1.90	11.0	3.10
	04/09/91	67.0	20.0	9.60	3.50	16.0	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	48.0	12.0	2.8	1.9	7.4	15.0[a]
	05/05/92	71	16	6.0	3.1	14	10[a]
	07/28/92	68	21	5.5	3.4	15	18[a]
	07/28/92(D)	70	17	5.0	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	3.0	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	2.0	4.9	8.1[a]
	10/18/93(D)	44	14	1.2	2.0	4.9	3.7[a]
MW-2	02/16/89	20.0	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	0.075	0.12	0.85	2.2	7.4
	12/15/89	5.0	0.052	0.013	0.0041	0.29	2.6
	02/07/90	13.0	0.032	0.034	0.23	0.640	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	0.540	0.940	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	0.140	0.490	0.28
	07/11/91	8.1	0.089	0.066	0.350	0.930	1.1
	10/08/91	1.4	0.0051	0.0015	0.036	0.270	2.6
	02/06/92	2.0	0.0078	0.0025	0.13	0.210	5.4[a]
	05/05/92	21[b]	ND	ND	0.30	0.96	1.0
	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]
	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]

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-3	02/16/89	60.0	5.5	0.2	3.2	5.2	NA
	05/23/89	ND	ND	ND	ND	ND	1.5
	08/04/89	2.0	0.12	0.012	ND	0.086	1.2
	12/15/89	5.2	0.38	0.047	0.017	0.410	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	0.920	0.0088	ND	0.190	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	0.140	0.0007	ND	0.053	0.56
	02/06/91	0.50	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	0.10[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 ----------					
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	0.060
	10/27/92	ND	ND	ND	ND	ND	ND
	01/14/93	ND	ND	ND	ND	ND	ND
	04/23/93	ND	ND	ND	ND	ND	ND
	07/21/93	ND	0.0022	0.0012	0.0011	0.0077	ND
	10/18/93	ND	ND	ND	ND	ND	ND
MW-5	05/23/89	26.0	1.5	0.28	ND	8.1	7.0
	08/05/89	12.0	0.86	0.094	ND	2.6	8.7
	12/15/89	1.00	0.022	0.035	0.018	0.044	0.71
	02/08/90	ND	0.0008	ND	ND	ND	0.62
	04/19/90	19.0	4.5	0.85	0.097	8.0	5.0

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-5 (cont.)	07/24/90	23.0	3.6	0.400	0.160	6.50	2.7
	09/28/90	5.4	1.40	0.026	0.013	1.30	0.55
	01/02/91	0.86	0.280	0.0028	0.0008	0.045	0.56
	04/09/91	12.0	0.710	0.130	0.500	2.4	1.8
	07/11/91	24.0	2.2	0.280	0.430	5.7	1.7
	10/08/91	2.8	0.860	0.013	ND	0.580	1.4
	02/06/92	1.0	0.30	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	0.90	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	12.0	16[a]
	07/21/93	18[d]	1.4	0.084	1.5	3.2	1.2[a]
	10/18/93	14	2.0	0.1	2.3	5.1	5.8[a]
MW-6	05/23/89	22.0	0.016	0.0065	0.0066	3.4	7.0
	08/04/89	28.0	1.2	0.13	2.1	2.8	8.8
	12/15/89	16.0	0.37	0.092	0.20	0.18	5.5
	02/07/90	22.0	0.52	0.085	0.63	0.77	2.6
	04/18/90	21.0	0.9	0.077	2.7	2.7	5.7
	07/24/90	24.0	1.00	0.094	3.40	2.70	3.0
	10/01/90	22.0	0.70	0.093	2.50	2.40	ND
	01/02/91	25.0	1.00	0.088	2.60	3.70	0.96
	04/09/91	18.0	0.560	0.190	0.480	0.830	0.92
	07/11/91	9.5	0.670	0.051	1.1	0.920	1.9
	10/08/91	11.0	1.00	0.043	ND	ND	5.1
	02/06/92	7.2	0.56	0.008	0.72	0.16	15.0[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	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]
	10/18/93	24	0.77	0.44	1.6	0.83	2.5[a]
MW-7	05/23/89	47.0	3.5	5.0	1.5	7.8	11
	08/04/89	68.0	6.2	6.6	3.6	8.8	22
	12/15/89	100.0	4.5	5.3	1.3	5.3	12
	02/08/90	96.0	15.0	15.0	2.5	14.0	8.1
	04/19/90	94.0	25.0	13.0	3.3	13.0	10.0
	07/24/90	84.0	3.8	26.0	13.0	3.0	12.0
	09/28/90	43.0	25.0	6.10	2.40	9.0	ND
	01/02/91	78.0	26.0	16.0	3.0	14.0	3.10
	04/09/91	140.0	26.0	16.0	2.20	14.0	1.8

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-7	07/11/91	79.0	7.7	7.2	2.3	10.0	1.1
(cont.)	10/08/91	55.0	29.0	7.5	1.8	9.3	0.39[a]
	02/06/92	63.0	16.0	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	13.0[a]
	10/27/92	63	21	11	3.0	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]
MW-8	05/23/89	ND	ND	ND	ND	ND	0.10
	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	0.0010	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
	10/18/93	ND	ND	0.8	ND	ND	ND
MW-9	08/04/89	47.0	5.6	6.6	1.5	8.5	12.0
	12/15/89	88.0	4.3	5.4	0.14	5.6	9.2
	02/08/90	50.0	1.8	1.4	3.2	1.8	7.4
	04/19/90	50.0	14.0	11.0	0.73	10.0	7.5
	07/24/90	62.0	19.0	16.0	0.950	15.0	3.20
	09/28/90	30.0	16.0	6.50	0.980	11.0	2.70
	01/02/91	34.0	9.20	3.20	0.770	7.00	2.50
	04/09/91	66.0	17.0	13.0	1.40	14.0	2.2
	07/11/91	40.0	7.7	3.2	1.1	9.4	2.0
	10/08/91	20.0	11.0	0.640	0.240	6.0	4.7[a]
	02/06/92	36.0	11.0	0.49	1.1	6.7	6.6[a]
	05/05/92	31	11	1.7	1.2	8.7	5.8[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-9 (cont.)	07/28/92	50	17	1.2	1.5	12	14.0
	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	0.73[a]
	04/23/93	45	11	1.4	1.5	10	8.0[a]
	07/21/93	25	10	0.32	1.1	7.1	5.1
	10/18/93	32	14	0.53	2.0	10	4.9[a]
MW-10	12/15/89	ND	1.5	ND	ND	ND	3.1
	03/08/90	25.0	17	0.330	2.1	1.4	1.8
	04/19/90	23.0	15.0	1.2	0.19	3.3	3.6
	07/25/90	18.0	12.0	0.38	ND	1.40	1.9
	09/28/90	9.5	13.0	0.100	1.80	0.23	0.43
	01/02/91	4.3	3.70	0.0097	ND	0.110	0.63
	04/09/91	45	16.0	4.60	3.0	6.90	1.4
	07/11/91	ND	ND	ND	ND	ND	
	10/08/91	3.8	13.0	0.082	0.0091	0.500	1.5[a]
	02/06/92	22.0	12.0	ND	0.60	0.17	1.6[a]
	05/05/92	39	14	5.0	1.8	5.0	8.0[a]
	07/28/92	38	17	2.8	1.5	4.0	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]
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
MW-12	07/20/93	ND	0.0028	0.0019	0.0032	ND	0.015
	10/18/93	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

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

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 TPH 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.
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
MW-2	07/28/92	NA	0.32
	01/14/93	NA	NA
	04/23/93	NA	ND
	10/18/93	NA	0.51
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 -----	
MW-4	07/28/92	NA	ND
	01/14/93	NA	0.12
	04/23/93	NA	0.17
	10/18/93	NA	0.20
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
MW-6	07/28/92	NA	ND
	01/14/93	NA	ND
	04/23/93	NA	ND
	10/18/93	NA	0.83
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	1.0

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-8	07/28/92	NA	0.15
	01/14/93	NA	NA
	04/23/93	NA	0.15
	10/18/93	NA	0.17
MW-9	07/28/92	NA	ND
	01/13/93	NA	NA
	04/23/93	NA	ND
	10/18/93	NA	0.39
MW-10	07/28/92	NA	ND
	01/14/93	NA	0.20
	04/23/93	NA	ND
	10/18/93	NA	0.61
MW-11	10/18/93	NA	0.26
MW-12	10/18/93	NA	0.12
MW-13	10/18/93	NA	0.10

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

Table 4
Soil Vapor Extraction System Mass Removal Data
Total Petroleum Hydrocarbons
(TPH as Gasoline and Benzene)

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

Sample ID	Date Sampled	Hourmeter Reading (hrs)	Flow Rate (scfm)	TPH as Gasoline: Influent Concentration (ppmv)	TPH as Gasoline: Removal Rate (lbs/day)	TPH as Gasoline: Removed to Date (lbs)	Benzene: Influent Concentration (ppmv)	Benzene: Removal Rate (lbs/day)	Benzene: Removed to Date (lbs)
INFL	08/30/93	6248	34	7,801	99.35	0.00	123.63	1.29	0.00
INFL	08/31/93	6250	37	2,364	33.52	5.54	28.46	0.33	0.07
INFL	09/01/93	6260	30	3,073	35.17	19.85	48.88	0.46	0.23
INFL	09/02/93	6269	46	2,080	36.62	33.31	54.63	0.79	0.47
INFL	09/08/93	6361	25	591	5.64	114.30	27.31	0.21	2.39
INFL	09/14/93	6502 a	29	780	8.48	155.78	18.80	0.12	3.38
INFL	10/27/93	1190.00 b	85	121	3.90	155.78	1.52	0.04	3.38
INFL	10/28/93	1213.57	85	187	6.03	160.66	5.18	0.14	3.47
INFL	10/29/93	1328.37	87	187	6.18	189.86	4.03	0.11	4.06
INFL	11/11/93	1511.20	90	260	8.90	247.28	5.46	0.15	5.06
INFL	11/22/93	1779.22	74	194	5.45	327.41	ND	0.00	5.92
INFL	12/09/93	2183.44	68	35	0.92	381.06	ND	0.00	5.92
TOTAL POUNDS REMOVED:				**TPH as Gasoline =**		**381.06**		**Benzene =**	**5.92**

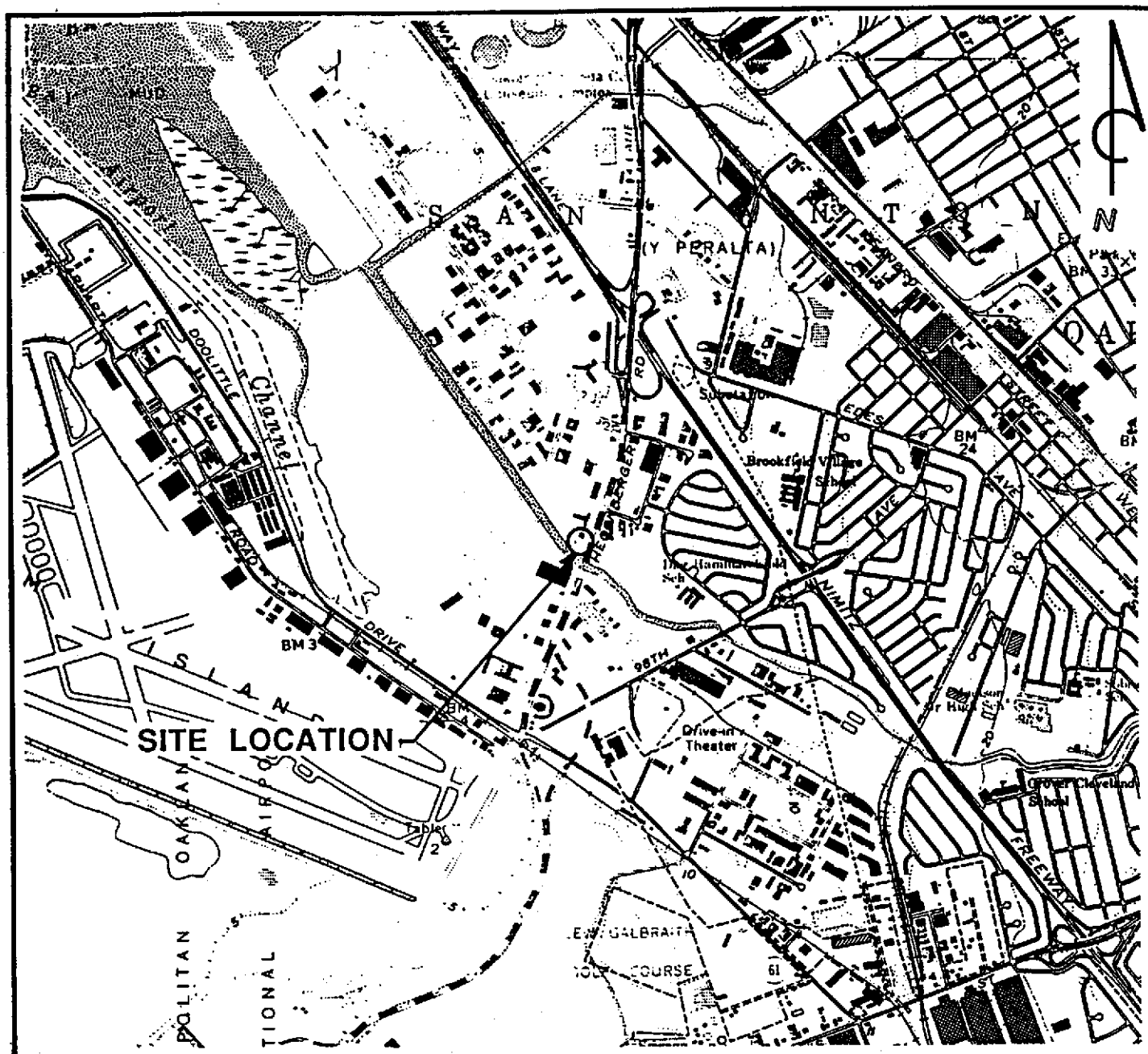
hrs = Hours
scfm = Standard cubic feet per minute
ppmv = Parts per million by volume
lbs = Pounds
ND = Not detected
a. Internal combustion engine was operated at the site from 08/30/93 to 09/14/93.
b. King-Buck Cat-Ox start-up on 10/27/93.
See certified analytical reports for detection limits.

Table 5
Soil Vapor Extraction Well Vapor Data
Total Petroleum Hydrocarbons
(TPH as Gasoline and Benzene)

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

Sample ID	Date Sampled	TPH as Gasoline Influent Concentration (ppmv)	Benzene Influent Concentration (ppmv)
VEW-1	08/30/93	33,097	9,488.21
VEW-1	09/14/93	12,530	287.52
VEW-1	10/27/93	6,147	189.76
VEW-2	08/30/93	4,965	0.00
VEW-2	09/14/93	993	6.61
VEW-2	10/27/93	331	0.00
VEW-3	08/30/93	9,693	0.00
VEW-3	09/14/93	733	0.00
VEW-3	10/27/93	709	0.00
VEW-4	08/30/93	2,837	0.00
VEW-4	09/14/93	1,229	0.00
VEW-4	10/27/93	260	0.00
VEW-5	08/30/93	28,369	0.00
VEW-5	09/14/93	827	0.00
VEW-5	10/27/93	2,222	0.00

ppmv = Parts per million by volume
See certified analytical reports for detection limits.



QUADRANGLE LOCATION

REFERENCES:
USGS 7.5 MIN. TOPOGRAPHIC MAP
TITLED: SAN LEANDRO, CALIFORNIA
DATED: 1959 REVISED: 1980
TITLED: OAKLAND EAST, CALIFORNIA
DATED: 1959 REVISED: 1980

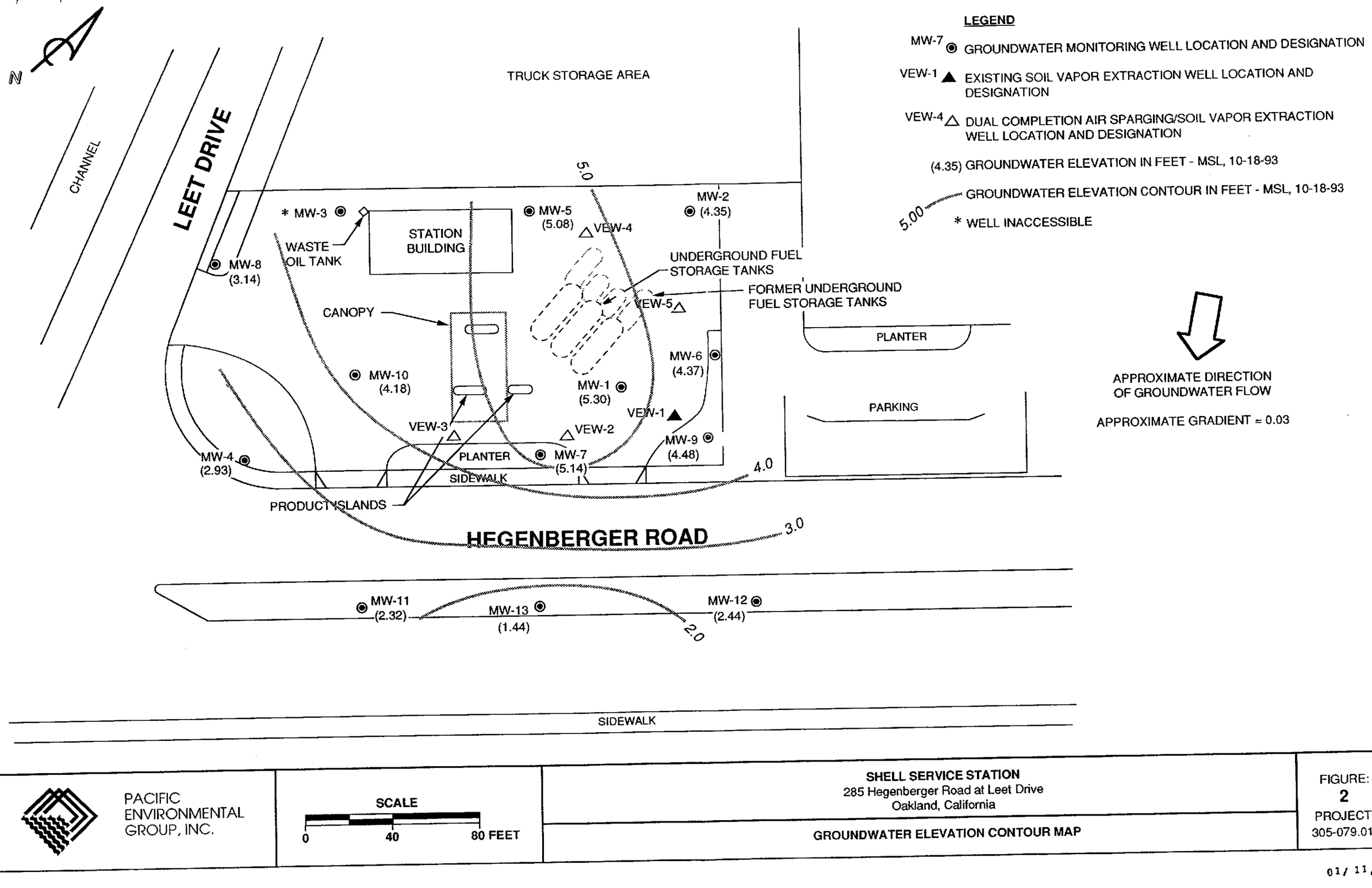
SCALE
2000 0 2000 FEET

PACIFIC ENVIRONMENTAL GROUP INC.

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

SITE LOCATION MAP

FIGURE: 1
PROJECT: 305-79.01



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: **2**
PROJECT: 305-079.01

01/11/94

N

CHANNEL

LEET DRIVE

PLANTER

TRUCK STORAGE AREA

† MW-3

WASTE OIL TANK

STATION BUILDING

MW-8
ND/ND/ND

MW-5
14/2/5.8 *

VEW-4

MW-2
2.1/ND/1.6 *

UNDERGROUND FUEL STORAGE TANKS

VEW-5

FORMER UNDERGROUND FUEL STORAGE TANK

CANOPY

MW-6
24/0.77/2.5 *

MW-10
13/8.6/1.2 *

MW-1
33/14/8.1 *

VEW-1

VEW-3

VEW-2

MW-9
32/14/4.9 *

PLANTER

PLANTER

MW-4
ND/ND/ND

MW-7
44/22/10 *

SIDEWALK

10

PRODUCT ISLANDS

1.0

PARKING

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

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

2.1/ND/1.6 * TPH-g/BENZENE/TPH-d CONCENTRATION IN GROUNDWATER, IN PARTS PER MILLION (ppm), 10-18-93

1.0 BENZENE ISOCONCENTRATION CONTOUR IN ppm, 10-18-93

ND NOT DETECTED

† WELL INACCESSIBLE

* PRIMARILY DUE TO THE PRESENCE OF A LIGHTER PETROLEUM PRODUCT

HEGENBERGER ROAD

MW-11
ND/ND/0.065

MW-13
ND/ND/ND

MW-12
ND/ND/ND

SIDEWALK

PACIFIC ENVIRONMENTAL GROUP, INC.

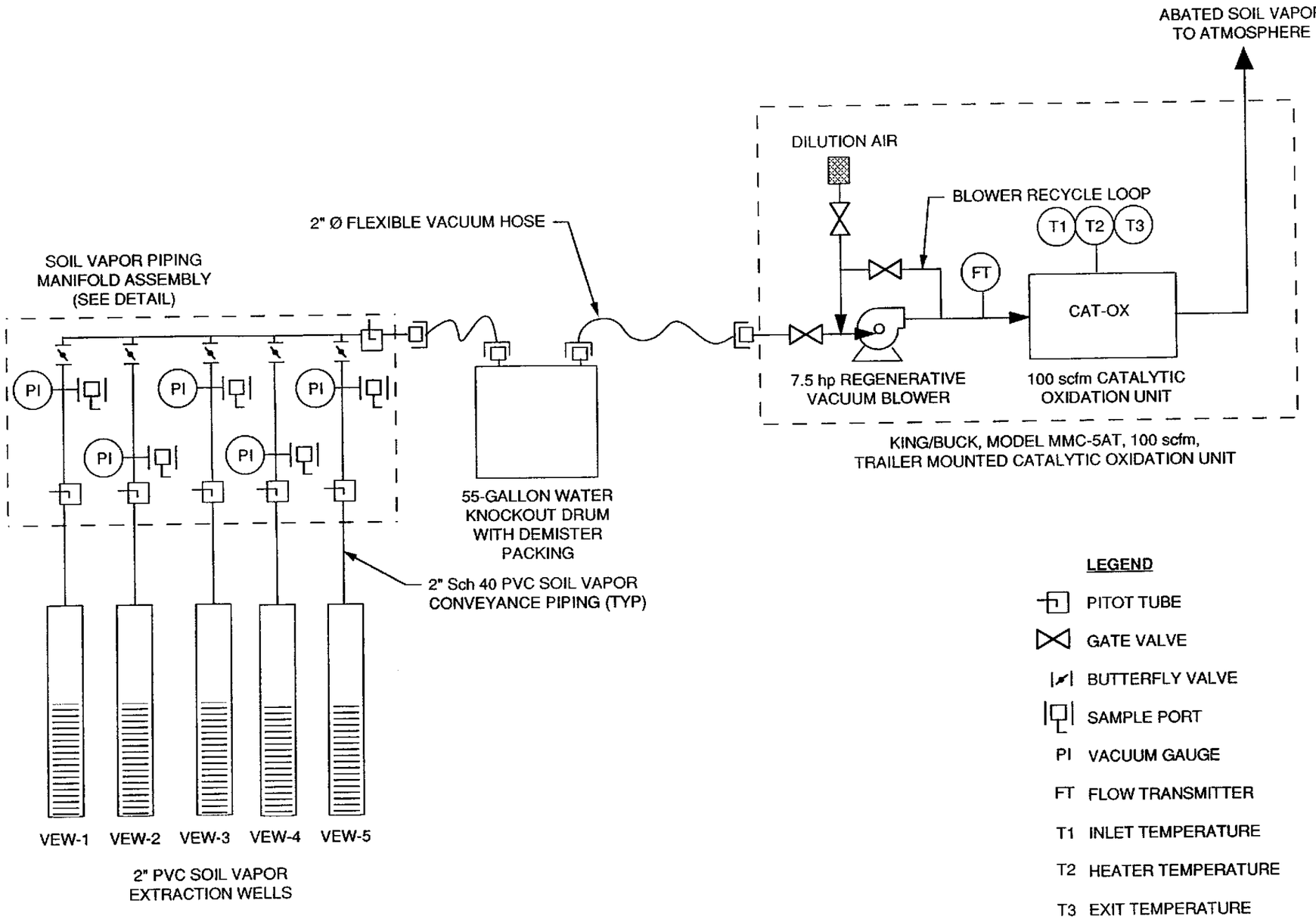
SCALE
0 40 80 FEET

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

TPH-g/BENZENE/TPH-d CONCENTRATION MAP

FIGURE:
3
PROJECT:
305-079.01

01/11/94



PACIFIC ENVIRONMENTAL GROUP, INC.	NO SCALE	**SHELL SERVICE STATION** 285 Hegenberger Road at Leet Drive Oakland, California **SOIL VAPOR EXTRACTION PROCESS FLOW DIAGRAM**	FIGURE: **4** PROJECT: 305-079.01

01/11/94

ATTACHMENT A

GROUNDWATER SAMPLING REPORT

BLAINE
TECH SERVICES INC.

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

November 5, 1993

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:
4th quarter of 1993

QUARTERLY GROUNDWATER SAMPLING REPORT 931018-L-1

This report contains data collected during routine inspection, gauging and sampling of groundwater monitoring wells performed by Blaine Tech Services, Inc. in reponse 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.

Richard C. Blaine

RCB/dk

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 *	10/18/93	TOC	ODOR	NONE	--	--	4.20	9.36
MW-2	10/18/93	TOC	ODOR	NONE	--	--	6.20	9.60
MW-3	10/18/93	INACCESSIBLE						
MW-4	10/18/93	TOC	--	NONE	--	--	7.35	10.14
MW-5	10/18/93	TOC	ODOR	NONE	--	--	5.79	9.71
MW-6	10/18/93	TOC	ODOR	NONE	--	--	6.67	11.01
MW-7	10/18/93	TOC	ODOR	NONE	--	--	5.14	9.94
MW-8	10/18/93	TOC	--	NONE	--	--	7.47	9.98
MW-9	10/18/93	TOC	ODOR	NONE	--	--	6.00	10.74
MW-10	10/18/93	TOC	ODOR	NONE	--	--	6.43	9.94
MW-11	10/18/93	TOC	--	NONE	--	--	8.24	13.90
MW-12	10/18/93	TOC	--	NONE	--	--	7.12	14.64
MW-13	10/18/93	TOC	--	NONE	--	--	8.66	14.39

* Sample DUP was a duplicate sample taken from well MW-1.

9310262 (18) (10/40)

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 10/18/93
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: Z. Bolver

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	MOTOR OIL	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
(1) MW-1	10/18			X		5		X				X	X						
(2) MW-2	↓			X		5		X				X	X						
(3) MW-4				X		5		X				X	X						
(4) MW-5				X		5		X				X	X						
(5) MW-6				X		5		X				X	X						
(6) MW-7				X		5		X				X	X						
(7) MW-8				X		5		X				X	X						
(8) MW-9	↓			X		5		X				X	X						

CHECK ONE (1) BOX ONLY — CT/DT

- Quarterly Monitoring [X] 6441
- Site Investigation [ ] 6441
- Soil Closure/Disposal [ ] 6442
- Water Closure/Disposal [ ] 6443
- Soil/Air Rem. or Syst. O & M [ ] 6442
- Water Rem. or Syst. O & M [ ] 6443
- 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
Z. Bolver	LAD B OLVER	10-19-93 1415	Benny S. Carrasco	Benny S Carrasco	10-19-93 1415
Benny S. Carrasco	Benny S. Carrasco	10-19-93 1935	[illegible]	Maria Barajas	10/19/93 14:33
		Date: Time:			Date: Time:

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

9310262 (18) (10/40)

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 10/18/93
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: [signature]

Printed Name: LAD B OLVER

LAB: Anametrix

CHECK ONE (1) BOX ONLY — C1/D1

- Quarterly Monitoring [X] 6461
- Site Investigation [ ] 6461
- Soil Closure/Disposal [ ] 6462
- Water Closure/Disposal [ ] 6463
- Soil/Air Rem. or Sys. O & M [ ] 6462
- Water Rem. or Sys. O & M [ ] 6463
- Other [ ]

TURN AROUND TIME

- 24 hours [ ]
- 48 hours [ ]
- 15 days [X] (Normal)
- Other [ ] _____

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

Analysis Required

	Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	MOTOR OIL	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
(9)	MW-10	10/18			X		5		X				X	X						
(10)	MW-11				X		5		X				X	X						
(11)	MW-12				X		5		Y				X	X						
(12)	MW-13				X		5		X				X	X						
(13)	DUP				X		5		X				X	X						
(14)	E.B.				X		5		X				X	X						
(15)	T.B.	↓			X		2						X							

	Printed Name	Date/Time		Printed Name	Date/Time
Relinquished By (signature): [signature]	LAD B OLVER	Date: 10-18-93 Time: 1415	Received (signature): [signature]	Printed Name: BENNY S. CARRASCO	Date: 10-18-93 Time: 1415
Relinquished By (signature): [signature]	Printed Name: BENNY S. CARRASCO	Date: 10-19-93 Time: 1435	Received (signature): [signature]	Printed Name: Maria Barajas	Date: 10/19/93 Time: 14:35
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 # : 9310262
Date Received : 10/19/93
Project ID : 204-5508-5504
Purchase Order: MOH-B813

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9310262- 1	MW-1
9310262- 2	MW-2
9310262- 3	MW-4
9310262- 4	MW-5
9310262- 5	MW-6
9310262- 6	MW-7
9310262- 7	MW-8
9310262- 8	MW-9
9310262- 9	MW-10
9310262-10	MW-11
9310262-11	MW-12
9310262-12	MW-13
9310262-13	DUP
9310262-14	E.B.
9310262-15	T.B.

This report consists of 12 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

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

Sarah Schoen, Ph.D.
Laboratory Director

11-03-93
Date

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

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

Workorder # : 9310262
Date Received : 10/19/93
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
9310262- 1	MW-1	WATER	10/18/93	TPHd
9310262- 2	MW-2	WATER	10/18/93	TPHd
9310262- 3	MW-4	WATER	10/18/93	TPHd
9310262- 4	MW-5	WATER	10/18/93	TPHd
9310262- 5	MW-6	WATER	10/18/93	TPHd
9310262- 6	MW-7	WATER	10/18/93	TPHd
9310262- 7	MW-8	WATER	10/18/93	TPHd
9310262- 8	MW-9	WATER	10/18/93	TPHd
9310262- 9	MW-10	WATER	10/18/93	TPHd
9310262-10	MW-11	WATER	10/18/93	TPHd
9310262-11	MW-12	WATER	10/18/93	TPHd
9310262-12	MW-13	WATER	10/18/93	TPHd
9310262-13	DUP	WATER	10/18/93	TPHd
9310262-14	E.B.	WATER	10/18/93	TPHd
9310262- 1	MW-1	WATER	10/18/93	TPHgBTEX
9310262- 2	MW-2	WATER	10/18/93	TPHgBTEX
9310262- 3	MW-4	WATER	10/18/93	TPHgBTEX
9310262- 4	MW-5	WATER	10/18/93	TPHgBTEX
9310262- 5	MW-6	WATER	10/18/93	TPHgBTEX
9310262- 6	MW-7	WATER	10/18/93	TPHgBTEX
9310262- 7	MW-8	WATER	10/18/93	TPHgBTEX

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

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

Workorder # : 9310262
Date Received : 10/19/93
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
9310262- 8	MW-9	WATER	10/18/93	TPHgBTEX
9310262- 9	MW-10	WATER	10/18/93	TPHgBTEX
9310262-10	MW-11	WATER	10/18/93	TPHgBTEX
9310262-11	MW-12	WATER	10/18/93	TPHgBTEX
9310262-12	MW-13	WATER	10/18/93	TPHgBTEX
9310262-13	DUP	WATER	10/18/93	TPHgBTEX
9310262-14	E.B.	WATER	10/18/93	TPHgBTEX
9310262-15	T.B.	WATER	10/18/93	TPHgBTEX

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

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

Workorder # : 9310262
Date Received : 10/19/93
Project ID : 204-5508-5504
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentrations reported as diesel for samples MW-1, MW-2, MW-5, MW-6, MW-7, MW-9, MW-10 and DUP are primarily due to the presence of a lighter petroleum product of hydrocarbon range C6-C12, possibly gasoline.

Cheryl Baemen 11/3/93
Department Supervisor Date

Reggie Dawson 11/3/93
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9310262
Matrix : WATER
Date Sampled : 10/18/93

Project Number : 204-5508-5504
Date Released : 11/02/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# MW-1 -01	Sample I.D.# MW-2 -02	Sample I.D.# MW-4 -03	Sample I.D.# MW-5 -04	Sample I.D.# MW-6 -05
Benzene	0.5	14000	ND	ND	2000	770
Toluene	0.5	1200	ND	ND	100	440
Ethylbenzene	0.5	2000	90	ND	2300	1600
Total Xylenes	0.5	4900	110	ND	5100	830
TPH as Gasoline	50	33000	2100	ND	14000	24000
% Surrogate Recovery		106%	112%	100%	108%	109%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		10/23/93	10/22/93	10/22/93	10/23/93	10/24/93
RLMF		500	10	1	100	50

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor (Dilution).

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 61-139%.

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

Reggie Dawson 11/3/93
Analyst Date

Cheryl Burleson 11/3/93
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9310262
Matrix : WATER
Date Sampled : 10/18/93

Project Number : 204-5508-5504
Date Released : 11/02/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# MW-7 -06	Sample I.D.# MW-8 -07	Sample I.D.# MW-9 -08	Sample I.D.# MW-10 -09	Sample I.D.# MW-11 -10
Benzene	0.5	22000	ND	14000	8600	ND
Toluene	0.5	3800	0.8	530	220	ND
Ethylbenzene	0.5	2600	ND	2000	ND	ND
Total Xylenes	0.5	10000	ND	10000	450	ND
TPH as Gasoline	50	44000	ND	32000	13000	ND
% Surrogate Recovery		103%	100%	101%	102%	101%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		10/23/93	10/22/93	10/24/93	10/24/93	10/22/93
RLMF		500	1	250	250	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor (Dilution).

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 61-139%.

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

Teresa Stier 11/3/93
Analyst Date

Cheryl Burmeister 11/2/93
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9310262
Matrix : WATER
Date Sampled : 10/18/93

Project Number : 204-5508-5504
Date Released : 11/02/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# MW-12 -11	Sample I.D.# MW-13 -12	Sample I.D.# DUP -13	Sample I.D.# E.B. -14	Sample I.D.# T.B -15
Benzene	0.5	ND	ND	14000	ND	ND
Toluene	0.5	ND	ND	1200	ND	ND
Ethylbenzene	0.5	ND	ND	2000	ND	ND
Total Xylenes	0.5	ND	ND	4900	ND	ND
TPH as Gasoline	50	ND	ND	44000	ND	ND
% Surrogate Recovery		102%	99%	106%	98%	96%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		10/22/93	10/22/93	10/23/93	10/22/93	10/24/93
RLMF		1	1	500	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor (Dilution).

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 61-139%.

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

Luisa Shor 11/3/93
Analyst Date

Cheryl Balmer 11/2/93
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9310262
Matrix : WATER
Date Sampled : N/A

Project Number : 204-5508-5504
Date Released : 11/02/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# BO2101E2 BLANK	Sample I.D.# BO2202E2 BLANK	Sample I.D.# BO2401E2 BLANK
Benzene	0.5	ND	ND	ND
Toluene	0.5	ND	ND	ND
Ethylbenzene	0.5	ND	ND	ND
Total Xylenes	0.5	ND	ND	ND
TPH as Gasoline	50	ND	ND	ND
% Surrogate Recovery		98%	92%	91%
Instrument I.D.		HP12	HP12	HP12
Date Analyzed		10/21/93	10/22/93	10/24/93
RLMF		1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor (Dilution).

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 61-139%.

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

Analyst 11/3/93 Date

Supervisor 11/2/93 Date

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

Anametrix W.O.: 9310262
Matrix : WATER
Date Sampled : 10/18/93
Date Extracted: 10/25/93

Project Number : 204-5508-5504
Date Released : 11/02/93
Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)	Surrogate %Rec
9310262-01	MW-1	10/27/93	500	8100	60%
9310262-02	MW-2	10/26/93	50	1600	54%
9310262-03	MW-4	10/26/93	50	ND	63%
9310262-04	MW-5	10/27/93	250	5800	51%
9310262-05	MW-6	10/26/93	50	2500	56%
9310262-06	MW-7	10/27/93	500	10000	55%
9310262-07	MW-8	10/26/93	50	ND	55%
9310262-08	MW-9	10/27/93	250	4900	50%
9310262-09	MW-10	10/28/93	100	1200	59%
9310262-10	MW-11	10/26/93	50	65	59%
9310262-11	MW-12	10/26/93	50	ND	61%
9310262-12	MW-13	10/27/93	50	ND	55%
9310262-13	DUP	10/28/93	100	3700	66%
9310262-14	E.B.	10/27/93	50	ND	58%
BO2512F1	METHOD BLANK	10/26/93	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.

Lucia Shea 11/3/93
Analyst Date

Cheryl Baeman 11/3/93
Supervisor Date

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

Anametrix W.O.: 9310262
Matrix : WATER
Date Sampled : 10/18/93
Date Extracted: 10/25/93

Project Number : 204-5508-5504
Date Released : 11/02/93
Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)	Surrogate %Rec
9310262-01	MW-1	10/27/93	500	960	60%
9310262-02	MW-2	10/26/93	50	510	54%
9310262-03	MW-4	10/26/93	50	200	63%
9310262-04	MW-5	10/27/93	250	860	51%
9310262-05	MW-6	10/26/93	50	830	56%
9310262-06	MW-7	10/27/93	500	1000	55%
9310262-07	MW-8	10/26/93	50	170	55%
9310262-08	MW-9	10/27/93	250	390	50%
9310262-09	MW-10	10/28/93	100	610	59%
9310262-10	MW-11	10/26/93	50	260	59%
9310262-11	MW-12	10/26/93	50	120	61%
9310262-12	MW-13	10/27/93	50	100	55%
9310262-13	DUP	10/28/93	100	670	66%
9310262-14	E.B.	10/27/93	50	ND	58%
BO2512F1	METHOD BLANK	10/26/93	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 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 11/3/93 Date

Supervisor 11/3/93 Date

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: MO2102E1
Matrix	: WATER	Analyst	: IS
Date Sampled	: N/A	Supervisor	: G
Date Analyzed	: 10/22/93	Date Released	: 11/02/93
		Instrument I.D.	: HP12

COMPOUND	SPIKE AMT. (ug/L)	REC LCS (ug/L)	%REC LCS	% REC LIMITS *
GASOLINE	500	450	90%	67-127
p-BFB			98%	61-139

* Quality control limits established by Anametrix, Inc.

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: MO2401E3
Matrix	: WATER	Analyst	: IS
Date Sampled	: N/A	Supervisor	:
Date Analyzed	: 10/24/93	Date Released	: 11/01/93
		Instrument I.D.	: HP12

COMPOUND	SPIKE AMT. (ug/L)	LCS (ug/L)	REC LCS	%REC LIMITS *
Benzene	20.0	22.5	113%	52-133
Toluene	20.0	21.5	108%	57-136
Ethylbenzene	20.0	22.9	115%	56-139
Total Xylenes	20.0	20.8	104%	56-141
P-BFB			101%	61-139

* 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: 10/25/93
Date Analyzed : 10/26/93

Anametrix I.D. : MO2512F1
Analyst : IS
Supervisor : [illegible]
Date Released : 11/02/93
Instrument I.D.: HP9

COMPOUND	SPIKE AMT (ug/L)	LCS REC (ug/L)	% REC LCS	LCSD REC (ug/L)	% REC LCSD	RPD	% REC LIMITS
DIESEL	1250	1180	94%	1220	98%	3%	47-130
SURROGATE			62%		65%		30-130

* Quality control limits established by Anametrix, Inc.

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: QO22X1E3
Matrix	: WATER	Analyst	: IS
Date Sampled	: N/A	Supervisor	: ag
Date Analyzed	: 10/22/93	Date Released	: 11/03/93
		Instrument I.D.	: HP12

COMPOUND	SPIKE AMT. (ug/L)	LCS (ug/L)	REC LCS	%REC LIMITS *
Benzene	20.0	22.1	111%	52-133
Toluene	20.0	23.5	118%	57-136
Ethylbenzene	20.0	24.0	120%	56-139
Total Xylenes	20.0	24.2	121%	56-141
P-BFB			101%	61-139

* 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 6 air samples received at Sequoia Analytical on August 30,1993. The requested analyses are listed below:

3HE1901	Air, Infl	8/30/93	EPA 5030/8015/8020
3HE1902	Air, VEW-1	8/30/93	EPA 5030/8015/8020
3HE1903	Air, VEW-2	8/30/93	EPA 5030/8015/8020
3HE1904	Air, VEW-3	8/30/93	EPA 5030/8015/8020
3HE1905	Air, VEW-4	8/30/93	EPA 5030/8015/8020
3HE1906	Air, VEW-5	8/30/93	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

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:	305-79.01/Shell, Oakland	Sampled:	Aug 30, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Aug 30, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Aug 31, 1993
Attention: Justin Hawkins	First Sample #:	3HE1901		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3HE1901 Infl	Sample I.D. 3HE1902 VEW-1	Sample I.D. 3HE1903 VEW-2	Sample I.D. 3HE1904 VEW-3	Sample I.D. 3HE1905 VEW-4	Sample I.D. 3HE1906 VEW-5
Purgeable Hydrocarbons	5.0	33,000	140,000	21,000	41,000	12,000	120,000
Benzene	0.050	430	3,300	N.D.	N.D.	N.D.	N.D.
Toluene	0.050	150	860	N.D.	62	N.D.	200
Ethyl Benzene	0.050	270	1,400	180	510	74	1,900
Total Xylenes	0.050	440	3,400	190	390	98	1,500
Chromatogram Pattern:		Gas + Non-gas < C8	Gas+Non-gas < C8	Gas+Non-gas < C8	Gas+Non-gas < C8	Gas+Non-gas < C8	Gas+Non-gas < C8

Quality Control Data

Report Limit Multiplication Factor:	250	1000	200	500	100	1000
Date Analyzed:	8/30/93	8/30/93	8/30/93	8/30/93	8/30/93	8/30/93
Instrument Identification:	GCHP-3	GCHP-3	GCHP-3	GCHP-2	GCHP-2	GCHP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	120	133*	120	198*	217*	237*

* 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: 305-79.01/Shell, Oakland
QC Sample Group: 3HE1901-03

Reported: Aug 31, 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
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK083093	GBLK083093	GBLK083093	GBLK083093
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	8/30/93	8/30/93	8/30/93	8/30/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
LCS % Recovery:	100	100	100	100
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3HA2901	3HA2901	3HA2901	3HA2901
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	8/30/93	8/30/93	8/30/93	8/30/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Matrix Spike % Recovery:	100	100	100	103
Matrix Spike Duplicate % Recovery:	110	100	100	107
Relative % Difference:	9.5	0.0	0.0	3.8

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

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: 3HE1904-06

Reported: Aug 31, 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
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK083093	GBLK083093	GBLK083093	GBLK083093
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	8/30/93	8/30/93	8/30/93	8/30/93
Instrument I.D.#:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
LCS % Recovery:	110	110	110	107
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3HA2901	3HA2901	3HA2901	3HA2901
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	8/30/93	8/30/93	8/30/93	8/30/93
Instrument I.D.#:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
Matrix Spike % Recovery:	100	100	100	100
Matrix Spike Duplicate % Recovery:	110	100	100	100
Relative % Difference:	9.5	9.5	9.5	9.5

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

SHELL OIL COMPANY 305 79.01
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 8-30-93
Page 1 of 1

Site Address: 285 Hegenberger OAKLAND

WIC#: 204 7620-1502

Shell Engineer: DAN KIRK
Phone No.: 675 6168 570
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

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	☐ 4463
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 GAS; 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
1	INFL	8/30/93				X	1	1 Liter Amb	NP	N	VST/Soil/Vapor	
2	VEW-1	↓				↓	↓	↓	↓	↓	↓	
3	VEW-2											9308E19
4	VEW-3											
5	VEW-4											
6	VEW-5	↓				↓	↓	↓	↓	↓	↓	

	Printed Name:	Date:	Time:	Received (signature):	Printed Name:	Date:	Time:
Relinquished By (signature):	Joe Vojvoda	8-30-93	1240		M Doden	8/30/93	1240
Relinquished By (signature):	M. Doden	8/30/93	1525		D. NEWCOMB	8/30/93	1525
Relinquished By (signature):	D. NEWCOMB	8/30/93	1640		1640 8/30/93	Date:	Time:

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

Rev: 7/12/93

Shell Oil Chn. of Custody

SEQUOIA ANALYTICAL — SAMPLE RECEIPT LOG

CLIENT NAME: Pacific Environmental
REC. BY (PRINT): MJC

MASTER LOG NO. / PAGE: 9308E19
DATE OF LOG-IN: 8-30-93

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
1. Custody Seal(s):	Present / (Absent)	1	A	INFL	Tedlar	Air	8/30	
	Intact / Broken*	2		VEW-1				
2. Custody Seal Nos.:		3		VEW-2				
		4		VEW-3				
3. Chain-of-Custody Records:	(Present) / Absent*	5		VEW-4				
		6		VEW-5				
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:	8/30/93							
12. Time Rec. at Lab:	1640							

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

SHELL OIL COMPANY 205 7901
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No:_____

Date: 8-30-93
Page 1 of 1

Site Address: 285 HagenBerger OAKLAND

WIC#: 204 7620-1502

Shell Engineer: DAN KIRK
Phone No.: 675 6168 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

UST AGENCY: _____

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.

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	8/30/93				X	1						Y		1 Liter Brs	NP	N	UST/Soil/Water	
Vew-1	↓				↓	↓						↓		↓	↓	↓	↓	
Vew-2																		
Vew-3																		
Vew-4																		
Vew-5	↓				↓	↓						↓		↓	↓	↓	↓	

	Printed Name:	Date:	Time:	Received (signature):	Printed Name:	Date:	Time:
Relinquished By (signature):	Joe Vojvoda	8-30-93	1240	M Doden	M Doden	8/30/93	1240
Relinquished By (signature):	M. Doden	8/30/93	1525	[signature]	D. NEWCOMB	8/30/93	1525
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: Justin Hawkins

Project: 305-79.01/Shell, Oakland

Enclosed are the results from 2 air samples received at Sequoia Analytical on August 31,1993. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3HE7101	Air, Infl	8/31/93	EPA 5030/8015/8020
3HE7102	Air, Effl	8/31/93	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

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:	305-79.01/Shell, Oakland	Sampled:	Aug 31, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Aug 31, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Sep 1, 1993
Attention: Justin Hawkins	First Sample #:	3HE7101		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3HE7101 Infl	Sample I.D. 3HE7102 Effl
Purgeable Hydrocarbons	5.0	10,000	240
Benzene	0.050	99	0.52
Toluene	0.050	47	0.76
Ethyl Benzene	0.050	110	8.1
Total Xylenes	0.050	170	14
Chromatogram Pattern:		Gas + Non-gas < C8	Gas

Quality Control Data

Report Limit Multiplication Factor:	100	2.5
Date Analyzed:	8/31/93	8/31/93
Instrument Identification:	GCHP-3	GCHP-3
Surrogate Recovery, %: (QC Limits = 70-130%)	102	100

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: 3HE7101-02

Reported: Sep 1, 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
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK083193	GBLK083193	GBLK083193	GBLK083193
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	8/31/93	8/31/93	8/31/93	8/31/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
LCS % Recovery:	99	100	99	100
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3HD6202	3HD6202	3HD6202	3HD6202
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	8/31/93	8/31/93	8/31/93	8/31/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Matrix Spike % Recovery:	100	100	100	100
Matrix Spike Duplicate % Recovery:	100	100	110	107
Relative % Difference:	0.0	0.0	9.5	6.8

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Page 1 of 1

Site Address: 285 Hegenberger Rd Oakland

WIC#: 204-5508-5504

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, CALIFORNIA 95110

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

Comments:

Sampled by: Joe Vujovich

Printed Name: Joe Vujovich

LAB: Segona

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

UST AGENCY: _____

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 GRO; Asbestos; Container Size; Preparation Used; Composite Y/N

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
IAFC	8/31/93				X	1	UST Soil Vapor	9308E71
VEW-1								
VEW-2								
VEW-3								
VEW-4								
VEW-5								
EFFC								

CANCELLED PER JUSTIN HAWKINS

	Printed Name	Date/Time	Received (signature)	Printed Name	Date/Time
Relinquished By (signature): Joe Vujovich	Joe Vujovich	8-31-93 1450	David Alderman	David Alderman	8/31/93 1450
Relinquished By (signature): David Alderman	David Alderman	8/31/93 3:40	Received (signature):	Printed Name:	Date: Time:
Relinquished By (signature):	Printed Name:	Date: Time:	Received (signature):	Printed Name: P. HUPAND	Date: 8-31-93 Time: 1540

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

Shell Oil Chn. of Custody

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

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

MASTER LOG NO. / PAGE: 9308E71
DATE OF LOG-IN: 8-31-93

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: Sample Tag Nos.:	(Present)* / Absent* (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:	8-31-93
12. Time Rec. at Lab:	1540

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
01	A	INFL	TEDLAR	A	8-31	
2		VEW 1				
3		2				
4		3				
5		4				
6		5				
7		EFFL				

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

SHELL OIL COMPANY 305 7901
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: ____________

Date: 8-31-95
Page 1 of 1

Site Address: 285 Hegenberger Rd Oakland

WIC#: 204-5508-5504

Shell Engineer: DAN Kirk
Phone No.: (510) 675 4668
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 Vujicic

Printed Name: Joe Vujicic

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	8/31/95				X	1						X				Liter Bag	N	N	UST Soil Vapor	
~~VEW-1~~	↓				↓	↓						↓				↓		↓		
~~VEW-2~~																				
~~VEW-3~~																				
~~VEW-4~~																				
~~VEW-5~~																				
EFFL	↓				↓	↓						↓				↓		↓		

Relinquished By (signature):	Printed Name:	Date/Time:	Received (signature):	Printed Name:	Date/Time:
Joe Vujicic	Joe Vujicic	Date: 8-31-95 Time: 1450	David Alderman	David Alderman	Date: 8/31/95 Time: 1450
		Date: Time:			Date: Time:
		Date: Time:			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: Justin Hawkins

Project: 305-79.01/Shell, Oakland

Enclosed are the results from 2 air samples received at Sequoia Analytical on September 2,1993. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3I05401	Air, Infl	9/1/93	EPA 5030/8015/8020
3I05402	Air, Effl	9/1/93	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

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:	305-79.01/Shell, Oakland	Sampled:	Sep 1, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Sep 2, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Sep 9, 1993
Attention: Justin Hawkins	First Sample #:	3I05401		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3I05401 Infl	Sample I.D. 3I05402 Effl
Purgeable Hydrocarbons	5.0	13,000	79
Benzene	0.050	170	0.25
Toluene	0.050	95	0.38
Ethyl Benzene	0.050	120	2.8
Total Xylenes	0.050	230	5.0
Chromatogram Pattern:		Gas + Non-gas < C8	Gas

Quality Control Data

Report Limit Multiplication Factor:	100	1.0
Date Analyzed:	9/2/93	9/2/93
Instrument Identification:	GCHP-3	GCHP-3
Surrogate Recovery, %: (QC Limits = 70-130%)	111	97

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: 3I05401-02

Reported: Sep 9, 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
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK090293	GBLK090293	GBLK090293	GBLK090293
Date Prepared:	-	-	-	-
Date Analyzed:	9/2/93	9/2/93	9/2/93	9/2/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
LCS % Recovery:	99	100	100	100
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3HD3602	3HD3602	3HD3602	3HD3602
Date Prepared:	-	-	-	-
Date Analyzed:	9/2/93	9/2/93	9/2/93	9/2/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Matrix Spike % Recovery:	100	100	100	103
Matrix Spike Duplicate % Recovery:	110	110	110	107
Relative % Difference:	9.5	9.5	9.5	3.8

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

SEQUOIA ANALYTICAL — SAMPLE RECEIPT LOG

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

MASTER LOG NO. / PAGE: 9309054
DATE OF LOG-IN: 9-2-93

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: 9-2-93
12. Time Rec. at Lab: 1130

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
01	A	INFL	1 bag	air	9/1	
02	A	EFFL	↓	↓		

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

Form SC001

SHELL OIL COMPANY 305 7901
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 9-1-93
Page 1 of 1

Site Address: 285 Hegenberger 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, 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

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

UST AGENCY: _____

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	9/1/93				X	1						X				Liter Brass	N	N	UST/Soil VAPOR	9309054
EFFL	↓				↓	1						↓				↓	↓	↓	gas	

Relinquished By (signature): Joe Vojvoda	Printed Name: Joe Vojvoda	Date: 9-1-93 Time: 1500	Received (signature): M Doden	Printed Name: M Doden	Date: 9/2/93 Time: 0730
Relinquished By (signature): M Doden	Printed Name: M Doden	Date: 9/2/93 Time: 0815	Received (signature): David Alderman	Printed Name: David Alderman	Date: 9/2/93 Time: 10:35
Relinquished By (signature): David Alderman	Printed Name: David Alderman	Date: 9/2/93 Time: 1130	Received (signature): L Stenstrom	Printed Name: L Stenstrom	Date: 9/2/93 Time: 1130

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

Rev: 7/12/93

Shell Oil Chn. of Custody

SHELL OIL COMPANY 305 79.01
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 9-1-93
Page 1 of 1

Site Address: 285 Hegenberger 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, 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

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	9/1/93				X	1						Y				Liter (BAY)	N	N	VST/Soil VAPOR/ gas	
EFFL	↓				↓	1						↓				↓	↓	↓		

	Printed Name	Date/Time		Printed Name	Date/Time
Relinquished By (signature): Joe Vojvoda	Joe Vojvoda	9-1-93 1500	Received (signature): M Docter	M Docter	9/2/93 0730
Relinquished By (signature): M Docter	M Docter	9/2/93 0745	Received (signature): David Adelman	David Adelman	9/2/93 10:5
Relinquished By (signature):			Received (signature):		

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

Rev. 7/12/93

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: Mark Boyd

Project: 305-79.01/Shell, Oakland

Enclosed are the results from 2 air samples received at Sequola Analytical on September 3,1993. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3I14901	Air, Infl	9/2/93	EPA 5030/8015/8020
3I14902	Air, Effl	9/2/93	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

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:	305-79.01/Shell, Oakland	Sampled:	Sep 2, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Sep 3, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Sep 9, 1993
Attention: Mark Boyd	First Sample #:	3I14901		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3I14901 Infl	Sample I.D. 3I14902 Effl
Purgeable Hydrocarbons	5.0	8,800	64
Benzene	0.050	190	1.7
Toluene	0.050	130	1.0
Ethyl Benzene	0.050	130	4.4
Total Xylenes	0.050	330	5.0
Chromatogram Pattern:		Gas	Gas

Quality Control Data

Report Limit Multiplication Factor:	100	1.0
Date Analyzed:	9/4/93	9/4/93
Instrument Identification:	GCHP-3	GCHP-3
Surrogate Recovery, %: (QC Limits = 70-130%)	123	110

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: Mark Boyd

Client Project ID: 305-79.01/Shell, Oakland
QC Sample Group: 3I14901-02
Reported: Sep 9, 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
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK090493	GBLK090493	GBLK090493	GBLK090493
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	9/4/93	9/4/93	9/4/93	9/4/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
LCS % Recovery:	100	100	100	103
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3HE7803	3HE7803	3HE7803	3HE7803
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	9/4/93	9/4/93	9/4/93	9/4/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Matrix Spike % Recovery:	110	110	110	107
Matrix Spike Duplicate % Recovery:	110	100	110	107
Relative % Difference:	0.0	9.5	0.0	0.0

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

SHELL OIL COMPANY 3057901
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: ______

Date: 9/3/93
Page 1 of 1

Site Address: 285 HEGENBERGER, OAKLAND

WIC#: 204-5508-5304

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

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

Consultant Contact: MARK BOYD
Phone No.: 408 441-7500
Fax #: 441-7539

Comments:

Sampled by: [signature]

Printed Name: JAMES MONNIER

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	☐
16 days	☒ (Normal)
Other	☐ ______

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

UST AGENCY: ______

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020 GAS			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
INFL.	9/2/93				X	1						X							UST SOIL VAPOR GAS	9309149-01
EFFL.	9/2/93				X	1						X							↓	02

Relinquished By (signature):	Printed Name:	Date/Time:	Received (signature):	Printed Name:	Date/Time:
[signature]	JAMES C. MONNIER	Date: 9/3/93 Time: 1130	[signature]	M DODGE	Date: 9/3/93 Time: 1130
[signature]	M DODGE	Date: 9/3/93 Time: 1410	[signature]	D. NEWCOMB	Date: 9/3/93 Time: 1410
[signature]	D. NEWCOMB	Date: 9/3/93 Time: 1450			Date: Time:

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

Shell Oil Chn of Custody

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT): PH
MASTER LOG NO. / PAGE: 9309149
DATE OF LOG-IN: 9-3-93

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
1. Custody Seal(s):	Present / (Absent)	01	A	INFL	TEDLAR	A	9-2	
	Intact / Broken*	02	↓	EFFL	↓	↓	↓	
2. Custody Seal Nos.:								
3. Chain-of-Custody Records:	(Present) / Absent*							
4. Traffic Reports or Packing List:	Present / (Absent)							
5. Airbill:	Airbill / Sticker		N.S.					
	Present / Absent							
6. Airbill No.:								
7. Sample Tags:	(Present) / Absent*							
Sample Tag Nos.:	(Listed) / Not Listed on Chain-of-Custody							
8. Sample Condition:	(Intact) / Broken* / Leaking*							
9. Does information on custody reports, traffic reports and sample tags agree?	(Yes) / No*							
10. Proper Preservatives Used:	Yes / No*							
11. Date Rec. at Lab:	9-3-93							
12. Time Rec. at Lab:	1442				↓			

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

SHELL OIL COMPANY 305-7901
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 9/3/93
Page 1 of 1

Site Address: 285 HEGENBERGER, OAKLAND

WIC#: 204-5508-5304

Shell Engineer: DANKIRK — Phone No.: (510) 675-6168 — Fax #: (510) 675-6172

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

Consultant Contact: MARK BOYD — Phone No.: 408 441-7500 — Fax #: 441-7539

Comments:

Sampled by: [signature] — Printed Name: JAMES MERRICK

LAB: SEQUOIA

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020 GAS			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
INFL.	9/2/93				X	1						X							UST SOIL VAPOR GAS ↓	
EFFL.	9/2/93				X	1						X								

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

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

UST AGENCY: _____

Relinquished By (signature)	Printed Name	Date / Time	Received (signature)	Printed Name	Date / Time
[signature]	JAMES C. MERRICK	Date: 9/3/93 Time: 1730	[signature]	M DODEN	Date: 9/3/93 Time: 1730
M DODEN	M DODEN	Date: 9/3/93 Time: 1410	[signature]	D. NEAROMS	Date: 9/3/93 Time: 1410
		Date: Time:			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: Justin Hawkins

Project: 305-79.01/Shell, Oakland

Enclosed are the results from 2 air samples received at Sequoia Analytical on September 9,1993. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3I29301	Air, Infl	9/8/93	EPA 5030/8015/8020
3I29302	Air, Effl	9/8/93	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

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:	305-79.01/Shell, Oakland	Sampled:	Sep 8, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Sep 9, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Sep 14, 1993
Attention: Justin Hawkins	First Sample #:	3I29301		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3I29301 Infl	Sample I.D. 3I29302 Effl
Purgeable Hydrocarbons	5.0	2,500	95
Benzene	0.050	51	2.0
Toluene	0.050	73	1.8
Ethyl Benzene	0.050	41	2.0
Total Xylenes	0.050	170	9.4
Chromatogram Pattern:		Gas	Gas

Quality Control Data

Report Limit Multiplication Factor:	100	1.0
Date Analyzed:	9/9/93	9/9/93
Instrument Identification:	GCHP-2	GCHP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	122	115

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: 3I29301-02

Reported: Sep 14, 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
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK090993	GBLK090993	GBLK090993	GBLK090993
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	9/9/93	9/9/93	9/9/93	9/9/93
Instrument I.D.#:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
LCS % Recovery:	84	85	85	87
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3HF8103	3HF8103	3HF8103	3HF8103
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	9/9/93	9/9/93	9/9/93	9/9/93
Instrument I.D.#:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
Matrix Spike % Recovery:	100	100	100	103
Matrix Spike Duplicate % Recovery:	96	99	99	100
Relative % Difference:	4.1	1.0	1.0	3.0

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

SHELL OIL COMPANY 305 7901
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 9-9-93
Page 1 of 1

Site Address: 285 Hegenberger OAKLand

WIC#: 204-7620-1502

Shell Engineer: DAN Kirk
Phone No.: 675 6168 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

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

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	9/8/93				X	1						X				1 Liter Amber	N	N	vst Soil/Vapor	9309293 -01A
EFFL	X				X	1						X				X	↓	↓		↓ -02A

Relinquished By (signature):	Printed Name: Joe VOJVODA	Date: 9-9-93 Time: 8:10	Received (signature):	Printed Name: M. Doden	Date: 9/9/93 Time: 0800
Relinquished By (signature):	Printed Name: M. DODEN	Date: 9/9/93 Time: 10:50	Received (signature):	Printed Name: David Alderman	Date: 9/9/93 Time: 10:50
Relinquished By (signature):	Printed Name: D. Alderman	Date: 9/9/93 Time: 11:40	Received (signature):	Printed Name: John Miller	Date: 9/9/93 Time: 1140

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

Shell Oil Chain of Custody

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

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

MASTER LOG NO. / PAGE: 9309293
DATE OF LOG-IN: 9-9-93

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	9/8	
2. Custody Seal Nos.:	—	02	↓	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: Sample Tag Nos.:	(Present) / Absent* (Listed) / Not Listed on Chain-of-Custody							
8. Sample Condition:	(Intact)/Broken*/Leaking*						—	
9. Does information on custody reports, traffic reports and sample tags agree?	(Yes) / No*							
10. Proper Preservatives Used:	(Yes) / No*							
11. Date Rec. at Lab:	9-9-93							
12. Time Rec. at Lab:	11:40							

*Circled, contact Project Manager and attach record of resolution

SHELL OIL COMPANY 305 7901
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 9-9-93
Page 1 of 1

Site Address: 285 Hegenberger OAKland

WIC#: 204-7620-1502

Shell Engineer: DAN Kirk
Phone No.: 675 6168
Fax #: 510 675 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

CHECK ONE (1) BOX ONLY		CT/DT
G.W. Monitoring	☐	4451
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

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	9/8/93				X	1						X				1 Liter Can	N	N	vst Soil/Vapor	
EFFL	X				X	1						X				X	✓	✓		

	Printed Name:	Date:	Time:	Received (signature):	Printed Name:	Date:	Time:
Relinquished By (signature):	Joe Vojvoda	9-9-93	9:10	M. Doden	M. Doden	9/9/93	0855
Relinquished By (signature):	M. Doden	9/9/93	10:50	David Alderman	David Alderman	9/9/93	10:50
Relinquished By (signature):		Date:	Time:	Received (signature):	Printed Name:	Date:	Time:

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

Rev. 1/11/93

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: Justin Hawkins

Project: 305-79.01/Shell, Oakland

Enclosed are the results from 7 air samples received at Sequoia Analytical on September 15,1993. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3I67101	Air, Infl	9/14/93	EPA 5030/8015/8020
3I67102	Air, Effl	9/14/93	EPA 5030/8015/8020
3I67103	Air, VEW-1	9/14/93	EPA 5030/8015/8020
3I67104	Air, VEW-2	9/14/93	EPA 5030/8015/8020
3I67105	Air, VEW-3	9/14/93	EPA 5030/8015/8020
3I67106	Air, VEW-4	9/14/93	EPA 5030/8015/8020
3I67107	Air, VEW-5	9/14/93	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

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:	305-79.01/Shell, Oakland	Sampled:	Sep 14, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Sep 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Sep 23, 1993
Attention: Justin Hawkins	First Sample #:	3I67101		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3I67101 Infl	Sample I.D. 3I67102 Effl	Sample I.D. 3I67103 VEW-1	Sample I.D. 3I67104 VEW-2	Sample I.D. 3I67105 VEW-3	Sample I.D. 3I67106 VEW-4
Purgeable Hydrocarbons	5.0	3,300	130	53,000	4,200	3,100	5,200
Benzene	0.050	48	11	1,000	23	N.D.	N.D.
Toluene	0.050	29	2.4	850	26	6.4	27
Ethyl Benzene	0.050	N.D.	0.55	57	8.0	14	N.D.
Total Xylenes	0.050	120	12	1,900	250	79	160
Chromatogram Pattern:		Gas + Non-gas < C8	Gas	Gas + Non-gas < C8	Gas	Gas	Gas

Quality Control Data

Report Limit Multiplication Factor:	100	10	500	100	100	100
Date Analyzed:	9/16/93	9/16/93	9/16/93	9/16/93	9/16/93	9/16/93
Instrument Identification:	GCHP-3	GCHP-3	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Surrogate Recovery, %: (QC Limits = 70-130%)	112	103	128	110	117	111

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	Client Project ID:	305-79.01/Shell, Oakland	Sampled:	Sep 14, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Sep 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Sep 23, 1993
Attention: Justin Hawkins	First Sample #:	3I67107		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3I67107 VEW-5
Purgeable Hydrocarbons	5.0	3,500
Benzene	0.050	N.D.
Toluene	0.050	N.D.
Ethyl Benzene	0.050	21
Total Xylenes	0.050	64
Chromatogram Pattern:		Gas

Quality Control Data

Report Limit Multiplication Factor:	100
Date Analyzed:	9/16/93
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: 305-79.01/Shell, Oakland
QC Sample Group: 3I67101-07

Reported: Sep 23, 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
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK091693	GBLK091693	GBLK091693	GBLK091693
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	9/16/93	9/16/93	9/16/93	9/16/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
LCS % Recovery:	96	97	97	97
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3I45101	3I45101	3I45101	3I45101
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	9/16/93	9/16/93	9/16/93	9/16/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Matrix Spike % Recovery:	91	90	91	90
Matrix Spike Duplicate % Recovery:	96	95	97	97
Relative % Difference:	5.3	5.4	6.4	7.5

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

SHELL OIL COMPANY 205-7901
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 9-14-93
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, 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

UST AGENCY: _____

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

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	9/14/93				1	1						X				1 Liter Brs	N	N	vf soil vapor	
EFFL	"				"	"						"				"	"	"	"	930967
VEW-1	"				"	"						"				"	"	"	"	
VEW-2	"				"	"						"				"	"	"	"	
VEW-3	"				"	"						"				"	"	"	"	
VEW-4	"				"	"						"				"	"	"	"	
VEW-5	"				"	"						"				"	"	"	"	

	Relinquished By (signature)	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
1	Joe Vojvoda	Joe Vojvoda	9-14-93	12:58	M Doder	M Doder	9/15/93	0752
2	M Doder	M Doder	9/15/93		David Alderman	David Alderman	9/15/93	10:30
3	David Alderman	David Alderman	9/15/93	11:20	P. HUFANO		9/15/93	1120

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

Rev. 7/12/93

Shell Oil Chain of Custody

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

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

MASTER LOG NO. / PAGE: 9309671
DATE OF LOG-IN: 9-15-93

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	9-14	
2. Custody Seal Nos.: —	02		EPFL				
3. Chain-of-Custody Records: (Present) / Absent*	03		VEW-1				
4. Traffic Reports or Packing List: Present / (Absent)	04		VEW-2				
5. Airbill: Airbill / Sticker Present / (Absent)	05		VEW-3				
6. Airbill No.:	06		VEW-4				
7. Sample Tags: Present / Absent* Sample Tag Nos.: Listed / Not Listed on Chain-of-Custody	07		VEW-5				
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. Time Rec. at Lab:							

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

SHELL OIL COMPANY 365-7901
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: ______

Date: 9-14-93
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: [signature]

Printed Name: Joe Vojvoda

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

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	9/14/93				1	1						X				1 Liter bag	N	N	vst soil vapor	
EFFL	↓				↓	↓						↓				↓	↓	↓	↓	
vew-1	↓				↓	↓						↓				↓	↓	↓	↓	
vew-2	↓				↓	↓						↓				↓	↓	↓	↓	
vew-3	↓				↓	↓						↓				↓	↓	↓	↓	
vew-4	↓				↓	↓						↓				↓	↓	↓	↓	
vew-5	↓				↓	↓						↓				↓	↓	↓	↓	

Relinquished By (signature):	Printed Name:	Date/Time	Received (signature):	Printed Name:	Date/Time
[signature]	Joe Vojvoda	Date: 9-14-93 Time: 1238	M Doden	M Doden	Date: 9/15/93 Time: 0750
M Doden	M Doden	Date: 9/15/93 Time:			Date: Time:
		Date: Time:			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: 305-79.01L/Shell, Oakland

Enclosed are the results from 5 air samples received at Sequoia Analytical on October 28,1993. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3JE5401	Air, VEW-1	10/27/93	EPA 5030/8015/8020
3JE5402	Air, VEW-2	10/27/93	EPA 5030/8015/8020
3JE5403	Air, VEW-3	10/27/93	EPA 5030/8015/8020
3JE5404	Air, VEW-4	10/27/93	EPA 5030/8015/8020
3JE5405	Air, VEW-5	10/27/93	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

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:	Oct 27, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Oct 28, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Nov 5, 1993
Attention: Maree Doden	First Sample #:	3JE5401		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3JE5401 VEW-1	Sample I.D. 3JE5402 VEW-2	Sample I.D. 3JE5403 VEW-3	Sample I.D. 3JE5404 VEW-4	Sample I.D. 3JE5405 VEW-5
Purgeable Hydrocarbons	5.0	26,000	1,400	3,000	1,100	9,400
Benzene	0.050	660	N.D.	N.D.	N.D.	N.D.
Toluene	0.050	450	N.D.	N.D.	4.0	N.D.
Ethyl Benzene	0.050	300	8.0	49	10	100
Total Xylenes	0.050	1,300	13	45	22	71
Chromatogram Pattern:		Gas + Non-gas < C8	Gas + Non-gas < C8	Gas + Non-gas < C8	Gas + Non-gas < C8	Gas + Non-gas < C8

Quality Control Data

Report Limit Multiplication Factor:	500	50	50	25	100
Date Analyzed:	10/28/93	10/28/93	10/28/93	10/29/93	10/29/93
Instrument Identification:	GCHP-2	GCHP-2	GCHP-2	GCHP-2	GCHP-3
Surrogate Recovery, %: (QC Limits = 70-130%)	136*	133*	167*	146*	111

*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: 305-79.01L/Shell, Oakland

QC Sample Group: 3JE5401-05

Reported: Nov 5, 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
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK102893	GBLK102893	GBLK102893	GBLK102893
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	10/28/93	10/28/93	10/28/93	10/28/93
Instrument I.D.#:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
LCS % Recovery:	81	80	81	80
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3JD2401	3JD2401	3JD2401	3JD2401
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	10/28/93	10/28/93	10/28/93	10/28/93
Instrument I.D.#:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
Matrix Spike % Recovery:	91	91	93	90
Matrix Spike Duplicate % Recovery:	98	98	97	100
Relative % Difference:	7.4	7.4	4.2	11

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

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

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

QC Sample Group: 3JE5401-05

Reported: Nov 5, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK102993	GBLK102993	GBLK102993	GBLK102993
Date Prepared:	-	-	-	-
Date Analyzed:	10/29/93	10/29/93	10/29/93	10/29/93
Instrument I.D.#:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
LCS % Recovery:	99	98	99	100
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3JE0001	3JE0001	3JE0001	3JE0001
Date Prepared:	-	-	-	-
Date Analyzed:	10/29/93	10/29/93	10/29/93	10/29/93
Instrument I.D.#:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
Matrix Spike % Recovery:	94	94	93	93
Matrix Spike Duplicate % Recovery:	97	96	97	97
Relative % Difference:	4.2	2.1	0.0	4.2

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

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(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: 305-79.01L/Shell, Oakland

QC Sample Group: 3JE5401-05

Reported: Nov 5, 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
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK102993	GBLK102993	GBLK102993	GBLK102993
Date Prepared:	-	-	-	-
Date Analyzed:	10/29/93	10/29/93	10/29/93	10/29/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
LCS % Recovery:	110	96	91	90
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3JD7902	3JD7902	3JD7902	3JD7902
Date Prepared:	-	-	-	-
Date Analyzed:	10/29/93	10/29/93	10/29/93	10/29/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Matrix Spike % Recovery:	113	103	93	91
Matrix Spike Duplicate % Recovery:	113	102	94	93
Relative % Difference:	0.0	0.97	1.1	2.2

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

SHELL OIL COMPANY 305-7901

RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: ____

Date: 10/28/93

Page 2 of 2

Site Address: 285 HEGENBERGER, Oakland

WIC#: 204 5508 5504

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: MAREE DODEN

Phone No.: 408 441-7500

Fax #: 441-7539

Comments: SV Start up Samples

Sampled by: [signature]

Printed Name: Mark Gubrud

Analysis Required

LAB: Sequoia

9310E54

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
VEW-1	10/27/93				X	1						X				Bag	NP	N	UST Soil Gasoline	01A
VEW-2	↓				↓	↓						X				↓	↓	↓	↓	02A
VEW-3	↓				↓	↓						X				↓	↓	↓	↓	03A
VEW-4	↓				↓	↓						X				↓	↓	↓	↓	04A
VEW-5	↓				↓	↓						X				↓	↓	↓	↓	05A

OCT 28 1149

Relinquished By (signature):	Printed Name:	Date/Time	Received (signature):	Printed Name:	Date/Time
[signature]	Mark Gubrud	Date: 10/28/93 Time: 717	[signature]	M DODEN	Date: 10/28/93 Time: 0740
[signature]	M DODEN	Date: 10/28/93 Time: 1028	SPO	S. O'Donnell	Date: 10/28/93 Time: 1028
SPO	S. O'Donnell	Date: 10/28/93 Time: 1147	[signature]	Y. HELFAND	Date: 10/28/93 Time: 1147

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

Shell Oil Chn. of Custody

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

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

MASTER LOG NO. / PAGE: 9310E54
DATE OF LOG-IN: 10-28

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: 10-28-93
12. Time Rec. at Lab: 1147

* If no, contact Project Manager and attach record of resolution

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
01	A	VEW - 1	TEDLAR	A	10-27	
02		2				
03		3				
04		4				
05		5				

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: 305-79.01L/Shell, Oakland

Enclosed are the results from 2 air samples received at Sequoia Analytical on October 28,1993. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3JE5201	Air, Infl	10/27/93	EPA 5030/8015/8020
3JE5202	Air, Effl	10/27/93	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

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:	Oct 27, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Oct 28, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Oct 29, 1993
Attention: Maree Doden	First Sample #:	3JE5201		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3JE5201 Infl	Sample I.D. 3JE5202 Effl
Purgeable Hydrocarbons	5.0	510	N.D.
Benzene	0.050	5.3	N.D.
Toluene	0.050	2.6	0.060
Ethyl Benzene	0.050	2.0	N.D.
Total Xylenes	0.050	4.3	0.070
Chromatogram Pattern:		Gas + Non-gas < C8	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Analyzed:	10/28/93	10/28/93
Instrument Identification:	GCHP-2	GCHP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	157*	102

*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: 305-79.01L/Shell, Oakland

QC Sample Group: 3JE5201-02

Reported: Oct 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
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK102893	GBLK102893	GBLK102893	GBLK102893
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	10/28/93	10/28/93	10/28/93	10/28/93
Instrument I.D.#:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
LCS % Recovery:	81	80	81	80
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3JD2401	3JD2401	3JD2401	3JD2401
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	10/28/93	10/28/93	10/28/93	10/28/93
Instrument I.D.#:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
Matrix Spike % Recovery:	91	91	93	90
Matrix Spike Duplicate % Recovery:	98	98	97	100
Relative % Difference:	7.4	7.4	4.2	11

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEC
REC. BY (PRINT): PH
MASTER LOG NO. / PAGE: 9310E52
DATE OF LOG-IN: 10-28

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	10-27	
2. Custody Seal Nos.: —	02	↓	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: 10-28-93							
Time Rec. at Lab: 1147							

* contact Project Manager and attach record of resolution

SHELL OIL COMPANY 3057901-2
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: ______

Date: 10/27/93
Page 1 of 2

Site Address: 285 HEGENBERGER, OAKLAND

WIC#: 204-5508 5504

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: MAREE DODEN
Phone No.: 408 441-7500
Fax #: 441-7539

Comments: SU Start-up Samples

Sampled by: [signature]

Printed Name: Mark Gubrud

Analysis Required

9310E52

LAB: SEQUOIA

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

UST AGENCY: ______

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	10/27/93				X	1						X				Bag	NP	n	UST/Soil	-01A
EFFL	↓				X	1						X				Bag	NP	n	Gasoline	-02A

OCT 28 1149

Relinquished By (signature):	Printed Name:	Date/Time	Received (signature):	Printed Name:	Date/Time
[signature]	Mark Gubrud	Date: 10/28/93 Time: 7:40	[signature] M Doden	M Doden	Date: 10/28/93 Time: 07:40
[signature] M Doden	M DODEN	Date: 10/28/93 Time: 10:27	SO	S. O'Donnell	Date: 10/28/93 Time: 10:27
SO	S. O'Donnell	Date: 10/28/93 Time: 11:47	[signature]	P. HURANO	Date: 10/28/93 Time: 11:47

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

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: 305-79.01L/Shell, Oakland

Enclosed are the results from 2 air samples received at Sequoia Analytical on October 29,1993. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3JF4801	Air, Infl	10/28/93	EPA 5030/8015/8020
3JF4802	Air, Effl	10/28/93	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

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: Oct 28, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received: Oct 29, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported: Nov 5, 1993
Attention: Maree Doden	First Sample #:	3JF4801	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3JF4801 Infl	Sample I.D. 3JF4802 Effl
Purgeable Hydrocarbons	5.0	790	N.D.
Benzene	0.050	18	N.D.
Toluene	0.050	14	N.D.
Ethyl Benzene	0.050	N.D.	N.D.
Total Xylenes	0.050	24	N.D.
Chromatogram Pattern:		Gas + Non-gas < C8	--

Quality Control Data

Report Limit Multiplication Factor:	20	1.0
Date Analyzed:	10/29/93	10/30/93
Instrument Identification:	GCHP-3	GCHP-3
Surrogate Recovery, %: (QC Limits = 70-130%)	110	95

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: 305-79.01L/Shell, Oakland

QC Sample Group: 3JF4801-02

Reported: Nov 5, 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
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK102993	GBLK102993	GBLK102993	GBLK102993
Date Prepared:	-	-	-	-
Date Analyzed:	10/29/93	10/29/93	10/29/93	10/29/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
LCS % Recovery:	110	96	91	90
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3JD7902	3JD7902	3JD7902	3JD7902
Date Prepared:	-	-	-	-
Date Analyzed:	10/29/93	10/29/93	10/29/93	10/29/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Matrix Spike % Recovery:	113	103	93	91
Matrix Spike Duplicate % Recovery:	113	102	94	93
Relative % Difference:	0.0	0.97	1.1	2.2

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

SEQUOIA ANALYTICAL
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(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: 305-79.01L/Shell, Oakland

QC Sample Group: 3JF4801-02

Reported: Nov 5, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	Harabajahian	Harabajahian	Harabajahian	Harabajahian
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK103093	GBLK103093	GBLK103093	GBLK103093
Date Prepared:	-	-	-	-
Date Analyzed:	10/30/93	10/30/93	10/30/93	10/30/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
LCS % Recovery:	100	95	95	97
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3JE7702	3JE7702	3JE7702	3JE7702
Date Prepared:	-	-	-	-
Date Analyzed:	10/30/93	10/30/93	10/30/93	10/30/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Matrix Spike % Recovery:	110	110	110	110
Matrix Spike Duplicate % Recovery:	100	100	100	103
Relative % Difference:	9.5	9.5	9.5	6.6

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

SHELL OIL COMPANY 3057901-K
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: ____

Date: 10/27/93
Page 1 of 1

Site Address: 285 HEGENBERGER, Oakland

WIC#: 204-5508-5504

Shell Engineer: Dan Kirk

Phone No: (510) 6756168
Fax #: 6756172

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

Consultant Contact: MAREE DODEN

Phone No.: 408 441-7500
Fax #: 441-7539

Comments: Day 2 SU Samples

Sampled by: [signature]

Printed Name: Mark Gubrud

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

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	10/28/93		-01		X	1						X				Bag	NP	N	VSC Soil	9310F48
EFFL	↓		-02		X	1						X				Bag	NP	N	Gasoline	

Relinquished By (signature):	Printed Name:	Date/Time	Received (signature):	Printed Name:	Date/Time
[signature]	Mark Gubrud	Date: 10/28/93 Time: 1158	M Doden	M DODEN	Date: 10/28/93 Time: 1200
M Doden	M DODEN	Date: 10/29 Time: 1134	SPO	S O'Donnell	Date: 10/29/93 Time: 1322
SPO	S O'Donnell	Date: 10/29/93 Time: 1610	[signature]	Stenstrom	Date: 10/29 Time: 1645

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

Shell Oil Chn. of Custody

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

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

MASTER LOG NO. / PAGE: 9310F48
DATE OF LOG-IN: 10-29

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
1. Custody Seal(s): Present / (Absent); Intact / Broken*	1	A	influent	Tedlar	A	10/28	
2. Custody Seal Nos.:	2	↓	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: 10/29							
12. Time Rec. at Lab: 1645							

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

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: 305-79.01L/Shell, Oakland

Enclosed are the results from 2 air samples received at Sequoia Analytical on October 29,1993. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3JF4701	Air, Infl	10/29/93	EPA 5030/8015/8020
3JF4702	Air, Effl	10/29/93	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

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:	Oct 29, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Oct 29, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Nov 5, 1993
Attention: Maree Doden	First Sample #:	3JF4701		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3JF4701 Infl	Sample I.D. 3JF4702 Effl
Purgeable Hydrocarbons	5.0	790	N.D.
Benzene	0.050	14	0.089
Toluene	0.050	12	N.D.
Ethyl Benzene	0.050	2.1	N.D.
Total Xylenes	0.050	27	N.D.
Chromatogram Pattern:		Gas	--

Quality Control Data

Report Limit Multiplication Factor:	10	1.0
Date Analyzed:	10/30/93	10/30/93
Instrument Identification:	GCHP-2	GCHP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	172*	104

*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: 305-79.01L/Shell, Oakland

QC Sample Group: 3JF4701-02

Reported: Nov 5, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	V. Harabajahian	V. Harabajahian	.Harabajahian	.Harabajahian
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK103093	GBLK103093	GBLK103093	GBLK103093
Date Prepared:	-	-	-	-
Date Analyzed:	10/30/93	10/30/93	10/30/93	10/30/93
Instrument I.D.#:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
LCS % Recovery:	98	98	99	100
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3JD7203	3JD7203	3JD7203	3JD7203
Date Prepared:	-	-	-	-
Date Analyzed:	10/30/93	10/30/93	10/30/93	10/30/93
Instrument I.D.#:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
Matrix Spike % Recovery:	100	100	100	100
Matrix Spike Duplicate % Recovery:	95	95	96	97
Relative % Difference:	5.1	5.1	4.1	3.0

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

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 2 air samples received at Sequoia Analytical on November 12,1993. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3K73901	Air, Infl	11/11/93	EPA 5030/8015/8020
3K73902	Air, Effl	11/11/93	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

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:	305-79.01/Shell, Oakland	Sampled:	Nov 11, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Nov 12, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Nov 18, 1993
Attention: Justin Hawkins	First Sample #:	3K73901		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3K73901 Infl	Sample I.D. 3K73902 Effl
Purgeable Hydrocarbons	5.0	1,100	N.D.
Benzene	0.050	19	N.D.
Toluene	0.050	31	N.D.
Ethyl Benzene	0.050	N.D.	N.D.
Total Xylenes	0.050	100	N.D.
Chromatogram Pattern:		Gas	--

Quality Control Data

Report Limit Multiplication Factor:	100	1.0
Date Analyzed:	11/12/93	11/12/93
Instrument Identification:	GCHP-2	GCHP-17
Surrogate Recovery, %: (QC Limits = 70-130%)	101	97

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: 3K73901

Reported: Nov 18, 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#:	3K60001	3K60001	3K60001	3K60001
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	11/12/93	11/12/93	11/12/93	11/12/93
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:	86	87	88	87
Matrix Spike Duplicate % Recovery:	99	100	105	103
Relative % Difference:	14	14	18	17
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: 305-79.01/Shell, Oakland

QC Sample Group: 3K73902

Reported: Nov 18, 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#:	3K45101	3K45101	3K45101	3K45101
Date Prepared:	-	-	-	-
Date Analyzed:	11/12/93	11/12/93	11/12/93	11/12/93
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:	88	92	93	90
Matrix Spike Duplicate % Recovery:	92	95	98	100
Relative % Difference:	4.4	3.2	5.2	11
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: 11-1

Page 1 of 1

Site Address: 285 Hegenberger, OAKLAND

WIC#: 204-5508-5504

Shell Engineer: DAN KIRK — Phone No.: 675-7668 (SO) 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

Analysis Required

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
INF-L	11/11/93				X	1	93117		39-01			X			1 liter (amber)	N/P	N	UST Soil Vapor	
EFF-L	↓				X	1			-02			X			↓	↓	↓		

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: Joe Vojvoda	Date: 11-12-93 Time: 8:45	Received (signature):	Printed Name: M DODEN	Date: 11/12/93 Time: 0845
Relinquished By (signature):	Printed Name: M DODEN	Date: 11/12/93 Time: 1425	Received (signature):	Printed Name: Rick Vincent	Date: 11/12/93 Time: 14:30
Relinquished By (signature):	Printed Name: Rick Vincent	Date: 11/12/93 Time: 15:55	Received (signature):	Printed Name: D Lawrence	Date: 11/12/93 Time: 15:55

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

Rev. 11/13/93

Shell Oil Chn. of Custody

SEQUOIA ANALYTICAL — SAMPLE RECEIPT LOG

CLIENT NAME: Pacific Environmental Grp
REC. BY (PRINT): DR
MASTER LOG NO. / PAGE: 9311739
DATE OF LOG-IN: 11/12/93

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
1. Custody Seal(s):	Present / (Absent)	01		Infl	Air bag	A	11/11	
	Intact / Broken*	02		Effl	"	"	"	
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:	11/12/93							
12. Time Rec. at Lab:	15:55							

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